

# 2023 OVERHEAD WEIGHING CATALOG



**RICE LAKE**  
WEIGHING SYSTEMS

800-472-6703

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## Rice Lake, WI

### ES-111

Fundamentals of Electronic Systems

February 6-10

April 17-21

June 26-30

August 7-11

September 18-22

December 11-15

### ES-222

Advanced Scale System Troubleshooting

January 23-27

May 8-12

August 21-25

October 23-27

### ES-300

1280 Enterprise Workshop

March 6-10

November 6-10

### ES-301

Indicator iRite Programming

March 13-17

November 13-17

## Online

### ES-111

Fundamentals of Electronic Systems

### ES-222

Advanced Scale System Troubleshooting

### SB-111

Setpoints and Batching

## Other Locations

### Handbook 44 Training

January 12..... Tampa, FL

February 21 ..... Las Vegas, NV

March 16 ..... Baltimore, MD

April 6 ..... Boise, ID

May 9 ..... Concord, CA

September 19 ..... Denver, CO

October 19 ..... Cleveland, OH

November 14 ..... Dallas, TX

PERSONAL INTERACTIONS WITH INSTRUCTORS



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to speak with our training coordinator.

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## Buyer's Guide

# Shipping Information

FREIGHT SERVICES OFFERED	"SMALL PACK"	LTL	TRUCK LOAD
Nationwide Same Day Service	Y* ***	Y*	N
Next Day (AM)	Y**	Y**	Y**
Next Day (END OF DAY)	Y	Y**	Y**
2 Day	Y	Y	Y
3 Day	Y	Y	Y
Ground	Y	Y	Y
Canada	Y	Y	Y
Mexico	Y	Y	Y
Express Freight (Air-over 150 lb)***	Y	Y	N
International (Sea)	Y	Y	Y
International (Air)	Y	Y	N

\* Subject to cost/distance

\*\* Subject to distance

\*\*\* Subject to flight availability and proximity of nearest airport

## Same Day Services

These services do not carry the same service guarantees that standard delivery schedules do and are subject to availability.

## Small Parcel Services

We ship with internationally recognized parcel carriers based on delivery time and services offered.

## Determining Dimensional Weight for Small Parcel Shipments for Air and Ground

When shipping via air services, couriers require the shipping weight be determined by the greater of the boxed product's actual weight or its dimensional shipping weight. The formula for calculating dimensional shipping weight is as follows:

Domestic shipments via Ground or Air:  $L \times W \times H / 139$ .

International air shipments:  $L \times W \times H / 139$ .

Please note: Rice Lake Weighing Systems takes the added precaution of double-boxing some of our electronic products and balances. This may result in higher dimensional weight charges by the carrier. Even with this added precaution, we suggest you always ship high precision and fragile products via air services to reduce excessive handling.

## Less Than Truckload (LTL)

Full service LTL coverage for the continental United States, Puerto Rico, Canada and Mexico.

Note: A standard LTL delivery is considered to be one that ships from either a company or partner dock to arrival at a standard commercial address with disposition of the goods at the rear of the truck to enable off loading by material handling equipment provided by the consignee at either ground level or via loading dock. The freight in question should be palletized and secured in a way to facilitate the safe handling of the freight with no one dimension over seven feet, six inches.

Any LTL delivery falling outside of this criteria may well accrue accessorial charges levied by the carrier in line with their tariff rules. It is recommended that any potential accessorial costs are discussed at the time of order placement so these costs can be billed appropriately at the time of shipment. If this is not the case, Rice Lake reserves the right to charge the customer retrospectively for any accessorial costs incurred during the delivery process.

### Accessorial charges include, but are not limited to the following:

Lift gate, call for appointment and guaranteed delivery: Day and by 10:30 a.m. (where available). Excessive length, inside delivery

**NOTE: To inside of first threshold crossed only**, high cost delivery areas such as government sites and mines, re-delivery, re-consignment, residential and restricted access shipments. All prices are available on request.

## Full Truckload

Various truckload providers give us the ability to ship to the contiguous United States, Alaska, Canada and Mexico.

## Forwarders (International Freight)

We can provide service through a forwarder of our choice, or select one of your preferred forwarders.

**Air freight:** All of our forwarders are internationally recognized brands.

**Ocean freight:** All of our forwarders are internationally recognized brands.



## Rice Lake Weighing Systems Freight Claims Procedure

Incidents can happen anytime between a package's departure from Rice Lake's loading dock and the time you receive it. For that reason, we are asking you to follow the procedures below when receiving a shipment.

The Bill of Lading (BOL) or Delivery Receipt (D/R) is the only record of the product's condition when it arrives at your site. If you do not inspect a shipment before signing, you are essentially waiving the right to collect on a damage claim regardless of whether the damage is visible or concealed. Your signature on a delivering carrier's BOL or D/R constitutes acceptance of the merchandise "as is." This proof is essential in filing a claim and holding the responsible parties accountable for items damaged or missing while in transit. Remember, once you sign, the goods and responsibility are yours.

### Receiving a Shipment

- Check immediately for possible damage during shipment. Inspect, examine and inventory your delivery as it is unloaded.
- Open cartons and containers. Any suspicion of damage or shortage must be noted on the BOL or D/R. This information must include the item, discrepancy and condition of the item in question. If this is NOT noted, the liability to prove the damage was done by the delivering carrier is your responsibility.
- The driver cannot leave your receiving dock until the BOL or D/R is signed, regardless if they are behind schedule or not. Do not be intimidated by the driver.

### Damaged Shipment

- Discovered damage: If the box, crate or merchandise is visibly damaged, beyond what you would consider to be normal shipping wear and tear, refuse the delivery and request a Return Authorization Number from the driver in order for the shipment to be sent back to its origin at no charge.
- Concealed damage: Immediately document and photograph the damage and packaging. Keep all crating and packaging material with the damaged item(s) for inspection by the company's claim inspector until told to either return or dispose of the item(s). The item should be moved minimally; only to an area where it can be inspected by the carrier or their agent.
- Keep a second copy of the BOL or D/R noting the damage and the driver's signature.
- Call your Rice Lake Weighing Systems customer service representative to report the shortage and/or damage. Ideally, the call should be made before the driver leaves the site.

At this point, a claim for concealed damage will be started and an inspection will be requested. The inspector will determine if the damage was possibly caused by the carrier. A report and claim must be filed with the carrier within seven days after delivery. The sooner concealed damage is discovered and reported, the better.

### Small Parcel Shipments

In general, it is the policy of small parcel carriers to NOT deliver damaged packages but rather take them back to the distribution center for evaluation. HOWEVER, that does not always happen. Occasionally if the package is deemed to be ok, it will be re-taped and delivered to the consignee. If damage is noticed while still at the distribution center, a notation should have been entered into the system.

If you do receive a package that appears to be damaged you can either refuse as damaged or you can accept the damaged package and report the damage (immediately) to your Rice Lake customer service representative with the tracking number. They will, in turn, contact the relevant team member from their support group so the claims process can be started. It should be noted that **drivers do not normally note the package was damaged until it is brought back to the distribution center. A clerk will note damage at that point.**

### Questions

If you have any questions about shipping or potential damages to your shipment, contact us at 800-472-6703 and a member of our sales and logistics team will assist you.



# Signed Sealed Delivered... It's yours!

**On average, regardless of carrier, 2% of all freight is damaged in transit. Don't let the delivery person slip away. And don't get left holding the bag.**

Rice Lake merchandise is packaged carefully to arrive at your location on time, intact and in perfect working order. We don't ship damaged goods, and we work with many of the most reputable national carriers. But know this—anytime a package is sent, as many as 2 out of 100 will be mishandled. To be sure your business doesn't take the hit for someone else's mistake—INSPECT before you sign.

Whether or not the product itself has been damaged, remember—your signature accepts the delivery as is, releasing the carrier and supplier of all liability, unless you take action:

- Make note of any damage to the packaging, no matter how slight, including re-packaging, water damage, scratches to paint, etc. Take photos if possible to back up any necessary claims.
- Do not accept or sign for as “unchecked”—this is not an acceptable disclaimer.
- Where damage to contents is obvious, take photos and refuse the shipment.

Notify your supplier immediately with the claim number provided by the driver. Noting the condition of your delivery upon receipt is the only recourse when making a damage claim. Follow these steps and you'll get replacement merchandise faster, keep costs down and ensure the carrier is held responsible for their mistakes; not you, and not your supplier.

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WEIGHING SYSTEMS

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# Customer Service Contacts

At Rice Lake Weighing Systems we strive to give you the best customer service in the industry. You can depend on our knowledgeable staff to deliver decisive, courteous assistance when you need it most.

Customer Service Representative Hours (CST): Monday through Friday 6:30 AM to 6:00 PM;  
Saturday 8:00 AM to Noon

## MSI



**Phil Gray**  
Director of Operations



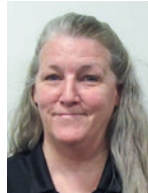
**Bob Davis**  
Field Sales Engineer



**Patrick Hillman**  
Technical Sales &  
Service Specialist



**Jack Nelson**  
Technical Sales  
Specialist



**Sue Radowick**  
Inside Sales



**Andy Burish**  
Product Manager



**Rob Nelson**  
Engineering Manager



**David Garcia**  
Customer Service  
Supervisor

CUSTOMER  
ASSISTANCE

# Trademarks

The following product names, logos, brands and other trademarks featured or referred to within this publication are the property of their respective trademark holders.

Access™	Fairbanks™	MS-DOS™	SUREFOOT™
Adventure Pro®	Flintec™	NatraSorb®	Symbol®
Allen-Bradley®	Genius®	Novell®	TekLynx®
Amphenol®	Hewlett-Packard™	OHAUS®	The Crosby Group LLC
AstraLabel™	Howe™	OKI®	Toledo®
AstraLink™	IBM®	Pax®	Torque™
AutoCal™	InCal™	pcANYWHERE®	TRANSCORE®
Beldfoil®	Intel®	Peachtree®	Trooper®
Bitstream®	Interchange®	Pelican™	Turck®
Bluetooth®	Intercomp CS™	Pick N Pluck™	Valor®
Cardinal®	Intercomp PT300DW™	Pioneer™	Voyager®
Cent-O-Gram®	Intercomp PT300™	PowerCell®	Vulcan®
Centronics®	IONMASTER™	Powerware®	WinCT®
Citizen®	iPAQ™	PreVent™	Windows®
ConnexLink™	ISOBAR®	Prodigy Max™	WinWedge®
ControlNet®	ISOBLOK®	Prodigy™	Xscale®
Conxall®	JavaPOS™	Profibus®	XTend-PKG™
CRS™	LabelView™	ProPrinter®	Zebra®
Cubis®	LifeGuard™	Quencharc®	ZigBee™
Datalogic QuickScan®	Linux®	Quickbooks®	ZPL®
Datamax-O'Neil®	LoopTracker™	QuickScan®	
DeviceNet™	Lotus™	QuikSharp™	
Dial-O-Gram®	Maxi-Scoop™	R Stahl®	
DIGI®	MaxWax™	Ranger™	
Discovery™	Microline®	Rapid Exchange®	
Dymo®	Microsoft®	Rockwell Automation®	
EPL®	Midrics®	Roman and Swiss™	
EPL2®	MIFARE®	S4M™	
EPSON®	Minebea Intec	Sartorius®	
ESC/POS®	Mobile 5.0™	Scout Pro®	
Excel™	Motiontrap™	SI®	
Explorer®	Motorola ColdFire®	STAR®	



The terms “buyer,” “authorized reseller,” and “customer” as used herein, shall mean the party placing the purchase order with Rice Lake Weighing Systems. No contractual relationship between Rice Lake Weighing Systems and said party shall arise until such time as a purchase order has been accepted by Rice Lake Weighing Systems and such acceptance has been indicated on a written acknowledgment. Orders shall be subject to Rice Lake Weighing Systems’ standard terms and conditions as printed below, subject to correction for clerical errors.

Any conditions stipulated by the buyer which are in contradiction to these sales terms and conditions shall only be valid if expressly acknowledged by Rice Lake Weighing Systems in writing.

## 1. Prices

(a) Rice Lake Weighing Systems (Rice Lake) prices are net 30 days Ex Works Rice Lake plants. Orders are subject to approval of our credit department with rights reserved to change or withdraw credit terms without notice and to terminate any orders when invoices for work done thereon have gone unpaid for 60 days.

(b) Prices do not include taxes of any kind by federal, state, municipality or other governmental authority, which Rice Lake may be required to collect or pay with respect to the sale or shipment of goods sold hereunder. Regardless of when any such taxes are determined or become payable, all taxes would be the responsibility of the customer and would be in addition to the prices quoted hereon.

(c) This quotation is made upon the basis of the cost of materials and labor as of the date of this quotation. A change in such costs shall give Rice Lake the right to alter prices to reflect such changes in cost.

(d) Requests for additional documentation, drawings, audits of factories or inspection of equipment in-process, additional testing, additional inspections and record retention will be quoted as a separate item even if we have already issued quotations for products and services.

## 2. Shipment, Title, Risk of Loss

(a) All shipments are Ex Works point of shipment. Title and risk of loss or damage passes to the customer upon presentation of the goods to the customer’s carrier at Rice Lake’s facility.

## 3. Quantity, Materials and Tolerances

(a) Rice Lake assumes no responsibility for loss or damage occurring by reason of delay or inability to deliver caused by fires, strikes, accidents, embargoes, car shortages, delays of carriers, insurrection, riots, acts of the civil or military authorities, nor will we assume responsibility for any reason whatever for damages of any kind on account of failure to deliver at the time specified. The customer shall indemnify and hold Rice Lake harmless from all direct and consequential costs and damages resulting from such loss or delay.

## 4. Weight Calibration Services

The uncertainty of measurement is included in the decision rule in determining pass/fail criteria of the Maximum Permissible Error (MPE).

## 5. Patents

If this quotation covers parts made specifically for the customer, the customer agrees to indemnify and hold Rice Lake harmless against any loss resulting from infringement of patents or trademarks, or from claims of such infringements and shall pay all legal and defense costs incurred by Rice Lake in the defense of such actions.

## 6. Software

Unless specifically otherwise stated, any and all software associated or part of any product sold, loaned on trial or demonstration to the customer is to be considered proprietary to Rice Lake. The customer agrees not to duplicate for distribution or to sell or distribute in any way without the prior written consent of Rice Lake.

## 7. Changes and Cancellation: Rejection, Claims

(a) Orders placed with Rice Lake are not subject to cancellation, change or reduction in amount or suspension of deliveries except with Rice Lake’s consent and upon terms that indemnify Rice Lake against loss. Unless confirmed in writing, all verbal agreements are void.

(b) Rice Lake will not be responsible for changes in design, deliveries or other instructions, unless they are furnished in writing. The customer agrees to pay for all tooling charges caused by changes in design or specifications.

(c) Samples submitted shall be deemed approved unless written rejection is received within two weeks of submission.

(d) Manufactured parts will be shipped and billed as they are produced.

(e) Claims for shortage or rejections for defects must be made within 10 days of receipt of goods. Credit will be rendered on such defective parts after we have had an opportunity to inspect them, provided they are returned to our factory, transportation charges prepaid, within 30 days, and provided they have not been altered or defaced in any way.

## 8. Tooling and Designing

(a) In consideration of the engineering service necessary in the designing of jigs, fixtures and tooling not being charged for, but being quoted on the basis of labor and material only, and not at their fair market value, such jigs, fixtures and tooling shall remain in our possession for at least one year. Thereafter, the customer desiring delivery of such jigs, fixtures and tooling shall pay an engineering charge of 50 percent of the original price of said jigs, fixtures and tooling and accept same as-is.

(b) When requested, we will submit suggestions concerning design and construction of parts, but we will not accept responsibility of liability for the practicability of these suggestions if adopted by the customer.

## 9. Delivery and Adjustment to Price

(a) If the customer requests that the goods be manufactured and shipped on a date (or dates) earlier than originally agreed to by Rice Lake and the customer, and Rice Lake agrees to the earlier date (or dates), any increase in the cost of performance incurred by Rice Lake resulting from earlier manufacture and shipment will be included in an adjustment of the purchase price to be made by Rice Lake and will be paid by the customer.

# Terms and Conditions

(b) Should shipments be held beyond scheduled date for convenience of the customer, goods will be billed and charges will be made for warehousing, trucking and other expenses incident to such delay. Reasonable and sufficient care is taken by Rice Lake in crating its goods. Rice Lake cannot be held responsible for breakage after having received "in-good-order" receipts from the transportation carrier. All claim for loss and damage must be made by the customer to the carrier, but we will assist insofar as practical in securing satisfactory adjustment of such claims.

## 10. Payment and Liens

(a) All invoices shall be due and payable when submitted for payment in accordance with the revisions of Rice Lake terms. No withholding of funds, back charges or credits against amounts otherwise due to Rice Lake will be permitted unless specifically agreed to in writing by Rice Lake. Settlement of any amounts due to the customer will be negotiated as separate items and not as offsets against amounts otherwise due to Rice Lake from the customer for products sold hereunder.

(b) Any unpaid account for work done shall constitute a lien on any jigs, fixtures, manufactured parts and raw materials in Rice Lake possession. In the event any account remains open and unpaid for 90 days, Rice Lake reserves the right to use the customer's jigs and fixtures to make parts therefrom, and to sell or dispose of manufactured parts and raw materials.

(c) The customer shall not assign or transfer any rights or obligations arising from this proposal, or monies payable thereunder, without the prior written consent of Rice Lake, and any such assignment or transfer made without such written consent shall be deemed null and void.

## 11. Additional Provisions

(a) Errors—stenographic and clerical errors are subject to correction.

(b) These terms and conditions constitute the entire contract between the customer and Rice Lake, transcending any oral arrangements or representations which may be inconsistent therewith.

(c) This quotation is made under and shall be governed by the laws of the state of Wisconsin.

## 12. Resale of Rice Lake Weighing Systems Products

In order to ensure compliance with the U.S. Export Administration Regulations we ask you to comply with the following:

(a) The customer shall not export or re-export Rice Lake Weighing Systems products, either directly or indirectly, in contravention of any applicable law, statute or regulation and will first obtain any required licenses or authorizations from the relevant government authority when necessary as prescribed by law.

(b) The customer confirms that it is familiar with and complies with the relevant national and international export control regulations and embargo regulations. The customer furthermore confirms that it is in particular familiar with and complies with the U.S. Department of Commerce, Export Administration Regulations; U.S. Department of Treasury, OFAC Sanctions; the U.S. Department of Defense, ITAR requirements and the U.S. Department of State regulations.

(c) If deemed necessary, Rice Lake Weighing Systems, in individual cases may make further requests from the customer for information required for export compliance.

(d) Should it be necessary for the customer to obtain an export license from the appropriate authorities pursuant to the aforementioned regulations, the customer shall apply for such a license autonomously and at their own expense.

**The foregoing warranties are exclusive and in lieu of all other express and implied warranties whatsoever, including but not limited to implied warranties of merchantability and fitness for a particular purpose. Rice Lake shall not be subject to any other obligations or liabilities whatsoever with respect to parts manufactured or supplied by Rice Lake or services rendered by it.**

**Anything herein to the contrary notwithstanding, Rice Lake shall not be liable for incidental and consequential damages, and in substitution for all remedies which the customer may have under any applicable law. The customer's sole and exclusive remedy against Rice Lake for any breach of warranty or any other breach relating to goods delivered pursuant hereto shall be for repair or replacement (at Rice Lake's option) of the goods or parts effected by such breach.**

## Warranties

### Standard Product Limited Warranty

Rice Lake Weighing Systems (Rice Lake) warrants that all Rice Lake brand equipment and systems properly installed by an Authorized Reseller or original equipment manufacturer (OEM) will operate per written specifications as confirmed by the authorized reseller/OEM and accepted by Rice Lake. All systems and components are warranted against defects in materials and workmanship for one (1) year from the date of shipment from Rice Lake, unless otherwise stated in the product catalog or manual. Rice Lake warrants that the equipment sold here under will conform to the current written specifications authorized by Rice Lake. Rice Lake warrants the equipment against faulty workmanship and defective materials. If any equipment fails to conform to these warranties, **Rice Lake will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:**

Upon discovery by the Customer of such nonconformity, Rice Lake will be given prompt written notice with a detailed explanation of the alleged deficiencies.

Individual electronic components returned to Rice Lake for warranty purposes must be packaged to prevent electrostatic discharge (ESD) damage in shipment. Packaging requirements are listed in the publication, "Protecting Your Components From Static Damage in Shipment," available from the Rice Lake Equipment Return Department.

Examination of such equipment by Rice Lake confirms that the non-conformity actually exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair, or improper testing. Rice Lake shall be the sole judge of all alleged non-conformities.

# Warranty and Limitation of Liability

Such equipment has not been modified, altered, or changed by any person other than Rice Lake or its duly authorized repair agents.

Cutting the load cell cable will void the warranty.

Rice Lake will have a reasonable time to repair or replace the defective equipment. The Customer is responsible for shipping the product to Rice Lake. Rice Lake is responsible for shipping the product back to the Customer.

In no event will Rice Lake be responsible for travel time or on-location repairs, including assembly or disassembly of equipment. Nor will Rice Lake be liable for the cost of any repairs made by others.

On all intrinsically safe equipment, any field repair or modifications voids any and all warranties expressed or implied and void F.M. approval.

Any loose hardware, screws, washers or non-ESD bags of hardware stored inside indicator will void warranty. This could cause harm to repair technician or damage CPU board.

If just the board is sent in for repair, the serial number of the product the board is from should accompany the board.

**These warranties exclude all other warranties, expressed or implied, including without limitation warranties of merchantability or fitness for a particular purpose. Neither Rice Lake nor the authorized reseller will, in any event, be liable for incidental or consequential damages at the point of use. Rice Lake and the Customer agree that Rice Lake's sole and exclusive liability here under is limited to repair or replacement of such goods. In accepting this warranty, the Customer waives any and all other claims to warranty.**

**Should the seller be other than Rice Lake, the Customer agrees to look only to the seller for warranty claims.** No terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of Rice Lake and the Customer.

## Carrier Product Damage

As part of our commitment to customer satisfaction and in accordance with ISO 9001 standards, we make every attempt to pack our products so they will arrive in new condition. Occasionally due to rough handling or carelessness of carrier, product may arrive in a damaged condition. When this happens, don't assume that the shipment left Rice Lake in that condition or that the original packing was not sufficient.

The receiver, whether it is the authorized reseller or their Customer, is responsible for making a notation of damaged or missing items when signing the carrier's delivery receipt. If you or your Customer are not sure whether there is damage, we suggest adding a statement "CONDITION UNKNOWN" to the delivery receipt. In the event that damage or missing items are not properly documented at time of receipt, the carrier is relieved of responsibility and the receiver is then responsible for the cost to get the product back to new condition.

After the damage or shortage has been properly noted with the carrier, contact Rice Lake immediately and keep all the original packaging material for inspection by the carrier's representative. It is also helpful in the claim process to take pictures of the condition of the packaging and damage.

When drop-shipping items to your Customers, it is imperative that you advise them of their responsibility in accepting shipments from common carriers. Even if the equipment is not expected to be installed or used for a period of time, the shipment must be inspected at time of receipt in order to preserve their rights for making a claim.

## Custom Software Limited Warranty

Rice Lake Weighing Systems (Rice Lake) warrants that (a) the software will perform in accordance with the specification and accompanying written endorsement by the Customer for a period of 90 days from the date of receipt; (b) any hardware accompanying the software will be free from defects in materials and workmanship under normal use and service for a period of one (1) year from the date of shipment from Rice Lake; and (c) the Customer should perform inspection and testing of software products prior to installation.

This limited warranty is void if failure of the software or hardware has resulted from accident, abuse, misapplication, or incorrect Customer specification. Any replacement software will be warranted for the remainder of the original warranty period or 30 days, whichever is longer.

If the software fails to conform to these warranties, Rice Lake will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:

Upon discovery by the Customer of such nonconformity, Rice Lake will be given prompt written notice with a detailed explanation of the alleged deficiencies.

Examination of software by Rice Lake confirms that the nonconformity exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair, improper testing, or incorrect Customer specification. Rice Lake shall be the sole judge of all alleged non-conformities.

Rice Lake will have a reasonable time to repair or replace the software. The Customer is responsible for shipping charges both ways.

In no event will Rice Lake be responsible for travel time or on-location repairs, including assembly or disassembly of equipment. Nor will Rice Lake be liable for the cost of any repairs made by others.

**These warranties exclude all other warranties, expressed or implied, including without limitation warranties of merchantability or fitness for a particular purpose. Neither Rice Lake nor the authorized reseller will, in any event, be liable for incidental or consequential damages at the point of use.**

**Rice Lake and Customer agree that Rice Lake's sole and exclusive liability here under is limited to repair or replacement of such goods. In accepting this warranty, the Customer waives any and all other claims to warranty.**

# Warranty and Limitation of Liability

Should the seller be other than Rice Lake, the Customer agrees to look only to the seller for warranty claims.

No terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of Rice Lake and the Customer.

## Return Policies

Our commitment to our Customers states that if any standard product purchased from Rice Lake does not work, or if the incorrect product is shipped, **return it in its original shipping carton with all accessories in “like new” condition** for full credit or replacement within 30 days of purchase. **Electronic components returned to Rice Lake must be properly packaged to prevent electrostatic discharge (ESD) damage in shipment.**

Packaging requirements are listed in the publication, “Protecting Your Components from Static Damage in Shipment,” available online or from our Returns Department. This policy and the 30-day limit also apply to any products drop-shipped directly from the manufacturer.

Please note that if an incorrect quantity of product was shipped, Rice Lake must be contacted within 10 days of the purchase. Upon notification, we will immediately correct the situation.

**A restocking charge will apply if equipment is not in like-new condition.** The restocking charge is directly proportional to the amount of time and material required to return the item to resalable condition—we will make every effort to do this quickly and economically. Equipment that has been abused and/or shows signs of excessive wear and cannot be reconditioned and resold will not be accepted for return or credit after excessive wear or has been modified.

## As Applied to Drop Shipments

All Rice Lake return guidelines apply to products drop-shipped directly from the manufacturer. If a perceived error occurs, Rice Lake will investigate to the best of our ability to determine if the error occurred prior to shipping, during shipping, or at the end user site. If our records and subsequent investigation indicate that the shipment was correct when it left our factory, our responsibility extends only to the authorized reseller, not their end user. Our standard product warranty notes that our coverage extends only to equipment and systems **properly installed by an authorized reseller.**

## Obtaining an RMA

A return authorization number (RMA) is required for all materials being returned to Rice Lake for credit. Flat rate repairs require purchase orders at time of RMA issuance. When returning equipment for repair or warranty reimbursement consideration, these simple steps will help to expedite your request:

1. Contact our Returns Department.
2. Please have your customer number and both the item description and detailed findings of product problem for repair.
3. Please have the original sales order or invoice number for items to be returned for credit or warranty.  
NOTE: See return policy
4. An RMA number will be given for eligible returns. This RMA number may also be faxed or emailed per your request.

## Return Shipments Outside the United States for Repair, Warranty, Calibration or Other Services and Re-export.

### For shipment to the USA:

1. The commercial invoice must include the following statement:
  - i. “These goods are being returned for maintenance under”
  - ii. Goods Made in the USA -- “HTS 9801.00.1012”
  - iii. Goods NOT made in the USA -- “HTS 9801.00.2500”
2. The commercial invoice must list items individually and include the fair market value of the item based on its present condition for customs purposes only.
3. Please reference original Rice Lake commercial invoice number and date item was purchased if applicable.
4. Please note that failure to follow these procedures may cause delay and will certainly incur extra charges that will NOT be absorbed by Rice Lake.

## Return Shipments Outside the United States Other Than for Repair, or Service Work Not Being Returned.

### For shipment to the USA:

1. The commercial invoice must include the following statement:
  - i. Goods Made in the USA -- “HTS 9801.00.1045”
  - ii. Goods NOT made in the USA -- “HTS 9801.00.2500”
2. The commercial invoice must list items individually and include the fair market value of the item based on its present condition for customs purposes only.
3. Please reference original Rice Lake commercial invoice number and date item was purchased if applicable.
4. Please note that failure to follow these procedures may cause delay and possible reduction in your refund.
5. Please be advised that you may qualify for a refund of your duties and should contact your local customs authority for instructions and forms.

## Special Order, Modified, Non-Catalog, or Non-Stock Items

Due to the added resources and difficulty in reselling special or non-standard products, returns or credit are not allowed for special order equipment, special software programs, equipment physically modified or altered in the field, discrete electronic components, relays, manuals, or opened software packages.

## Calibration Test Weights

All weights returned for credit will be assessed a restocking charge because of the required inspection and verification. Credit is not allowed for serialized weights, calibration or traceable services performed on weights.

### Calibration Test Weights

No returns will be accepted for items that are specifically modified for the Customer’s requirements. Examples of such modifications may include, but not necessarily limited to:

1. Weights that have been specifically built to the customer’s specifications.
2. Standard product specifically modified to the customer’s specifications.
3. Standard product engraved with serial numbers at the customer’s request.



# Warranty and Limitation of Liability

4. Laboratory procedure charges.
5. Laboratory documentation fees.

## Balances

Balances returned for credit within 30 days of purchase may be subject to a restocking fee if assessed by balance manufacturer.

### Balance Repair Policy and Rates

We offer repair support on the following balance models:

- All Rice Lake brand models: Once we receive the equipment and the RMA form, an estimate will be prepared.

A minimum charge of one hour will apply. All balance repairs are covered by a 90-day limited warranty on parts and workmanship performed and noted under the scope of the specific repair. Balances must be packaged to adequately protect them from damage in transit. Please refer to "How to Prepare a Balance for Shipment" available on our website and from our Returns Department.

### How to Prepare a Balance for Shipment

The best and most effective method for shipping a balance at any time and for any reason is to use the original manufacturer's packaging materials and subsequently double box it as described below. Teach your Customers to retain the packing set. Please remember that due to the nature of the equipment, new packaging materials can be very expensive.

In the event that the original manufacturer's packaging materials are not available, follow these instructions for top loading balances.

1. Remove the weighing platform cover, support buttons, weighing platform, floor plate and other devices installed in the weighing chamber. Pack these pieces individually in bubble wrap and tape the wrapping closed. Follow this same procedure for AC adapters and power cords. Please note that AC adapters and power cords are necessary to adequately evaluate the problem.
2. Examine the device (refer to the operating instructions) and if necessary, re-install or tighten any shipping screws/retaining devices to prevent damage to the weighing mechanism during shipment.
3. If the floor plate is not removable, ensure it is securely in place and cannot come loose during shipment, even if the balance is inverted. Do NOT invert the balance to test the security of the floor plate.
4. Clean the device of any loose debris or potential contaminants to our testing facility.
5. Prepare and sign a Statement of Decontamination (form #0679). This form MUST be included in a separate packing list envelope on the outside of the box with the "Statement of Decontamination Form" statement clearly visible.
6. Using Scotch tape or "speed" tape, tape all the glass doors on the device CLOSED. Be sure the tape is securely affixed and will not come off during shipment. Please note that on some devices, the glass breeze-break around the weighing chamber can actually be disassembled and packed separate prior to shipment. Refer to the manufacturer's operating instructions. If this is a feature of the device being return, disassemble the breeze break and pack it in its own packing material and box.

7. Use a large box that will provide a minimum of 3 inches of space around the device for loose-fill packing material.
8. Place a padding of foam or Styrofoam (at least 1inch thick) at the bottom of the box.
9. Place the balance in a large plastic bag and seal the bag closed.
10. Please put the device on top of the foam padding or Styrofoam from step 8 above.
11. Ensure that there is at least three inches of clearance between the top of the balance and the top of the box.
12. Using generous amounts of anti-static loose-fill packing material, fill all the spaces around the balance. Shake the box to cause the material to settle and add additional loose fill as necessary.
13. Place the small box containing all the items from step 1 above on top of the loose fill covering the balance. Add additional loose fill to completely cover all items within the box.
14. Double pack this box in another box that will again provide an additional two inches of space around the inner box. Fill all existing space between the inner and outer box with copious amounts of anti-static loose fill packing material.
15. Seal the box and include all the necessary documentation on the outside of the box. Don't forget the Decontamination Form (form #0679) from step 5 above.

## Repair Service Policies

Our Service Department is staffed Monday through Friday from 6:30 A.M. to 6:30 P.M., and Saturday from 8:00 A.M. to noon, Central time. For those utilizing the conveniences of the internet, we have an e-mail address dedicated to technical support. Please contact Rice Lake at [service@ricelake.com](mailto:service@ricelake.com) for answers to your technical questions and the status of repair products during normal business hours.

We provide quality and timely repairs for the products we sell. Flat rate repair is offered for selected models of indicators, printers and remote displays. Prior to returning a product for repair, our returns department will work with you to determine some key factors that will help Rice Lake better serve you. Please provide the following via phone to extensions 5348 or an RMA form.

- Customer Number: Without a customer number we cannot issue an RMA number.
- Ship-to Address: Your customer number will bring up the bill-to address. You must inform Rice Lake of the ship-to address if it's different than the bill-to address.
- **Original sales and invoice orders: Required on warranty claims.**
- Freight Type: Unless stated otherwise, we ship the device back to you utilizing the same freight type in which we received it. If Rice Lake is responsible for freight charges, the carrier will be selected at the sole discretion of Rice Lake.
- **Definition of Product and Problem: Please provide as much detail as possible regarding the type of product, application and problem.**

# Warranty and Limitation of Liability

- Purchase Order Number for Flat Rate Repair: Once we receive the equipment and the RMA, equipment for flat rate repair will be processed immediately. Other equipment will be evaluated and a minimum evaluation charge will apply (contact the factory for exact pricing).

You may be asked about the possibility of a new replacement product. It may be in your customer's best interest to explore the option of purchasing a new product if the repair will exceed 50 percent of authorized reseller net price, since new products carry full-warranty benefits.

Please note our hourly service rate on all current Rice Lake products. Contact the factory for exact pricing. There is a 120-day limited warranty on parts and workmanship performed and noted under the scope of the specific repair.

## California Proposition 65

### Rice Lake Weighing Systems Statement

Proposition 65 requires businesses to inform Californians about exposures to chemicals that are known to cause cancer, birth defects or other reproductive harm. These chemicals may be in the products you purchase, or they may be exposed to you at home, at the workplace or within the environment. Proposition 65 enables Californians to make informed decisions about their exposures to these chemicals.

Rice Lake Weighing Systems wants to be proactive in regards to Proposition 65 and provide information about the products we produce, distribute and use to manufacture equipment we sell.

We are providing this warning based on the knowledge that one or more chemicals included in the California Proposition 65 list known to cause cancer, birth defects or other reproductive harm may be present in Rice Lake Weighing Systems products and workplaces.



**WARNING:** Chemicals listed in California Proposition 65 known to cause cancer, birth defects or other reproductive harm may be present only in trace amounts or contained within Rice Lake Weighing Systems products and proper encapsulation equipment. This warning is provided out of an abundance of caution to enable you to be an informed consumer.

More information about California Proposition 65 can be found at [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

# Crane Scales

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The following product names, logos, brands and other trademarks featured or referred to within this publication are the property of their respective trademark holders.

# MSI-3460 Challenger 3

Crane Scale

CRANE SCALES



## Approvals



Consult

Consult

## Standard Features

- LED display
- Top lifting eye and bottom swivel hook
- Lb/kg switch selectable
- Six volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)
- Meets or exceeds OSHA, ANSI, ASME and other safety design standards (5:1 Ultimate Safety Factor)
- NTEP Certified (250 to 10,000 lb capacities)

## Part Number/Price

Part #	Description	Resolution	Est. Weight	Price
139102	250 lb/500 lb (125 kg/250 kg) cap F/A	0.1 lb (0.05 kg) 0.2 lb (0.1 kg)	22 lb	\$2,090.00
139103	1,000 lb/2,000 lb (500 kg/1,000 kg) cap F/A	0.5 lb (0.2 kg) 1 lb (0.5 kg)	22 lb	\$2,200.00
139104	5,000 lb/10,000 lb (2,500 kg/5,000 kg) cap F/A	2 lb (1 kg) 5 lb (2 kg)	39 lb	\$2,760.00
139105	15,000 lb (7,000 kg) cap F/A	5 lb (2 kg)	67 lb	\$3,770.00
139110	250 lb/500 lb (125 kg/250 kg) cap F/A (with RF modem for connectivity to model MSI-8000 and remote)	0.1 lb (0.05 kg) 0.2 lb (0.1 kg)	22 lb	\$2,280.00
139111	1,000 lb/2,000 lb (500 kg/1,000 kg) cap F/A (with RF modem for connectivity to model MSI-8000 and remote)	0.5 lb (0.2 kg) 1 lb (0.5 kg)	22 lb	\$2,430.00
139112	5,000 lb/10,000 lb (2,500 kg/5,000 kg) cap F/A (with RF modem for connectivity to model MSI-8000 and remote)	2 lb (1 kg) 5 lb (2 kg)	39 lb	\$2,920.00
139113	15,000 lb (7,000 kg) cap F/A (with RF modem for connectivity to model MSI-8000 and remote)	5 lb (2 kg)	67 lb	\$4,010.00
176909	250 lb/500 lb (125 kg/250 kg) cap F/A with Wi-Fi	0.1 lb (0.05 kg) 0.2 lb (0.1 kg)	22 lb	\$2,340.00
176910	1,000 lb/2,000 lb (500 kg/1,000 kg) cap F/A with Wi-Fi	0.5 lb (0.2 kg) 1 lb (0.5 kg)	22 lb	\$2,460.00
176911	5,000 lb/10,000 lb (2,500 kg/5,000 kg) cap F/A with Wi-Fi	2 lb (1 kg) 5 lb (2 kg)	39 lb	\$2,990.00
176912	15,000 lb (7,000 kg) cap F/A with Wi-Fi	5 lb (2 kg)	67 lb	\$4,080.00

## Options

(Contact MSI for application consultation)

- Rugged remote control (control for On/Off, Zero, Tare and other functions)
- RF modem install for connectivity to MSI-8000, MSI-8000HD RF, MSI-8004HD RF remote display, TranSend and LaserLight2 remote display range typically 100 to 300 ft, line of sight; for longer range consult factory
- Universal direct power supply (115/230 VAC)
- Audible alarm
- Wi-Fi communication is available for specialty applications
- OIML and CE approved versions available, consult for more information

## Specifications

### Accuracy:

± (0.1% +1 d) of applied load

### Resolution:

2,000 to 3,750 d standard  
(Up to 10,000 d available)

### Enclosure:

NEMA Type 4, IP65, powder coated cast aluminum

### Lifting Eye & Hook:

Crosby® or equivalent with 360° non-bearing swivel hook

### Design Overload:

200% Safe / 500% Ultimate

### Functions:

Power: Turns unit ON or OFF  
Zero: Zeros applied load up to 100% of capacity (limited range in NTEP/OIML configurations)  
Tare: Tares applied load and displays weight in Net mode  
User: Programmable as test, units, net/gross, total, peak hold and setpoints

### Display:

5-digit, 1.5 in (38 mm) LED with programmable brightness control

### Displayable Units:

Pounds or kilogram selectable

### Annunciators:

COZ, Net, Gross, Total, Peak, Low Battery, lb/kg, Motion, Setpoints, ACK IN, ACK OUT, RF

### Power:

6 Volt rechargeable battery. 115/230 VAC battery charger is included

### Operating Time:

Up to 80 hours between charging with typical use, less with optional RF Model

### Temperature Range:

Operating: 14 °F to 104 °F (-10 °C to 40 °C)  
Certified: 14 °F to 104 °F (-10 °C to 40 °C)

### Auto-Off Mode:

Select for 15, 30, 45, 60 minutes or Off

### Auto Sleep Mode:

Power down during non-use and power up with weight change or any key press

### Service Counters:

Counts number of lifts over percentage of capacity and lifts over capacity

### Calibration:

Digital

### Filtering:

OFF, LO, HI-1, HI-2 selectable

### Warranty:

One-year limited

### Approvals:

NTEP CC 86-021: 250 to 10,000 lb  
OIML (Consult)  
CE Marked (Consult)



# MSI-3460 Challenger 3

Crane Scale

## Options/Accessories

Part #	Description	Est. Weight	Price
140049	Battery assembly, 6 volt rechargeable	3 lb	\$145.00
139152	Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)	5 lb	\$190.00
139153	Battery charger 115/230 VAC, 50/60 Hz (EC plug standard)	5 lb	\$190.00
197201	Battery charger, 115 VAC, 50/60 Hz (NA plug standard) CEC compliant	-	\$235.00
149549	Universal 115/230 VAC 50/60 Hz (NA plug standard) battery charger for MSI-8000 remote display	3 lb	\$155.00
178004	LaserLight2, 4 in (101 mm) six-digit RF scoreboard (requires MSI-3460 with RF modem)	21 lb	\$2,370.00
178006	LaserLight2, 6 in (152 mm) six-digit RF scoreboard (requires MSI-3460 with RF modem)	37 lb	\$2,810.00
Consult	AC power supply	-	\$310.00
140058	3460 AC conversion kit	-	\$445.00
Consult	Audible setpoint alarm	-	\$330.00
139395	Challenger retrofit to 3460 electronics	1 lb	\$1,110.00
139397	Challenger retrofit to 3460 RF electronics	-	\$1,280.00
173014	Rugged remote control (requires MSI-3460 with RF modem)	-	\$330.00
139381	MSI-8000 RF remote display (requires MSI-3460 with RF modem)	5 lb	\$1,320.00
153591	MSI-8000HD ScaleCore RF remote display (requires MSI-3460 with RF modem)	-	\$1,440.00
178281	MSI-8004HD AC, red/green 85~264 VAC, 47~440 Hz, 120~370 VDC	-	\$1,980.00

CRANE SCALES

# MSI-4260 Port-A-Weigh

Industrial Crane Scale



## Approvals



## Standard Features

- LED display
- Top lifting eye or shackle, bottom thrust bearing swivel hook
- 12 volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)
- NTEP Certified configuration

## Options

(Contact MSI for application consultation)

- Rugged remote control (control for On/Off, Zero, Tare and other functions)
- RF modem install for connectivity to MSI-8000, MSI-8000HD RF, MSI-8004HD RF remote display, TranSend and LaserLight2 remote display. Typically 100 to 300 ft, line of sight; for longer range consult factory
- Anti-heat shielding for high temperature applications
- Substitute bottom swivel hook with shackle
- Oversized top lifting eye or shackle
- Oversized bottom hook
- Universal direct power supply; 85 to 265 VAC, 47 to 440 Hz / 130 to 300 VDC
- Low headroom top adapter
- Audible alarm
- Wi-Fi communication is available for specialty applications
- Custom top and bottom interfaces
- Factory Mutual and ATEX approved intrinsically safe models available

## Part Number/Price

Part #	Description	Resolution	Est. Weight	Price
139460	500 lb (250 kg) F/A	0.2 lb (0.1 kg)	53 lb	\$4,520.00
139461	2,000 lb (1,000 kg) F/A	1.0 lb (0.5 kg)	53 lb	\$4,520.00
139462	5,000 lb (2,500 kg) F/A	1.0 lb (0.5 kg)	62 lb	\$4,620.00
139463	10,000 lb (5,000 kg) F/A	2.0 lb (1.0 kg)	62 lb	\$4,890.00
139464	20,000 lb (10,000 kg) F/A	5.0 lb (2.0 kg)	105 lb	\$6,540.00
139465	30,000 lb (15,000 kg) F/A	10 lb (5.0 kg)	125 lb	\$6,910.00
139466*	50,000 lb (25,000 kg) F/A	10 lb (5.0 kg)	235 lb	\$10,560.00
139467**	70,000 lb (35,000 kg) F/A	20 lb (10 kg)	270 lb	\$13,990.00
139468***	100,000 lb (50,000 kg) F/A	20 lb (10 kg)	420 lb	\$21,700.00

\* 490% of kg capacity

\*\* 475% of lb capacity/430% of kg capacity

\*\*\* 450% of kg capacity

## Specifications

### Accuracy:

± 0.1% +1 d of applied load

### Resolution:

3,000 to 5,000 d standard  
(Up to 10,000 d available)

### Enclosure:

NEMA Type 4, IP66 marine grade 356 alloy  
anodized cast aluminum

### Lifting Eye, Shackle & Hook:

Crosby® or equal with 360° thrust-bearing  
swivel hook

### Design Overload:

200% Safe / 500% Ultimate (except where noted)

### Functions:

Power: Turns Unit ON or OFF, Zero: Zeros applied  
load up to 100% of capacity (limited range in  
NTEP configuration)  
Tare: Tares applied load and displays weight in  
Net mode, F1: Programmable as TEST, UNITS, NET/  
GROSS, TOTAL & PEAK HOLD

### Display:

Five digit, 1.2 in (30 mm) LED with programmable  
brightness control

### Displayable Units:

Pounds or kilograms selectable

### Annunciators:

COZ, Net, Gross, Total, Peak, Low Battery, lb/kg,  
Motion, Setpoints

### Power:

12 Volt rechargeable battery (115/230 VAC battery  
charger is included)

### Operating Time:

Up to 200 hours between charging with typical use,  
less with optional RF modem

### Temperature Range:

Operating: -40 °F to 122 °F (-40 °C to 50 °C)  
Certified: 14 °F to 104 °F (-10 °C to 40 °C)

### Auto-Off Mode:

Select for 15, 30, 45 minutes, 1 hour or Off

### Auto Sleep Mode:

Power down during non-use and power up with  
weight change or any key press

### Service Counters:

Counts number of lifts over percentage of capacity  
and lifts over capacity

### Calibration:

Digital

### Filtering:

OFF, LO, HI-1, HI-2 selectable

### Warranty:

One-year limited

### Approvals:

NTEP CC 19-122: 500 to 70,000 lb  
Measurement Canada AM-6198: 500 to 5,000 lb

# MSI-4260 Port-A-Weigh

Industrial Crane Scale

## Options/Accessories

Part #	Description	Est. Weight	Price
<b>150971</b>	MSI RF modem option kit (used in MSI-4260, MSI-4260M, MSI-6360, MSI-9600HT)	-	\$240.00
<b>139381</b>	MSI-8000 RF remote display (requires MSI-4260 equipped with RF modem)	5 lb	\$1,320.00
<b>173014</b>	RF rugged remote control (requires MSI-4260 equipped with RF modem)	-	\$330.00
<b>153591</b>	MSI-8000HD remote display, AC power and tilt bracket option	3 lb	\$1,440.00
<b>178281</b>	MSI-8004HD AC, red/green 85~264 VAC, 47~440 Hz, 120~370 VDC	-	\$1,980.00
<b>159221</b>	Universal crane scale transport cart	180 lb	\$1,250.00
<b>178004</b>	LaserLight2, 4 in (101 mm) six-digit RF scoreboard (requires MSI-4260 equipped with RF modem)	21 lb	\$2,370.00
<b>178006</b>	LaserLight2, 6 in (152 mm) six-digit RF scoreboard (requires MSI-4260 equipped with RF modem)	37 lb	\$2,810.00
<b>Consult</b>	AC direct power supply	-	\$535.00
<b>Consult</b>	Audible setpoint alarm	-	\$395.00
<b>Consult</b>	Anti-heat shield	-	\$1,010.00
<b>152123</b>	Retrofit kit 4260 to 4260B	8 lb	\$2,560.00
<b>176956</b>	MSI Wi-Fi modem option kit (used in MSI-4260, MSI-4260M, MSI-6360, MSI-9600HT)	-	\$465.00
<b>Accessories</b>			
<b>150367</b>	Battery assembly, 12 V rechargeable	7 lb	\$135.00
<b>138006</b>	Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)	4 lb	\$330.00
<b>138007</b>	Universal 115/230 VAC, 50/60 Hz battery charger (UK plug standard)	4 lb	\$330.00
<b>138008</b>	Universal 115/230 VAC, 50/60 Hz battery charger (EC plug standard)	4 lb	\$330.00
<b>149549</b>	Universal 115/ 230 VAC 50/60 Hz (NA plug standard) battery charger for MSI-8000 remote display	3 lb	\$155.00
<b>4260 Sub Hook with Shackle</b>			
<b>Consult</b>	500 to 10,000 lb, 6.5 ton shackle	-	Consult
<b>Consult</b>	20,000 to 30,000 lb, 17 ton shackle	-	Consult
<b>Consult</b>	50,000 lb, 25 ton shackle	-	Consult
<b>Consult</b>	70,000 lb, 40 ton shackle	-	Consult
<b>Consult</b>	100,000 lb, 55 ton shackle	-	Consult
<b>4260 Oversize Lifting Eye/Shackle</b>			
<b>Consult</b>	500 to 10,000 lb capacity	-	Consult
<b>Consult</b>	20,000 to 30,000 lb capacity, adapter with 25 ton shackle	-	Consult
<b>Consult</b>	50,000 to 70,000 lb capacity	-	Consult
<b>Consult</b>	100,000 lb capacity	-	Consult

CRANE SCALES

# MSI-4260 IS Port-A-Weigh

Intrinsically Safe Crane Scale

CRANE SCALES



## Approvals



## Standard Features

- LED display
- Top lifting eye or shackle, bottom thrust bearing swivel hook
- 12 volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)

(Contact MSI for application consultation)

## Part Number/Price

Part #	Description	Resolution	Price
156013	500 lb (250 kg), swivel hook	0.2 lb (0.1 kg)	\$6,620.00
156014	2,000 lb (1,000 kg), swivel hook	1.0 lb (0.5 kg)	\$6,620.00
156015	5,000 lb (2,500 kg), swivel hook	1.0 lb (0.5 kg)	\$6,620.00
156016	10,000 lb (5,000 kg), swivel hook	2.0 lb (1.0 kg)	\$6,620.00
156017	20,000 lb (10,000 kg), swivel hook	5.0 lb (2.0 kg)	\$8,380.00
156018	30,000 lb (15,000 kg), swivel hook	10 lb (5.0 kg)	\$8,380.00
156019	50,000 lb (25,000 kg), swivel hook	10 lb (5.0 kg)	\$12,360.00
156020	70,000 lb (35,000 kg), swivel hook	20 lb (10 kg)	\$14,610.00
156021	100,000 lb (50,000 kg), swivel hook	20 lb (10 kg)	\$22,500.00

Capacities over 70,000lb are not NTEP

## Options/Accessories

Part #	Description	Price
170606	Battery charger	\$305.00
167777	Spare battery	\$275.00

## Specifications

### Accuracy:

± (0.1% +1 d) of applied load

### Resolution:

3,000 to 5,000 d standard  
(up to 10,000 d available)

### Enclosure:

NEMA Type 4, IP66 marine grade 356 alloy  
anodized cast aluminum

### Intrinsic Safety:

US Listings

FM16US0156X

IS / I, II, III / 1 / CDEFG / T4 Ta = -20°C to 50°C

I / 0 / AEx ia / IIB / T4 Ta = -20°C to 50°C Ga

20 / AEx ia / IIIC / T135°C Ta = -20 °C to 50 °C Da

Canadian Listings

FM16CA0092X

IS / I / 1 / CD / T4 Ta = -10 °C to 50 °C

IS / II, III / 1 / EFG / T4 Ta = -10 °C to 50 °C

I / 0 / Ex ia / IIB / T4 Ta = -10 °C to 50 °C Ga

20 / Ex ia / IIIC / T135°C Ta = -10 °C to 50 °C Da

ATEX Listings

FM16ATEX0038X

II 1 G Ex ia IIB T4 Ga -10 °C = Ta = 50 °C

II 1 D Ex ia IIIC T135°C Da -10 °C = Ta = 50 °C

### Lifting Eye, Shackle & Hook:

Crosby® or equal with 360° thrust-bearing  
swivel hook

### Design Overload:

200% Safe / 500% Ultimate (except where noted)

### Functions:

Power: Turns unit on or off

Zero: Zeros applied load up to 100% of capacity  
(limited range in NTEP Certified configuration)

Tare: Tares applied load and displays  
weight in net

Mode F1: Programmable as test, units, net/gross,  
total and peak hold

### Display:

Five-digit, 1.2 in (30 mm) LED with  
programmable brightness control

### Displayable Units:

Pounds or kilograms selectable

### Annunciators:

COZ, Net, Gross, Total, Peak, Low Battery, lb/kg,  
Motion, Setpoints

### Power:

12 volt rechargeable battery

115/230 VAC approved battery charger is included

### Temperature Range:

Certified: -10 °C to 40 °C

### Operating Time:

Up to 200 hours between charging with typical use

### Auto-Off Mode:

Select for 15, 30, 45 minutes, 1 hour or Off

### Auto Sleep Mode:

Power down during non-use and power up with  
weight change or any key press

### Service Counters:

Counts number of lifts over percentage of capacity  
and lifts over capacity

### Calibration:

Digital

### Filtering:

OFF, LO, HI-1, HI-2 selectable

### Warranty:

One-year limited

### Approvals:

NTEP CC 19-122: 500 to 70,000 lb

Measurement Canada AM-6198: 500 to 5,000 lb  
cFmus Approved



# MSI-4260M Port-A-Weigh

Industrial Crane Scale



## Approvals



## Part Number/Price

Part #	Description	Resolution	Est. Weight	Price
<b>4260M with LCD display, Swivel Hook, No RF, 12V SLA Battery</b>				
201951	500 lb (250 kg) with 12V battery F/A	0.2 lb (0.1 kg)	53 lb	\$4,920.00
201953	2,000 lb (1,000 kg) with 12V battery F/A	1.0 lb (0.5 kg)	53 lb	\$4,920.00
201954	5,000 lb (2,500 kg) with 12V battery F/A	1.0 lb (0.5 kg)	62 lb	\$5,240.00
201955	10,000 lb (5,000 kg) with 12V battery F/A	2.0 lb (1.0 kg)	62 lb	\$5,460.00
201956	20,000 lb (10,000 kg) with 12V battery F/A	5.0 lb (2.0 kg)	105 lb	\$7,120.00
201957	30,000 lb (15,000 kg) with 12V battery F/A	10 lb (5.0 kg)	125 lb	\$7,480.00
201958	50,000 lb (25,000 kg) with 12V battery F/A	10 lb (5.0 kg)	235 lb	\$11,450.00
201959	70,000 lb (35,000 kg) with 12V battery F/A	20 lb (10 kg)	270 lb	\$14,990.00
201960	100,000 lb (50,000 kg) with 12V battery F/A	20 lb (10 kg)	420 lb	\$22,800.00
<b>4260M with LCD display, Swivel Hook, No RF, D-Cell Battery</b>				
201999	500 lb (250 kg) with D-cell battery F/A	0.2 lb (0.1 kg)	53 lb	\$4,920.00
202000	2,000 lb (1,000 kg) with D-cell battery F/A	1.0 lb (0.5 kg)	53 lb	\$4,920.00
202001	5,000 lb (2,500 kg) with D-cell battery F/A	1.0 lb (0.5 kg)	62 lb	\$5,240.00
202002	10,000 lb (5,000 kg) with D-cell battery F/A	2.0 lb (1.0 kg)	62 lb	\$5,460.00
202003	20,000 lb (10,000 kg) with D-cell battery F/A	5.0 lb (2.0 kg)	105 lb	\$7,120.00
202004	30,000 lb (15,000 kg) with D-cell battery F/A	10 lb (5.0 kg)	125 lb	\$7,480.00
202005	50,000 lb (25,000 kg) with D-cell battery F/A	10 lb (5.0 kg)	235 lb	\$11,450.00
202006	70,000 lb (35,000 kg) with D-cell battery F/A	20 lb (10 kg)	270 lb	\$14,990.00
202007	100,000 lb (50,000 kg) with D-cell battery F/A	20 lb (10 kg)	420 lb	\$22,800.00

Capacities over 70,000lb are not NTEP and capacities over 5,000lb are not currently Measurement Canada

## Standard Features

- LCD display
- IP66 cast aluminum
- Top lifting eye or shackle, bottom thrust bearing swivel hook
- Battery operated, six (6) D cell 1.5V alkaline batteries or 12 volt rechargeable battery (115/230 VAC battery charger is included)
- NTEP Certified configuration

## Options

(Contact MSI for application consultation)

- Rugged remote control (control for On/Off, Zero, Tare and other functions)
- RF modem install for connectivity to MSI-8000, MSI-8000HD RF, MSI-8004HD RF remote display, TranSend and LaserLight2 remote display
- Wi-Fi communication is available for specialty applications
- Anti-heat shielding for high temperature applications
- Substitute bottom swivel hook with shackle
- Oversized top lifting eye or shackle
- Oversized bottom hook
- Universal direct power supply; 85 to 265 VAC, 47 to 440 Hz / 130 to 300 VDC
- Low headroom top adapter
- Audible alarm
- Custom top and bottom interfaces

## Specifications

### Accuracy:

± 0.1% +1 d of applied load

### Resolution:

Max NTEP Approved Class III: 2,500 d  
Max NTEP Approved Class IIIL: 5,000 d  
Max Non-NTEP Approved: 10,000 d

### Enclosure:

IP66 cast aluminum

### Lifting Eye, Shackle & Hook:

Crosby® or equal with 360° thrust-bearing swivel hook

### Design Overload:

200% Safe / 500% Ultimate (except where noted)

### Functions:

Power: Turns Unit ON or OFF  
Zero: Zeros applied load up to 100% of capacity (limited range in NTEP configuration)  
Tare: Tares applied load and displays weight in Net mode  
User: Programmable as test, total, unit, peak hold, net/gross, view total and print

### Display:

Five-digit, 1.75 in (44.5 mm) LCD with programmable brightness control

### Displayable Units:

Pounds or kilograms selectable

### Annunciators:

COZ, Battery Level, Net, Total, lb/kg, Stability, RF and Setpoint LEDs

### Power:

Battery operated, six (6) D cell 1.5V alkaline batteries or 12 volt rechargeable battery (115/230 VAC battery charger is included)

### Operating Time:

Six (6) D Cell 1.5V alkaline batteries:  
Up to 1,000 hours of battery life with typical use, less with RF modem  
12 volt rechargeable battery: Up to 250 hours between charging with typical use, less with RF modem

### Temperature Range:

Operating: -20 °F to 122 °F (-28 °C to 50 °C)  
Certified: 14 °F to 104 °F (-10 °C to 40 °C)

### Auto-Off Mode:

Powers off after the scale is not used for the set time (in minutes); 15, 30, 45, 60 or OFF selectable

### Auto Sleep Mode:

Power down during non-use after the set time (in minutes) and powers up with weight change or any key press; 5, 15, 30 or OFF selectable

### Service Counters:

Counts number of lifts over percentage of capacity and lifts over capacity

### Calibration:

Digital (procedure initiated by calibration switch)

### Filtering:

OFF, LO, HI-1 or HI-2 selectable

### Radio Link:

802.15.4 at 2.4 GHz

### Radio Effective Range:

Typically 100 to 300 ft line of sight

### Warranty:

One-year limited

### Approvals:

NTEP CC 19-122: 500 to 70,000 lb  
Measurement Canada AM-6198: 500 to 5,000 lb

# MSI-4260M Port-A-Weigh

Industrial Crane Scale

## Options/Accessories

Part #	Description	Est. Weight	Price
150971	MSI RF modem option kit (used in MSI-4260, MSI-4260M, MSI-6360, MSI-9600HT)	-	\$240.00
139381	MSI-8000 RF remote display (requires MSI-4260M equipped with RF modem)	5 lb	\$1,320.00
173014	RF rugged remote control (requires MSI-4260M equipped with RF modem)	-	\$330.00
153591	MSI-8000HD remote display, AC power and tilt bracket option (requires MSI-4260M equipped with RF modem)	3 lb	\$1,440.00
178281	MSI-8004HD AC, red/green 85~264 VAC, 47~440 Hz, 120~370 VDC	-	\$1,980.00
159221	Universal crane scale transport cart	180 lb	\$1,250.00
178004	LaserLight2, 4 in (101 mm) six-digit RF scoreboard (requires MSI-4260M equipped with RF modem)	21 lb	\$2,370.00
178006	LaserLight2, 6 in (152 mm) six-digit RF scoreboard (requires MSI-4260M equipped with RF modem)	37 lb	\$2,810.00
176956	MSI Wi-Fi modem option kit (used in MSI-4260, MSI-4260M, MSI-6360, MSI-9600HT)	-	\$465.00
<b>Accessories</b>			
150367	Battery assembly, 12V rechargeable	7 lb	\$135.00
138006	Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)	4 lb	\$330.00
138007	Universal 115/230 VAC, 50/60 Hz battery charger (UK plug standard)	4 lb	\$330.00
138008	Universal 115/230 VAC, 50/60 Hz battery charger (EC plug standard)	4 lb	\$330.00
149549	Universal 115/ 230 VAC 50/60 Hz (NA plug standard) battery charger for MSI-8000 remote display	3 lb	\$155.00
<b>4260 Sub Hook with Shackle</b>			
Consult	500 to 10,000 lb, 6.5 ton shackle	-	Consult
Consult	20,000 to 30,000 lb, 17 ton shackle	-	Consult
Consult	50,000 lb, 25 ton shackle	-	Consult
Consult	70,000 lb, 40 ton shackle	-	Consult
Consult	100,000 lb, 55 ton shackle	-	Consult
<b>4260 Oversize Lifting Eye/Shackle</b>			
Consult	500 to 10,000 lb capacity	-	Consult
Consult	20,000 to 30,000 lb capacity, adapter with 25 ton shackle	-	Consult
Consult	50,000 to 70,000 lb capacity	-	Consult
Consult	100,000 lb capacity	-	Consult

CRANE SCALES

# MSI-4260M Port-A-Weigh

Marine Crane Scale



## Standard Features

- LCD display
- IP66 cast aluminum
- Top lifting eye with lower link interface
- Battery operated, six (6) D cell 1.5V alkaline batteries
- NTEP Certified configuration

## Options

(Contact MSI for application consultation)

- Rugged remote control (control for On/Off, Zero, Tare and other functions)
- RF modem install for connectivity to MSI-8000, MSI-8000HD, MSI-8004HD, TranSend and LaserLight2 remote display. Typically 100 to 300 ft, line of sight; for longer range consult factory.
- Wi-Fi communication is available for specialty applications

## Specifications

### Accuracy:

± (0.1% +1d) of applied load

### Resolution:

Max NTEP Approved Class III: 2,500 Divisions  
Max NTEP Approved Class III: 5,000 Divisions  
Max Non NTEP Approved: 10,000 Divisions

### Enclosure:

IP66 cast aluminum

### Lifting Eye, Link & Hook:

Top lifting eye with lower link interface

### Design Overload:

200% Safe / 500% Ultimate

### Functions:

Power: Turns Unit ON or OFF  
Zero: Zeros applied load up to 100% of capacity (limited range in NTEP configuration),  
Tare: Tares applied load and displays weight in Net mode  
User: Programmable as test, total, unit, peak hold, net/gross, view total and print

### Display:

Five-digit, 1.75 in (44.5 mm) LCD with programmable brightness control

### Displayable Units:

Pounds or kilograms selectable

### Annunciators:

COZ, Battery Level, Net, Total, lb/kg, Stability, RF and Setpoint LEDs

### Power:

Battery operated, six (6) D cell 1.5 V alkaline batteries

### Operating Time:

Up to 1,000 hours of battery life with typical use, less with RF modem option

### Temperature Range e:

Operating: -20° F to 122° F (-28 °C to 50 °C)  
Certified: 14 °F to 104 °F (-10 °C to 40 °C)

### Auto-Off Mode:

Powers off after the scale is not used for the set time (in minutes); 15, 30, 45, 60 or OFF selectable

### Auto Sleep Mode:

Power down during non-use after the set time (in minutes) and powers up with weight change or any key press; 5, 15, 30 or OFF selectable

### Service Counters:

Counts number of lifts over percentage of capacity and lifts over capacity

### Calibration:

Digital (procedure initiated by calibration switch)

### Filtering:

OFF, LO, HI-1 or HI-2 selectable

### Radio Link:

802.15.4 at 2.4 GHz

### Radio Effective Range:

Typically 100 to 300 ft line of sight

### Warranty:

One-year limited

### Approvals:

NTEP CC 19-122: 500 to 70,000 lb  
Measurement Canada AM-6198: 500 to 5,000 lb

## Approvals



## Part Number/Price

Part #	Description	Resolution	Est. Weight	Price
194593	5,000 lb	1.0 lb (0.5 kg)	58 lb	\$4,960.00
196908	5,000 lb w/RF	1.0 lb (0.5 kg)	58 lb	\$5,270.00

## Options/Accessories

Part #	Description	Est. Weight	Price
150971	MSI RF modem option kit (used in MSI-4260, MSI-4260M, MSI-6360, MSI-9600HT)	-	\$240.00
139381	MSI-8000 RF remote display (requires MSI-4260M equipped with RF modem)	5 lb	\$1,320.00
173014	RF rugged remote control (requires MSI-4260M equipped with RF modem)	-	\$330.00
153591	MSI-8000HD remote display, AC power and tilt bracket option (requires MSI-4260M equipped with RF modem)	3 lb	\$1,440.00
178281	MSI-8004HD AC, red/green 85~264 VAC, 47~440 Hz, 120~370 VDC	-	\$1,980.00
159221	Universal crane scale transport cart	180 lb	\$1,250.00
178004	LaserLight2, 4 in (101 mm) six-digit RF scoreboard (requires MSI-4260M equipped with RF modem)	21 lb	\$2,370.00
178006	LaserLight2, 6 in (152 mm) six-digit RF scoreboard (requires MSI-4260M equipped with RF modem)	37 lb	\$2,810.00
176956	MSI Wi-Fi modem option kit (used in MSI-4260, MSI-4260M, MSI-6360, MSI-9600HT)	-	\$465.00

CRANE SCALES

# MSI-9600HT Hi-Torque Port-A-Weigh Plus

High Torque Crane Scale



CRANE SCALES

## Standard Features

- LED display and annunciators
- Top shackle (sold separately)
- 12 volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)
- Hi-torque load train designed for use with powered rotation

## Part Number/Price

Part #	Description	Resolution	Est. Weight	Price
214371	10,000 lb (5000 kg) F/A	2.0 lb (1.0 kg)	62 lb	Consult
214370	30,000 lb (15,000 kg) F/A	10 lb (5.0 kg)	125 lb	Consult
214369	70,000 lb (35,000 kg) F/A	20 lb (10 kg)	270 lb	Consult
214477	100,000 lb (50,000 kg) F/A	20 lb (10 kg)	420 lb	Consult
214474	120,000 lb (60,000 kg) F/A	50 lb (20 kg)	550 lb	Consult
214479*	200,000 lb (100,000 kg) F/A	100 lb (50 kg)	1,100 lb	Consult

\* 400% Ultimate overload

## Options/Accessories

Part #	Description	Est. Weight	Price
141992	Top lifting shackle Crosby® G2130 17 ton for 30,000 lb cap unit	-	Consult
146335	Top lifting shackle Crosby® G2140 40 ton for 70,000 lb cap unit	-	Consult
146336	Top lifting shackle Crosby® G2140 55 ton for 120,000 lb cap unit	-	Consult
150971	MSI RF modem option kit (used in MSI-4260, MSI-4260M, MSI-6360, MSI-9600HT)	3 lb	\$240.00
173014	RF rugged remote control (requires MSI-9600HT equipped with RF modem)	-	\$330.00
153591	MSI-8000HD RF remote display AC powered ( no A/D)	180 lb	\$1,440.00
178004	4in LaserLight2 MSI RF	21 lb	\$2,370.00
159221	Universal crane scale transport cart	-	\$1,250.00
Consult	AC direct power supply	-	\$535.00
Consult	Anti-heat shield	-	\$1,010.00
Consult	Audible alarm	-	\$400.00
176956	MSI Wi-Fi modem option kit (used in MSI-4260, MSI-4260M, MSI-6360, MSI-9600HT)	-	\$465.00
<b>Accessories</b>			
150367	Battery assembly, 12 V rechargeable	7 lb	\$135.00
138006	Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)	4 lb	\$330.00
138007	Universal 115/230 VAC, 50/60 Hz battery charger (UK plug standard)	4 lb	\$330.00
138008	Universal 115/230 VAC, 50/60 Hz battery charger (EC plug standard)	4 lb	\$330.00

## Options

(Contact MSI for application consultation)

- Top shackle
- Rugged remote control (control for On/Off, Zero, Tare and other functions)
- Anti-heat shielding for high-temperature applications
- Substitute bottom hook with shackle
- Oversized top or shackle
- Oversized bottom hooks
- Universal direct power supply
- Wi-Fi communication is available for specialty applications
- RF modem install for connectivity to MSI-8000, MSI-8000HD RF, MSI-8004HD RF remote display, TranSend and LaserLight2 remote display
- Typically 100 to 300 ft, line of sight; for longer range consult factory
- Low headroom top adaptor
- Audible alarm
- Custom top and bottom interfaces

## Specifications

### Accuracy:

10,000 to 120,000 lb:  $\pm (0.1\% + 1 \text{ d})$  of capacity  
200,000 lb:  $\pm (0.2\% + 1 \text{ d})$  of capacity

### Resolution:

3,000 to 5,000 d standard  
(Up to 10,000 d available)

### Enclosure:

NEMA Type 4, IP66, marine grade 356 alloy anodized cast aluminum

### Lifting Eye, Shackle & Hook:

Shackle is optional and Crosby® fixed hook provided as standard

### Design Overload:

200% Safe / 500% Ultimate (except where noted)

### Functions:

Power: Turns unit on or off  
Zero: Zeros applied load up to 100% of capacity  
Tare: Tares applied load and displays weight in net  
Mode F1: Programmable as test, units, net/gross, total and peak hold

### Display:

6 digit, 1.5 in (38 mm) LED with programmable brightness control

### Displayable Units:

Pounds or kilograms selectable

### Power:

12 Volt rechargeable battery, 115/230 VAC battery charger included

### Operating Time:

Up to 30 hours between charging with typical use

### Operating Temperature:

14 °F to 104 °F (-10 °C to 40 °C)

### Calibration:

Digital

### Filtering:

OFF, LO, HI-1 or HI-2 selectable

### Radio Link:

802.15.4 at 2.4 GHz

### Radio Link Effective Range:

Typically 100 to 300 ft line of sight

### Warranty:

One-year limited

# MSI-6360 Trans-Weigh

Crane Scale



## Approvals



## Standard Features

- Top lifting eye or shackle, bottom thrust bearing swivel hook
- 12 volt rechargeable battery and universal 115/230 VAC, 50/60 Hz battery charger (NA Plug Standard)
- Meets or exceeds OSHA, ANSI, ASME and other safety design standards (5:1 Ultimate Safety Factor)
- NTEP Certified configuration

## Part Number/Price

Part #	Description	Resolution	Est. Weight	Price
215829	500 lb (250 kg) F/A	0.2 lb (0.1 kg)	53 lb	Consult
215830	2,000 lb (1000 kg) F/A	1.0 lb (0.5 kg)	53 lb	Consult
215831	5,000 lb (2500 kg) F/A	1.0 lb (0.5 kg)	62 lb	Consult
215832	10,000 lb (5000 kg) F/A	2.0 lb (1.0 kg)	62 lb	Consult
215833	20,000 lb (10,000 kg) F/A	5.0 lb (2.0 kg)	105 lb	Consult
215834	30,000 lb (15,000 kg) F/A	10 lb (5.0 kg)	125 lb	Consult
215835	50,000 lb (25,000 kg) F/A	10 lb (5.0 kg)	235 lb	Consult
215836	70,000 lb (35,000 kg) F/A	20 lb (10 kg)	270 lb	Consult
215837	100,000 lb (50,000 kg) F/A	20 lb (10 kg)	420 lb	Consult

## Options

(Contact MSI for application consultation)

- Anti-heat shielding for high-temperature applications
- Substitute bottom swivel hook with shackle
- Rugged remote control (control for On/Off, Zero, Tare and other functions)
- Oversized top lifting eye or shackle
- Oversized bottom hook
- Low headroom top adaptor
- Universal direct power supply; 85 to 265 VAC, 47 to 440 Hz / 130 to 300 VDC
- Wi-Fi communication is available for specialty applications and for use with the ScaleCore Webserver
- RF modem install for connectivity to MSI-8000, MSI-8000HD, MSI-8004HD, TranSend and LaserLight2 remote displays
- Custom top and bottom interfaces
- Crane scale cart

## Specifications

### Accuracy:

± (0.1% +1 d) of applied load

### Resolution:

3,000 to 5,000 d standard  
(Up to 10,000 d available)

### Enclosure:

NEMA Type 4, IP66, marine grade 356 alloy cast aluminum

### Lifting Eye, Shackle & Hook:

Crosby® or equivalent with 360° thrust-bearing swivel hook

### Design Overload:

200% Safe / 500% Ultimate (except where noted)

### Functions:

On/Off

### Displayable Units:

Pounds or kilograms selectable

### Power:

12 Volt rechargeable battery, 115/230 VAC battery charger included

### Operating Time:

Up to 40 hours between charging with typical use

### Operating Temperature:

-4 °F to 140 °F (-20 °C to 60 °C)  
Legal for Trade: 14 °F to 104 °F (-10 °C to 40 °C)

### Calibration:

Digital via MSI ScaleCore remote display

### Radio Link:

802.15.4 at 2.4 GHz

### Radio Link Effective Range:

Typically 100 to 300 ft line of sight

### Warranty:

One-year limited

### Approvals:

NTEP CC 19-122: 500 to 70,000 lb

# MSI-6360 Trans-Weigh

Crane Scale

## Options/Accessories

Part #	Description	Est. Weight	Price
150971	MSI RF modem option kit (used in MSI-4260, MSI-4260M, MSI-6360, MSI-9600HT)		\$240.00
139381	MSI-8000 Remote Display		\$1,320.00
173014	RF Rugged remote control (requires MSI-6360 equipped with RF modem)		\$330.00
153591	MSI-8000HD RF remote display AC powered ( no A/D)		\$1,440.00
178281	MSI-8004HD AC, red/green 85~264 VAC, 47~440 Hz, 120~370 VDC	-	\$1,980.00
178004	4in LaserLight2 MSI RF		\$2,370.00
178006	6in LaserLight2 MSI RF		\$2,810.00
159221	Universal crane scale transport cart	180 lb	\$1,250.00
Consult	AC power supply	-	\$535.00
Consult	Anti-heat shield	-	\$1,010.00
Consult	Audible alarm	-	Consult
176956	MSI Wi-Fi modem option kit (used in MSI-4260, MSI-4260M, MSI-6360, MSI-9600HT)	-	\$465.00
<b>6360 Sub Hook with Shackle</b>			
Consult	500 to 10,000 lb, 6.5 ton shackle	-	Consult
Consult	20,000 to 30,000 lb, 17 ton shackle	-	Consult
Consult	50,000 lb, 25 ton shackle	-	Consult
Consult	70,000 lb, 40 ton shackle	-	Consult
Consult	100,000 lb, 55 ton shackle	-	Consult
<b>6360 Oversize Lifting Eye/Shackle</b>			
Consult	500 to 10,000 lb capacity	-	Consult
Consult	20,000 to 30,000 lb capacity, adapter with 25 ton shackle	-	Consult
Consult	50,000 to 70,000 lb capacity	-	Consult
Consult	100,000 lb capacity	-	Consult
<b>Accessories</b>			
150367	Battery assembly, 12 volt rechargeable	6.6 lb	\$135.00
138006	Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)	4 lb	\$330.00
138007	Universal 115/230 VAC, 50/60 Hz battery charger (UK plug standard)	4 lb	\$330.00
138008	Universal 115/230 VAC, 50/60 Hz battery charger (EC plug standard)	4 lb	\$330.00

CRANE SCALES



# Crane Scale Cart

Universal Transport and Storage Cart



## Standard Features

- Designed to hold MSI-4260, MSI-4260IS, MSI-4260M, MSI-4300, MSI-9600HT, MSI-6360
- Four swivel castors with brake
- Powder coated mild steel

## Specifications

**Warranty:**  
One-year limited

## Part Number/Price

Part #	Description	Est. Weight	Price
159221	Universal MSI Crane Scale Cart	180 lb	\$1,250.00
Consult	Modified versions of universal MSI Crane Scale Cart	-	Consult

CRANE SCALES

# MSI-7300 Dyna-Link 2

Digital Tension Dynamometer

CRANE SCALES



Shown with optional shackles

## Part Number/Price

Part #	Description	Resolution	Est. Weight	Price
139162	1,000 lb (500 kg) F/A	0.5 lb (0.2 kg)	8 lb	\$1,610.00
139163	2,500 lb (1,250 kg) F/A	1 lb (0.5 kg)	9 lb	\$1,610.00
139164	5,000 lb (2,500 kg) F/A	2 lb (1.0 kg)	9 lb	\$1,610.00
139165	10,000 lb (5,000 kg) F/A	5 lb (2.0 kg)	11 lb	\$1,730.00
139166	25,000 lb (12,500 kg) F/A	10 lb (5 kg)	19 lb	\$2,310.00
139167	50,000 lb (25,000 kg) F/A	20 lb (10 kg)	29 lb	\$3,000.00
139168*	100,000 lb (50,000 kg) F/A	50 lb (20 kg)	65 lb	\$3,910.00
Optional Configurations (for connectivity to MSI-8000 RF Remote Display) F/A				
139441	1,000 lb (500 kg) RF module	0.5 lb (0.2 kg)	8 lb	\$1,810.00
139442	2,500 lb (1,250 kg) RF module	1 lb (0.5 kg)	9 lb	\$1,810.00
139443	5,000 lb (2,500 kg) RF module	2 lb (1 kg)	9 lb	\$1,810.00
139444	10,000 lb (5,000 kg) RF module	5 lb (2 kg)	11 lb	\$1,930.00
139445	25,000 lb (12,500 kg) RF module	10 lb (5 kg)	19 lb	\$2,500.00
139446	50,000 lb (25,000 kg) RF module	20 lb (10 kg)	29 lb	\$3,190.00
139447*	100,000 lb (50,000 kg) RF module	50 lb (20 kg)	65 lb	\$4,110.00
159168*	120,000 lb (60,000 kg) RF module includes MSI-8000	50 lb (20 kg)	57 lb	Consult
159169*	180,000 lb (90,000 kg) RF module includes MSI-8000	100 lb (50 kg)	74 lb	Consult
159170*	260,000 lb (130,000 kg) RF module includes MSI-8000	100 lb (50 kg)	100 lb	Consult
159171*	380,000 lb (190,000 kg) RF module includes MSI-8000	200 lb (100 kg)	169 lb	Consult
159172**	550,000 lb (275,000 kg) RF module includes MSI-8000	200 lb (100 kg)	336 lb	Consult
MSI-7300 Dyna-Link 2 Wi-Fi				
176813	1,000 lb (500 kg) F/A with Wi-Fi	0.5 lb (0.2 kg)	8 lb	\$1,750.00
176814	2,500 lb (1,250 kg) F/A with Wi-Fi	1 lb (0.5 kg)	9 lb	\$1,840.00
176815	5,000 lb (2,500 kg) F/A with Wi-Fi	2 lb (1.0 kg)	9 lb	\$1,840.00
176816	10,000 lb (5,000 kg) F/A with Wi-Fi	5 lb (2.0 kg)	11 lb	\$1,970.00
176817	25,000 lb (12,500 kg) F/A with Wi-Fi	10 lb (5 kg)	19 lb	\$2,550.00
176818	50,000 lb (25,000 kg) F/A with Wi-Fi	20 lb (10 kg)	29 lb	\$3,340.00
176819	100,000 lb (50,000 kg) F/A with Wi-Fi	50 lb (20 kg)	65 lb	\$4,200.00
176827	120,000 lb (60,000 kg) F/A with Wi-Fi	50 lb (20 kg)	57 lb	Consult
176828	180,000 lb (90,000 kg) F/A with Wi-Fi	100 lb (50 kg)	74 lb	Consult
176829	260,000 lb (130,000 kg) F/A with Wi-Fi	100 lb (50 kg)	100 lb	Consult
176830	380,000 lb (190,000 kg) F/A with Wi-Fi	200 lb (100 kg)	169 lb	Consult
176831	550,000 lb (275,000 kg) F/A with Wi-Fi	200 lb (100 kg)	336 lb	Consult

\* 500% Ultimate overload

\*\* 440% Ultimate overload

## Standard Features

- LCD display
- Two C-cell alkaline batteries for capacities up to 10,000 lb (5,000 kg)
- Two D-cell alkaline batteries for capacities 25,000 lb (12,500 kg) and above

## Options

(Contact MSI for application consultation)

- Crosby® top and bottom shackles
- Portable transport case
- Serial output cable
- Rugged remote control (control for On/Off, Zero, Tare and other functions)
- RF modem install for connectivity to MSI-8000, MSI-8000HD RF, MSI-8004HD RF remote display and TranSend. Typically 100 to 300 ft, line of sight, for longer range consult factory.
- Heavy capacity configurations (60 to 275 Ton)
- Audible alarm
- Wi-Fi communication is available for specialty applications

## Specifications

### Accuracy:

- 0.1% FS of rated capacity (up to 50 ton)
- 0.5% FS of rated capacity (50 ton and above)

### Enclosure:

- NEMA Type 4, IP65, anodized corrosion-resistant finish

### Material:

- 2024 aircraft grade aluminum
- Capacities above 100 K have zinc plated enclosures and 4340 load cell bodies

### Design Overload:

- 200% Safe/700% Ultimate\* (except where noted)

### Functions:

- On/Off, Zero, Hi-Speed Peak Hold, Setpoints, Total, Tare, Auto-Off, Motion Filter

### Display:

- 6 digit, 1.00 in (25 mm) LCD

### Displayable Units:

- Pounds, kilograms, kilonewtons, tons, metric tons

### LED Annunciators:

- Function 1, Function 2, Setpoint 1, Setpoint 2

### LCD Annunciators:

- Net, Center of Zero, Stable, Battery Test, Peak Hold, Total

### Power:

- Two each C-cell alkaline batteries for capacities up to 10,000 lb; two each D-cell alkaline batteries for capacities 25,000 to 100,000 lb

### Operating Time:

- From 150 to 300 hours in typical use depending on unit capacity and battery configuration. Approximately 25 to 30 hours with optional RF modem link installed.

### Operating Temperature:

- 4 °F to 140 °F (-20 °C to 60 °C)

### Calibration:

- Digital

### Filtering:

- OFF, LO, HI selectable

### Data Output:

- Serial RS-232

### Warranty:

- Two-year limited

# MSI-7300 Dyna-Link 2

Digital Tension Dynamometer

## Options/Accessories

Part #	Description	Est. Weight	Price
151357	Shackle anchor, bolt type 3.25 ton for 500 lb-5,000 lb unit	3 lb/pair	Consult
151355	Shackle anchor, bolt type 6.5 ton for 10,000 lb unit	6 lb/pair	Consult
141992	Shackle anchor, bolt type 17 ton for 25,000 lb unit	39 lb/pair	Consult
151356	Shackle anchor, bolt type 25 ton for 50,000 lb unit	63 lb/pair	Consult
146336	Shackle anchor, bolt type 55 ton for 100,000 lb unit	103 lb	Consult
151359	Shackle anchor, bolt type 85 ton for 180,000 lb unit	206 lb/pair	Consult
151360	Shackle anchor, bolt type 120 ton for 260,000 lb unit	225 lb/pair	Consult
151361	Shackle anchor, bolt type 175 ton for 380,000 lb unit	665 lb/pair	Consult
151358	Shackle anchor, bolt type 250 ton for 550,000 lb unit	1,300 lb/pair	Consult
139381	MSI-8000 RF remote display (requires MSI-7300 equipped with optional RF modem)	5 lb	\$1,320.00
153591	MSI-8000HD RF remote display, A/C powered with tilt stand (requires MSI-7300 equipped with optional RF modem)	5 lb	\$1,440.00
165313	Heavy duty Pelican transport case with precision cut. Heavy duty foam for units up to 10,000 lb capacity	10 lb	\$365.00
145076	Transport crate for 25,000 lb and 50,000 lb capacity unit	35 lb	\$440.00
145073	Transport crate for 100,000 lb capacity unit	42 lb	Consult
139470	RS-232 serial cable for MSI-7300	1 lb	\$155.00
178004	LaserLight2, 4 in (101 mm) six-digit RF scoreboard (requires MSI-7300 equipped with optional RF modem)	21 lb	\$2,370.00
178006	LaserLight2, 6 in (152 mm) six-digit RF scoreboard (requires MSI-7300 equipped with optional RF modem)	37 lb	\$2,810.00
149549	Universal 115/ 230 VAC 50/60 Hz (NA plug standard) battery charger for MSI-8000 remote display	3 lb	\$155.00
182223	12V car charger adapter for MSI-8000	1 lb	\$135.00
173014	Rugged remote control (requires MSI-7300 equipped with optional RF modem)	-	\$330.00
150964	RS-232 13 ft (4 m) serial cable for MSI-8000	1 lb	\$190.00
139438	Audible setpoint	-	\$420.00
149550	Battery charger for MSI-8000 EC plug	-	\$150.00

CRANE SCALES

# MSI Dyna-Clamp

Tension Meter



Approvals



## Part Number/Price

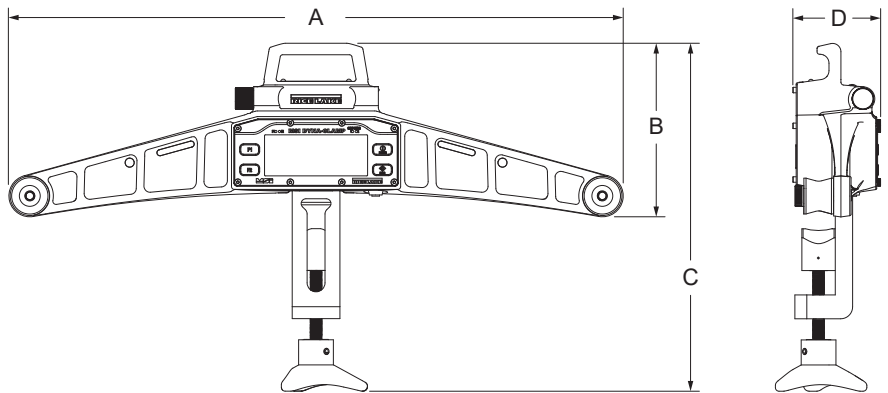
Part #	Description	Tension	Est. Weight	Price
189581	MSI Dyna-Clamp tension meter	12,500 lbf (5,670 kgf / 55.60 kN)	15 lb	\$4,860.00

## Options/Accessories

Part #	Description	Price
198418	Heavy-duty carrying case	\$610.00

## Dimensions

A	25.70 in (652.80 mm)	C	13.75 in-15.50 in (349.25 mm-393.70 mm)
B	7.30 in (185.50 mm)	D	3.70 in (94 mm)



## Standard Features

- Dual line LCD display
- Two user-programmable function keys
- IP65 anodized aluminum frame
- RS-232 port
- Up to 8 factory calibrations included at no additional cost

## Options

(Contact MSI for application consultation)

- Heavy-duty carrying case

## Specifications

### Power:

Battery operated two AA -cell 1.5 V alkaline batteries (can be replaced with rechargeable NiMH cells)

### Max Tension:

12,500 lbf (5,670 kgf / 55.60 kN)

### Operating Time:

Alkaline AA -cells: 24 hours

### Wire Rope:

Diameter 3/16 in (5 mm) to 1 in (25 mm)

### Accuracy:

±3% of capacity

### Units:

lbf, kgf, kN

### Resolution:

Standard: 2,500 divisions

### Display:

Primary display (bottom) six, 0.7 in (18 mm) numeric digits

Secondary display (top) eight, 0.5 in (13 mm) numeric digits

### Function Keys:

Two programmable keys (user-defined) – F1, F2 (test, unit, print, scroll, actfun)

Two permanent keys – power, zero

### Setpoints:

Two dedicated setpoints for minimum and maximum allowable wire rope tension (LEDs for measurements outside of allowable range)

### Auto-Off Mode:

Prolongs battery life by turning power OFF after 15, 30, 45 or 60 minutes of no activity (user determined)

### Enclosure:

IP65 powder-coated aluminum frame

### Calibration:

Up to eight factory programmed wire rope calibrations

### Operating Temperature:

-4 °F to 122 °F (-20 °C to 50 °C)

### Operator Use:

Outdoor

### Storage:

Indoor

### Warranty:

Two-year limited

### Approvals:

CE Marked

UKCA

OVERHEAD  
WEIGHING



Part Number/Price

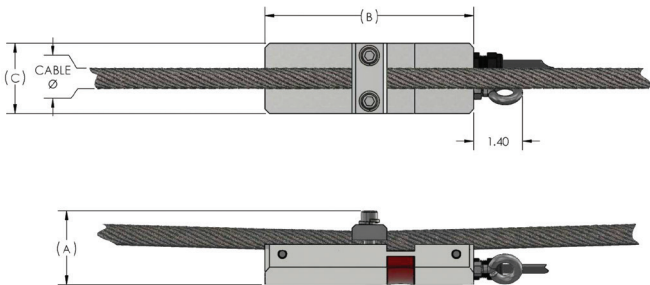
Part #	Description	Price
179080	Load cell assembly Clamp-On for 3/8 to 1/2 in wire rope	\$750.00
179082	Load cell assembly Clamp-On for 9/16 to 3/4 in wire rope	\$890.00
188816	Kit with SCT-2200 for 3/8 to 1/2 in wire rope	\$1,330.00
188817	Kit with SCT-2200 for 9/16 to 3/4 in wire rope	\$1,470.00

Larger diameter clamp ons available - call for pricing

Dimensions

Cable Range	P/N	A	B	C
3/8 - 1/2	179080	Cable + 1.70	6.00	2.00
9/16-3/4	179082	Cable + 1.67	6.00	2.00

\*8mm cable can be used with PN 179080



Standard Features

- ETD 150 construction
- Accommodates up to 3/4 in wire rope size
- Larger diameter clamp-on available - call for pricing

Options

(Contact MSI for application consultation)

- Custom sizes available on request
- Pair with an SCT transmitter for basic safety functions

Specifications

System Accuracy of Calibrated Capacity:  
3 to 5%

Material:  
4340 steel, zinc plated

Output Resistance:  
350 ohm

IP Rating:  
IP68

Cable Color Code:  
Red +Excitation  
Black –Excitation  
Green +Signal  
White –Signal

Cable Length:  
20 ft integral cable with blunt end termination



Optional SCT-2200 transmitter



## Standard Features

- Internally gauged load pin
- Idler sheave or dead end pin preferred location
- Minimum 5:1 safety factor
- 17-4 stainless steel construction
- $\pm 1\%$  to 3% accuracy of hoist capacity
- -40 °F to 140 °F standard operating temperature (other temperature compensated ranges available)

(Contact MSI for application consultation)

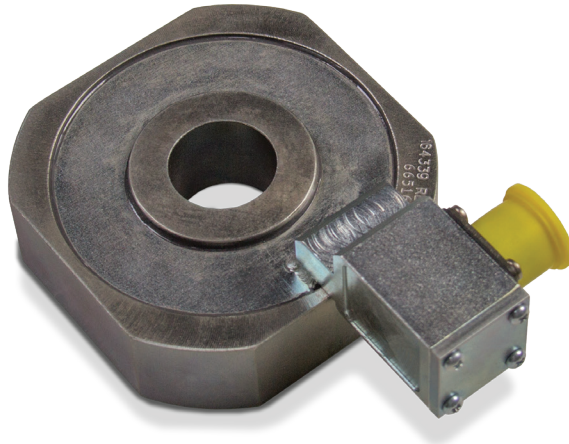
A key component for MSI's integrated overhead weighing solutions is the Load Pin Sensor. Typically designed and manufactured specifically to each integrated solution, the MSI load pin is strictly industrial grade. Each load pin design is precision machined from 17-4 stainless steel for safety, strength and corrosion resistance.

Each strain gauge location is precisely calculated and correctly placed in the optimum concentrated stress area of each installation. This MSI applied engineering process ensures the most efficient and accurate performance for each specific installation.

MSI load pin designs apply only internally mounted strain gauges for complete protection from the outside environment.

To receive a quotation for a load pin sensor to meet your application requirements, complete the load pin questionnaire on page 197 or online at [www.ricelake.com/questionnaires](http://www.ricelake.com/questionnaires) or contact an MSI overhead weighing specialist for further application assistance.





## Standard Features

- Designed to be placed above the trunnion of a load block, this integrated low-profile load cell eliminates headroom loss
- Off-axis compensation

(Contact MSI for application consultation)

## Specifications

### Accuracy (Static Load):

0.5 to 1% system accuracy of rated capacity

### Material:

4340 alloy steel, zinc plated

### IP Rating:

IP67

### Resistance:

700 ohm

## Part Number/Price

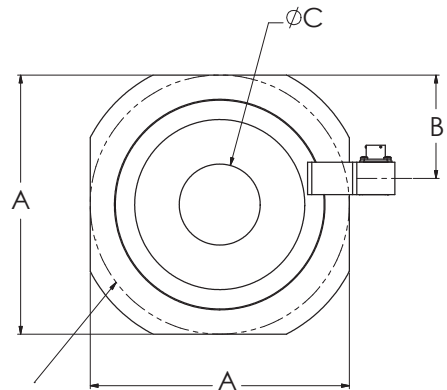
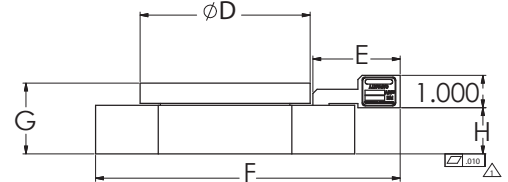
Part #	Description	Est. Weight	Price
160651	10,000 lb/5,000 kg capacity	5 lb	Consult
163595	20,000 lb/10,000 kg capacity	10 lb	Consult
163596	40,000 lb/20,000 kg capacity	20 lb	Consult
163829	60,000 lb/30,000 kg capacity	30 lb	Consult
163597	80,000 lb/40,000 kg capacity	34 lb	Consult
163598	100,000 lb/50,000 kg capacity	38 lb	Consult
159550	120,000 lb/60,000 kg capacity	60 lb	Consult
163599	160,000 lb/80,000 kg capacity	105 lb	Consult
163600	200,000 lb/100,000 kg capacity	215 lb	Consult

## Options/Accessories

Part #	Description	Price
165978	Load cell interface cable to TranSend™, 6.5 ft	\$315.00
165979	Load cell interface cable to TranSend, 10 ft	\$340.00
165980	Load cell interface cable to TranSend, 16 ft	\$360.00
165989	Load cell interface cable to TranSend, 20 ft	\$390.00
165990	Load cell interface cable to TranSend, 25 ft	\$420.00
165991	Load cell interface cable to TranSend, 32 ft	\$485.00
134498	Load cell interface cable to CellScale™, 5 ft	\$350.00
134495	Load cell interface cable to CellScale, 10 ft	\$380.00
134500	Load cell interface cable to CellScale, 15 ft	\$400.00
134499	Load cell interface cable to CellScale, 20 ft	\$430.00
134501	Load cell interface cable to CellScale, 25 ft	\$460.00

## Dimensions

Part #	Capacity	A	B	C (+0.005,-0.000)	D	E	F	G	H	Required Hook Shank Diameter (+0.000,-0.005)
160651	10,000 lb	3.500	1.350	1.005	2.450	1.880	4.905	1.500	1.000	1.000
163595	20,000 lb	6.000	2.500	1.505	3.500	2.443	7.405	1.750	1.250	1.500
163596	40,000 lb	7.500	3.150	2.005	5.000	2.580	8.905	2.000	1.375	2.000
163829	60,000 lb	8.000	3.190	2.505	5.250	2.695	9.405	2.188	1.500	2.500
163597	80,000 lb	8.500	3.650	3.505	5.750	2.680	9.905	2.313	1.500	3.500
163598	100,000 lb	9.125	3.873	4.005	7.000	2.382	10.530	2.668	1.875	4.000
159550	120,000 lb	9.125	3.873	4.005	7.000	2.382	10.530	2.813	2.000	4.000
163599	160,000 lb	16.000	7.030	6.005	14.500	2.955	17.405	4.625	2.500	6.000
163600	200,000 lb	16.000	7.030	6.005	14.500	2.955	17.405	5.125	3.000	6.000



SHOWN AS REFERENCE  
FOR ROUND LOAD CELLS

# MSI Tension Link

Load Cell



## Standard Features

- 4340 steel construction
- Mil spec connector
- 7:1 safety factor

## Options

(Contact MSI for application consultation)

- Crosby® top and bottom shackles

## Specifications

**Input Resistance:**

1,500 ohm

**Output Resistance:**

2,000 ohm

**Full Scale Output:**

0.8 mV/V

**Connector Pin Out:**

A: EX +

B: Sig +

C: Sig —

D: EX —

**Accuracy:**

0.1% sensor accuracy

**Material:**

4340 steel

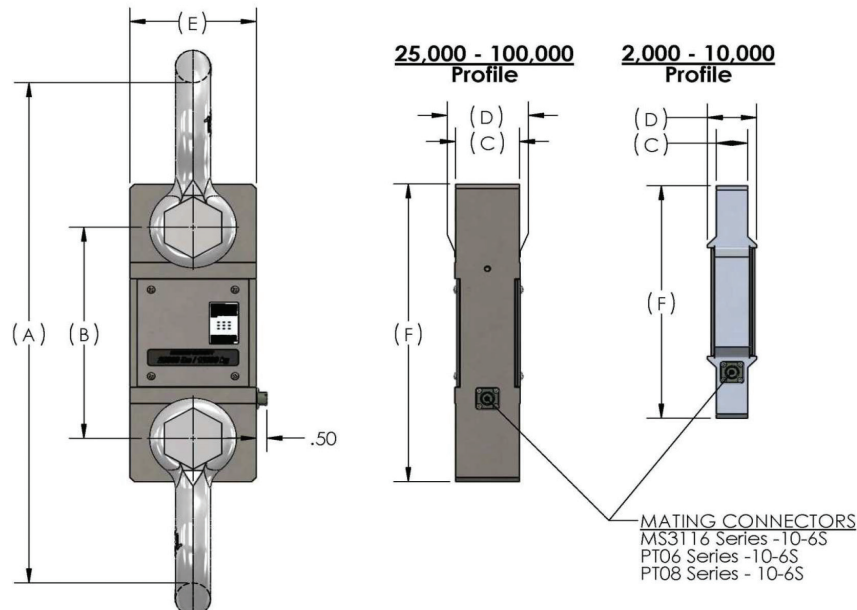
## Part Number/Price

Part #	Description	Price
181907	2K 7200 style load cell only	Consult
181908	5K 7200 style load cell only	Consult
181909	10K 7200 style load cell only	Consult
178093	25K 7200 style load cell only	Consult
178094	50K 7200 style load cell only	Consult
181910	100K 7200 style load cell only	Consult
134505	Mating cable assembly, 10 ft	\$175.00

Contact factory for higher capacities

## Dimensions

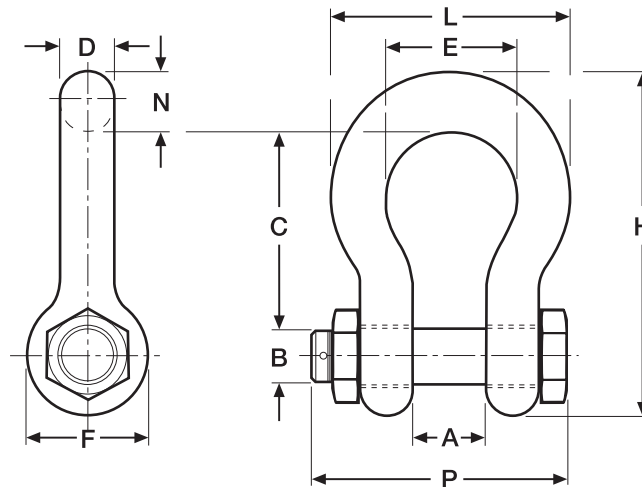
Capacity (lbs)	P/N	Load Cell Material	(A) Headroom Loss	(B) C-C Length	(C) Lug Thk	(D) Body Thk	(E) Body Width	(F) Body Length	Lug Hole	Crosby Shackle
2,000	181907	Aluminum	13.50 in	8.00 in	0.99 in	2.13 in	4.50 in	9.75 in	0.78 in	3-1/4 T 151357
5,000	181908	Aluminum	13.50 in	8.00 in	0.99 in	2.13 in	4.50 in	9.75 in	0.78 in	3-1/7 T 151357
10,000	181909	Aluminum	16.13 in	8.50 in	1.35 in	2.13 in	5.37 in	10.75 in	1.05 in	6-1/2 T 151355
25,000	178093	Steel	22.39 in	9.26 in	2.24 in	2.24 in	4.80 in	12.76 in	1.67 in	17 T 141992
50,000	178094	Steel	25.74 in	9.76 in	2.74 in	2.81 in	5.43 in	13.76 in	2.05 in	25 T 151356
100,000	181910	Steel	28.49 in	10.74 in	3.09 in	3.09 in	6.86 in	15.74 in	2.30 in	55 T 146336



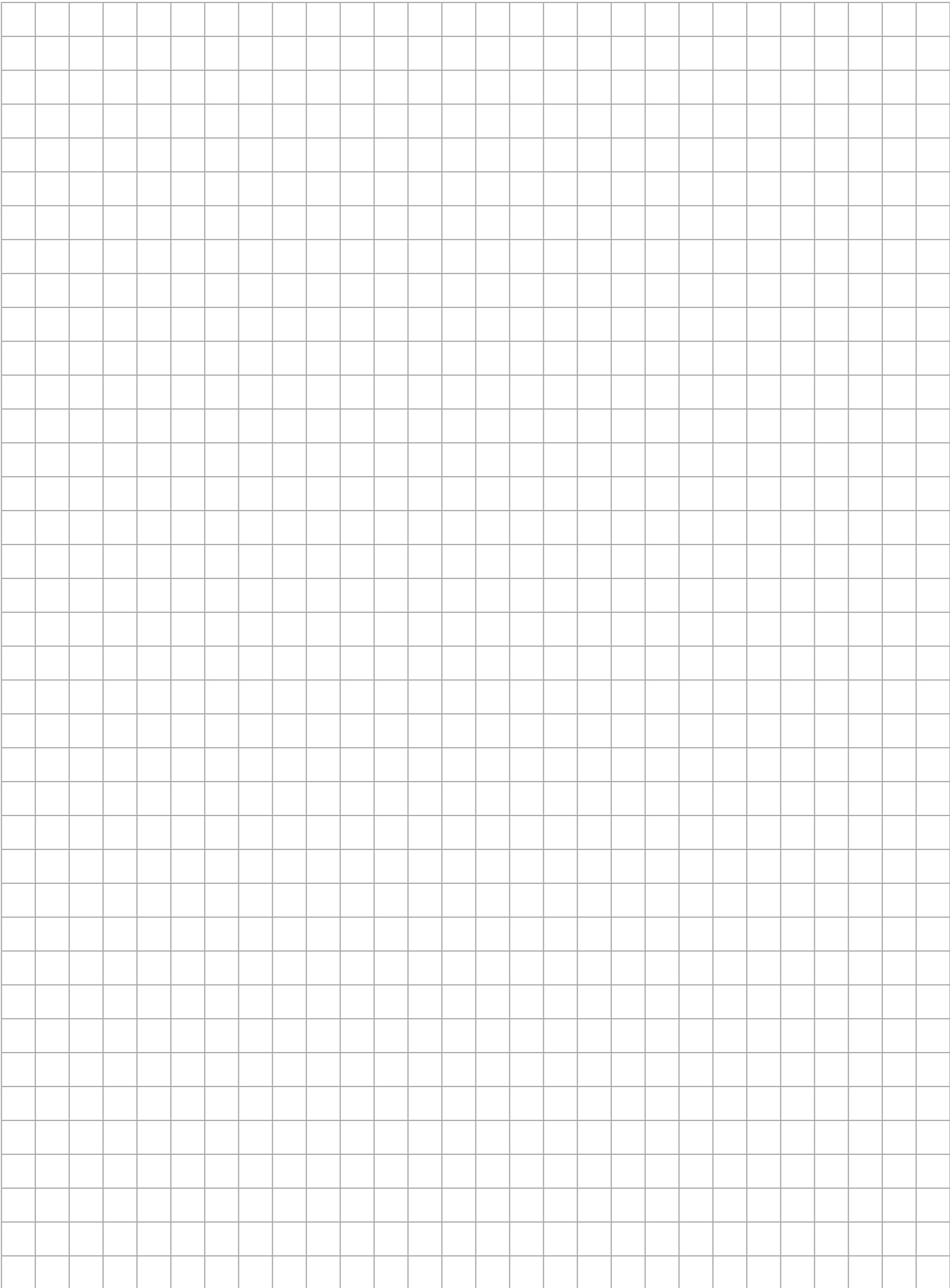
# Shackle Dimensions

## Part Number/Price

Part #	W.L.L. Tons	Size	A	B	C	D	E	F	H	L	N	P	Weight	Price
151357	3 1/4	0.63 in	1.06 in	.75 in	2.38 in	0.63 in	1.69 in	1.56 in	4.22 in	2.94 in	0.69 in	N/A	1.58 lb	Consult
151355	6 1/2	0.88 in	1.44 in	1.00 in	3.31 in	0.88 in	2.28 in	2.13 in	5.75 in	4.03 in	0.97 in	5.00 in	3.95 lb	Consult
141992	17	1.50 in	2.38 in	1.63 in	5.75 in	1.50 in	3.88 in	3.63 in	9.88 in	6.88 in	1.62 in	8.25 in	19.50 lb	Consult
151356	25	1.75 in	2.88 in	2.00 in	7.00 in	1.75 in	5.00 in	4.32 in	11.88 in	8.50 in	2.12 in	9.59 in	31.30 lb	Consult
146334	30	1.50 in	2.38 in	1.63 in	5.75 in	1.50 in	3.88 in	3.63 in	9.88 in	6.88 in	1.62 in	8.25 in	20.80 lb	Consult
146335	40	1.75 in	2.88 in	2.00 in	7.00 in	1.75 in	5.00 in	4.32 in	11.88 in	8.50 in	2.12 in	9.59 in	33.91 lb	Consult
146336	55	2.00 in	3.25 in	2.25 in	7.75 in	2.00 in	5.75 in	5.00 in	13.38 in	9.75 in	2.00 in	11.00 in	51.75 lb	Consult
151359	85	2.5 in	4.12 in	2.75 in	10.50 in	2.72 in	7.25 in	5.69 in	17.84 in	12.87 in	3.12 in	13.58 in	96.00 lb	Consult
151360	120	3.00 in	5.00 in	3.25 in	13.00 in	3.00 in	7.88 in	6.50 in	21.50 in	14.50 in	3.63 in	16.50 in	178.00 lb	Consult
83455	120	3 in	5.00 in	3.25 in	13.00 in	3.11 in	7.88 in	6.50 in	21.50 in	14.36 in	3.63 in	15.13 in	178.00 lb	Consult
151361	175	4.00 in	5.50 in	4.25 in	14.50 in	4.00 in	10.00 in	9.00 in	25.69 in	18.38 in	4.56 in	19.75 in	338.00 lb	Consult
151358	250	4 in	8.50 in	5.00 in	20.00 in	4.50 in	13.00 in	12.00 in	35.00 in	24.50 in	6.50 in	22.68 in	600.00 lb	Consult
<b>Oversized Shackles</b>														
148497	40	1.75 in	2.88 in	2.00 in	10.00 in	2.25 in	6.00 in	4.32 in	15.35 in	10.50 in	2.25 in	9.00 in	45.00 lb	Consult
148393	40	2.25 in	2.88 in	2.00 in	12.50 in	2.25 in	8.00 in	4.32 in	17.85 in	12.50 in	2.25 in	10.00 in	90.00 lb	Consult
148394	50	2.00 in	3.25 in	2.25 in	12.25 in	2.50 in	8.00 in	5.00 in	18.50 in	13.00 in	2.50 in	11.00 in	72.00 lb	Consult
<b>Shims</b>														
146534	(For use with 50,000 ton/70,000 ton systems)													Consult



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# Indicators / Controllers

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# 1280 Enterprise™ Series

Programmable Color Touchscreen Weight Indicator/Controller



## Specifications

### Power:

AC voltages: 100 to 240 VAC; 50/60 Hz  
DC voltages: 11 to 30 VDC

### Power Consumption:

60W

### Excitation Voltage:

10 VDC (+/- 5 VDC)  
16 × 350 ohm or 32 × 700 ohm load cells per A/D card

### Analog Signal Input Range:

-60 mV to 60 mV

### Analog Signal Sensitivity:

0.3 µV/graduation minimum at 7.5 Hz to 120 Hz  
1.0 µV/graduation recommended

### A/D Sample Rate:

7.5 to 960 Hz, software selectable

### Resolution:

Internal: 8,000,000 counts  
Display: 1,000,000

### System Linearity

± 0.01% full scale

### Digital I/O:

Eight I/O channels on CPU board  
Optional 24-channel I/O expansion boards

### Communication Ports:

Port 1 & 2: Full duplex RS-232 with CTS/RTS, RS-422/485  
Baud rate: 1200 to 115200  
Port 3: USB 2.0 Device (Micro)  
USB host: (2) Type A connectors max 500 mA  
Ethernet: Wired 10/100 Auto-MDX  
Ethernet: Wireless 802.11 b/g/n 2.4GHz

### Onboard:

Selectable filters: Three stage, Adaptive or Damping  
Embedded Linux® OS  
8 GB eMMC (system use)  
1 GB DDR3 RAM  
460 MB onboard database (SQLite) storage  
Up to 32 GB micro SD card (sold separately)

### Display:

Seven-inch, 800 × 480 pixel, 500 or 1,000 NIT  
Twelve-inch, 1280 × 800 pixel, 1,500 NIT

### Keys/Buttons:

22-key membrane panel, tactile buttons, on-screen keyboard for text and numeric entry, USB port for flash drive, keyboard and printer

### Temperature Range:

Certified: 14 °F to 104 °F (-10 °C to 40 °C)  
Operating: -4 °F to 131 °F (-20 °C to 55 °C)

### Rating/Material:

Universal: IP69K  
Wall Mount: IP66  
Panel Mount: IP69K, NEMA Type 4X and 12  
Stainless steel 304 enclosure

### Weight:

Universal enclosure: 11 lb (4.9 kg)  
Panel mount enclosure: 8 lb (3.6 kg)  
Wall mount enclosure: 23 lb (10.4 kg)  
Panel mount 7 in touch-only: 7 lb (3.1 kg)  
Panel mount 12 in touch-only: 10 lb (4.5 kg)

### Warranty:

Two-year limited

### EMC Immunity:

10 V/m

### Approvals:

NTEP CC 15-001/Class III/IIIL 10,000d  
Measurement Canada AM-5980C,  
Class III/IIIL HD 10,000d  
OIML R76/2006-A-NL1-19.23  
Class III/IIIL 10,000d  
EU Test Certificate TC8596  
UL/cUL Listed (Universal, Wall Mount)  
UL/cUL Recognized (Panel Mount)  
CE Marked

## Approvals



## Standard Features

- Customizable color touchscreen with graphical user interface
- User-defined softkeys, icons and graphics
- Tactile keypad for scale operations, numeric entry and navigation
- On-screen keyboard available during entry mode (or external keyboard)
- Built-in web server for remote access, systems integration and data monitoring
- Multi-language operation and text entry
- Supports eight scales within five different kinds:
  - Analog load cell, multi-range/interval weighing
  - Total scale summing
  - Serial input scales
  - iQUBE<sup>2</sup> scales
  - Program scales
- Six smart card slots for additional scale channels, serial ports, digital inputs and outputs, analog outputs and protocol interfaces
- iRite™ Programming Software
  - Five built-in applications: Truck in/out, recipe storage, filling/dosing, counting, checkweighing
  - Customizable user programs with event-based functions
  - 150 built-in functions for common processes & data tables
  - Customize and transfer data via email, FTP server and networked printers
  - Display data with line charts or bar graphs
- Dual-port assignments for weight tickets, credit cards, smart pass, HID readers, etc.
- iRite reporting or iQUBE2 alerts
- Email, USB, Ethernet TCP/IP, Wi-Fi Direct®, two serial ports RS-232 or RS-485
- Alibi memory captures serial port transmissions
- Four configurable data-stream formats for PC, printers and remote displays
- 100 setpoints, 18 configurable setpoint types
- Eight digital I/O for control and pulse count
- Three different enclosure types: universal with tilt stand, panel mount and wall mount

# 1280 Enterprise™ Series

Programmable Color Touchscreen Weight Indicator/Controller



7-inch model with keypad

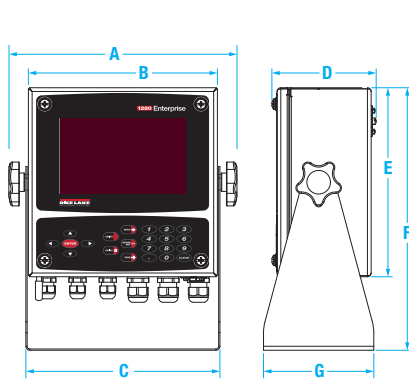


7-inch touch-only model

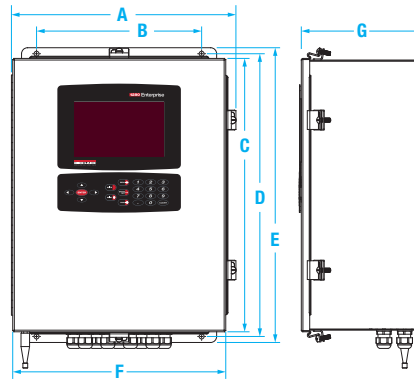


12-inch touch-only model

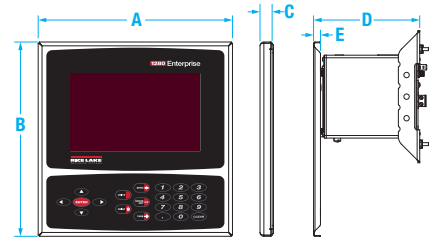
## Numeric Keypad Models:



1280-2



1280-3



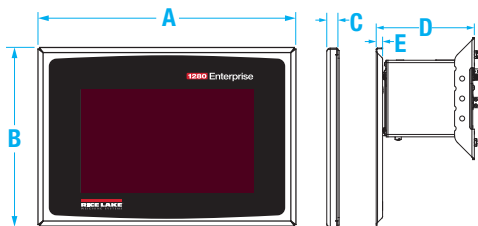
1280-4

Universal (1280-2) Dimensions			
A	10.86 in (276 mm)	E	9.00 in (229 mm)
B	9.00 in (229 mm)	F	12.50 in (318 mm)
C	9.24 in (235 mm)	G	5.25 in (133 mm)
D	4.97 in (126 mm)		

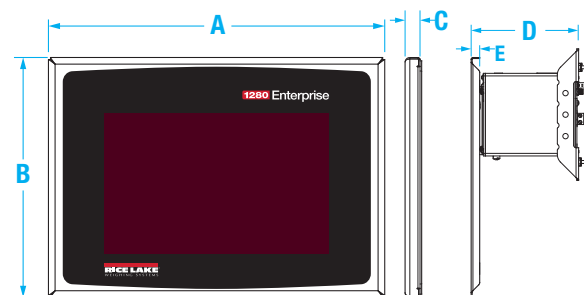
Wall Mount (1280-3) Dimensions			
A	14.92 in (379 mm)	E	19.64 in (499 mm)
B	11.00 in (279 mm)	F	14.20 in (361 mm)
C	18.22 in (463 mm)	G	8.08 in (205 mm)
D	18.84 in (479 mm)		

Panel Mount (1280-4) Dimensions			
A	9.00 in (229 mm)	D	5.34 in (136 mm)
B	9.00 in (229 mm)	E	0.32 in (8 mm)
C	0.58 in (15 mm)		

## Touch-only Models:



1280-5



1280-6

7-inch Touch-only (1280-5) Dimensions			
A	9.00 in (229 mm)	D	5.34 in (136 mm)
B	6.22 in (158 mm)	E	0.32 in (8 mm)
C	0.58 in (15 mm)		

12-inch Touch-only (1280-6) Dimensions			
A	14.00 in (356 mm)	D	5.34 in (136 mm)
B	10.00 in (254 mm)	E	0.32 in (8 mm)
C	0.58 in (15 mm)		

INDICATORS/  
CONTROLLERS

# 1280 Enterprise™ Series

Programmable Color Touchscreen Weight Indicator/Controller

## Generate a 1280 Enterprise Series Model Reference Code

This reference number can be used at time of ordering.

**ENCLOSURE TYPE**

- 1 Universal (1280-2)
- 2 Panel (1280-4)
- 3 Wall (1280-3)
- 4 Touch-only Panel 7 in (1280-5)
- 5 Touch-only Panel 12 in (1280-6)

**POWER TYPE**

- 1 AC
- 2 DC

**CORD TYPE**

- 1 US Plug Universal
- 2 Brazil Plug Universal
- 3 Euro Plug Universal
- 4 US Plug Wall
- 5 Euro Plug Wall
- 6 Brazil Plug Wall
- 7 UK Plug Universal
- 8 AU/NZ Plug Universal
- 9 UK Plug Wall
- A AU/NZ Plug Wall

**DISPLAY TYPE**

- 1 500NIT 7in Universal
- 2 1000NIT 7in Universal
- 3 500NIT 7in Panel/Wall
- 4 1000NIT 7in Panel/Wall
- 5 1500NIT 12 in Panel

**OPTION CARDS** ALL SLOTS MUST BE FILLED
 

A Blank  
If no option, controller will need 6 blanks

I Analog Input

B Single A/D Scale

J Ethernet/IP

C Dual A/D Scale

K DeviceNet

D 24 Channel Digital I/O

L ProfiNet

E Dual Serial Channel

M Modbus TCP

F 4-dry Contact Relay

N Profibus DP

G Single Analog Out

O EtherCat

H Dual Analog Out

P PowerLink

INDICATORS / CONTROLLERS

### Part Number

Part #	Reference #	Description	Power	Display	Option Installed	Price
<b>Universal Enclosure with 500 NIT Display (1280-2)</b>						
<b>171427</b> †	1111BAAAAA	1280 Universal	115 VAC	500 NIT	Single Scale Card	\$3,450.00
<b>171441</b> ††	1131BAAAAA	1280 Universal	100-240 VAC	500 NIT	Single Scale Card	\$3,450.00
<b>171662</b> †	1111CAAAAA	1280 Universal	115 VAC	500 NIT	Dual Scale Card	\$3,625.00
<b>172188</b> ††	1131CAAAAA	1280 Universal	100-240 VAC	500 NIT	Dual Scale Card	\$3,625.00
<b>Panel Mount Enclosure with 500 NIT Display (1280-4)</b>						
<b>171663</b>	21-3BAAAAA	1280 Panel Mount	100-240 VAC	500 NIT	Single Scale Card	\$3,250.00
<b>172186</b>	21-3CAAAAA	1280 Panel Mount	100-240 VAC	500 NIT	Dual Scale Card	\$3,425.00
<b>Wall Mount Enclosure with 500 NIT Display (1280-3)</b>						
<b>173673</b> †	3143BAAAAA	1280 Wall Mount	115 VAC	500 NIT	Single Scale Card	\$3,850.00
<b>174143</b> ††	3153BAAAAA	1280 Wall Mount	100-240 VAC	500 NIT	Single Scale Card	\$3,850.00
<b>174144</b> †	3143CAAAAA	1280 Wall Mount	115 VAC	500 NIT	Dual Scale Card	\$4,025.00
<b>174145</b> ††	3153CAAAAA	1280 Wall Mount	100-240 VAC	500 NIT	Dual Scale Card	\$4,025.00
<b>Wall Mount Enclosure with 1000 NIT Display (1280-3)</b>						
<b>172184</b> †	3144BAAAAA	1280 Wall Mount	115 VAC	1,000 NIT	Single Scale Card	\$3,950.00
<b>172185</b> ††	3154BAAAAA	1280 Wall Mount	100-240 VAC	1,000 NIT	Single Scale Card	\$3,950.00
<b>206563</b> †	3144CAAAAA	1280 Wall Mount	115 VAC	1,000 NIT	Dual Scale Card	\$4,125.00
<b>172187</b> ††	3154CAAAAA	1280 Wall Mount	100-240 VAC	1,000 NIT	Dual Scale Card	\$4,125.00
<b>Touch-only 7 inch with 500 NIT Display (1280-5)</b>						
<b>186618</b>	41-3BAAAAA	1280 Touch-only 7 in	100-240 VAC	500 NIT	Single Scale Card	\$3,350.00
<b>Touch-only 12 inch with 1500 NIT Display (1280-6)</b>						
<b>186465</b>	51-5BAAAAA	1280 Touch-only 12 in	100-240 VAC	1,500 NIT	Single Scale Card	\$3,975.00



† US plug (NA) - Type B



†† Euro Plug - Type E



(Brazil) - Type N



††† BS1363 (UK) - Type G



†††† AS 3112 (Australian) - Type I

# 1280 Enterprise™ Series

Programmable Color Touchscreen Weight Indicator/Controller

## Single A/D Scale



### Excitation Voltage:

10 VDC bi-polar, 4 or 6 wire sensing  
16 × 350 ohms per channel

### Analog Input Signal:

-10 to +40 mV

Part #	Description	Price
164085	Single scale A/D	\$375.00
166957	A/D sealing kit	\$13.00

## Dual A/D Scale



### Excitation Voltage:

10 VDC bi-polar, 4 or 6 wire sensing  
8 × 350 ohms per channel

### Analog Input Signal:

-10 to +40 mV

Part #	Description	Price
164683	Dual scale A/D	\$550.00
166957	A/D sealing kit	\$13.00

## Digital I/O



24 channels, configurable as inputs or outputs  
Inputs: 5 VDC max, active low; Outputs: 20 mA max per channel, active low; 5 VDC source available: 500 mA max

Part #	Description	Price
164684*	Digital I/O	\$350.00
170008	DIO adapter, includes 60 pin flat ribbon cable, 24 in	\$130.00
170009	DIO adapter, includes 60 pin round cable, 60 in	\$155.00
170736	DIO adapter, includes 60 pin cable and cord grip, 60 in	\$155.00

\* 24 I/O ribbon cable required.

## Dual Serial Channel



Two-channel, full duplex RS-232 with CTS/RTS, RS-485 or RS-422, 1200-115200 baud

Part #	Description	Price
164685	Dual serial channel	\$425.00

## Single Analog Out



16 bit, voltage output 0-10 VDC, current output 0-20mA, 4-20mA

Part #	Description	Price
165366	Single analog out	\$375.00

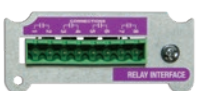
## Dual Analog Out



16 bit, voltage output 0-10 VDC, current output 0-20mA, 4-20mA

Part #	Description	Price
164686	Dual analog out	\$550.00

## Relay Card



Relay four-dry contact, max current  
3A @ 30 VDC, 3A @250VAC

Part #	Description	Price
164689	Relay card	\$425.00

## Analog Input



### Analog Input Signal:

±10 VDC, ±100 mV, 0-20 mA

Part #	Description	Price
164687	Dual analog input	\$650.00

## Data Exchange with PLC/DCS Systems

### EtherNet/IP



Part #	Description	Price
165792	EtherNet/IP, single port	\$600.00
208129	EtherNet/IP, dual port	\$750.00

### DeviceNet



Part #	Description	Price
165793	DeviceNet	\$600.00

### Profinet



Part #	Description	Price
165794	Profinet	\$600.00

### Modbus TCP



Part #	Description	Price
165796	Modbus TCP	\$600.00

### Profibus DP



Part #	Description	Price
165795	Profibus DP	\$600.00

### EtherCAT



Part #	Description	Price
179533	EtherCAT	\$600.00

### PowerLink



Part #	Description	Price
182319	PowerLink	\$850.00

INDICATORS /  
CONTROLLERS

# 1280 Enterprise™ Series

Programmable Color Touchscreen Weight Indicator/Controller

## Options/Accessories

To have your option factory installed, please specify when placing your order.

Part #	Description	Price
<b>Manuals and Software</b>		
167659	Manual, Technical	\$35.00
72809	Interchange database software	\$295.00
164939	8 GB Micro SD card with SD and USB adapter	\$25.00
195607	USB flash drive, 1 GB	\$9.00
<b>Extended Display Cable Length for Touch Only Models</b>		
182600	Display cable for 7 in (500 NIT) touch-only, 5 ft length	\$130.00
182601	Display cable for 7 in (500 NIT) touch-only, 10 ft length	\$160.00
187489	Display cable for 7 in (1,000 NIT) touch-only, 10 ft length	\$160.00
180027	Display cable for 12 in touch-only, 5 ft length	\$160.00
180028	Display cable for 12 in touch-only, 10 ft length	\$160.00
<b>Extended Touch Cable Length for Touch Only Models</b>		
180744	Touch cable for touch-only, 5 ft length	\$105.00
180745	Touch cable for touch-only, 10 ft length	\$105.00

## Primary Component Parts

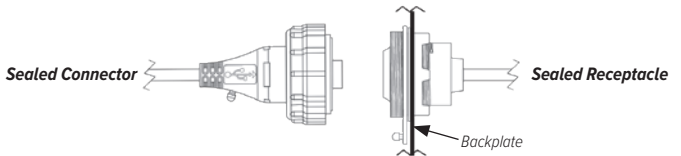
Part #	Description	Price
<b>Displays</b>		
163400	7 in 500 NIT display	\$350.00
163399	7 in 1,000 NIT display	\$450.00
182992	12 in 1,500 NIT display	\$875.00
<b>Boards</b>		
179992	CPU board assembly includes face plate and fan plate	\$1,100.00
199157	Controller box, CPU, power supply, backplane	\$1,500.00
<b>Power Supplies</b>		
202512	AC power supply board	\$180.00
202514	DC power supply board	\$180.00
<b>Overlays</b>		
164121	Keypad, for panel & wall mount	\$75.00
164120	Touchscreen, for panel & wall mount	\$130.00
161731	Keypad, for universal	\$75.00
161730	Touchscreen, for universal	\$130.00
178498	Touchscreen, for 7 in touch-only panel mount	\$210.00
176126	Touchscreen, for 12 in touch-only panel mount	\$400.00
178161	Clear protective overlay display (pack of 5)	\$63.00
178163	Clear protective overlay keypad (pack of 5)	\$63.00

## Cables and Receptacles

To have your option factory installed, please specify when placing your order.

Part #	Connector Type		Length	Price
USB Cables (Connector is a male plug)				
79074	A UNSEALED	B UNSEALED	2 m	\$35.00
124700	A SEALED	B SEALED	3 m	\$90.00
126477	A SEALED	A UNSEALED	3 m	\$90.00
124701	A SEALED	B UNSEALED	3 m	\$90.00
124702	B SEALED	A UNSEALED	3 m	\$90.00
152434	A UNSEALED	Micro A UNSEALED	2 m	\$15.00
USB Receptacles (Receptacle is a socket)				
176790 Panel Mount	A SEALED	A UNSEALED	0.75 m	\$105.00
126476 Wall Mount	A SEALED	A UNSEALED	0.5 m	\$90.00
172735 Universal	A SEALED	A UNSEALED	0.25 m	\$90.00
Ethernet Cables				
72697	RJ-45 UNSEALED	RJ-45 UNSEALED	2 m	\$40.00
124706	RJ-45 SEALED	RJ-45 SEALED	3 m	\$90.00
124707	RJ-45 SEALED	RJ-45 UNSEALED	2 m	\$90.00
Ethernet Receptacles (Receptacle is a socket)				
176789	RJ-45 SEALED		0.75 m	\$105.00
172734	RJ-45 SEALED		0.5 m	\$90.00
126353	RJ-45 SEALED		0.25 m	\$90.00
Cable and Receptacle Accessories				
124694	Cover for sealed receptacles			\$13.00
124689	Cover for flash driver mounts on sealed receptacle			\$25.00

### Unsealed Connectors







### Part Number/Price

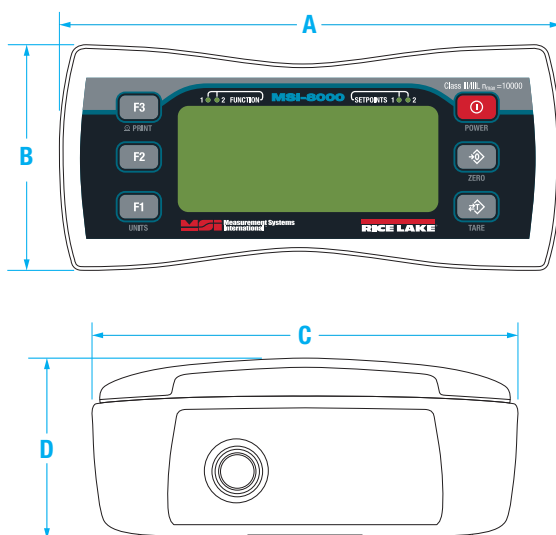
Part #	Description	Est. Weight	Price
139381	MSI-8000 RF remote display	5 lb	\$1,320.00

### Options/Accessories

Part #	Description	Est. Weight	Price
149549	Universal 115/230 VAC 50/60 Hz (NA plug standard) battery charger for MSI-8000 RF remote display	3 lb	\$155.00
149550	Universal 115/230 VAC 50/60 Hz (EC plug standard) battery charger for MSI 8000 RF remote display	1 lb	\$150.00
150964	DB9 female serial interface cable for MSI-8000 RF remote display	1 lb	\$190.00
151095	Audible alarm	—	\$300.00
182223	12V car charger adapter for MSI-8000	1 lb	\$135.00

### Dimensions

A	8.00 in (203 mm)	C	3.85 in (98 mm)
B	3.85 in (98 mm)	D	1.37 in (35 mm)



### Standard Features

- Compatible with all ScaleCore™ based products including: MSI-7300 Dyna-Link 2, MSI-3460 Challenger 3, MSI-4260 Port-A-Weigh, MSI-7000 and MSI-7001 TranSend™, MSI-9600HT and MSI-6360
- LCD display
- Membrane keypad for remote control functionality
- User-definable function keys for added versatility
- Universal 115/230 VAC, 50/60 Hz battery charger (NA plug standard)

(Contact MSI for application consultation)

### Specifications

#### Enclosure:

NEMA Type 4, IP65

#### Weight:

0.98 lb (445 g)

#### Keypad:

On/Off, Zero (100%), Tare, Print and two user-defined keys for the following functions: peak hold, high resolution, total, view total, net/gross, units switching

#### Display:

Six-digit 1.0 in (26.4 mm) LCD screen

#### Units Displayed:

Pounds, kilograms, tons, metric tons, kilonewtons

#### Annunciators:

Stable, COZ, low battery, peak, net, kg, kN, lb, M, ton, setpoint, function LEDs

#### Power:

Integral lithium-ion battery  
Universal 115/230 VAC, 50/60 Hz battery charger (NA plug included)

#### Operating Time:

Up to 24 hours of continuous use (15 minute auto-shutoff with non-use)

#### Operating Temperature:

-4 °F to 140 °F (-20 °C to 60 °C)

#### RF Radio Link:

2.4 GHz 802.15.4  
Communicates with RF 3460, 4260, 7300, 7000 & 7001

#### RF Effective Range:

Typically 100 to 300 ft, line of sight; for longer range consult factory

#### Connector:

Four-pin Turck connector for charging and RS-232 communication

#### Warranty:

One-year limited

# MSI-8000HD

Digital Weight Indicator



## Approvals

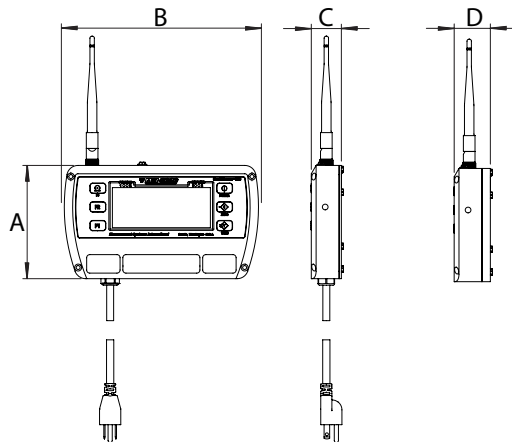


## Standard Features

- Compatible with all ScaleCore™-based products including: MSI-7300 Dyna-Link 2, MSI-3460 Challenger 3, MSI-4260 Port-A-Weigh, MSI-7000 and MSI-7001 TranSend™, MSI-9600HT and MSI-6360
- LCD display
- IP68 milled aluminum enclosure
- Time and date
- Membrane keypad for remote-control functionality
- User-definable function keys for added versatility
- Swivel tilt stand

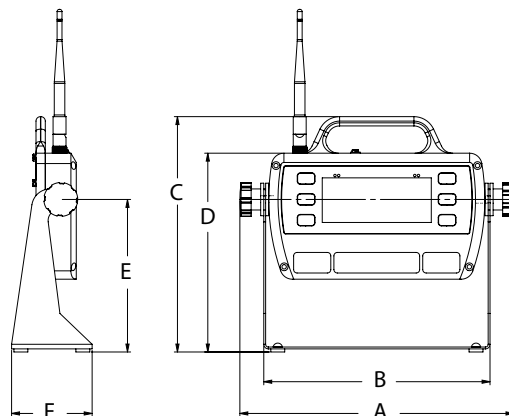
### Dimensions

A	5.09 in (129 mm)
B	8.98 in (228 mm)
C	1.35 in (34 mm)
D	1.63 in (41 mm)



### Dimensions

With Tilt Stand	
A	11.06 in (281 mm)
B	9.13 in (232 mm)
C	9.50 in (241 mm)
D	8.02 in (204 mm)
E	6.16 in (156 mm)
F	3.25 in (83 mm)



## Options

(Contact MSI for application consultation)

- Up to 8 configurable relay outputs
- Wi-Fi communications
- 802.15.4 Serial RF
- FHSS
- Wired Ethernet

## Specifications

### Power:

90-267 VAC, 9-36 VDC, 18-72 VDC, 120-300 VDC  
Optional battery power module available

### Excitation Voltage:

4.8V current limited and over-voltage protected

### RF Remote Channels:

Up to four remote sensors, monitored individually, in pairs or sum all (non-A/D version only)

### Service Counters:

A/D version only

### A/D Inputs:

Two independent or summing load cell inputs

### Filtering:

Off, Low, Hi-1, Hi-2

### RF Radio Link:

2.4 GHz 802.15.4

Compatible with all ScaleCore™ based products including:

MSI-7300 Dyna-Link 2, MSI-3460 Challenger 3, MSI-4260 Port-A-Weigh, MSI-7000 and MSI-7001

### RF Effective Range:

Typically 100 to 300 ft, line of sight;  
for longer range consult factory

### Communication Ports:

Dual RS-232 communication ports

### Optional Communications:

Wi-Fi

Serial RF (Single Sequence or FHSS)

### Annunciators:

Stable, COZ, peak, kg, kN, lb, M, ton, setpoint, function LEDs

Channels: 1, 2, 3, 4, TTL

### Display:

Six-digit 1.0 in (26.4 mm) LCD

### Units Displayed:

Pounds, kilograms, tons, metric tons, kilonewtons

### Keys/Buttons:

On/Off, Zero (100%), Tare, Print, and Two user-defined keys for the following functions:  
peak hold, high resolution, total, view total, net/gross, units switching

### Rating/Material:

Enclosure: NEMA Type 4, IP68 milled anodized aluminum with O-ring gaskets

### Temperature Range:

Operating: -4 °F to 140 °F (-20 °C to 60 °C)

Certified: 14 °F to 104 °F (-10 °C to 40 °C)

### Warranty:

One-year limited

### Approvals:

NTEP CC 15-110 (-10 °C to 40 °C)

## Part Number/Price

Part #	Description	Est. Weight	Price
153591	MSI-8000HD ScaleCore RF/Remote Display/85-265 VAC	5 lb (2.5 kg)	\$1,440.00
154853	MSI-8000HD ScaleCore RF/Remote Display/Internal Battery	5 lb (2.5 kg)	\$1,560.00
160476	MSI-8000HD ScaleCore RF/Remote Display/7-36 VDC	5 lb (2.5 kg)	\$1,390.00
159377	MSI-8000HD ScaleCore RF/Remote Display/18-72 VDC	5 lb (2.5 kg)	\$1,420.00
159376	MSI-8000HD ScaleCore RF/Remote Display/9-36 VDC	5 lb (2.5 kg)	\$1,420.00
158427	MSI-8000HD Meter/2 A/D Inputs/85-265 VAC (non RF)	5 lb (2.5 kg)	\$1,750.00
158428	MSI-8000HD Meter/2 A/D Inputs/Internal Battery (non RF)	5 lb (2.5 kg)	\$1,860.00
160478	MSI-8000HD Meter/2 A/D Inputs/7-36 VDC (non RF)	5 lb (2.5 kg)	\$1,560.00
159381	MSI-8000HD Meter/2 A/D Inputs/18-72 VDC (non RF)	5 lb (2.5 kg)	\$1,600.00
159380	MSI-8000HD Meter/2 A/D Inputs/9-36 VDC (non RF)	5 lb (2.5 kg)	\$1,600.00
158425	MSI-8000HD RF Meter/2 A/D Inputs/85-265 VAC	5 lb (2.5 kg)	\$1,770.00
158426	MSI-8000HD RF Meter/2 A/D Inputs/Internal Battery	5 lb (2.5 kg)	\$1,930.00
160477	MSI-8000HD RF Meter/2 A/D Inputs/7-36 VDC	5 lb (2.5 kg)	\$1,770.00
159379	MSI-8000HD RF Meter/2 A/D Inputs/18-72 VDC	5 lb (2.5 kg)	\$1,780.00
159378	MSI-8000HD RF Meter/2 A/D Inputs/9-36 VDC	5 lb (2.5 kg)	\$1,780.00
176958	MSI-8000HD Wi-Fi Meter/85/265 VAC	5 lb (2.5 kg)	\$1,470.00
176960	MSI-8000HD Wi-Fi Meter/Internal Battery	5 lb (2.5 kg)	\$1,600.00
176964	MSI-8000HD Wi-Fi Meter/7-36 VDC	5 lb (2.5 kg)	\$1,420.00
176966	MSI-8000HD Wi-Fi Meter/9-36 VDC	5 lb (2.5 kg)	\$1,460.00
176968	MSI-8000HD Wi-Fi Meter/18-72 VDC	5 lb (2.5 kg)	\$1,460.00

## Options/Accessories

Part #	Description	Price
155173	MSI-8000HD spare tilt stand option kit	\$83.00
155193	MSI-8000HD Ethernet TCP/IP option kit wired	\$410.00
162178	Antenna extension kit, 6 ft	\$465.00
148624	MSI-8000HD serial RS-232 cable	\$135.00
158779	MSI-8000HD two each coil relay option kit, 250 VAC/30 VDC 5A or 100 VDC 0.4A	\$355.00
158780	MSI-8000HD two each solid state relay option kit, 60 Vpk 2.7A	\$355.00
158781	MSI-8000HD two each solid state relay option kit, 200 Vpk 0.9A	\$355.00
149549	Universal 115/230 VAC 50/60 Hz (NA plug standard) battery charger for MSI-8000HD battery powered device	\$155.00
149550	Universal 115/230 VAC 50/60 Hz (international plugs) battery charger for MSI-8000HD battery powered device	\$150.00
171203	Audible alarm kit	\$355.00
176963	Serial print cable	\$155.00
<b>Relays</b>		
172490	Expanded relay kit, Four-Channel, 12A 5V, Latching relays	Consult
172492	Expanded relay kit, Four-Channel, 12A 5V, Momentary relays	Consult
Consult	Expanded relay kit, Four-Channel, 0.9A 200Vpk, AC/DC Solid State relays	Consult
172495	Expanded relay kit, Eight-Channel, 12A 5V, Momentary relays	Consult
172500	Expanded relay option kit, Four-Channel, 3A, 60Vpk Solid State Form C relays	Consult
172501	Expanded relay option kit, Eight-Channel, 3A 60Vpk, Solid State Form C relays	Consult
172502	Expanded relay option kit, Eight-Channel, 0.9A 200Vpk, Solid State Form C relays	Consult
171676	Expanded relay option kit, Eight-Channel, 12A 5V, Latching relays	Consult

# MSI-8004HD

Indicator/RF LED Remote Display



## Approvals

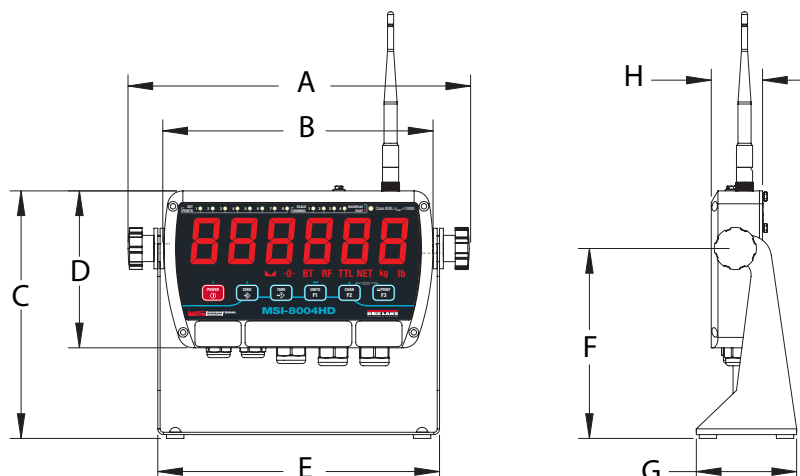


## Part Number/Price

Part #	Description	Price
<b>Indicator</b>		
196904	4CH AC, Red/Green Instant Power-On, 85~264VAC, 47~440 Hz, 120~370 VDC	\$2,240.00
178265	4CH AC, Red/Green 85~264 VAC, 47~440 Hz, 120~370 VDC	\$2,030.00
178269	4CH DC 8-32 V, Red/Green Best for external 12 V SLA Batteries	\$2,060.00
178271	4CH DC 9-36 V Iso, Red/Green Do not use on 12 V Vehicle Systems	\$2,160.00
183481	4CH 5 V Red/Green with external rechargeable battery	\$2,040.00
<b>Remote Display</b>		
178281	AC, Red/Green 85~264 VAC, 47~440 Hz, 120~370 VDC	\$1,980.00
178283	DC, 8-32 V, Red/Green Best for external 12 V SLA Battery	\$1,940.00
178285	DC, 9-36 V Iso, Red/Green Do not use on 12 V Vehicle Systems	\$2,020.00
183479	4CH 5 V Red/Green with external rechargeable battery	\$1,750.00

## Dimensions

With Tilt Stand			
A	11.10 in (282 mm)	E	9.13 in (232 mm)
B	8.76 in (223 mm)	F	6.16 in (156 mm)
C	8.02 in (204 mm)	G	3.25 in (83 mm)
D	5.09 in (129 mm)	H	1.66 in (42 mm)



## Standard Features

- LED display
- IP65 rugged milled aluminum enclosure
- Backlit membrane keypad for user functioning and controls
- Tilt bracket included
- Color changing display (via setpoints)

## Options

(Contact MSI for application consultation)

- Expanded relay outputs
- Battery pack for mobile operation
- Second radio module for additional network connectivity

## Specifications

### Power:

90 to 267 VAC, 9 to 36 VDC, 18 to 72 VDC, 120 to 300 VDC

### Excitation Voltage:

4.8 V current limited and over-voltage protected

### Functions:

Peak hold, high resolution, total, view total net/gross, units switching

### Units:

Pounds, kilograms, tons, metric tons, kilonewtons

### Channels:

1, 2, 3, 4, TTL

### RF Remote Channels:

Up to 4 remote sensors monitored individually, in pairs or sum all (non-A/D version only) (when used with TranSend)

### Service Counters:

A/D version only

### A/D Inputs:

Four independent or summing load cell inputs

### Relays:

Two 5 V coil, 250 VAC, 5 A relays

### Filtering:

Off, Low, Hi-1, Hi-2

### RF Radio Link:

2.4 GHz 802.15.4, optional second channel for Serial RF, 802.11 Wi-Fi

### RF Effective Range:

Typically 100 to 300 ft, line of sight; for longer range consult factory

### Communication Ports

Two RS-232 hard wired communication ports

### Annunciators:

Stable, COZ, peak, kg, kN, lb, M, ton, setpoint, function LEDs

### Display:

Six-digit, 1.5 in (38 mm) LED display with red/green/orange coloring

### Keys/Buttons:

On/Off, Zero, Tare, Print and two user-defined keys

### Operating Temperature :

-4 °F to 140 °F (-20 °C to 60 °C)

### Rating/Material:

NEMA Type 4, IP65 milled anodized aluminum

### Warranty:

One-year limited

### Approvals:

NTEP 17-036 (-5 °C to 40 °C)  
Measurement Canada AM-6068

## Options/Accessories

Part #	Description	Price
139309	Antenna kit, long range omni-directional, 9 dBi with 3 m coax intended for omni-directional mast mounting (up to 2" Ø). Beam-width. Must be mounted vertically.	\$485.00
139310	Antenna kit, corner reflector, 9 dBi with 3 m coax intended for directional wall or mast mounting (up to 2" Ø). Beam-width: 75° elevation, 65° azimuth.	\$480.00
139311	Antenna kit, corner reflector, 12 dBi with 3 m coax intended for directional wall or mast mounting (up to 2" Ø). Beam-width: 50° elevation, 36° azimuth.	\$510.00
139312	Antenna kit, YAGI, 15 dBi with 3 m coax highly directional wall or mast mounting (up to 2" Ø). Beam-width: 30° elevation, 34° azimuth.	\$395.00
139313	Antenna kit, vehicle mount, 5 dBi with 5 m coax omni-directional. Mounts in 3/4" Hole.	\$150.00
162178	Antenna extension kit, 6 ft	\$465.00
197013	Antenna extension kit, 20 ft	\$495.00
155173	Spare kit, tilt stand	\$83.00
199105	Audible alarm not compatible with battery versions	\$300.00
22436	Cable, Comm DB9F 9-pPin Fem One end stripped and tinned on other end 6' Pin 2 (Brown) Pin 3 (Red) Pin 5 (Yellow) For use with MSI-8004HD serial ports to connect to: Scoreboard displays, printers, computers & other equipment that supports RS-232.	\$67.00
183437	Battery, 5V Li-ion battery with USB power ports. Output 5 V/3.0A per port (6.0 A max)Rate, 2A per port (4A if both ports are used).	\$225.00
184131	8004 option kit, WiFi with SMA antenna	\$190.00
187424	8004 option kit, 2nd Xbee with TNC antenna	\$200.00
182224	Power adapter, 12 VDC 5 VDC dual USB car charger plus 3 ft USB cable	\$56.00
<b>Relays</b>		
172500	Expanded relays option kit, four-channel, 3A, 60VPK SSR Form C	Consult
172501	Expanded relays option kit, eight-channel, 3A 60VPK, SSR Form C	Consult
Consult	Expanded relays option kit, four-channel, 0.9A 200VPK, AC/DC SSR Form C	Consult
172502	Expanded relays option kit, eight-channel, 0.9A 200VPK, SSR Form C	Consult
172492	Expanded relays option kit, four-channel, 12A 5V, momentary	Consult
172495	Expanded relays option kit, eight-channel, 12A 5V, momentary	Consult
172490	Expanded relays option kit, four-channel, 12A 5V, latching relays	Consult
171676	Expanded relays option kit, eight-channel, 12A 5V, latching relays	Consult

# MSI Scoreboards Wireless RF

Featuring LaserLight2 Remote Displays



- Tilt mounting bracket
- Integrated data repeater
- Six high-intensity red digits (double-row discrete LED)
- Auto Learn mode of communication protocols
- Hold displayed weight (demand input)
- Software selectable standstill mode for no updates while in motion
- Durable weather-tight IP66 enclosure
- Adjustable daylight/night intensity
- Non-glare contrast filtered lens
- Mirror (reverse image) feature
- RS-232, 20 mA and RS-485 communications
- Auto sensing 115/230 VAC power supply
- PEMs for VESA flat-wall mount or side-mounting flange available
- Polyethylene breather vent inhibits internal moisture buildup

(Contact MSI for application consultation)

## Specifications

### Enclosure:

NEMA Type 4, IP66

### Display:

Six-digit long-life LED, 4 in or 6 in

### Power:

AC/DC power supply 85 to 265 VAC,  
47 to 440 Hz/130 to 300 VDC

### Radio Link:

Direct sequence spread spectrum at 2.4GHz

### Radio Link Effective Range:

Typically 100 to 300 ft, line of sight;  
for longer range consult factory

### Standard Antenna:

1/2 wave 2 dBi, articulated

### Warranty:

One-year limited

### Echo Data Output:

RS-232

## Standard Features

- Compatible with all ScaleCore™-based products including: MSI-7300 Dyna-Link 2, MSI-3460 Challenger 3, MSI-4260 Port-A-Weigh, MSI-7000 and MSI-7001 TranSend™, MSI-9600HT and MSI-6360

## Part Number/Price

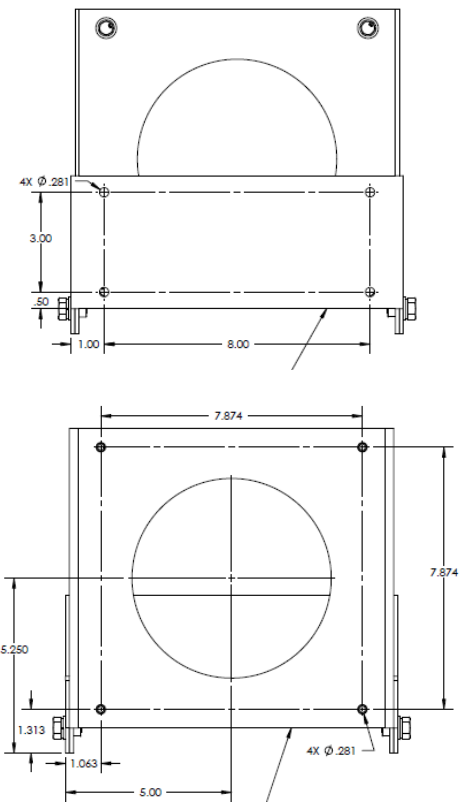
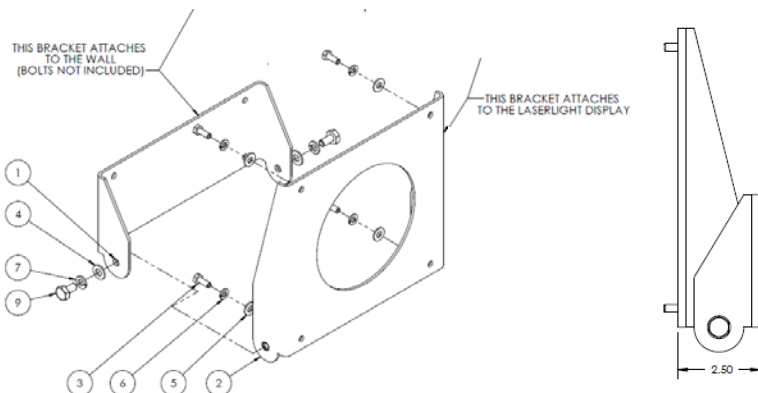
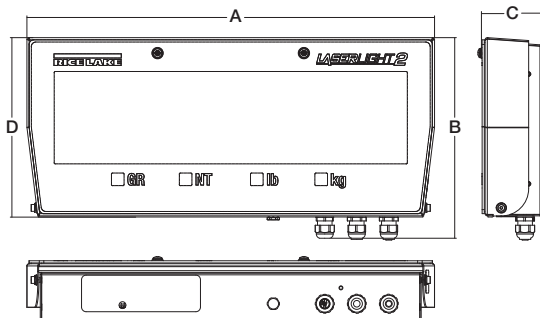
Part #	Description	Est. Weight	Price
178004	LaserLight2, 4 in with ScaleCore RF and tilt bracket		\$2,370.00
178006	LaserLight2, 6 in with ScaleCore RF and tilt bracket		\$2,810.00
178341	Laserlight2, 4 in with tilt bracket		\$2,250.00
178342	Laserlight2, 6 in with tilt bracket		\$2,680.00

## Options/Accessories

Part #	Description	Est. Weight	Price
139309	Long-range antenna, 300 m-500 m omni-directional with 9 dBi gain, includes 10 ft/3 m coaxial cable	1 lb	\$485.00
139310	9 dBi gain corner reflector antenna	1 lb	\$480.00
139311	12 dBi gain corner reflector antenna	1 lb	\$510.00
139313	5 dBi gain vehicle/cab mount whip antenna	1 lb	\$150.00
162178	Antenna extension kit, 6 ft		\$465.00
197013	Antenna extension kit, 20 ft		\$495.00
178318	Replacement tilt bracket		\$260.00

## Dimensions

22-inch enclosure (4-inch model)				31-inch enclosure (6-inch model)			
A	22.28 in (565 mm)	C	3.28 in (85 mm)	A	30.63 in (780 mm)	C	3.73 in (95 mm)
B	10.96 in (280 mm)	D	9.80 in (250 mm)	B	13.94 in (355 mm)	D	12.77 in (325 mm)







### Standard Features

- Works with any basic digital weight indicator
- Excitation to load cell(s) provided by the transmitter, not the indicator
- Each transmitter/receiver set is individually paired
- Auto-off mode - selectable for 15, 30, 45, 60 minutes or off
- Auto-sleep mode - power down during non-use, power up with weight change or key press
- Serial communication cable included with all transmitters
- IP68 milled aluminum enclosure

(Contact MSI for application consultation)

### Specifications

**Power:**

5 to 6 VDC, 7 to 36 VDC, 85 to 265 VAC

**Excitation Voltage:**

Transmitter: +4.8 VDC, 16 x 350 ohm or 32 x 700 ohm load cells

**Standard Antenna:**

1/2 wave 2dBi, articulated

**Frequency:**

Direct sequence spread spectrum at 2.4 GHz, 802.15.4

**Effective Range:**

Typically 100 to 300 ft, line of sight; for longer range consult factory

**Communication Ports:**

Full duplex RS-232

**Circuit Protection:**

RFI, EMI, ESD protection

**Operating Temperature :**

-40 °F to 185 °F (-40 °C to 85 °C)

**Rating/Material:**

NEMA Type 4 (IP66), aluminum black powder coated (excludes wall cube model)  
 MSI-7000HD/MSI-7001HD: IP68

**Additional RF Options:**

Wi-Fi  
 802.15.4  
 FHSS

**Warranty:**

One-year limited

### Part Number/Price

Part #	Description	Est. Weight	Price
<b>Transmitters</b>			
<b>5-6 VDC Power Input</b>			
159207	Four-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	\$985.00
161949	Four-channel transmitter, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	\$1,130.00
176648	Four-channel transmitter, no relays, Wi-Fi	2 lb	\$1,040.00
176652	Four-channel transmitter, includes three coil relays, Wi-Fi	2 lb	\$1,180.00
<b>7-36 VDC Power Input</b>			
159470	Four-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	\$1,020.00
161951	Four-channel transmitter, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	\$1,180.00
176650	Four-channel transmitter, no relays, Wi-Fi	2 lb	\$1,070.00
176653	Four-channel transmitter, includes three coil relays, Wi-Fi	2 lb	\$1,240.00
<b>85-265 VAC Power Input</b>			
159469	Four-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	\$1,040.00
161950	Four-channel transmitter, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	\$1,210.00
176647	Four-channel transmitter, no relays, Wi-Fi	2 lb	\$1,100.00
176651	Four-channel transmitter, includes three coil relays, Wi-Fi	2 lb	\$1,280.00
<b>Receivers</b>			
<b>5-6 VDC Power Input</b>			
160016	Four-channel receiver to provide an analog output signal: 4-20 mA, 0-20 mA, 0-5 VDC, 0-10 VDC, $\pm 5$ VDC, $\pm 10$ VDC, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	\$1,180.00
160017	MSI-7000 four-channel receiver to provide RS232 serial output	2 lb	\$1,200.00
<b>7-36 VDC Power Input</b>			
159478	MSI-7000 four-channel receiver to provide RS232 serial output	2 lb	\$1,250.00
159476	Four-channel receiver to provide an analog output signal: 4-20 mA, 0-20 mA, 0-5 VDC, 0-10 VDC, $\pm 5$ VDC, $\pm 10$ VDC, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	\$1,330.00
<b>85-265 VAC Power Input</b>			
159477	Four-channel receiver to provide RS232 serial output	2 lb	\$1,110.00
159475	Four-channel receiver to provide an analog output signal: 4-20 mA, 0-20 mA, 0-5 VDC, 0-10 VDC, $\pm 5$ VDC, $\pm 10$ VDC, includes three coil relays, RF 802.15.4, 2.4 GHz	2 lb	\$1,430.00

Options/Accessories

Part #	Description	Price
162172	Charger, TranSend™ for 6 V SLA battery	\$67.00
162173	Battery, TranSend 6 V SLA	\$130.00
162175	Enclosure, TranSend for 6 V SLA battery	\$340.00
160109	AC adaptor, TranSend 6 V	\$56.00
143531	Power cord, 6 V SLA battery charger EU	\$29.00
143533	Power cord, 6 V SLA battery charger, Australia	\$51.00
143534	Power cord, 6 V SLA battery charger, UK	\$45.00
160110	265 VAC to 6 VDC wall adapter US/UK/EU/AUS/China	\$56.00
162178	Antenna extension kit, 6 ft coax cable	\$465.00
139309	Antenna kit, long range Omni with 3 m coax cable	\$485.00
139310	Antenna kit, corner reflector 9 dbi with 3 m coax cable	\$480.00
197013	Antenna extension kit, 20 ft	\$495.00
139311	Antenna kit, corner reflector 12 dbi with 3 m coax cable	\$510.00
139312	Antenna kit, Yagi 15 dbi with 3 m coax cable	\$395.00
144345	30 m coaxial cable, for use with non-vehicle mount antenna kits	\$455.00
139313	Antenna kit, vehicle mount. 5 dbi with 5 m coaxial cable	\$150.00
150964	RS-232 13 ft (4 m) serial cable with nine-pin (female) connector	\$190.00
150965	RS-232 13 ft (4 m) serial cable with nine-pin (male) connector	\$170.00
145085	RS-232 serial cable, nine-pin unterminated	\$130.00



### Standard Features

- Works with any basic digital weight indicator
- Excitation to load cell(s) provided by the transmitter, not the indicator
- Each transmitter/receiver set is individually paired
- Auto-off mode - selectable for 15, 30, 45, 60 minutes or off
- Auto-sleep mode - power down during non-use, power up with weight change or key press
- Serial communication cable included with all transmitters
- IP68 milled aluminum enclosure

(Contact MSI for application consultation)

### Specifications

**Power:**

5 to 6 VDC, 7 to 36 VDC, 85 to 265 VAC

**Excitation Voltage:**

Transmitter: +4.8 VDC, 16 x 350 ohm or 32 x 700 ohm load cells

**Standard Antenna:**

1/2 wave 2dBi, articulated

**Frequency:**

Direct sequence spread spectrum at 2.4 GHz, 802.15.4

**Effective Range:**

Typically 100 to 300 ft, line of sight; for longer range consult factory

**Communication Ports:**

Full duplex RS-232

**Circuit Protection:**

RFI, EMI, ESD protection

**Operating Temperature :**

-40 °F to 185 °F (-40 °C to 85 °C)

**Rating/Material:**

NEMA Type 4 (IP66), aluminum black powder coated (excludes wall cube model)  
 MSI-7000HD/MSI-7001HD: IP68

**Additional RF Options:**

Wi-Fi  
 802.15.4  
 FHSS

**Warranty:**

One-year limited

### Part Number/Price

Part #	Description	Est. Weight	Price
<b>Transmitters</b>			
<b>5-6 VDC Power Input</b>			
<b>160330</b>	Single-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	\$930.00
<b>176655</b>	Single-channel transmitter, no relays, Wi-Fi	2 lb	\$980.00
<b>7-36 VDC Power Input</b>			
<b>160329</b>	Single-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	\$985.00
<b>176656</b>	Single-channel transmitter, no relays, Wi-Fi	2 lb	\$1,040.00
<b>85-265 VAC Power Input</b>			
<b>160328</b>	Single-channel transmitter, no relays, RF 802.15.4, 2.4 GHz	2 lb	\$1,020.00
<b>176654</b>	Single-channel transmitter, no relays, Wi-Fi	2 lb	\$1,070.00
<b>Receivers</b>			
<b>5-6 VDC Power Input</b>			
<b>160337</b>	Single-channel receiver to provide a mV signal to a digital weight indicator, RF 802.15.4, 2.4 GHz	2 lb	\$985.00
<b>160334</b>	Single-channel receiver to provide an analog output signal: 4-20 mA, 0-20 mA, 0-5 VDC, 0-10 VDC, ±5 VDC, ±10 VDC, RF 802.15.4, 2.4 GHz	2 lb	\$1,040.00
<b>161941</b>	Single-channel receiver to provide RS232 serial output	2 lb	\$770.00
<b>7-36 VDC Power Input</b>			
<b>160336</b>	Single-channel receiver to provide a mV signal to a digital weight indicator, RF 802.15.4, 2.4 GHz	2 lb	\$1,080.00
<b>161939</b>	Single-channel receiver to provide RS232 serial output	2 lb	\$880.00
<b>160333</b>	Single-channel receiver to provide an analog output signal: 4-20 mA, 0-20 mA, 0-5 VDC, 0-10 VDC, ±5 VDC, ±10 VDC, RF 802.15.4, 2.4 GHz	2 lb	\$1,180.00
<b>85-265 VAC Power Input</b>			
<b>160335</b>	Single-channel receiver to provide a mV signal to a digital weight indicator, RF 802.15.4, 2.4 GHz	2 lb	\$1,130.00
<b>161938</b>	Receiver to provide RS232 serial output	2 lb	\$940.00

**Options/Accessories**

Part #	Description	Price
<b>162177</b>	Cordset, TranSend, pre-wired for use with single channel transmitters or non-relay based receivers	\$130.00
<b>164865</b>	Cable, 4 m, one-channel, mV/V output, LC input	\$135.00
<b>165648</b>	Cable, 5 m, one-channel, mV/V output, LC input	\$155.00
<b>165651</b>	Cable, 10 m, one-channel, mV/V output, LC input	\$220.00
<b>162184</b>	Load cell connector, TranSend, field wireable, 4-6 mm straight. For use with single channel transmitters and all receivers.	\$59.00
<b>162185</b>	Load cell connector, TranSend, field wireable, 6-8 mm straight. For use with single channel transmitters and all receivers.	\$59.00
<b>162186</b>	Load cell connector, TranSend, field wireable, 4-6 mm right angle. For use with single channel transmitters and all receivers.	\$59.00
<b>162187</b>	Load cell connector, TranSend, field wireable, 6-8 mm right angle. For use with single channel transmitters and all receivers.	\$59.00
<b>145084</b>	Cable, 2 m, one-channel, analog output	\$61.00
<b>144400</b>	Cable, 5 m, one-channel, analog output	\$95.00
<b>168903</b>	Cable, 10 m, one-channel, analog output	\$145.00
<b>Consult</b>	Straight connector, analog output, field wire able, 4-6 mM OD	Consult
<b>Consult</b>	Straight connector, analog output, field wire able, 6-8 mM OD	Consult
<b>Consult</b>	Right angle connector, analog output, field wire able, 4-6 mM OD	Consult
<b>Consult</b>	Right angle connector, analog output, field wire able, 6-8 mM OD	Consult
<b>162172</b>	Charger, TranSend™ for 6 V SLA battery	\$67.00
<b>162173</b>	Battery, TranSend 6 V SLA	\$130.00
<b>162175</b>	Enclosure, TranSend for 6 V SLA battery	\$340.00
<b>160109</b>	AC adaptor, TranSend 6 V	\$56.00
<b>143531</b>	Power cord, 6 V SLA battery charger EU	\$29.00
<b>143533</b>	Power cord, 6 V SLA battery charger, Australia	\$51.00
<b>143534</b>	Power cord, 6 V SLA battery charger, UK	\$45.00
<b>160110</b>	265 VAC to 6 VDC wall adapter US/UK/EU/AUS/China	\$56.00
<b>162178</b>	Antenna extension kit, 6 ft coax cable	\$465.00
<b>139309</b>	Antenna kit, long range Omni with 3 m coax cable	\$485.00
<b>139310</b>	Antenna kit, corner reflector 9 dbi with 3 m coax cable	\$480.00
<b>197013</b>	Antenna extension kit, 20 ft	\$495.00
<b>139311</b>	Antenna kit, corner reflector 12 dbi with 3 m coax cable	\$510.00
<b>139312</b>	Antenna kit, Yagi 15 dbi with 3 m coax cable	\$395.00
<b>144345</b>	30 m coaxial cable, for use with non-vehicle mount antenna kits	\$455.00
<b>139313</b>	Antenna kit, vehicle mount. 5 dbi with 5 m coaxial cable	\$150.00
<b>150964</b>	RS-232 13 ft (4 m) serial cable with nine-pin (female) connector	\$190.00
<b>150965</b>	RS-232 13 ft (4 m) serial cable with nine-pin (male) connector	\$170.00
<b>145085</b>	RS-232 serial cable, nine-pin unterminated	\$130.00



### Standard Features

- Works with any basic digital weight indicator
- Excitation to load cell(s) provided by the transmitter, not the indicator
- Each transmitter/receiver set is individually paired
- Auto-off mode - selectable for 15, 30, 45, 60 minutes or off
- Auto-sleep mode - power down during non-use, power up with weight change or key press
- Serial communication cable included with all transmitters
- IP68 milled aluminum enclosure

(Contact MSI for application consultation)

### Specifications

**Power:**

5 to 6 VDC, 7 to 36 VDC, 85 to 265 VAC

**Excitation Voltage:**

Transmitter: +4.8 VDC, 16 x 350 ohm or 32 x 700 ohm load cells

**Standard Antenna:**

1/2 wave 2dBi, articulated

**Frequency:**

Direct sequence spread spectrum at 2.4 GHz, 802.15.4

**Effective Range:**

Typically 100 to 300 ft, line of sight; for longer range consult factory

**Communication Ports:**

Full duplex RS-232

**Circuit Protection:**

RFI, EMI, ESD protection

**Operating Temperature :**

-40 °F to 185 °F (-40 °C to 85 °C)

**Rating/Material:**

NEMA Type 4 (IP66), aluminum black powder coated (excludes wall cube model)  
 MSI-7000HD/MSI-7001HD: IP68

**Additional RF Options:**

Wi-Fi  
 802.15.4  
 FHSS

**Warranty:**

One-year limited

### Part Number/Price

Part #	Description	Est. Weight	Price
<b>Transmitters</b>			
<b>5-6 VDC Power Input</b>			
<b>177944</b>	Four-channel 7-36VDC, three coil relays, 802.15.4		\$2,080.00
<b>177997</b>	Four-channel 7-36VDC, three coil relays, Wi-Fi		\$2,090.00
<b>7-36 VDC Power Input</b>			
<b>177945</b>	Four-channel 9-36VDC isolated, three coil relays, 802.15.4		\$2,170.00
<b>177998</b>	Four-channel 9-36VDC isolated, three coil relays, Wi-Fi		\$2,190.00
<b>184002</b>	Half-plate mounted, FHSS, DC (battery) powered (half plate battery power supply sold separately)		Consult
<b>85-265 VAC Power Input</b>			
<b>177942</b>	Four-channel 85-265VAC, three coil relays, 802.15.4		\$2,130.00
<b>177995</b>	Four-channel 85-265VAC, three coil relays, Wi-Fi		\$2,150.00

### Options/Accessories

Part #	Description	Price
<b>187424</b>	Dual XBee option kit for 7000HD with TNC connector	\$200.00
<b>162178</b>	Antenna extension kit, 6 ft coax cable	\$465.00
<b>139309</b>	Antenna kit, long range Omni with 3 m coax cable	\$485.00
<b>139310</b>	Antenna kit, corner reflector 9 dbi with 3 m coax cable	\$480.00
<b>197013</b>	Antenna extension kit, 20 ft	\$495.00
<b>139311</b>	Antenna kit, corner reflector 12 dbi with 3 m coax cable	\$510.00
<b>139312</b>	Antenna kit, Yagi 15 dbi with 3 m coax cable	\$395.00
<b>144345</b>	30 m coaxial cable, for use with non-vehicle mount antenna kits	\$455.00
<b>139313</b>	Antenna kit, vehicle mount. 5 dbi with 5 m coaxial cable	\$150.00
<b>148624</b>	RS-232/RS-485 serial cable	\$135.00
<b>143348</b>	Cordset IP68 5-pin male	\$130.00

**TranSend™ MSI-7001HD**

Wireless Load Cell Interface System

**Standard Features**

- Works with any basic digital weight indicator
- Excitation to load cell(s) provided by the transmitter, not the indicator
- Each transmitter/receiver set is individually paired
- Auto-off mode - selectable for 15, 30, 45, 60 minutes or off
- Auto-sleep mode - power down during non-use, power up with weight change or key press
- Serial communication cable included with all transmitters
- IP68 milled aluminum enclosure

(Contact MSI for application consultation)

**Specifications****Power:**

5 to 6 VDC, 7 to 36 VDC, 85 to 265 VAC

**Excitation Voltage:**

Transmitter: +4.8 VDC, 16 x 350 ohm or 32 x 700 ohm load cells

**Standard Antenna:**

1/2 wave 2dBi, articulated

**Frequency:**

Direct sequence spread spectrum at 2.4 GHz, 802.15.4

**Effective Range:**

Typically 100 to 300 ft, line of sight; for longer range consult factory

**Communication Ports:**

Full duplex RS-232

**Circuit Protection:**

RFI, EMI, ESD protection

**Operating Temperature :**

-40 °F to 185 °F (-40 °C to 85 °C)

**Rating/Material:**NEMA Type 4 (IP66), aluminum black powder coated (excludes wall cube model)  
MSI-7000HD/MSI-7001HD: IP68**Additional RF Options:**Wi-Fi  
802.15.4  
FHSS**Warranty:**

One-year limited

**Part Number/Price**

Part #	Description	Est. Weight	Price
<b>Transmitters</b>			
<b>5-6 VDC</b>			
178010	Two-channel 5-6VDC, 802.15.4		\$1,160.00
178018	Two-channel 5-6VDC, Wi-Fi		\$1,250.00
<b>7-36 VDC</b>			
178011	Two-channel 7-36VDC, 802.15.4		\$1,240.00
178019	Two-channel 7-36VDC, Wi-Fi		\$1,260.00
<b>85-265 VAC Isolated</b>			
178012	Two-channel 9-36VDC isolated, 802.15.4		\$1,250.00
178020	Two-channel 9-36VDC isolated, Wi-Fi		\$1,330.00
<b>85-265 VAC</b>			
178021	Two-channel 85-265VAC, 802.15.4		\$1,280.00
178017	Two-channel 85-265VAC, Wi-Fi		\$1,310.00

**Options/Accessories**

Part #	Description	Price
162172	Charger, TranSend™ for 6 V SLA battery	\$67.00
162173	Battery, TranSend 6 V SLA	\$130.00
162175	Enclosure, TranSend for 6 V SLA battery	\$340.00
160109	AC adaptor, TranSend 6 V	\$56.00
143531	Power cord, 6 V SLA battery charger EU	\$29.00
143533	Power cord, 6 V SLA battery charger, Australia	\$51.00
143534	Power cord, 6 V SLA battery charger, UK	\$45.00
160110	265 VAC to 6 VDC wall adapter US/UK/EU/AUS/China	\$56.00
162178	Antenna extension kit, 6 ft coax cable	\$465.00
139309	Antenna kit, long range Omni with 3 m coax cable	\$485.00
139310	Antenna kit, corner reflector 9 dBi with 3 m coax cable	\$480.00
197013	Antenna extension kit, 20 ft	\$495.00
139311	Antenna kit, corner reflector 12 dBi with 3 m coax cable	\$510.00
139312	Antenna kit, Yagi 15 dBi with 3 m coax cable	\$395.00
144345	30 m coaxial cable, for use with non-vehicle mount antenna kits	\$455.00
139313	Antenna kit, vehicle mount. 5 dBi with 5 m coaxial cable	\$150.00
148624	RS-232/RS-485 serial cable	\$135.00
143348	Cordset IP68, 5-pin	\$130.00



# ScaleCore Webserver

Wireless Network Router/Webserver

**NEW**



Approvals



## Part Number/Price

Part #	Description	Price
207943	ScaleCore Webserver, 5VDC and PoE	\$3,570.00
209704	ScaleCore Webserver, 7-14 VDC and PoE	\$3,570.00
210817	ScaleCore Webserver, 85-265 VAC and PoE wall cube	\$3,570.00

## Options/Accessories

Part #	Description	Price
Consult	Extended-range antennas	Consult
213559	MSI-8000 handheld remote display with Wi-Fi, (only to be used with MSI ScaleCore Webserver systems and applications)	\$1,460.00

## Standard Features

- Display and control multiple ScaleCore based scales, indicators, remote displays and receivers through network connected devices using a web browser, including cell phones, tablets, and PCs.
- Capable of functioning either with an existing Wi-Fi network or as its own Wi-Fi router
- Can be powered by a dedicated power input or directly through the Ethernet cable where PoE (Power over Ethernet) is supported
- RS-232 communications at up to 460 Kbps
- Scale/load cell summing
- Tiered login to limit scale functionality for different levels of users

(Contact MSI for application consultation)

## Specifications

### Minimum System Requirements:

Will display on any device with a web browser supporting HTML 5  
Connected ScaleCore based MSI scales and indicators are required to have the optional Wi-Fi radio module

### Connectivity:

Wi-Fi 2.4 GHz IEEE 802.11g  
Gigabit Ethernet  
2 × USB 2.0 Interface  
RS-232 Serial

### Status Announcers:

Units (lb, kg, short tons (tn), metric tons (t), (NONE) gross/net, motion, center of zero

### Operating Temperature:

-10 °C to 40 °C (14 °F to 104 °F)

### Effective Range:

Typically 100 to 300 ft, line of sight;  
for longer range consult factory

### Enclosure:

IP65, aluminum black powder coated (excludes 85 to 265 VAC model)

### Power:

5 to 6 VDC, 7 to 14 VDC, 85 to 265 VAC, PoE

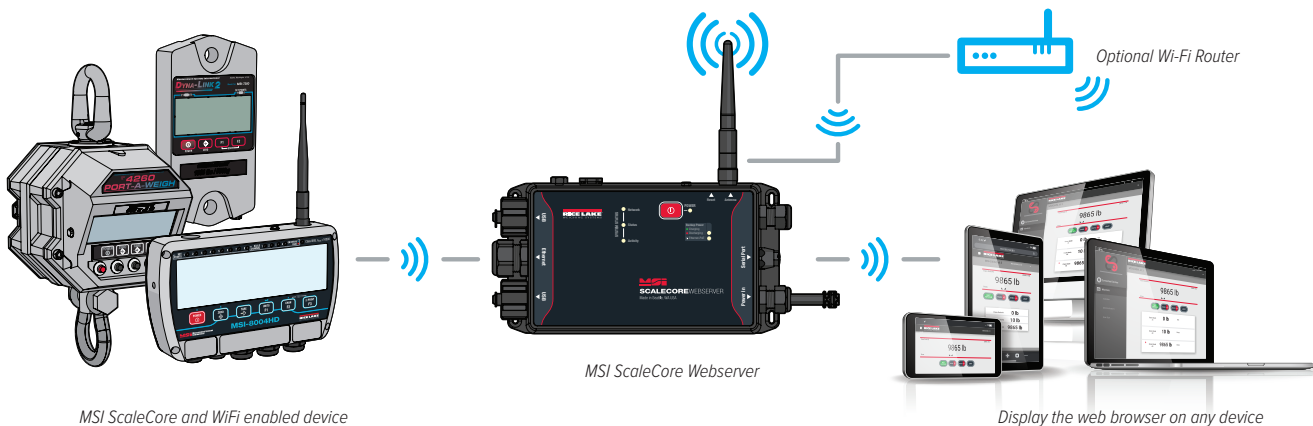
### Warranty:

One year limited

### Approvals:

NTEP CC 21-098 Classes III and IIIL at 10,000d

INDICATORS /  
CONTROLLERS



MSI ScaleCore and WiFi enabled device

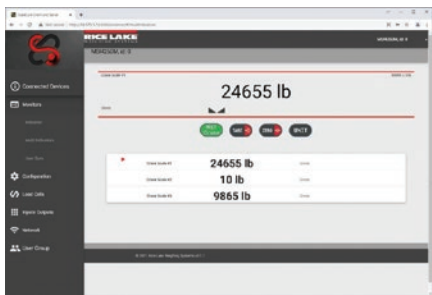
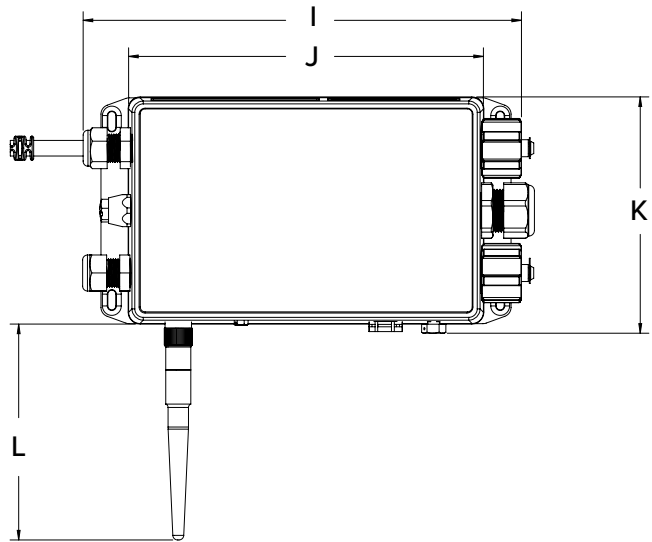
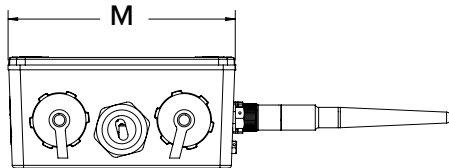
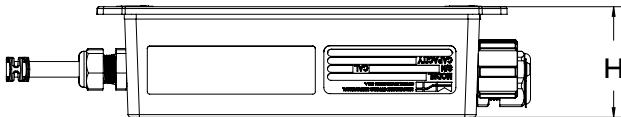
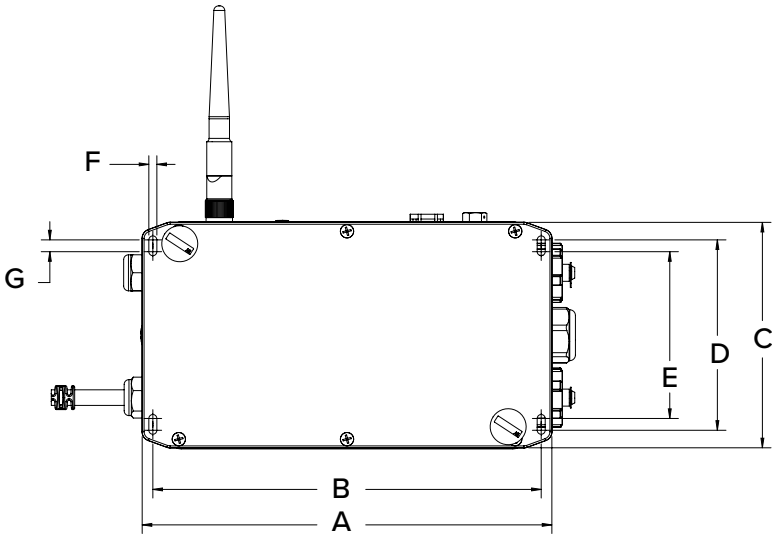
MSI ScaleCore Webserver

Display the web browser on any device

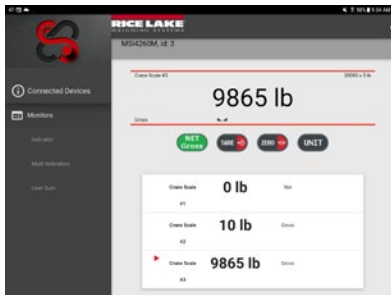
# ScaleCore Webserver

Wireless Network Router/Webserver

Dimensions			
A	8.54 in (217 mm)	H	2.23 in (57 mm)
B	8.09 in (205 mm)	I	9.13 in (232 mm)
C	4.70 in (119 mm)	J	7.40 in (188 mm)
D	3.97 in (101 mm)	K	4.90 in (124 mm)
E	3.47 in (88 mm)	L	4.50 in (114 mm)
F	0.17 in (4 mm)	M	4.70 in (119 mm)
G	0.25 in (6 mm)		



Computer Screenshot



Tablet Screenshot



Phone Screenshot

INDICATORS /  
CONTROLLERS

# Rugged Remote



Approvals



### Part Number/Price

Part #	Description	Price
173014	MSI Rugged Remote control	\$330.00

### Standard Features

- Handheld rugged remote control
- Compatible with all ScaleCore™-based products including: MSI-7300 Dyna-Link 2, MSI-3460 Challenger 3, MSI-4260 Port-A-Weigh, MSI-7000 and MSI-7001 TranSend™, MSI-9600HT and MSI-6360
- Four button interface: Power, Zero, Tare, Function

### Options

(Contact MSI for application consultation)

- CE approved version available, consult for more information

### Specifications

#### Power:

Battery operated, three (3) AAA alkaline batteries

#### Function:

Power: turns unit ON or OFF

Zero: zeros applied load up to 100% of capacity (limited range in NTEP/OIML configurations)

Tare: tares applied load and displays weight in Net mode

User: programmable as test, units, net/gross, total, peak hold and setpoints

#### Radio Effective Range:

Typically 100-300 ft line of sight

#### Warranty:

One-year limited

#### Approval:

CE Marked versions available

INDICATORS /  
CONTROLLERS

# SCT-1100

Signal Conditioning Transmitter



SCT1100-AN with Analog Output



SCT-1100-AN in Plastic Enclosure

## Approvals



## Part Number/Price

Part #	Description	Est. Weight	Price
202101	Indicator, SCT-1100-AN four load cell input with Analog Output	1 lb	\$450.00
197011	Indicator, SCT-1100-AN four load cell input with Analog Output in plastic enclosure	1 lb	\$625.00

NOTE: PN 182588 is superseded by 202101

## Options/Accessories

Part #	Description	Est. Weight	Price
188483	SCT-1000 converter RS-232/485 to Ethernet TCP/IP and Modbus TCP. Does not have an A/D	1 lb	\$400.00
88792	12VDC 1.2A DIN rail mount power supply	1 lb	\$140.00
119244	24VDC 1.3A DIN rail mount power supply	1 lb	\$160.00



SCT-1000  
Serial to Ethernet converter

## Standard Features

- Up to four independent scales or four load cell inputs
- Quick menu for real and theoretical calibration
- Red LED display
- DIN rail mountable
- Configurable calibration and setup parameters from keyboard
- Calibration using linearization points
- Reading of the net, gross and tare weights, clearing, semi-automatic and pre-settable tare, scale switch, setting of outputs application thresholds
- Diagnostic information via serial port, message display, printing, setting of APW in counting mode, simulation of key pressure
- Modbus RU or ASCII protocol

## Specifications

### Power:

12/24 VDC

### Power Consumption:

70 mA min to 100 mA max

### Excitation Voltage:

5VDC, 120 mA, 8 × 350 ohm load cells

### Analog Signal Input Range:

± 39 mV

### Analog Signal Sensitivity:

0.3 µV/graduation minimum

### A/D Sample Rate:

Four channel A/D 24-bit sigma-delta conversion, up to 200 conv./sec. auto select

### Resolution:

Internal: 1,500,000 counts  
Display: 800,000

### Digital I/O:

Two inputs: 12/24 VDC  
Two outputs: 150 mA 48 VAC/ 150 mA 60 VDC

### Communication Ports:

(1) RS-485, (1) RS-232

### Analog Output (if equipped):

Opto isolated, 16-bit  
0 to 20mA, 4 to 20mA (Maximum 350 ohm)  
0 to 5VDC, 0 to 10VDC (Minimum 10,000 ohm)

### Annunciators:

Net, center of zero, stability

### Display:

Six-digit (10 mm), red LED

### Keys/Buttons:

Five key, membrane panel, tactile feel Zero (Down), Tare (Up), Mode (Right), Print (Enter), C (On/Off)

### Dimensions:

(L × W × H)  
4.17 × 3.54 × 2.28 in  
(106 × 90 × 58 mm)

### Temperature :

5 °F to 104 °F (-15 °C to 40 °C)

### Humidity:

85% non-condensing

### Rating/Material:

Enclosure: NEMA Type 4, plastic  
Clear cover: six PG9 cord grips

### Warranty:

One-year limited

### Approvals:

NTEP CC 20-046  
Measurement Canada AM-6165C  
OIML R76/2006-A-GB1-19.17  
EU Legal for Trade  
cULus Listed  
NAWI Certified  
UKCA Marked



SCT2200 Pictured with optional EtherNet/IP Module

### Approvals



### Standard Features

- HUB mode connects up to 16 transmitters to one fieldbus
- Quick menu for real and theoretical calibration
- Remote access through web browser for weight monitoring and calibration over EtherNet/IP, Profinet and Modbus TCP network
- Red LED display
- DIN rail mountable
- Configurable calibration and setup parameters from keyboard
- Calibration using linearization points
- Reading of the net, gross and tare weights, clearing, semi-automatic and presettable tare setting of outputs application thresholds
- Diagnostic information via serial port, message display, printing, simulation of key pressure, Modbus RTU or ASCII protocol
- Two RS-485 port for "daisy-chain" network connection
- Printer management on second serial port available
- Multi-range function allows for subdividing the scale capacity in two, each up to 3,000 divisions

### Part Number/Price

Part #	Description	Est. Weight	Price
<b>Transmitters</b>			
202103 *	Indicator, SCT-2200 for scale input to be used with fieldbus module	1 lb	\$325.00
202104 *	Indicator, SCT-2200-AN with analog output	1 lb	\$450.00
<b>Fieldbus</b>			
182592	Fieldbus, SCT-2200, Profinet module	1 lb	\$550.00
194343	Fieldbus, SCT-2200, Ethernet TCP/IP and Wi-Fi	1 lb	\$550.00
182593	Fieldbus, SCT-2200, Profibus module	1 lb	\$350.00
182591	Fieldbus, SCT-2200, EtherNet/IP module	1 lb	\$550.00
182596	Fieldbus, SCT-2200, DeviceNet module	1 lb	\$550.00
182598	Fieldbus, SCT-2200, EtherCAT module	1 lb	\$550.00
182597	Fieldbus, SCT-2200, CANopen module	1 lb	\$550.00
196694	Fieldbus, SCT-2200, Modbus TCP module	1 lb	\$550.00
182599	Cable with RJ45 plugs, 6 in length	1 lb	\$11.00
212772 **	Fieldbus, SCT-2200, Profibus module	1 lb	\$350.00

NOTE: PN 182587 is superseded by 202103 and PN 182589 is superseded by 202104.

\*How to Order the SCT-2200 for use with fieldbus module

Order 1 RJ45 cable for every Scale module connected to a Fieldbus module.

\*\* Compatible with 682 indicator

### Options/Accessories

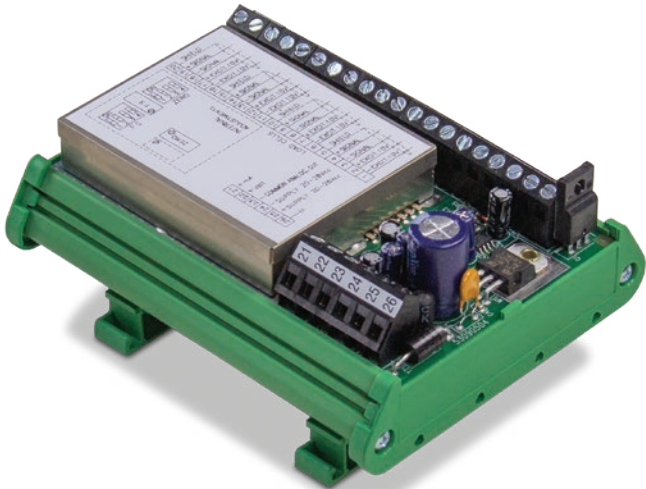
Part #	Description	Est. Weight	Price
88792	12VDC 1.2A DIN rail mount power supply	1 lb	\$140.00
119244	24VDC 1.3A DIN rail mount power supply	1 lb	\$160.00

### Specifications

- Power:**  
12/24 VDC
- Power Consumption:**  
70 mA min to 100 mA max
- Excitation Voltage:**  
5 VDC, 120 mA, 8 × 350 ohm load cells
- Analog Signal Input Range:**  
± 39 mV
- Analog Signal Sensitivity:**  
0.3 µV/graduation minimum
- A/D Sample Rate:**  
One channel A/D 24-bit sigma-delta conversion, up to 200 conv./sec. auto select
- Resolution:**  
Internal: 1,500,000 counts  
Display: 800,000
- Digital I/O:**  
Two inputs: 12/24 VDC  
Two outputs: 150 mA 48 VAC/ 150 mA 60 VDC
- Communication Ports:**  
(1) RS-485, (1) RS-232  
Analog output (if equipped):  
Opt isolated, 16-bit  
0-20mA, 4-20mA (Maximum 350 ohm)  
0-5VDC, 0-10VDC (Minimum 10,000 ohm)
- Annunciators:**  
Net, center of zero, stability
- Display:**  
Six-digit 0.31 in (8 mm), red LED
- Keys/Buttons:**  
Five key, tactile feel  
Zero (Down), Tare (Up), Mode (Right), Print (Enter), C (On/Off)
- Dimensions:**  
(L × H × D)  
4.72 × 4.52 × 0.98 in  
(120 × 115 × 25 mm)
- Temperature & Humidity:**  
Certified: 14 °F to 104 °F (-10 °C to 40 °C)  
Operating: 14 °F to 122 °F (-10 °C to 50 °C)  
Humidity: 85% non-condensing
- Rating/Material:**  
NEMA Type 1 plastic pluggable connectors
- Weight:**  
1 lb (0.5 kg)
- Warranty:**  
One-year limited
- Approvals:**  
NTEP CC 20-046  
Measurement Canada AM-6165C  
OIML R76/2006-A-GB1-19.17  
EU Legal for Trade  
cULus Listed  
NAWI Certified  
UKCA Marked

# SCT-3300

Signal Conditioning Transmitter



Approvals

UK  
CA

## Part Number/Price

Part #	Description	Est. Weight	Price
Transmitters			
188725	Indicator, SCT-3300 four load cell input with Analog Output	1 lb	\$350.00

## Options/Accessories

Part #	Description	Est. Weight	Price
88792	12VDC 1.2A DIN rail mount power supply	1 lb	\$140.00
119244	24VDC 1.3A DIN rail mount power supply	1 lb	\$160.00

## Standard Features

- Powers up to six (350 ohm) load cells in parallel
- Analog amplifier and transmitter
- Analog output: 0-20 mA, 4-20 mA, 0-10 V
- Mounting on Omega/DIN rail for back panel or junction box

## Specifications

### Power:

Input: 20 to 28 VDC

### Power Consumption:

8 W

### Excitation Voltage:

10 VDC, 170 mA, 6 × 350 ohm load cells

### Analog Signal Input Range:

3.5 to 24 mV

### Analog Signal Sensitivity:

0.3  $\mu$ V/graduation minimum  
1.0  $\mu$ V/graduation recommended

### A/D Sample Rate:

300 Hz

### System linearity:

± 0.01% full scale

### Analog Output (if equipped):

Opto isolated  
0-20 mA, 4-20 mA (max 300 ohm)  
0-10 VDC (min 10,000 ohm)

### Dimensions:

(L × W × H)  
4.56 × 3.72 × 2.4 in  
(114 × 93 × 60 mm)

### Temperature & Humidity:

Operating: 14 °F to 122 °F (-10 °C to 50 °C)  
Humidity: 85% non-condensing

### Rating/Material:

DIN rail mount: NEMA Type 1

### Weight:

0.5 lb (0.2 kg)

### Warranty:

One-year limited

### Approvals:

UKCA Marked



COMING  
SOON

## Standard Features

- Load cell status diagnostics
- USB port for quick programming
- Integrated fieldbus and web server for configuration, diagnostics and data backup
- Process up to 4800 weight readings per second. The high speed allows an extremely accurate weight filtering even with weighing being performed in milliseconds.
- Up to 120 updates per second on Fieldbus
- New power supply circuit of the load cells (up to 16) for a better weighing stability
- Power supply circuit with protections against overloads, polarity reversal and short circuits, specific for industrial environments
- Micro-USB communication port for configuration, diagnostics and data backup available on all versions
- Modbus RTU protocol integrated on all versions, up to 110 updates per second
- Real time warning of any faults or disconnections of the load cell
- The integrated web server allows full diagnostics, calibration and remote configuration of the weight transmitter from an Ethernet network.
- Calibration via theoretical (mV/V), with sample weights, Web server or XSpeed software tool

## OPTIONAL XSPED SOFTWARE

- Customization of the weighing filter, to maximize the speed and accuracy in static and dynamic applications
- Graphical weighing analysis for the identification of mechanical disturbances and vibrations. Oscilloscope function for system diagnostics and filter optimization

## Part Number/Price

Part #	Description	Est. Weight	Price
Consult	SCT-1SX-AN weight transmitter and analog output for DIN rail mount with DIO 2 IN and 4 OUT, integrated web server		Consult
Consult	SCT-1SX-ETHIP weight transmitter and EtherNet/IP port for DIN rail mount with DIO 2 IN and 4 OUT, integrated web server		Consult
Consult	SCT-1SX-PRONET weight transmitter and PROFINET port for DIN rail mount with DIO 2 IN and 4 OUT, integrated web server		Consult
Consult	SCT-1SX-MODTCP weight transmitter and Modbus/TCP port for DIN rail mount with DIO 2 IN and 4 OUT, integrated web server		Consult

## Options/Accessories

Part #	Description	Est. Weight	Price
88792	12VDC 1.2A DIN rail mount power supply	1 lb	\$140.00
119244	24VDC 1.3A DIN rail mount power supply	1 lb	\$160.00
Consult	PC software, XSpeed with graphical weighing analysis and oscilloscope function for system diagnostics and filter optimization		Consult
Consult	Alibi Memory for type-approved communication to PC/PLC (fiscal memory, max 120,000 weighs) built-in real time clock to print the date/time with PCB, screw terminal, plastic box		Consult
Consult	Real time clock for printing/displaying of date and time		Consult

## Specifications

### Power:

12 to 24 VDC, 5 W

### Power Consumption:

70 mA min to 100 mA max

### Excitation Voltage:

5V, 120 mA, 16 × 350 ohm load cells

### Analog Signal Input Range:

± 39 mV

### Analog Signal Sensitivity:

High resolution 0.01  $\mu$ V/d

Legal for trade 0.3  $\mu$ V/e

### A/D Sample Rate:

Up to 4800 Hz

### Resolution:

Internal: 1,500,000 counts

Display: 800,000

Legal-for-trade divisions

Up to 10,000e or multi-field 2 × 3,000e

### Digital I/O:

Two inputs, configurable: 12/24 VDC

Four outputs, configurable: 150 mA 48 VAC/

150 mA 60 VDC

### Communication Ports:

(1) RS-485, (1) RS-232

1 micro-USB port (device)

Serial port update rate: up to 1600 Hz

Fieldbus update rate: up to 120 Hz

### Analog Output (if equipped):

Opto. isolated, 16-bit

0 to 20mA, 4 to 20mA (Maximum 350 ohm)

0 to 5VDC, 0 to 10VDC (Minimum 10,000 ohm)

### Annunciators:

Net, center of zero, stability

### Display:

Six-digit (8 mm), red LED

### Keys/Buttons:

Five key, membrane panel

Zero (Down), Tare (Up), Mode (Right), Print (Enter),

C (On/Off)

### Dimensions:

(L × W × H)

4.72 × 0.90 × 4.00 in

(120 × 23 × 112 mm)

### Temperature & Humidity:

For internal use -20°C to 60°C

Approved -10°C to 40°C

Humidity: 85% non-condensing

### Rating/Material:

Enclosure: ABS plastic

### Warranty:

One-year limited

### Approvals:

CE-M EN 45501

# SCT-4X

4-Channel Integrated Fieldbus Transmitter

COMING  
SOON



## Specifications

- Power:**  
12 to 24 VDC
- Power Consumption:**  
5W
- Excitation Voltage:**  
5 VDC, 120 mA  
up to 16 x 350 ohm cells
- Analog Signal Input Range:**  
± 39 mV
- Analog Signal Sensitivity:**  
0.3 µV/graduation minimum
- A/D Sample Rate:**  
24-bit A/D  
Single-channel up to 2600 conv/sec  
4 channels up to 100 conv/sec
- Resolution:**  
Internal: 3,000,000 counts  
Display: up to 800,000  
Up to 8 linearization points
- Digital I/O:**  
Two inputs: 12/24 VDC  
Two outputs: 150 mA 48 VAC/ 150 mA 60 VDC
- Communication Ports:**  
1 Micro-USB port (device) for PC configuration  
(1) RS-485, (1) RS-232
- Analog Output (if equipped):**  
Opt. isolated, 16-bit  
0-20mA, 4-20mA (Maximum 350 ohm)  
0-5VDC, 0-10VDC (Minimum 10,000 ohm)
- Annunciators:**  
Nine LEDs
- Display:**  
Six-digit 0.31 in (8 mm), red LED
- Keys/Buttons:**  
Five tactile keys  
Zeroing, Tare, Function mode,  
Manual data printing/sending, ON/Stand-by
- Dimensions:**  
(L x W x H)  
4.17 x 2.20 x 4.64 inches  
(106 x 56 x 118 mm)
- Temperature & Humidity:**  
Certified: 14 °F to 104 °F (-10 °C to 40 °C)  
Operating: -4 °F to 140 °F (-20 °C to 60 °C)
- Humidity:**  
80% RH, non-condensing
- Rating/Material:**  
NEMA Type 1 plastic pluggable connectors  
ABS
- Weight:**  
1 lb (0.5 kg)
- Warranty:**  
One-year limited
- Approvals:**  
CE-M EN 45501

## Standard Features

- Manage up to 4-load cells (1 scale) or 4 scales with load cell feed circuit for greater weighing stability
- Process to 2600 weight readings per second for single-channel
- 14.2 mm display with new configuration menu to simplify calibration and configuration
- All data and adjustments of each scale are available through integrated fieldbus with up to 120 updates per second
- Integrated web server allows complete diagnostics, calibration and remote configuration
- Frontal micro-USB communication port for configuration, diagnostics and data backup
- Removable terminal blocks to simplify wiring in the electrical panel
- RS-485 communication port always available on all versions
- Power supply circuit with protections, specific for industrial environment

## OPTIONAL XSPEED SOFTWARE

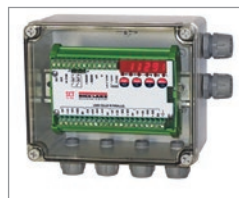
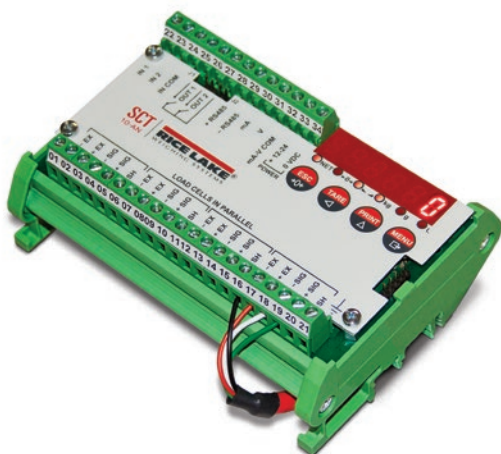
- Customization of the weighing filter, to maximize the speed and accuracy in static and dynamic applications
- Graphical weighing analysis for the identification of mechanical disturbances and vibrations.
- Oscilloscope function for system diagnostics and filter optimization

## Part Number/Price

Part #	Description	Price
Consult	SCT-4XAN high speed weight transmitter and analog output for DIN rail mount with 2 IN, 2 OUT, 5-key keypad, LED display	Consult
Consult	SCT-4X-ETHIP high speed 4 channel weight transmitter and EtherNet/IP port for DIN rail mount with DIO 2 IN, 2 OUT, 5-key keypad, LED display	Consult
Consult	SCT-4X-MODTCP high speed 4 channel weight transmitter and Modbus/TCP port for DIN rail mount with DIO 2 IN, 2 OUT, 5-key keypad, LED display	Consult
Consult	SCT-4X-PRONET high speed 4 channel weight transmitter and PROFINET port for DIN rail mount with DIO 2 IN, 2 OUT, 5-key keypad, LED display	Consult

## Options/Accessories

Part #	Description	Est. Weight	Price
88792	12VDC 1.2A DIN rail mount power supply	1 lb	\$140.00
119244	24VDC 1.3A DIN rail mount power supply	1 lb	\$160.00
Consult	PC software, XSpeed with graphical weighing analysis and oscilloscope function for system diagnostics and filter optimization		Consult
Consult	Alibi Memory for type-approved communication to PC/PLC (fiscal memory, max 120,000 weighs) built-in real time clock to print the date/time with PCB, screw terminal, plastic box		Consult
Consult	Real time clock for printing/displaying of date and time		Consult



SCT-10 in Plastic Enclosure

### Approvals



### Standard Features

- Converts digital weight to analog output
- Sums four input channels in parallel
- Theoretical calibration, real-weigh calibration, linearity calibration
- Push-button or preset tare
- Full-scale analog output with zero setting and PLC correction of analog signal
- Displays weight, configuration, calibration and error conditions
- DIN-rail mounting, suitable for back panel
- Two digital inputs, two digital outputs
- Supports ASCII or MODBUS-RTU protocols

### Part Number/Price

Part #	Description	Est. Weight	Price
129393	SCT-10 converter with Analog Output	1 lb	\$475.00
129394	SCT-10 converter with Analog Output in enclosure	1 lb	\$625.00

### Options/Accessories

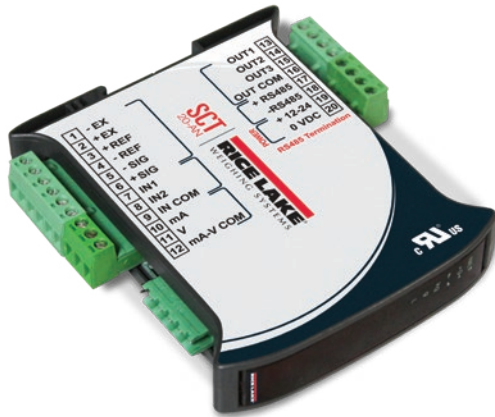
Part #	Description	Est. Weight	Price
88792	12VDC 1.2A DIN rail mount power supply	1 lb	\$140.00
119244	24VDC 1.3A DIN rail mount power supply	1 lb	\$160.00
131129	Installation manual	1 lb	\$25.00
199687	DIN rail clip right & left end clamp		\$10.00

### Specifications

- Power:**  
Input: 12 to 24 VDC
- Power Consumption:**  
5 W
- Excitation Voltage:**  
5VDC, 120mA, 8 × 350 ohm load cells
- Analog Signal Input Range:**  
+/-19.5 mV
- Analog Signal Sensitivity:**  
0.3  $\mu$ V/graduation minimum  
1.0  $\mu$ V/graduation recommended
- A/D Sample Rate:**  
80 Hz
- Resolution:**  
Internal: 16,000,000 counts  
Display: 999,999
- System Linearity:**  
 $\pm$  0.01% full scale
- Digital I/O:**  
2 inputs 5-24VDC, 2 outputs  
24 VDC/60 mA  
N.O. or N.C. (solid state)
- Communication Ports**  
RS-485 or RS-232 simplex supports  
up to 115,200 bps
- Analog Output:**  
Optoisolated, 16 bit  
0-20 mA, 4-20 mA (max 300 ohm)  
0-10 VDC, 0-5 VDC, -10 to 10 VDC,  
5 to 5 VDC, (min 10 k ohm)
- Annunciators:**  
Net, center of zero, stability,  
KG, G, LB
- Display:**  
0.3 in (8 mm), six-digit, 7 segment LED
- Keys/Buttons:**  
4-key membrane panel, tactile feel  
Zero, Tare, Print, Menu, Escape,  
Left and Up Navigation, Enter
- Dimensions:**  
(L × W × H)  
DIN Rail Mount: 4.84 × 3.62 × 1.96 in  
(123 × 92 × 50 mm)  
Enclosure: 6.69 × 5.51 × 3.74 in  
(170 × 140 × 95 mm)
- Temperature & Humidity:**  
Operating Temperature: -4 °F to 140 °F  
(-20 °C to 60 °C)  
Humidity: 85% non-condensing
- Rating/Material:**  
DIN rail mount: NEMA Type 1  
Enclosure: NEMA Type 4/IP67, plastic  
Clear cover: six PG9 cord grips
- Weight:**  
1 lb (0.5 kg)
- Warranty:**  
One-year limited
- Approvals:**  
cULus Recognized

# SCT-20

Signal Conditioning Transmitter



## Approvals



## Standard Features

- Space saving, vertical shape with DIN-rail mounting
- Displays weight, configuration, calibration and error conditions
- Theoretical calibration, real-weigh calibration, linearity calibration
- Push-button or preset tare
- Converts digital weight to analog output or optional DeviceNet™ or Profibus™ or EtherNet/IP™ protocol
- Supports ASCII or MODBUS-RTU protocols
- Full-scale analog output with zero setting and PLC correction of analog signal
- Bit swapping selection for little endian and big endian format
- Two digital inputs, three digital outputs
- One serial port, RS-232 transmit only, or RS-485 half duplex connection

## Part Number/Price

Part #	Description	Est. Weight	Price
129396	SCT-20 converter with Analog Output	1 lb	\$475.00
129397	SCT-20 converter with DeviceNet™	1 lb	\$625.00
129558	SCT-20 converter with Profibus™ DP	1 lb	\$675.00
129398	SCT-20 converter with EtherNet/IP™	1 lb	\$850.00
132534	SCT-20 converter with Ethernet TCP/IP™	1 lb	\$850.00
156903	SCT-20 converter with Modbus/TCP	1 lb	\$850.00
131128	Installation manual	1 lb	\$25.00
NTEP Approved			
162883	SCT-20 converter with Analog Output	1 lb	\$525.00
162886	SCT-20 converter with EtherNet/IP	1 lb	\$925.00
162887	SCT-20 converter with Ethernet TCP/IP	1 lb	\$925.00

*EtherNet/IP and Modbus output changed to Dual Port in 2019.*

## Options/Accessories

Part #	Description	Est. Weight	Price
88792	12VDC 1.2A DIN rail mount power supply	1 lb	\$140.00
119244	24VDC 1.3A DIN rail mount power supply.	1 lb	\$160.00

## Specifications

### Power:

Input: 12 to 24 VDC

### Power Consumption:

5 W

### Excitation Voltage:

5 VDC, 120 mA, 8 × 350 ohm load cells

### Analog Signal Input Range:

+/-39 mV

### Analog Signal Sensitivity:

0.3 µV/graduation minimum

1.0 µV/graduation recommended

### A/D Sample Rate:

300 Hz

### Resolution:

Internal: 16,000,000 counts

Display: 999,999

### System linearity:

± 0.01% full scale

### Digital I/O:

2 inputs 5 to 24 VDC, 3 outputs 115 VAC/150 mA

N.O. or N.C. (dry contact)

### Communication Ports:

RS-232 transmit only, or RS-485 half duplex

Supports up to 115,200 bps

### Analog Output:

Optoisolated, 16 bit

0-20 mA, 4-20 mA (max 300 ohm)

0-10 VDC, 0-5 VDC (min 10k ohm)

### Display:

0.3 in (8 mm), six-digit, seven-segment LED

Annunciators: Net, center of zero, stability, KG, G, LB

### Keys/Buttons:

4-key membrane panel, tactile feel

Zero, Tare, Print, Menu, Escape, Left & Up

Navigation, Enter

### Dimensions

(W × H × D)

4.72 × 4.52 × 0.98 in

(120 × 115 × 25 mm)

### Temperature & Humidity:

Operating: -4 °F to 140 °F (-20 °C to 60 °C)

Humidity: 85% non-condensing

### Rating/Material:

Enclosure: NEMA Type 1 plastic

pluggable connectors

### Weight:

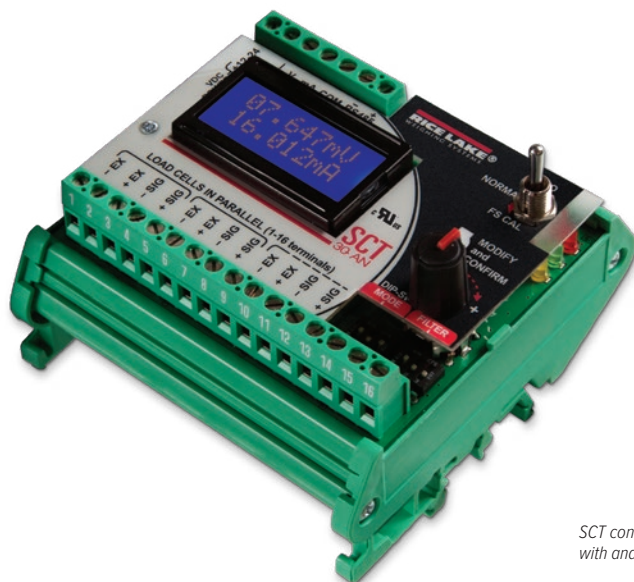
1 lb (0.5 kg)

### Warranty:

One-year limited

### Approvals:

cULus Recognized



SCT converter  
with analog output

#### Approvals



#### Part Number/Price

Part #	Description	Est. Weight	Price
156794	SCT-30 converter with Analog Output	1 lb	\$375.00
156834	SCT-30 converter with Analog Output in enclosure	1 lb	\$525.00

#### Options/Accessories

Part #	Description	Est. Weight	Price
88792	12VDC 1.2A DIN rail mount power supply	1 lb	\$140.00
119244	24VDC 1.3A DIN rail mount power supply.	1 lb	\$160.00
131129	Installation manual	1 lb	\$25.00
199707	DIN rail clip right & left end clamp		\$10.00

#### Standard Features

- LCD display
- Powers up to eight (350 ohm) load cells in parallel (with a 24-bit A/D converter)
- A/D converter 24-bit 4.8 kHz
- 16-bit analog output: 0-20 mA, 4-20 mA, 0-5 V, 0-10 V,  $\pm 5$  V, and  $\pm 10$  V
- Mounting on Omega/DIN rail for back panel or junction box
- Diagnostic message for load cell disconnect and over-capacity errors

#### Specifications

##### Power:

Input: 12 to 24 VDC

##### Power Consumption:

3 W

##### Excitation Voltage:

5 VDC, 120 mA, 8  $\times$  350 ohm load cells

##### Analog Signal Input Range:

$\pm 39$  mV

##### Analog Signal Sensitivity:

0.3  $\mu$ V/graduation minimum

1.0  $\mu$ V/graduation recommended

##### A/D Sample Rate:

300 Hz

##### Resolution:

Internal: 16,000,000 counts

##### System Linearity:

$\pm 0.01\%$  full scale

##### Communication Ports:

RS-485

##### Analog Output:

Opto isolated, 16 bit

0-20 mA, 4-20 mA (max 300 ohm)

0-10 VDC, 0-5 VDC (min 10k ohm)

##### Display:

Eight-digit alphanumeric tow line LCD, 5 mm high

##### Keys/Buttons:

Control knob and DIP switches

##### Dimensions:

(L  $\times$  W  $\times$  H)

3.74  $\times$  3.54  $\times$  2.36 in

(95  $\times$  90  $\times$  60 mm)

##### Temperature & Humidity:

Operating:  $-4^{\circ}\text{F}$  to  $140^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ )

Humidity: 85% non-condensing

##### Rating/Material:

DIN rail mount: NEMA Type 1

##### Weight:

1 lb (0.5 kg)

##### Warranty:

One-year limited

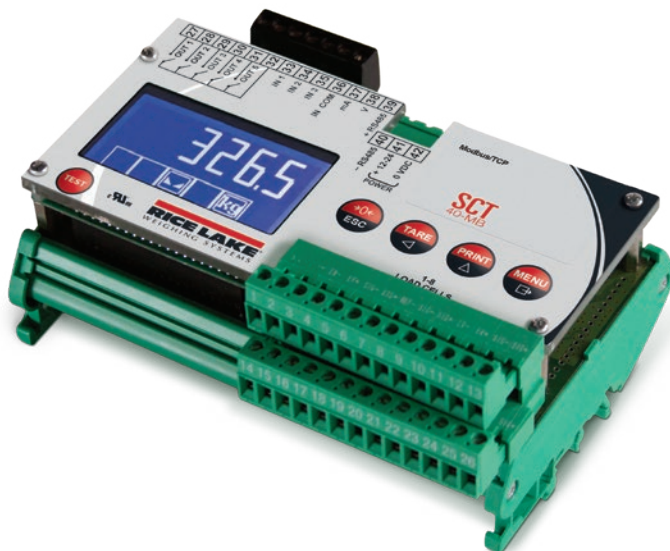
##### Approval:

cULus Recognized



# SCT-40

Signal Conditioning Transmitter



## Approvals



## Standard Features

- LCD display
- Supports up to eight independent reading channels for load cells
- Displays weight, configuration, calibration and error conditions
- DIN rail mounting
- Theoretical calibration, real-weight calibration and error conditions
- Push-button or preset tare
- Converts digital weight to analog output or optional DeviceNet™, Profibus™, EtherNet/IP™, PROFINET and Modbus TCP protocols
- Supports ASCII or MODBUS RTU protocols
- Full scale analog cut put with zero setting and PLC correction of analog signal
- Bit swapping selection for little endian and endian format
- Three digital inputs, five digital outputs
- One serial port, RS-485 half duplex or RS-232 transmit-only connection

## Part Number/Price

Part #	Description	Est. Weight	Price
170470	SCT-40 with Analog Output	1 lb	\$675.00
170471	SCT-40 with DeviceNet	1 lb	\$950.00
170472	SCT-40 with Profibus	1 lb	\$950.00
170473	SCT-40 with EtherNet/IP	1 lb	\$950.00
170474	SCT-40 with Ethernet TCP/IP	1 lb	\$900.00
170475	SCT-40 with Modbus TCP	1 lb	\$950.00
170476	SCT-40 with Profinet I/O	1 lb	\$950.00
131128	Installation manual	1 lb	\$25.00

*EtherNet/IP and Modbus output changed to Dual Port in 2019*

## Options/Accessories

Part #	Description	Est. Weight	Price
88792	12VDC 1.2A DIN rail mount power supply	1 lb	\$140.00
119244	24VDC 1.3A DIN rail mount power supply.	1 lb	\$160.00

## Specifications

### Power:

Input: 12 to 24 VDC

### Power Consumption:

5W

### Excitation Voltage:

5 VDC, 240 mA, 16 x 350 ohm load cells

### Analog Signal Input Range:

+/-39 mV

### Analog Signal Sensitivity:

0.3  $\mu$ V/graduation minimum

1.0  $\mu$ V/graduation recommended

### A/D Sample Rate:

600 Hz

### Resolution:

Internal: 16,000,000 counts

Display: 999,999

### System linearity:

$\pm$  0.01% full scale

### Digital I/O:

3 inputs 5 to 24 VDC, 5 outputs, 115 VAC/150 mA

### Communication Ports

RS-232 transmit only, or RS-485 half duplex

Supports up to 115,200 bps

### Analog Output:

Opto isolated, 16 bit

0-20 mA, 4-20 mA (max 300 ohm)

0-10 VDC, 0-5 VDC (min 10,000 ohm)

### Display:

Backlit graphic LCD, transmissive

128 x 64 pixel resolution, 60 x 32 mm visible area

### Keys/Buttons:

Five-key tactile keypad

Test, Zero, Tare, Print Menu, Escape, Left and Up,

Navigator, Enter

### Dimensions:

(L x W x H)

5.82 x 3.62 x 2.36 in

(148 x 92 x 60 mm)

### Temperature & Humidity:

Operating: -4 °F to 140 °F (-20 °C to 60 °C)

Humidity: 85% non-condensing

### Rating/Material:

DIN rail mount: NEMA Type 1

### Weight:

1 lb (0.5 kg)

### Warranty:

One-year limited

### Approvals:

cULus Recognized





## Part Number/Price

Part #	Description	Price
157323	Ranger 7 high resolution calibration simulator	\$995.00

## Options/Accessories

Part #	Description	Price
21116	Cable (4 ft) with banana plugs	\$68.00

## Standard Features

- High resolution design
- Used in high precision testing, troubleshooting and calibrating digital weight indicators
- Switchable offset
- Painted die-cast enclosure

## Specifications

### Vernier:

Two ranges; one is equal to the sum of the 0.05 mV/V switch and the 0 to 0.5 mV/V switch. The other is the sum of the 0.5 mV/V, 0.1 mV/V and 0.01 mV/V switches.

### Load Impedance:

Three settings:  
X0.5: 700 ohm  
X1: 350 ohm (one standard load cell)  
X4: 87.5 ohm (four load cell platform)

### Linearity:

$\pm 0.01\% + 1\mu V$

### Connectors:

Low Thermal Electronics, Type 2758 precision gold plated binding posts, standard banana jacks or 14 AWG wire

### Temperature Coefficient:

5 ppm/°C

### Zero Offset:

$\pm 0.0005$  mV/V

### Output Range:

0 to 3 mV/V in 0.01 mV/V steps

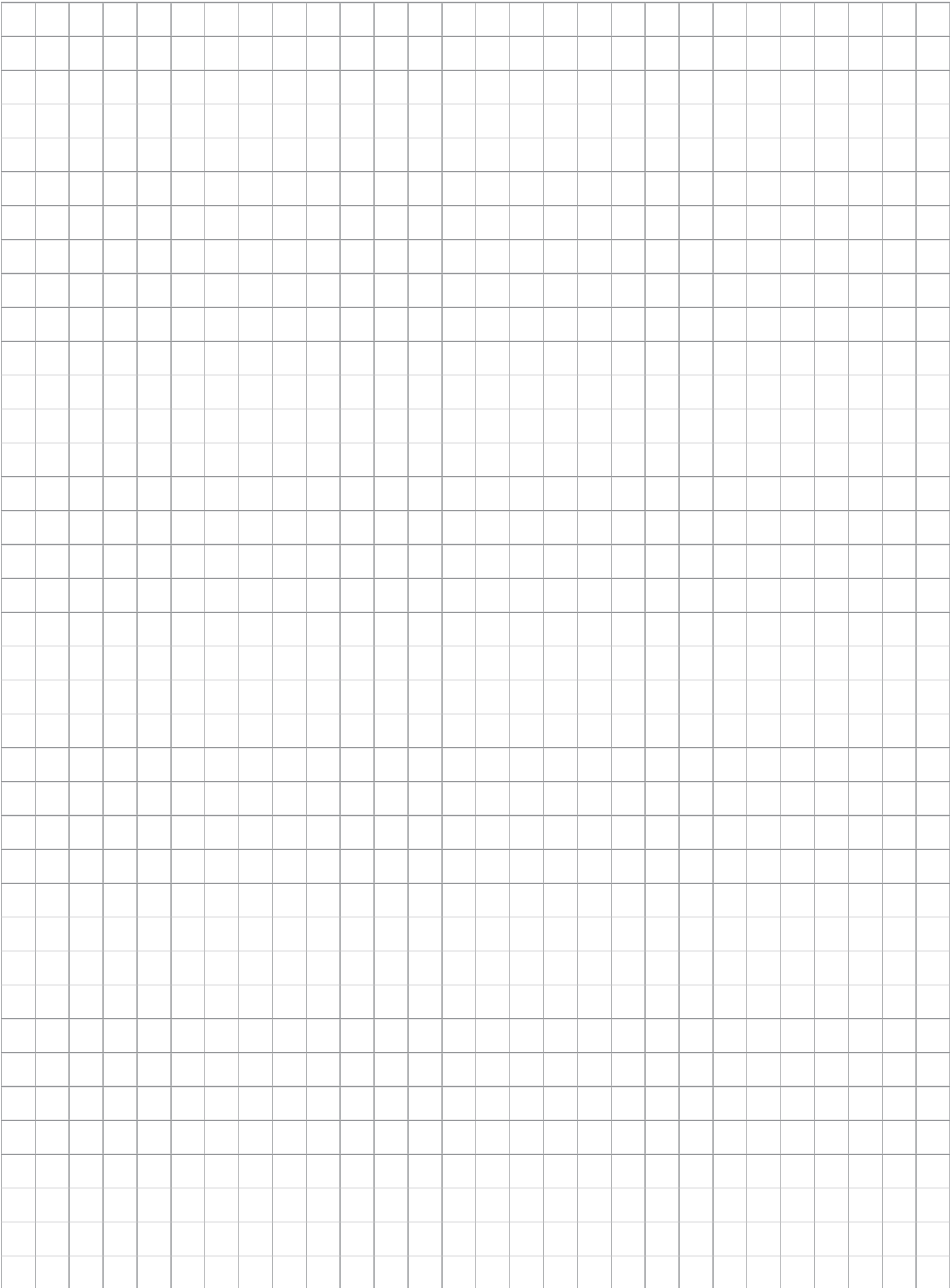
### LED Annunciators:

EXC +  
EXC -  
Offset ON  
0.5 mV/V  
0.1 mV/V

### Warranty:

One-year limited

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This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

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<i>Mid-section Assembly 10,000lb</i>	
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# MSI-3460

Assembly (250 to 10,000 lb)



## Part Number/Price

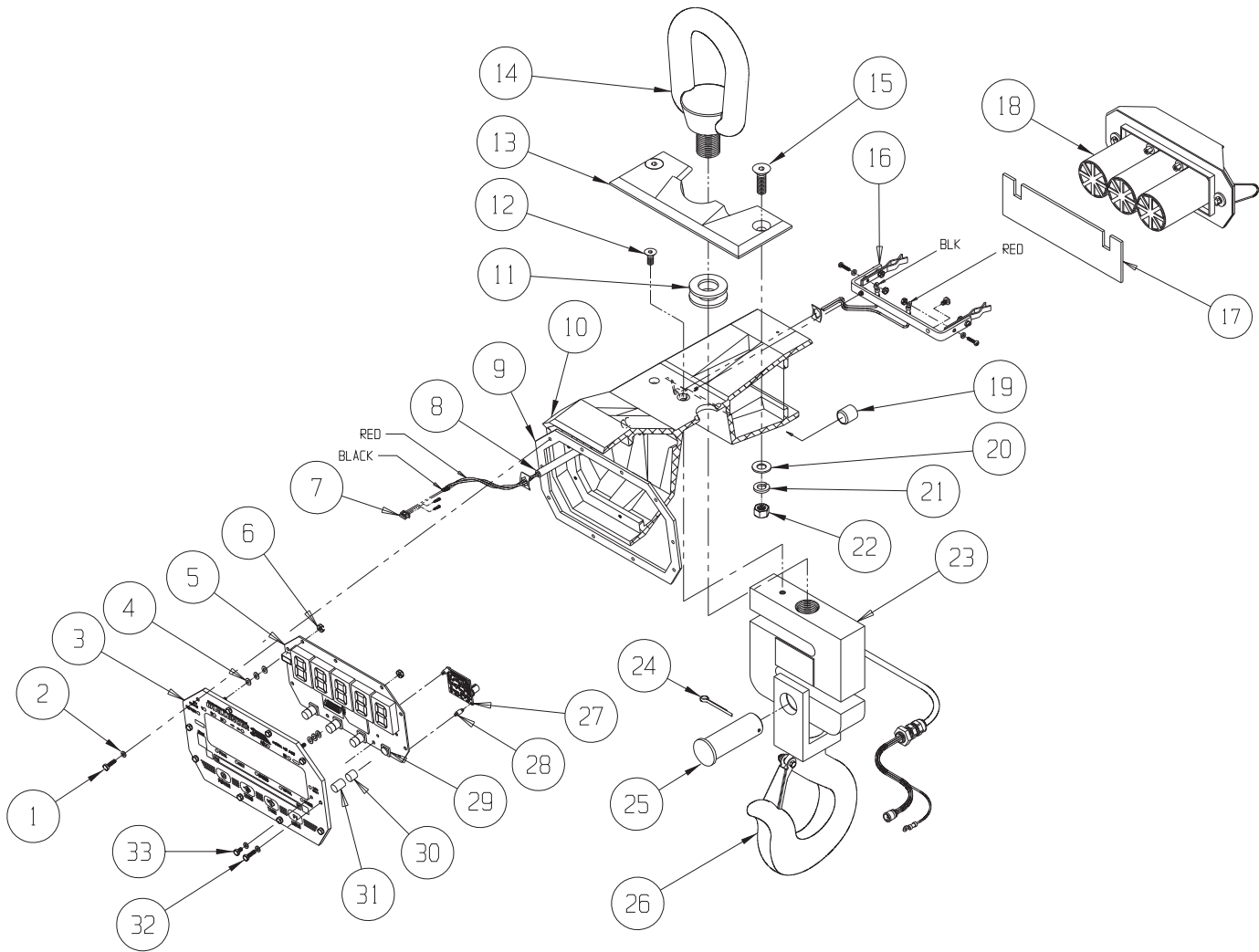
Item #	Part #	Description	Price
1	142276	Screw, hex head, 6-32 × 5/8, stainless steel	\$4.00
2	144645	Washer, rubber #6	\$3.00
3	149298	Front panel assembly	\$160.00
4	141899	Washer, flat, #6	\$2.00
5	149279	PCB display	\$275.00
6	128445	Nut, hex, 6-32, stainless steel	\$0.10
7	144178	Connector, power to PCB	\$2.00
8	148347	Tube, power cable	\$23.00
9	150056	Gasket, front panel	\$6.00
10	150398	Casting	\$445.00
11	148177	Washer, foam	\$3.00
12	146120	Screw, flat head, 1/4-20 × 5/8, stainless steel	\$2.00
13	148052	Plate, keeper, 250 to 2,000 lb	\$36.00
13	148050	Plate, keeper, 5,000 to 10,000 lb	\$36.00
14	142030	Eye, lifting, 250 to 2,000 lb	\$65.00
14	135441	Eye, lifting, 5,000 to 10,000 lb	\$140.00
15	146121	Screw, flat head, 3/8-16 × 1-1/4, allen, stainless steel	\$2.00
16	139821	Bracket assembly, battery clip	\$76.00
17	149750	Pad, battery	\$4.00
18	140049	Battery assembly	\$145.00
19	145927	Cap, receptacle	\$2.00
20	146533	Washer, flat, 3/8, stainless steel	\$0.75
21	15160	Washer, split lock, 3/8, stainless steel	\$1.10
22	126992	Nut, hex, 3/8-16, stainless steel	\$2.00
23	139081	Load cell assembly, 250/500 lb	\$1,040.00
23	139081	Load cell assembly, 1,000/2,000 lb	\$1,040.00
23	139082	Load cell assembly, 5,000/10,000 lb	\$925.00
24	145944	Pin, cotter, (fits 11205 clevis pin)	\$2.00
24	15258	Pin, cotter, (fits 11206 clevis pin)	\$3.30
25	142594	Pin, clevis (fits C00524-0009 hook)	\$4.00
25	142595	Pin, clevis (fits C00524-0010 hook)	\$18.00
26	140079	Hook/clevis assembly, 250 to 2,000 lb	\$330.00
	143232	Latch, safety (fits C00524-0009)	\$18.00
26	140080	Hook/clevis assembly, 5,000 to 10,000 lb	\$760.00
	143233	Latch, safety (fits C00524-0010)	\$40.00
27	153429	PCA, with turch insert	\$265.00
28	144929	Spacer, dual locking	\$6.00
29	143816	Switch	Consult
30	144643	Cap, switch .364, orange	\$2.00
31	144644	Cap, switch .236	\$2.00
32	142573	Screw, hex head, 6-32 × 5/8, stainless steel , drilled	\$4.00
33	142574	Screw, hex head, 6-32 × 1/4, stainless steel	\$4.00

REPLACEMENT PARTS



# MSI-3460

Assembly (250 to 10,000 lb)



REPLACEMENT PARTS

# MSI-3460

Assembly (15,000 lb)



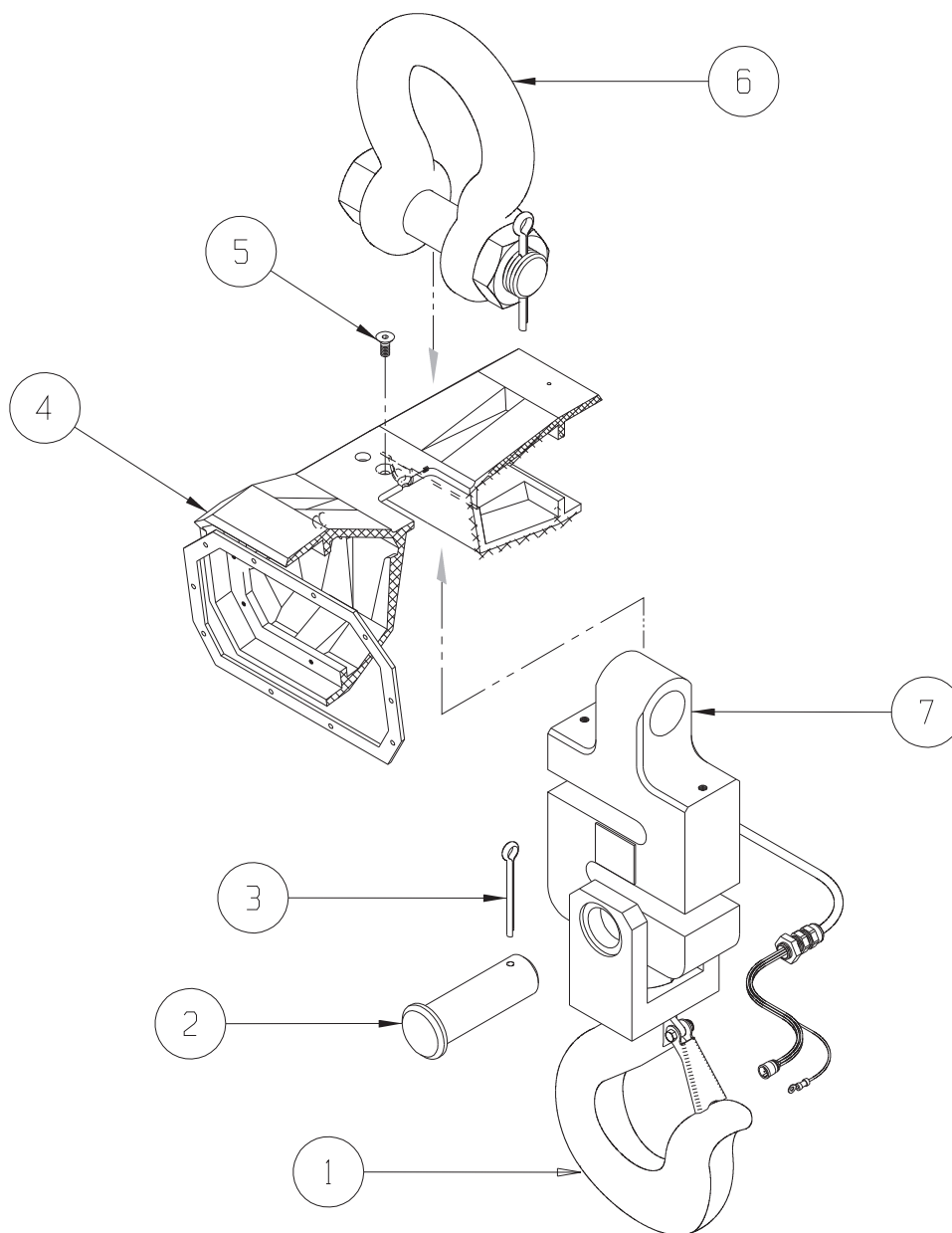
## Part Number/Price

Item #	Part #	Description	Price
1	135966	Swivel hook clevis assembly	\$1,510.00
2	142836	Pin clevis, 1.25 diameter x 4, steel plated	\$65.00
3	142186	Pin, cotter, 3/16 x 2	\$2.00
4	136084	Casting	\$525.00
5	146120	Screw, 1/4-20 x 5/8, allen, stainless steel	\$2.00
6	146331	Shackle 12 ton	\$295.00
7	139083	Load cell assembly, 15,000 lb/ 7,000 kg	\$1,750.00

REPLACEMENT PARTS

# MSI-3460

Assembly (15,000 lb)



REPLACEMENT PARTS

# MSI-3460

Battery Charger Assembly



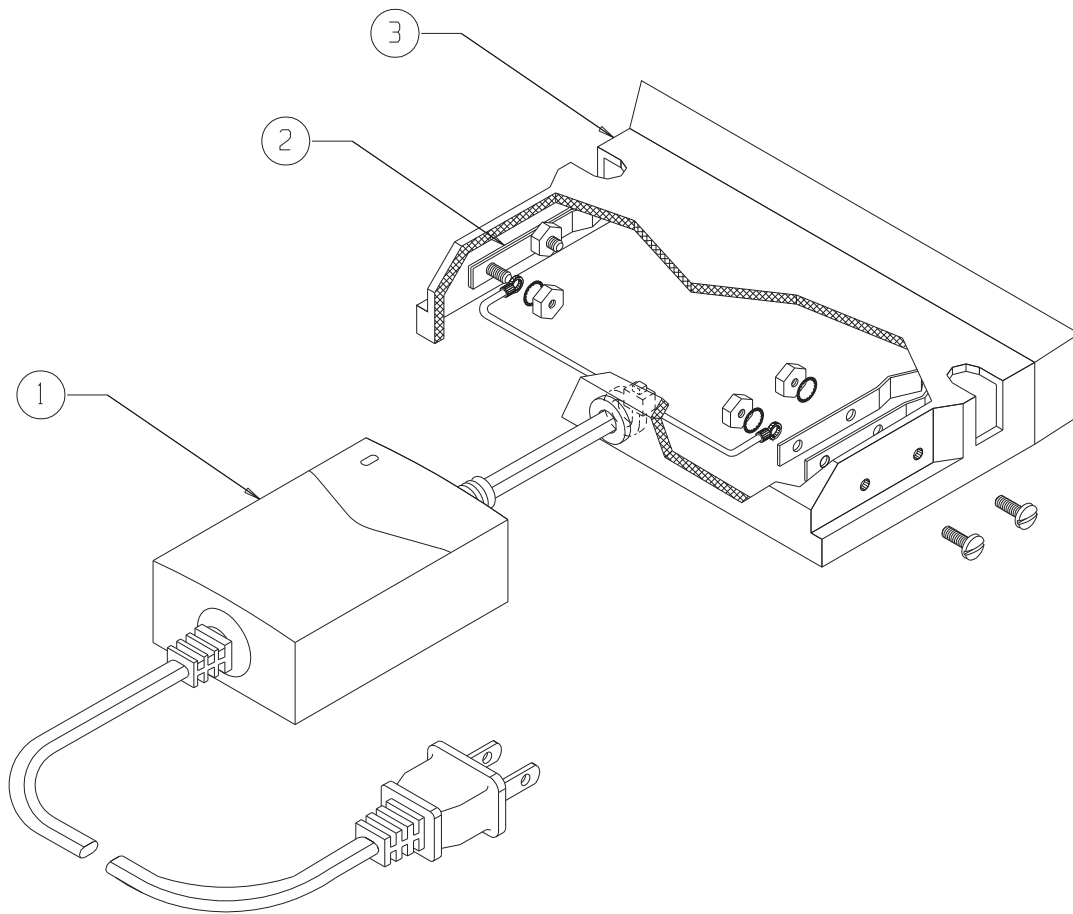
## Part Number/Price

Item #	Part #	Description	Price
1	162172	Charger, 6V universal input	\$67.00
2	150038	Clip, battery terminal	\$7.00
3	150055	Enclosure	\$36.00
	139152	Battery charger assembly, US plug	\$190.00
	139153	Battery charger assembly, European plug	\$190.00
	139154	Battery charger assembly, no plug	\$180.00

REPLACEMENT PARTS

# MSI-3460

Battery Charger Assembly



REPLACEMENT PARTS

# MSI-4260B

Front Casting Assembly

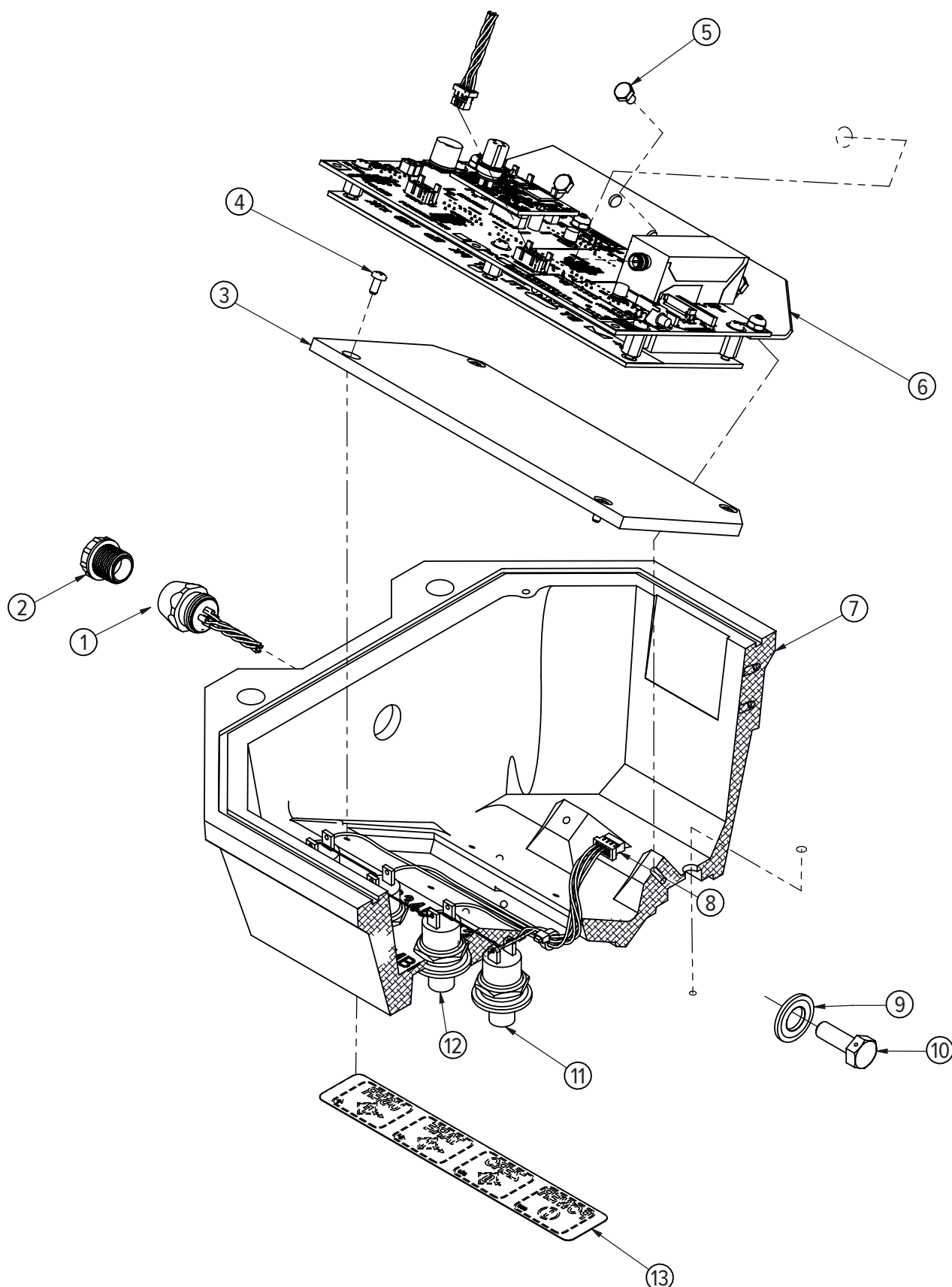


## Part Number/Price

Item #	Part #	Description	Price
1	139449	Cable assembly comm serial data RS-232	\$53.00
2	143352	Conn closure cap IP68 male	\$3.00
3	149488	Window LED	\$56.00
4	128088	Screw 4-40 x 1/4 pan head Phillips drive 18-8 stainless steel	\$0.50
5	142197	Screw, pan head 6-32 x 5/16 long Phillips drive stainless steel with locking patch material applied	\$2.00
6	139427	Assembly electronics 5-digit	\$1,000.00
7	149481	Front casting and machining	\$385.00
8	139448	Cable assembly switch harness	\$21.00
9	142472	Washer seal Stat-O-Seal® 1/4 in	\$4.00
10	153203	Screw hex 1/4-20 x 0.375 UNC drilled head stainless steel	\$10.00
11	147562	Switch P3-31111W watertight red	\$46.00
12	147563	Switch P3-31112W watertight black	\$44.00
13	149506	Label switch	\$13.00

REPLACEMENT PARTS





REPLACEMENT PARTS

# MSI-4260B

Mid-Section Assembly (S-Beam Load Cell ) (500 to 10,000 lb)



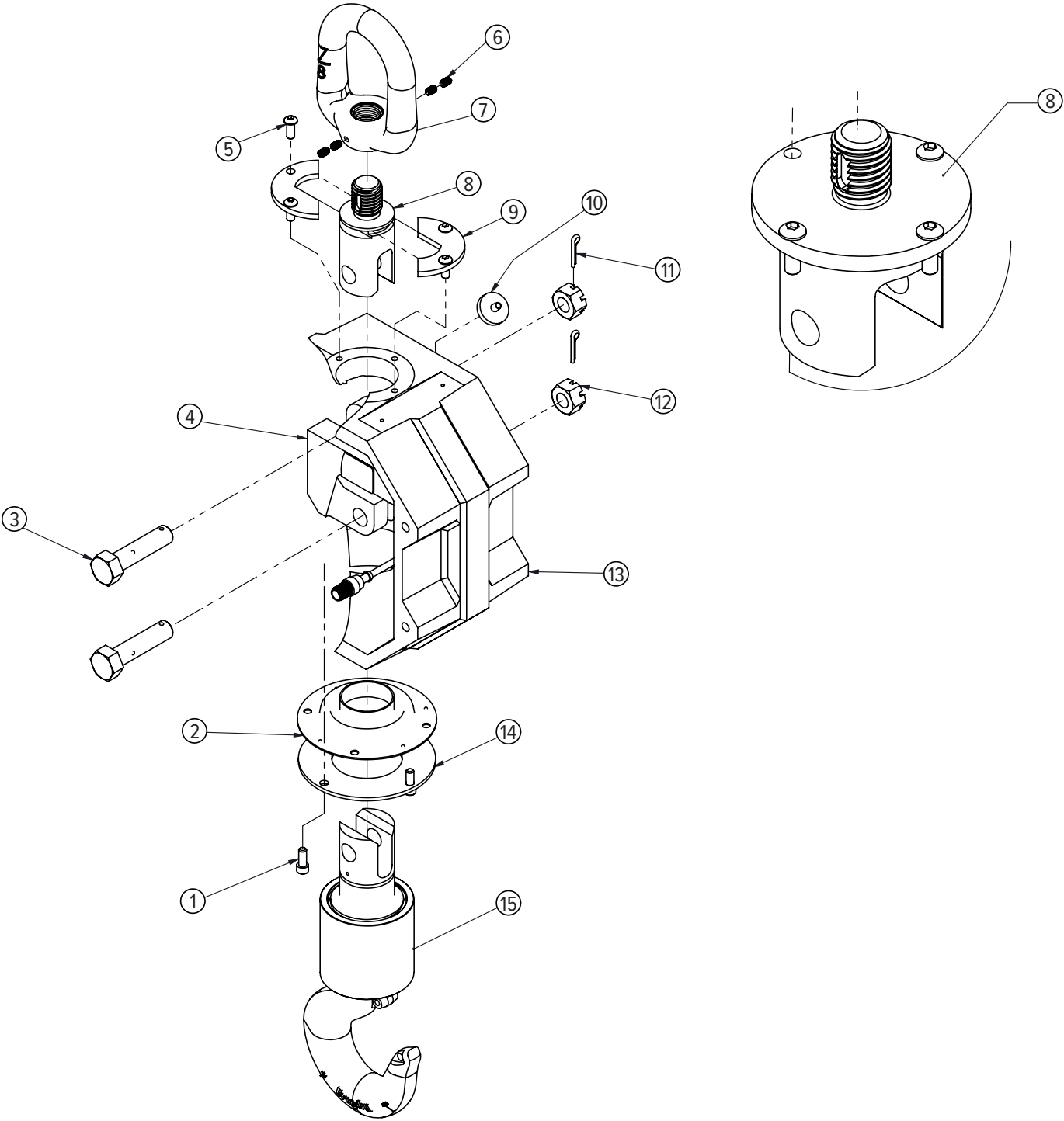
### Part Number/Price

Item #	Part #	Description	Price
1	145990	Screw socket head 1/4-20 × 5/8 stainless steel	\$2.00
2	149710	Seal link lower	\$47.00
	149165	Seal lower link	\$56.00
3	148457	Bolt clevis hex head 5/8 × 1.75 grip with thread protectors	\$25.00
	149217	Bolt clevis hex head 5/8 × 2.75 grip with thread protectors	\$32.00
4	138661	Load cell assembly 500 lb s-beam	\$1,220.00
	138662	Load cell assembly 1K/2K s-beam	\$1,220.00
	138663	Load cell assembly 5K s-beam	\$1,580.00
	138664	Load cell assembly 10K s-beam	\$1,710.00
5	72031	Screw, cap 1/4-20NC × 5/8 hex socket button head stainless steel	\$1.00
6	128799	Screw, set 1/4-20 × 3/8 socket head cup point 18-8 stainless steel	\$0.45
7	139795	Eye nut #7 500# - 2K	\$200.00
	148225	Eye nut 5/10K	\$265.00
8	148271	Upper link 500#/10K	\$245.00
	149126	Upper link s-beam 5/10K	\$415.00
9	148274	Collar top half 500#/10K	\$38.00
10	146347	Adhesive loctite 242-21 blue	Consult
11	15238	Pin, cotter 1/8 × 1 extended prong stainless steel	\$1.10
12	142832	Nut hex slotted 5/8 - 11	\$2.00
13	150519	Mid-section machined 500-10K w/o o-ring	\$560.00
14	148259	Collar 500#/10K	\$47.00
15	135043	Swivel hook assembly 500#/2K	\$1,630.00
	134523	Swivel hook assembly 5/10K s-beam	\$1,320.00

REPLACEMENT PARTS

# MSI-4260B

Mid-Section Assembly (S-Beam Load Cell) (500 to 10,000 lb)



REPLACEMENT PARTS

# MSI-4260B

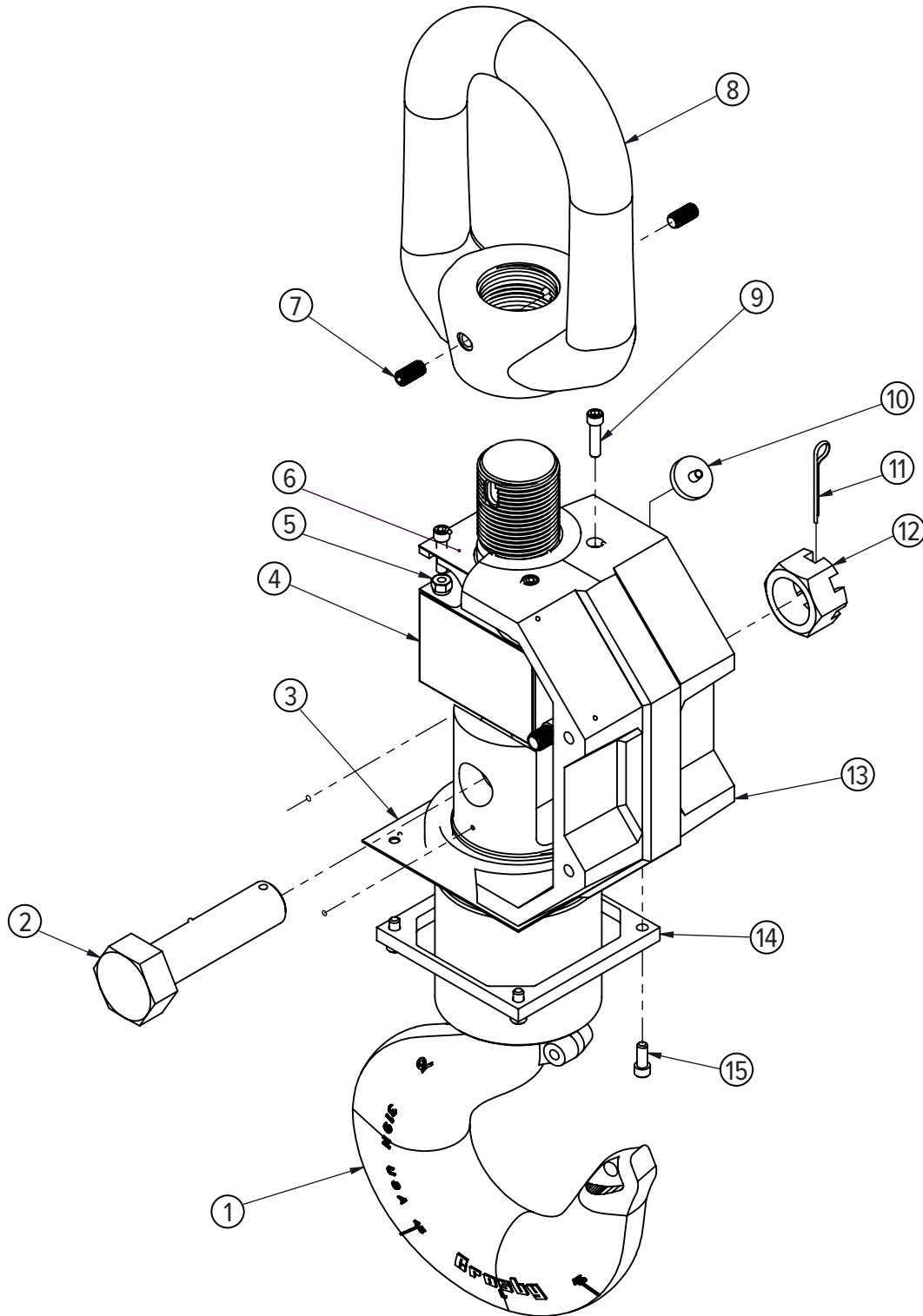
Mid-Section Assembly (20,000 to 30,000 lb)



### Part Number/Price

Item #	Part #	Description	Price
1	134938	Swivel hook assembly 20K	\$2,680.00
	134939	Swivel hook assembly 30K	\$3,480.00
2	148458	Bolt clevis hex head 1.125-4 × 4.2 grip with thread protectors	\$82.00
3	149957	Boot lower 20 to 70K	\$82.00
4	137763	Load cell assembly 20/30K standard	\$2,150.00
5	146631	Nut hex 1/4-20 nyloc stainless steel	\$2.00
6	149976	Gasket upper 20/30K Port-A-Weigh gasket	\$5.00
7	146081	Screw set 3/8-24 × 3/4 cup point stainless steel	\$2.00
8	148110	Eye nut 20/30K galvanized	\$610.00
9	81405	Screw, socket head 1/4-20 UNCx1 18-8 stainless steel	\$1.00
10	146322	Filter millipore	\$9.00
11	142186	Cotter pin 3/16 × 2 stainless steel	\$2.00
12	142833	Nut hex slotted 1.125 - 7 zinc plated	\$11.00
13	150523	Mid-section machined 20/30K	\$465.00
14	149958	Collar bottom 20 to 50K	\$130.00
15	145990	Screw socket head 1/4-20 × 5/8 stainless steel	\$2.00

REPLACEMENT PARTS



# MSI-4260B

Mid-Section Assembly (50,000 to 70,000 lb)



## Part Number/Price

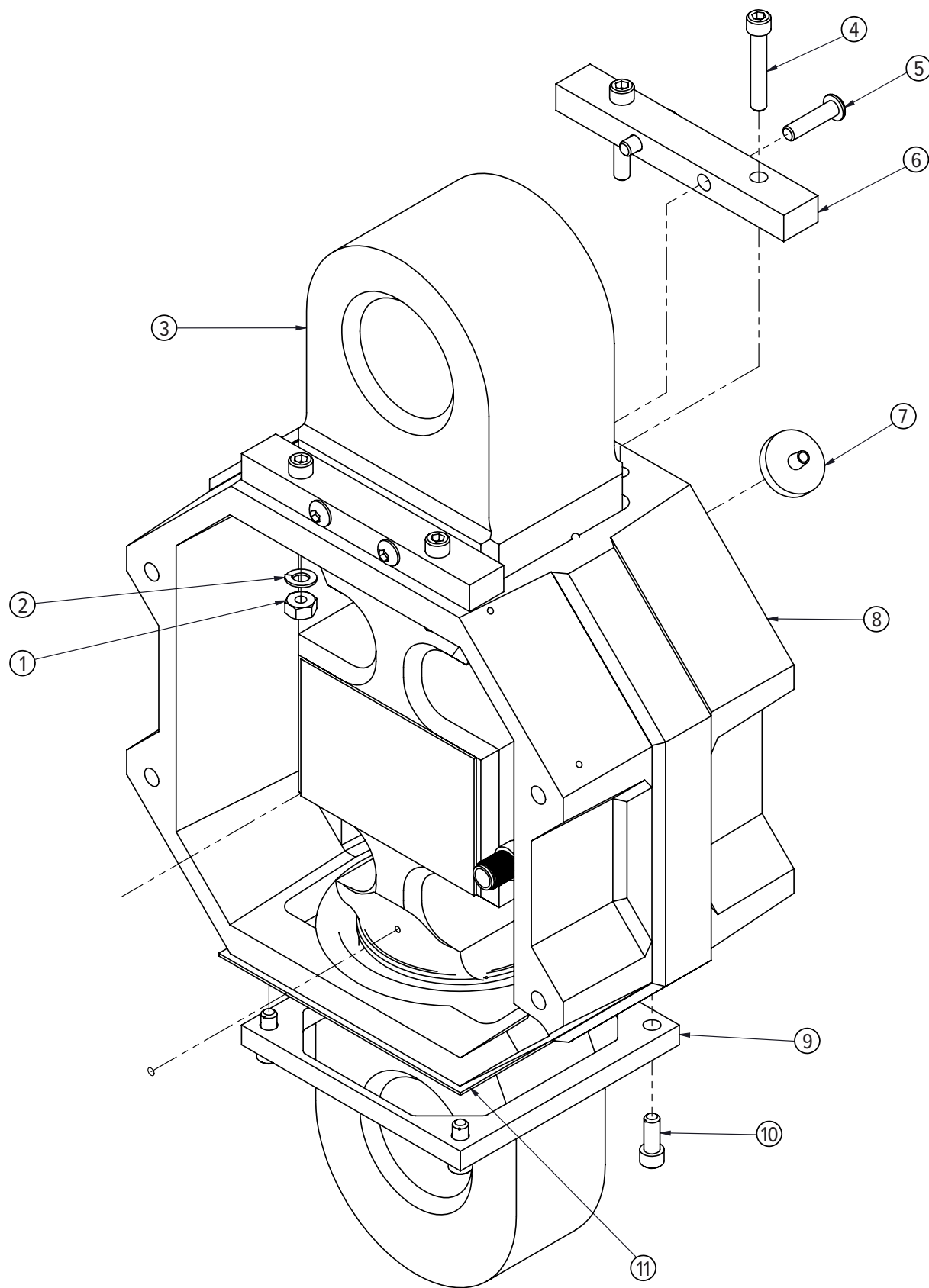
Item #	Part #	Description	Price
1	14642	Nut, 1/4-20NC hex stainless steel	\$1.50
2	15148	Washer, lock 1/4 regular	\$1.00
3	137764	Load cell assembly 50/70K standard	\$5,120.00
4	117599	Screw, cap 1/4-20NC x 1-1/2 hex socket head 18-8 stainless steel	\$1.50
5	145982	Screw button head 1/4-20 x 1 stainless steel socket head	\$2.00
6	148213	Collar top 50/100K	\$93.00
7	146322	Filter millipore	\$9.00
8	150525	Mid-section machined 50/100K	\$495.00
9	149958	Collar bottom 20 to 50K	\$130.00
10	145990	Screw socket head 1/4-20 x 5/8 stainless steel	\$2.00
11	149957	Boot lower 20 to 70K	\$82.00
Not Shown			
	151356	Shackle, 25T, 50,000 lb	Consult
	146335	Shackle, 40T, 70,000 lb	Consult
	135035	Hook, swivel, 50,000 lb	\$8,060.00
	142179	Latch, safety (fits 135035 hook)	\$150.00
	135036	Hook, swivel, 70,000 lb	\$11,290.00
	142180	Latch, safety (fits 135036 hook)	\$200.00

REPLACEMENT PARTS



# MSI-4260B

Mid-Section Assembly (50,000 to 70,000 lb)



REPLACEMENT PARTS

# MSI-4260B

Battery Casting Assembly



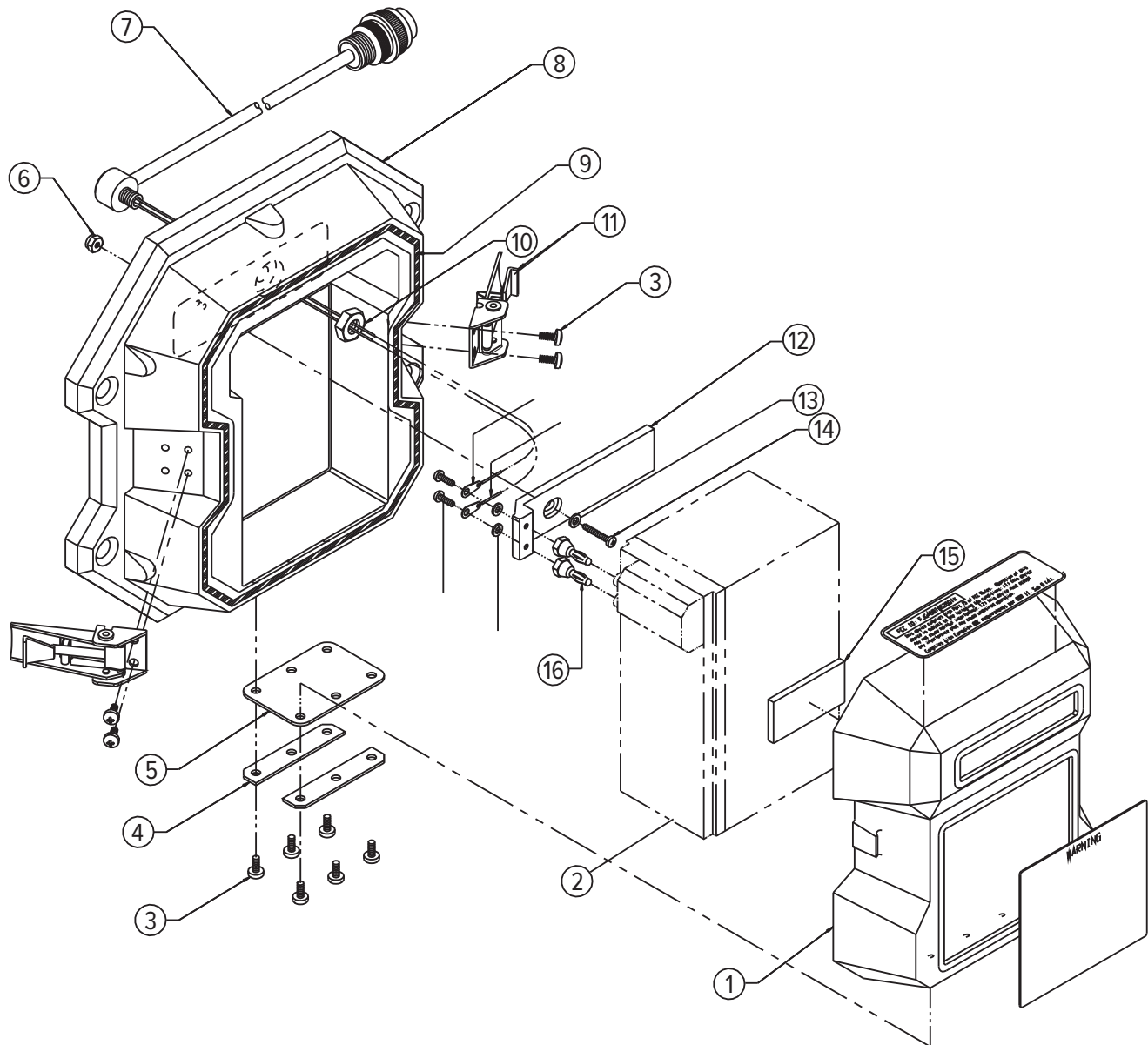
## Part Number/Price

Item #	Part #	Description	Price
1	150516	Battery door machined	\$93.00
2	150367	Battery	\$135.00
3	146107	Screw pan head 8-32 x 5/16 type f stainless steel Phillips	\$2.00
4	149718	Plate aluminum battery door	\$13.00
5	149719	Fastener battery door rubber	\$10.00
6	146627	Nut hex 6-32 nyloc stainless steel	\$0.75
7	133798	Cable assembly power molded feed through	\$140.00
8	150517	Battery well machined with o-ring	\$315.00
9	149723	O-ring assembly battery well casting	\$13.00
10	146661	Nut hex 5/16-18 jam stainless steel	\$2.00
11	145934	Latch camloc	\$38.00
12	150073	Conn block	\$25.00
13	55124	Washer, flat #6 cres	\$0.50
14	127036	Screw, machine 6-32 x 3/4 Phillips pan head 18-8 stainless steel	\$3.00
15	146640	Pad poron 2.0 x 1.0	\$3.00
16	147825	Plug banana jack	\$11.00

REPLACEMENT PARTS

# MSI-4260B

Battery Casting Assembly



REPLACEMENT PARTS

# MSI-4260B

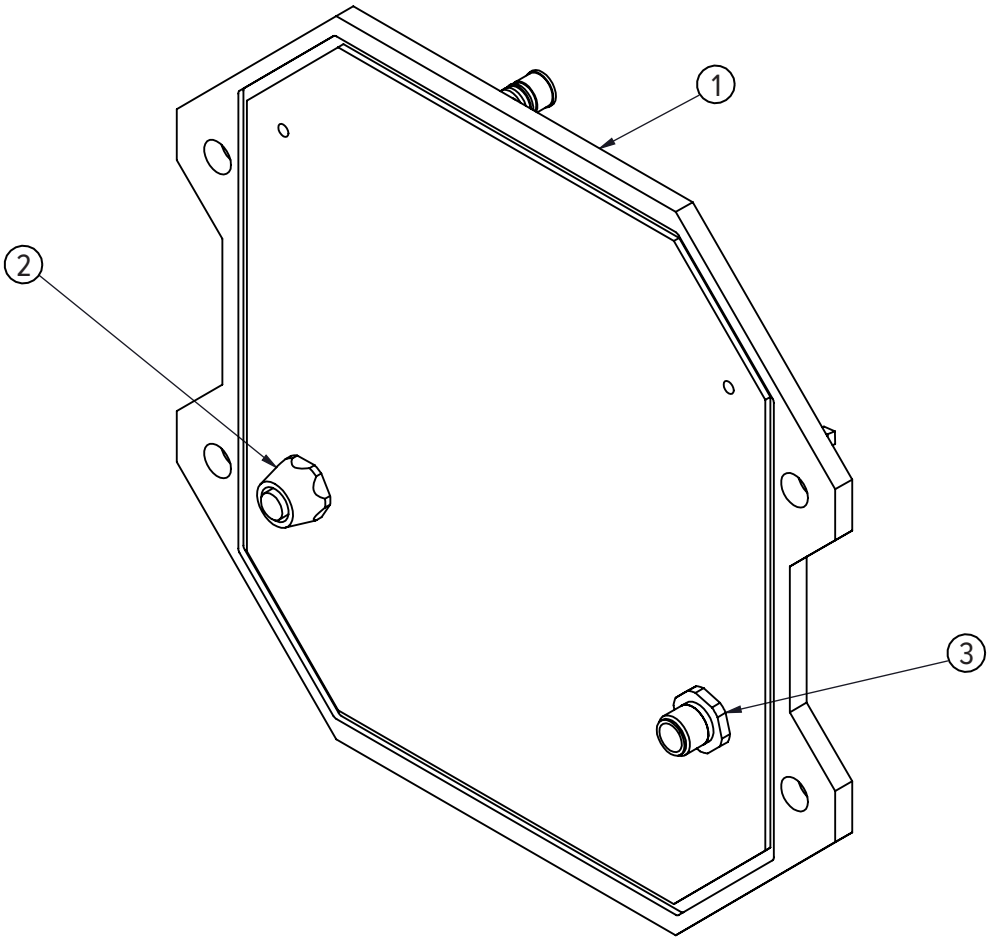
Bulkhead Assembly



## Part Number/Price

Item #	Part #	Description	Price
1	149469	Bulkhead	\$145.00
2	139471	Cable assembly bulkhead load cell 12.0 in	\$63.00
3	139472	Cable assembly bulkhead power 12.0 in	\$47.00

REPLACEMENT PARTS



# MSI-4260M Industrial

Front Casting Assembly



## Part Number/Price

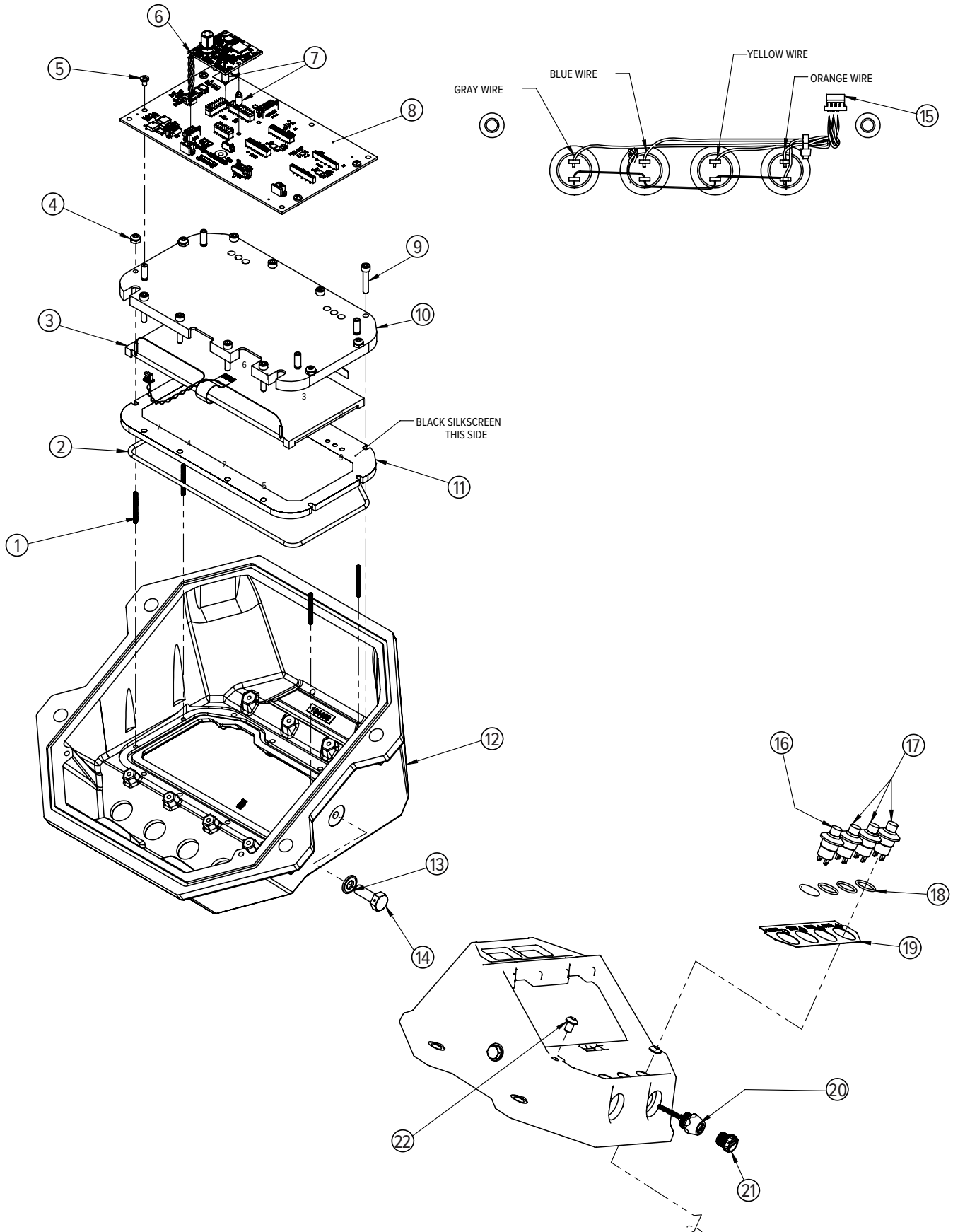
Item #	Part #	Description	Price
1	196566	Screw set allen dr cp stainless steel 4-40 1.0 LG	\$2.00
2	182066	O-ring 5.737 × 0.103 nitrile	\$2.00
3	195333	LCD module	\$115.00
4	146625	Nut hex 4-40 nyloc stainless steel	\$2.00
5	146593	Screw pan head 4-40 × 3/16 Phillips stainless steel	\$0.75
6	153429	PCA ScaleCore 3 1-channel w/ turck insert - controlled	\$265.00
7	144929	Spacer miniature dual locking 6 mm long	\$6.00
8	191081	PCA 5-digit LCD	\$390.00
9	200637	Screw, cap 6-32NC × 3/4 hex socket head 18-8 stainless steel	\$2.00
10	196524	LCD bracket	\$100.00
11	196523	LCD window	\$100.00
12	203000	Front casting LCD display	\$430.00
13	142472	Washer seal Stat-O-Seal® 1/4 inch	\$4.00
14	153203	Screw hex 1/4-20 × .375 UNC drilled hd stainless steel	\$10.00
15	139448	Cable assembly switch harness	\$21.00
16	147562	Switch P3-31111W watertight red	\$46.00
17	147563	Switch P3-31112W watertight black	\$44.00
18	146251	O-ring 70 durometer for use with PG11 feed through	\$2.00
19	194709	Overlay switches	\$30.00
20	139449	Cable assembly comm serial data RS-232	\$53.00
21	143352	Connector closure cap IP68 male	\$3.00
22	198460	Screw, cap 1/4-20 × 3/8 hex socket button head stainless steel	\$2.00

REPLACEMENT PARTS



# MSI-4260M Industrial

Front Casting Assembly



REPLACEMENT PARTS

# MSI-4260M Industrial

Mid-Section Assembly (500 to 10,000 lb)



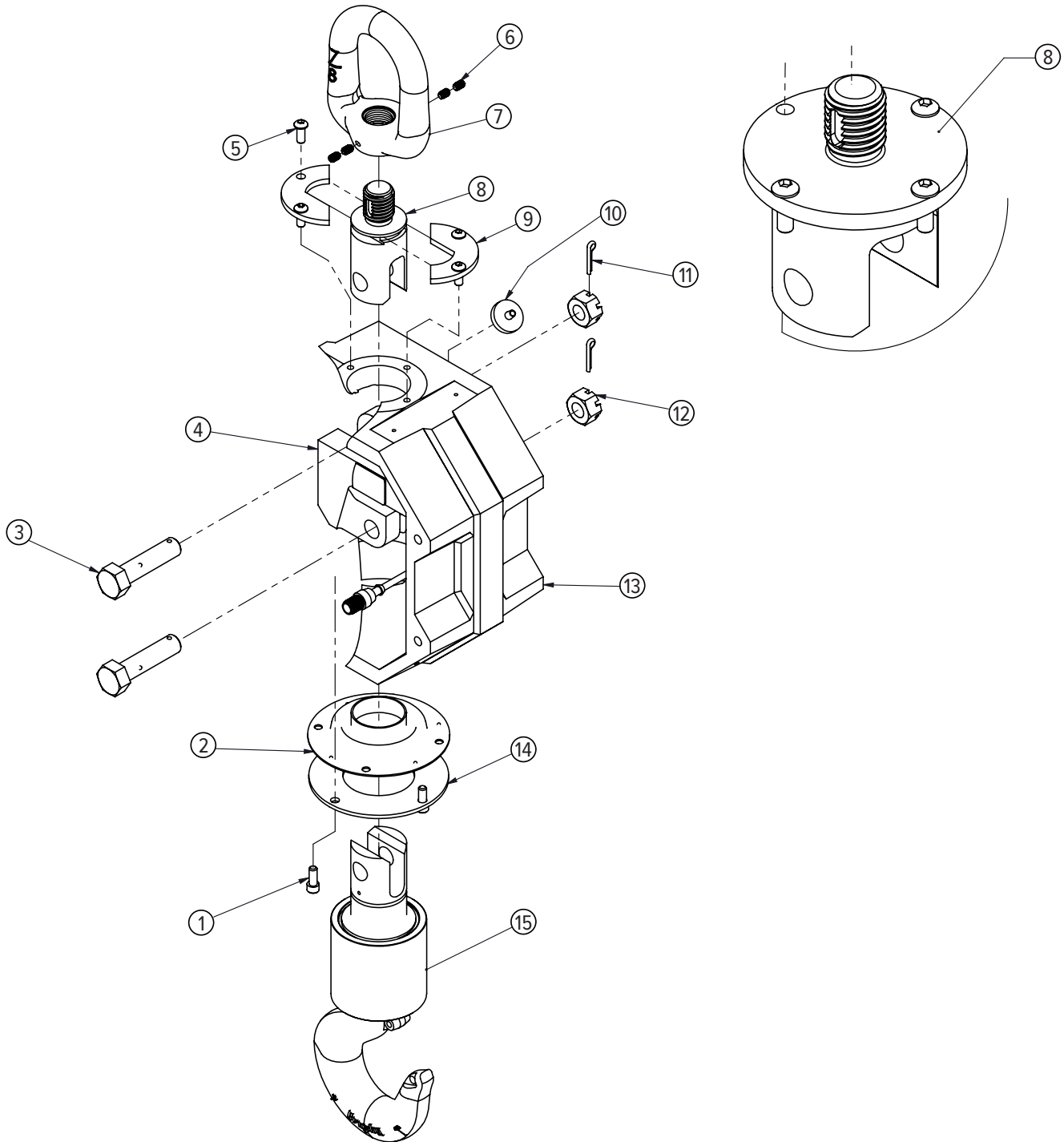
## Part Number/Price

Item #	Part #	Description	Price
1	145990	Screw socket head 1/4-20 × 5/8 stainless steel	\$2.00
2	149165	Seal lower link	\$56.00
	149710	Seal lower link	\$47.00
3	149217	Bolt clevis hex head 5/8 × 2.75 grip	\$32.00
	148457	Bolt clevis hex head 5/8 × 1.75 grip with thread protectors	\$25.00
4	138664	Load cell assembly 10K s-beam	\$1,710.00
	138663	Load cell assembly 5K s-beam	\$1,580.00
	138662	Load cell assembly 1K/2K s-beam	\$1,220.00
	138661	Load cell assembly 500 lb s-beam	\$1,220.00
5	41251	Screw, cap 1/4-20NC × 3/4 hex socket button head stainless steel	\$2.00
	72031	Screw, cap 1/4-20NC × 5/8 hex socket button head stainless steel	\$1.00
6	128799	Screw, set 1/4-20 × 3/8 socket head cup point 18-8 stainless steel	\$0.45
7	148225	Eye nut 5/10K	\$265.00
	139795	Eye nut #7 500 lb/2K	\$200.00
8	149126	Upper link s-beam 5/10K	\$415.00
	148271	Upper link 500 lb/10K	\$245.00
9	148274	Collar top half 500 lb/10K	\$38.00
10	146322	Filter	\$9.00
11	15238	Pin, cotter 1/8 × 1 extended prong stainless steel	\$1.10
12	142832	Nut, hex slotted 5/8-11	\$2.00
13	150519	Mid section machined 500 lb/10K without o-ring	\$560.00
14	148259	Collar 500 lb/10K	\$47.00
15	134523	Swivel hook assembly 5/10K s-beam	\$1,320.00
	135043	Swivel hook assembly 500 lb/2K s-beam	\$1,630.00

REPLACEMENT PARTS

# MSI-4260M Industrial

Mid-Section Assembly (500 to 10,000 lb)



REPLACEMENT PARTS

# MSI-4260M Industrial

Mid-Section Assembly (20,000 to 30,000 lb)



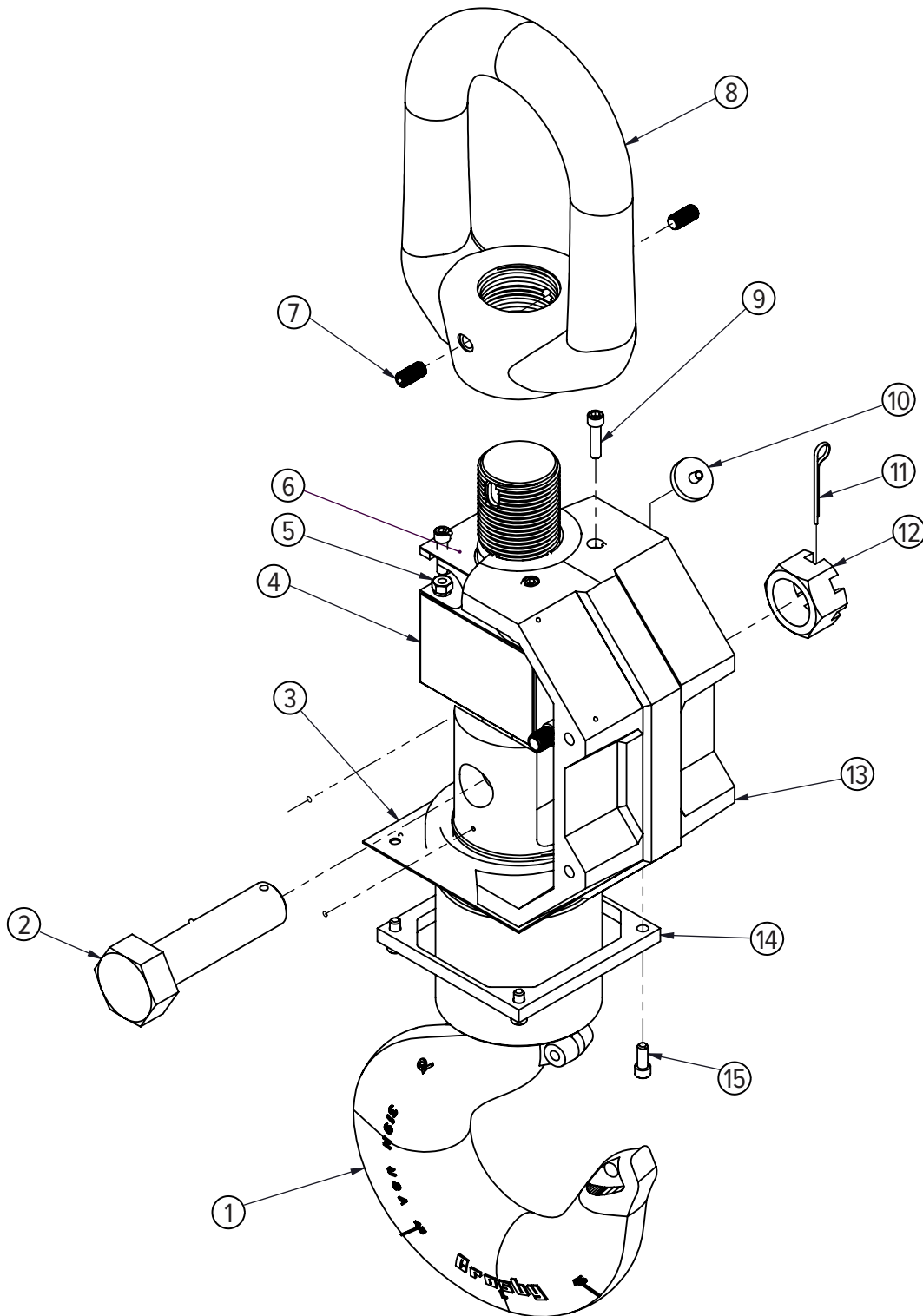
## Part Number/Price

Item #	Part #	Description	Price
1	134938	Swivel hook assembly 20K	\$2,680.00
	134939	Swivel hook assembly 30K	\$3,480.00
2	148458	Bolt clevis hex head 1.125-7 × 4.2 grip with thread protectors	\$82.00
3	149957	Boot lower 20 to 70K	\$82.00
4	137763	Load cell assembly 20K/30K	\$2,150.00
5	146631	Nut hex 1/4-20 nyloc stainless steel	\$2.00
6	149976	Gasket upper 20K/30K Port-A-Weigh gasket	\$5.00
7	146081	Screw set 3/8-24 × 3/4 cup point stainless steel	\$2.00
8	148110	Eye nut 20K/30K galvanized	\$610.00
9	81405	Screw, socket head 1/4-20UNC×1 18-8 stainless steel	\$1.00
10	146322	Filter millipore	\$9.00
11	142186	Cotter pin 3/16 × 2	\$2.00
12	142833	Nut hex slotted 1.125 - 7 zinc pltd	\$11.00
13	150523	Mid section machined 20K/30K	\$465.00
14	149958	Collar bottom 20 to 50K	\$130.00
15	145990	Screw socket head 1/4-20 × 5/8 stainless steel	\$2.00

REPLACEMENT PARTS

# MSI-4260M Industrial

Mid-Section Assembly (20,000 to 30,000 lb)



REPLACEMENT PARTS

# MSI-4260M Industrial

Mid-Section Assembly (50,000 to 70,000 lb)



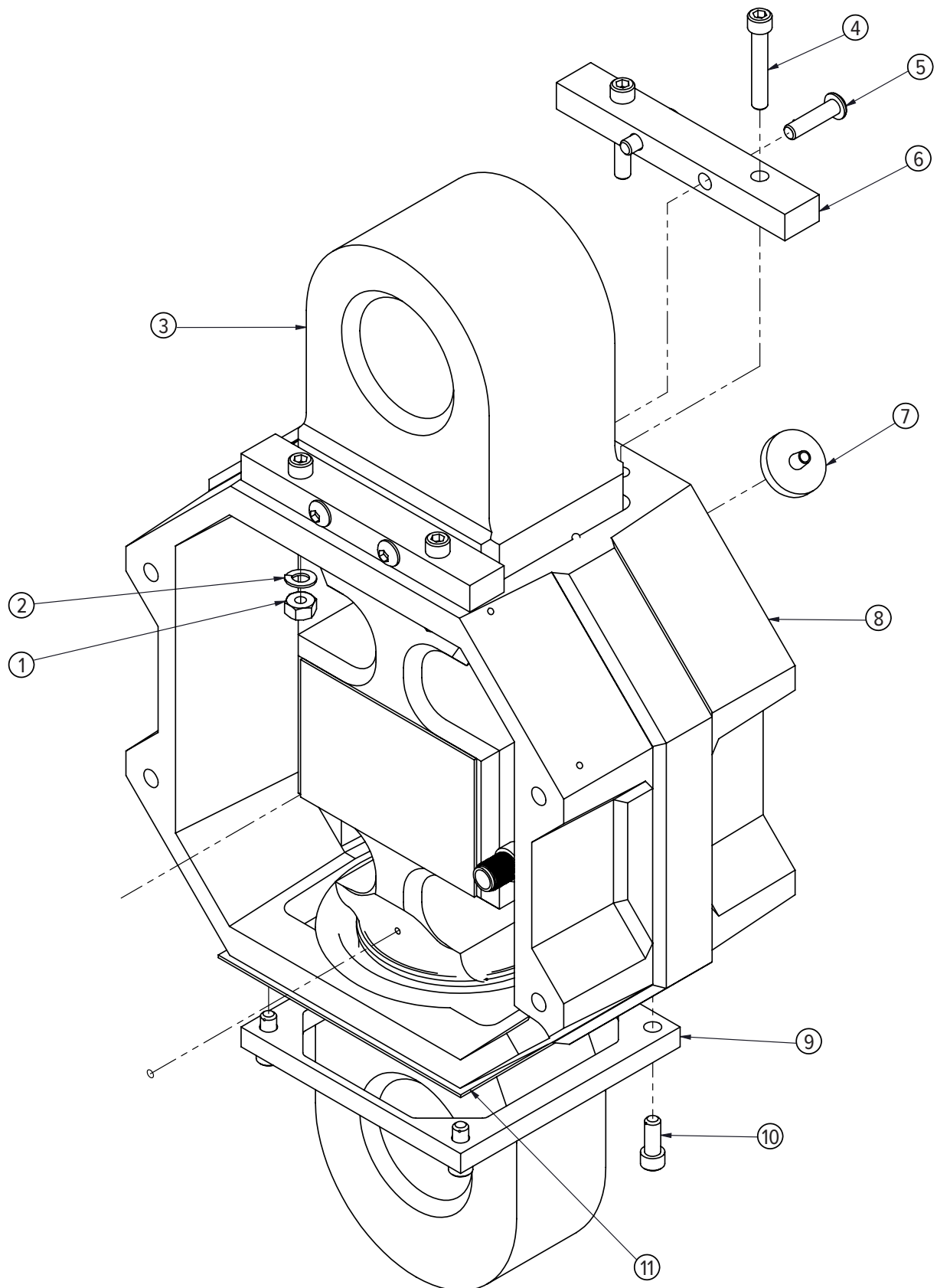
## Part Number/Price

Item #	Part #	Description	Price
1	14642	Nut, 1/4-20NC hex stainless steel	\$1.50
2	15148	Washer, lock 1/4 regular helical spring stainless steel	\$1.00
3	137764	Load cell assembly 50K/70K standard	\$5,120.00
4	117599	Screw, cap 1/4-20NC×1-1/2 hex socket head 18-8 stainless steel	\$1.50
5	145982	Screw button head 1/4-20 × 1 stainless steel socket head	\$2.00
6	148213	Collar top 50K/100K	\$93.00
7	146322	Filter millipore	\$9.00
8	150525	Mid-section machined 50K/100K	\$495.00
9	149958	Collar bottom 20 to 50K	\$130.00
10	145990	Screw socket head 1/4-20 × 5/8 stainless steel	\$2.00
11	149957	Boot lower 20 to 70K	\$82.00
Not Shown			
	151356	Shackle, 25T, 50,000 lb	Consult
	146335	Shackle, 40T, 70,000 lb	Consult
	135035	Hook, swivel 50,000 lb	\$8,060.00
	142179	Latch safety (fits PN 135035 hook)	\$150.00
	135036	Hook, swivel 70,000 lb	\$11,290.00
	142180	Latch safety (fits PN 135036 hook)	\$200.00

REPLACEMENT PARTS

# MSI-4260M Industrial

Mid-Section Assembly (50,000 to 70,000 lb)



REPLACEMENT PARTS



# MSI-4260M Industrial

Battery Casting Assembly



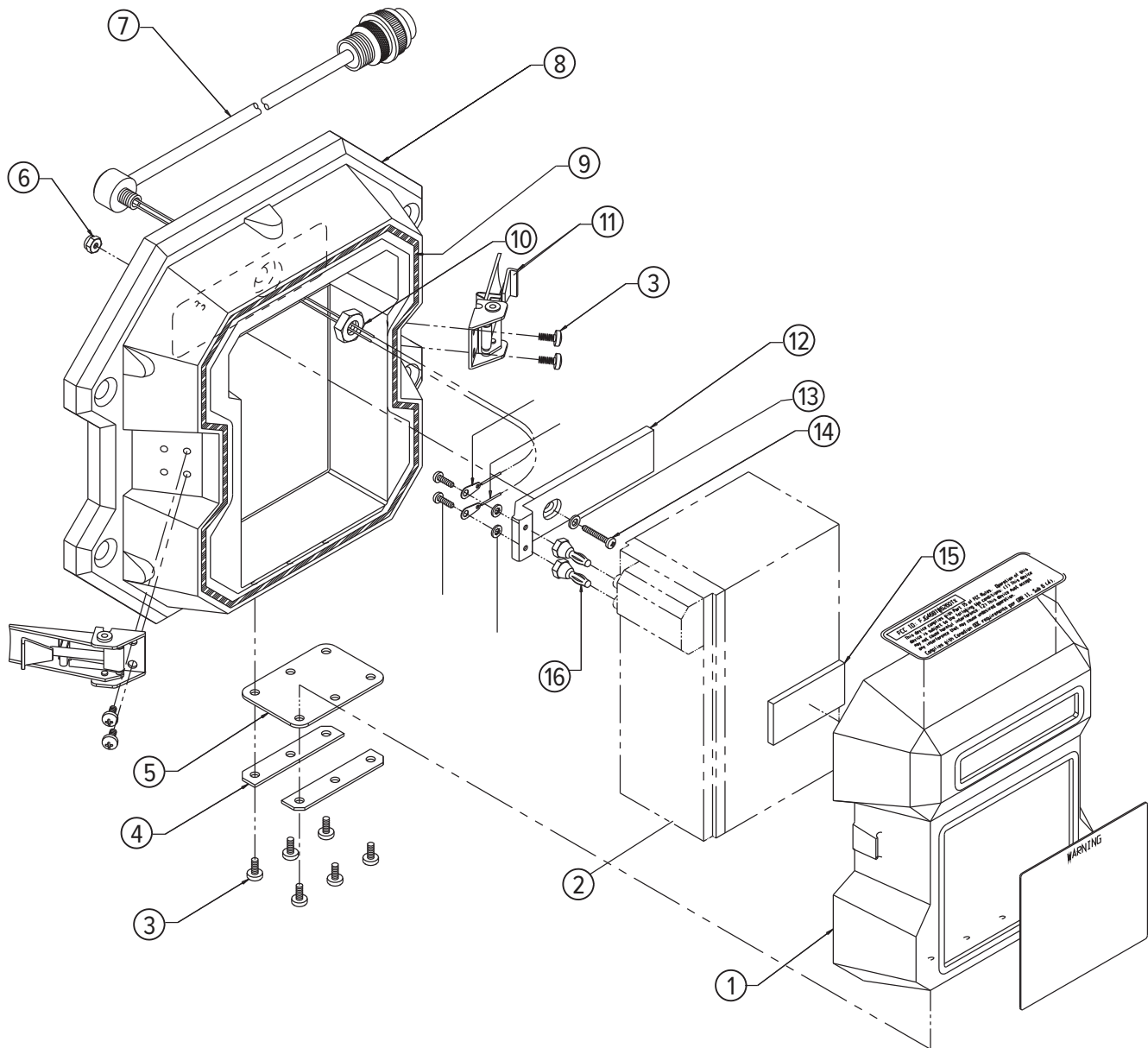
## Part Number/Price

Item #	Part #	Description	Price
1	150516	Battery door machined	\$93.00
2	150367	Battery	\$135.00
3	146107	Screw pan head 8-32 x 5/16 type f stainless steel Phillips head	\$2.00
4	149718	Plate aluminum battery door	\$13.00
5	149719	Fastener battery door rubber	\$10.00
6	146627	Nut hex 6-32 nyloc stainless steel	\$0.75
7	133798	Cable assembly power molded feed through	\$140.00
8	150517	Battery well machined with o-ring	\$315.00
9	149723	O-ring assembly battery well casting	\$13.00
10	146661	Nut hex 5/16-18 jam stainless steel	\$2.00
11	145934	Latch camloc	\$38.00
12	150073	Connector block	\$25.00
13	55124	Washer, flat #6 cres	\$0.50
14	127036	Screw, machine 6-32 x 3/4 Phillips pan head 18-8 stainless steel	\$3.00
15	146640	Pad poron 2.0 x 1.0	\$3.00
16	147825	Plug banana jack	\$11.00

REPLACEMENT PARTS

# MSI-4260M Industrial

Battery Casting Assembly



REPLACEMENT PARTS

# MSI-4260M Industrial

Bulkhead Assembly



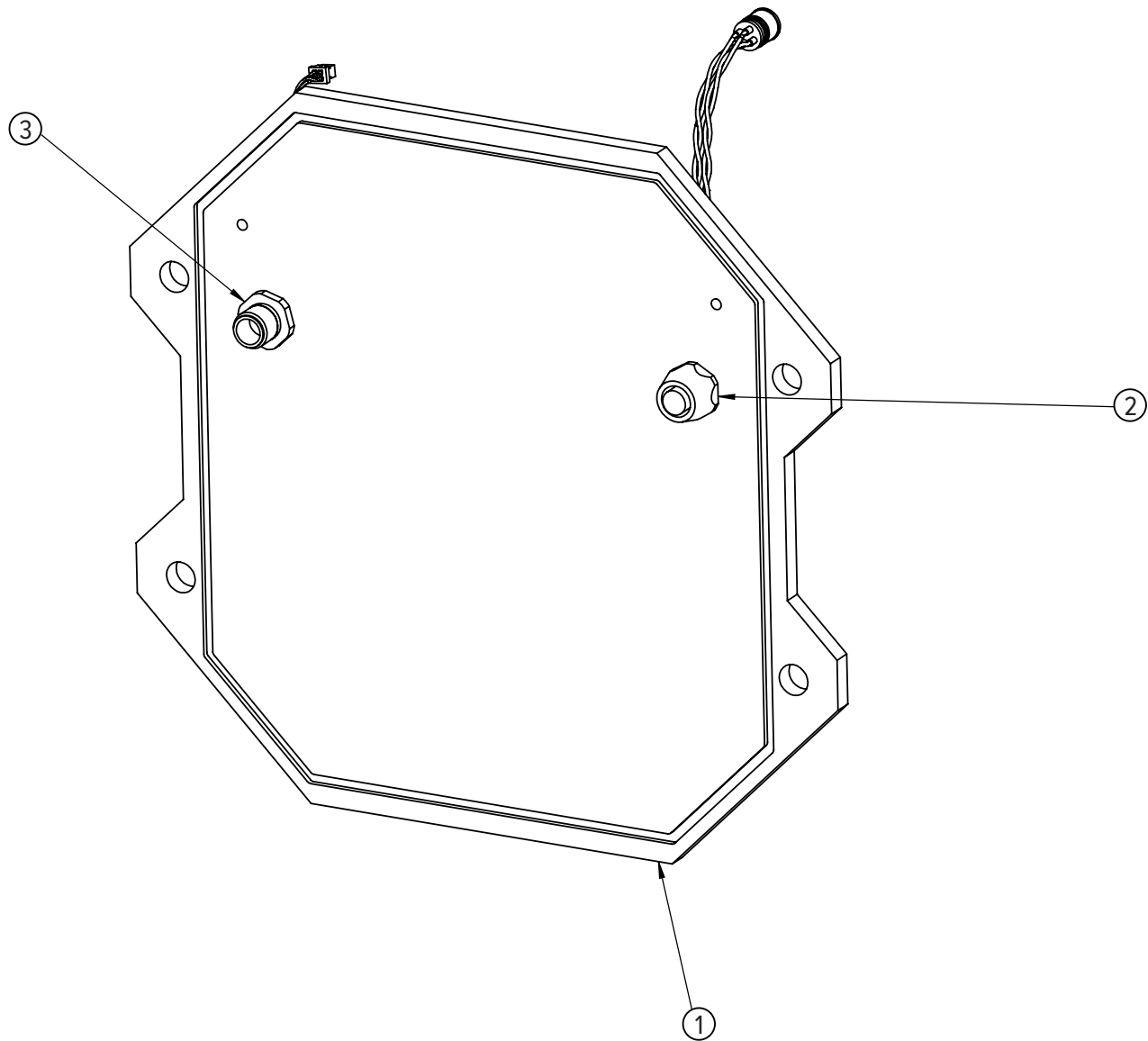
## Part Number/Price

Item #	Part #	Description	Price
1	196355	Bulkhead front casting	Consult
2	139471	Cable assembly bulkhead load cell 12.0 in	\$63.00
3	139472	Cable assembly bulkhead power 12.0 in	\$47.00

REPLACEMENT PARTS

# MSI-4260M Industrial

Bulkhead Assembly



REPLACEMENT PARTS

# MSI-4260M Marine

Front Assembly



## Part Number/Price

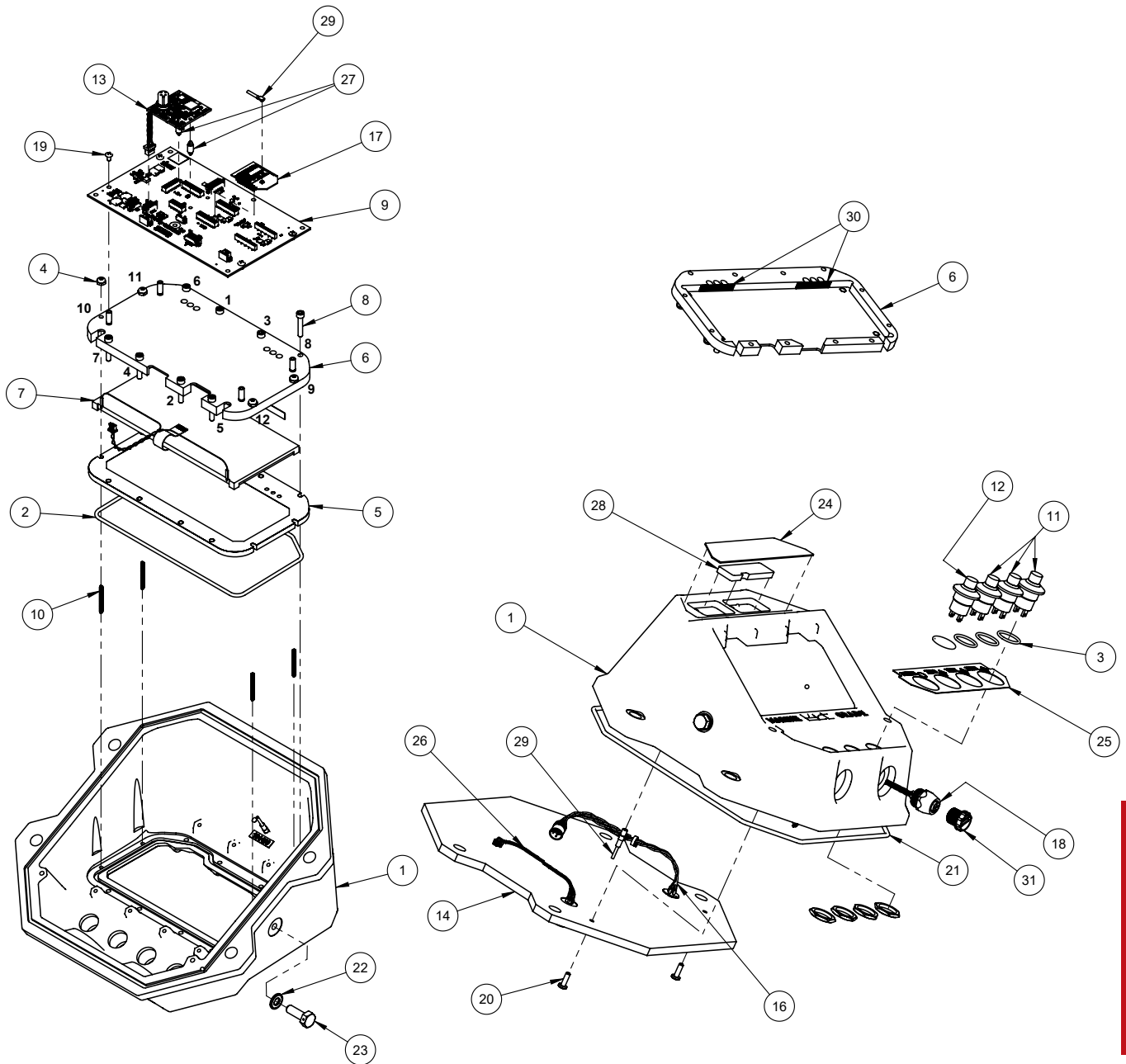
Item #	Part #	Description	Price
1	194469	Front casting 4260M	\$430.00
2	182066	O-ring 5.707 × .103	\$2.00
3	146251	O-ring ID .614 × .070 70 durometer	\$2.00
4	146625	NUT hex 4-40 nyloc stainless steel	\$2.00
5	196523	Window LCD 4260M	\$100.00
6	196524	Bracket LCD and electronics 4260M	\$100.00
7	195333	LCD display module 4260M	\$115.00
8	79567	Screw socket head 6-32 × 3/4 stainless steel	\$1.00
9	191081	PCA LCD 4260M	\$390.00
10	196566	Screw set 4-40 × 1.0 lg cp stainless steel	\$2.00
11	147563	Switch, black, watertight	\$44.00
12	147562	Switch, red, watertight	\$46.00
13	137805	PCA Scalecore 1 channel with turck insert	\$265.00
14,16,26	196276	Bulkhead assembly front 4260M	\$290.00
15	139448	Cable assembly switch harness 4260B (not shown)	\$21.00
16	139471	Cable assembly bulkhead lc 4260B/4260M	\$63.00
17	144773	Radio module XBEE-PRO 802.15.4 U.FL connect	\$120.00
18	139449	Cable assembly comm serial data RS-232 4260B/4260M	\$53.00
19	146593	Screw pan head 4-40 × 3/16 Phillips stainless steel	\$0.75
20	146604	Screw pan head 6-32 × 7/16 Phillips stainless steel	\$0.75
21	149724	O-ring assembly front casting paw/Trans-Weigh 4260M	\$13.00
22	142472	Washer seal Stat-O-Seal® 1/4 inch	\$4.00
23	144333	Screw hex head 1/4-20 × .75 drilled hd zinc pltd	\$5.00
24	195104	Overlay, descriptive 4260M	\$29.00
25	194709	Overlay switch 4260M	\$30.00
26	139472	Cable assembly bulkhead power 4260B/4260M	\$47.00
27	144929	Spacer mini dual locking .1 hole × 6 mm long	\$6.00
28	143454	Antenna 2.4GHz patch with straight mmcx	\$105.00
29	139450	RF cable assembly mmcx str jack - U.FL 175 mm	\$24.00
30	197592	Light shield blackout .235 × 1.25 peel & stick	\$4.00
31	143352	Conn closure cap IP68 male	\$3.00

Note: Items 14,16 and 26 add new item for the assembly

REPLACEMENT PARTS

# MSI-4260M Marine

Front Assembly



REPLACEMENT PARTS

# MSI-4260M Marine

Battery Casting Assembly



## Part Number/Price

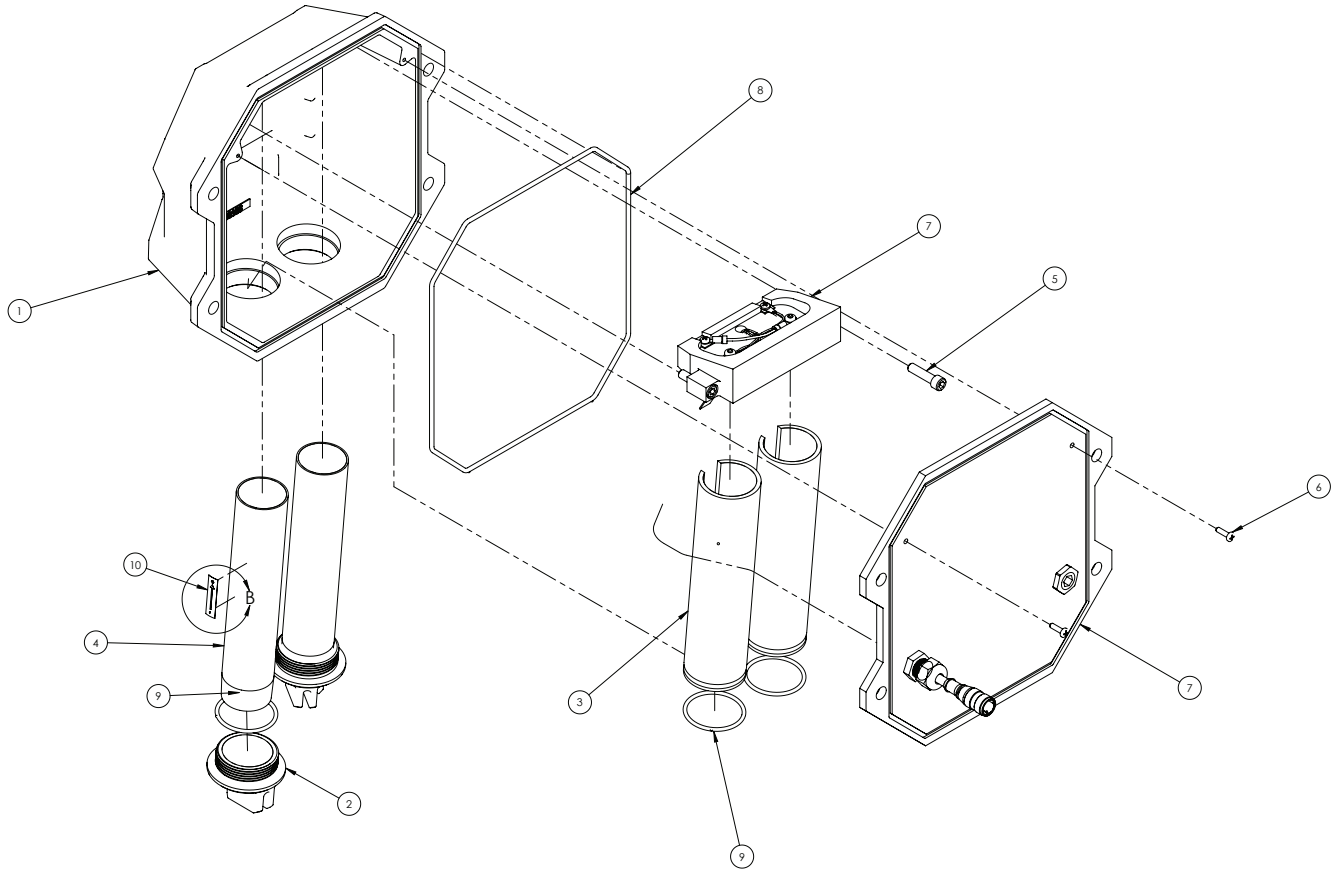
Item #	Part #	Description	Price
1	196155	Rear casting d-cell battery 4260M	\$310.00
2	147901	Battery cap paw+ d-cell tube 4260M	\$15.00
3	196308	Guide tube d-cell battery 4260M	\$115.00
4	196313	Weldment d-cell battery tube	\$145.00
5	81405	Screw socket head 1/4-20 × 1 stainless steel	\$1.00
6	146605	Screw pan head 6-32 × 1/2 stainless steel	\$0.75
7	196500	Battery terminal carrier assembly	\$450.00
8	149724	O-ring assembly front casting paw/trans-weigh 4260M	\$13.00
9	196502	O-ring 1-9/16 id × .103	\$0.75
10	141676	Polarity label	\$0.75

REPLACEMENT PARTS



# MSI-4260M Marine

Battery Casting Assembly



REPLACEMENT PARTS

# MSI-4260M Marine

Midsection Assembly



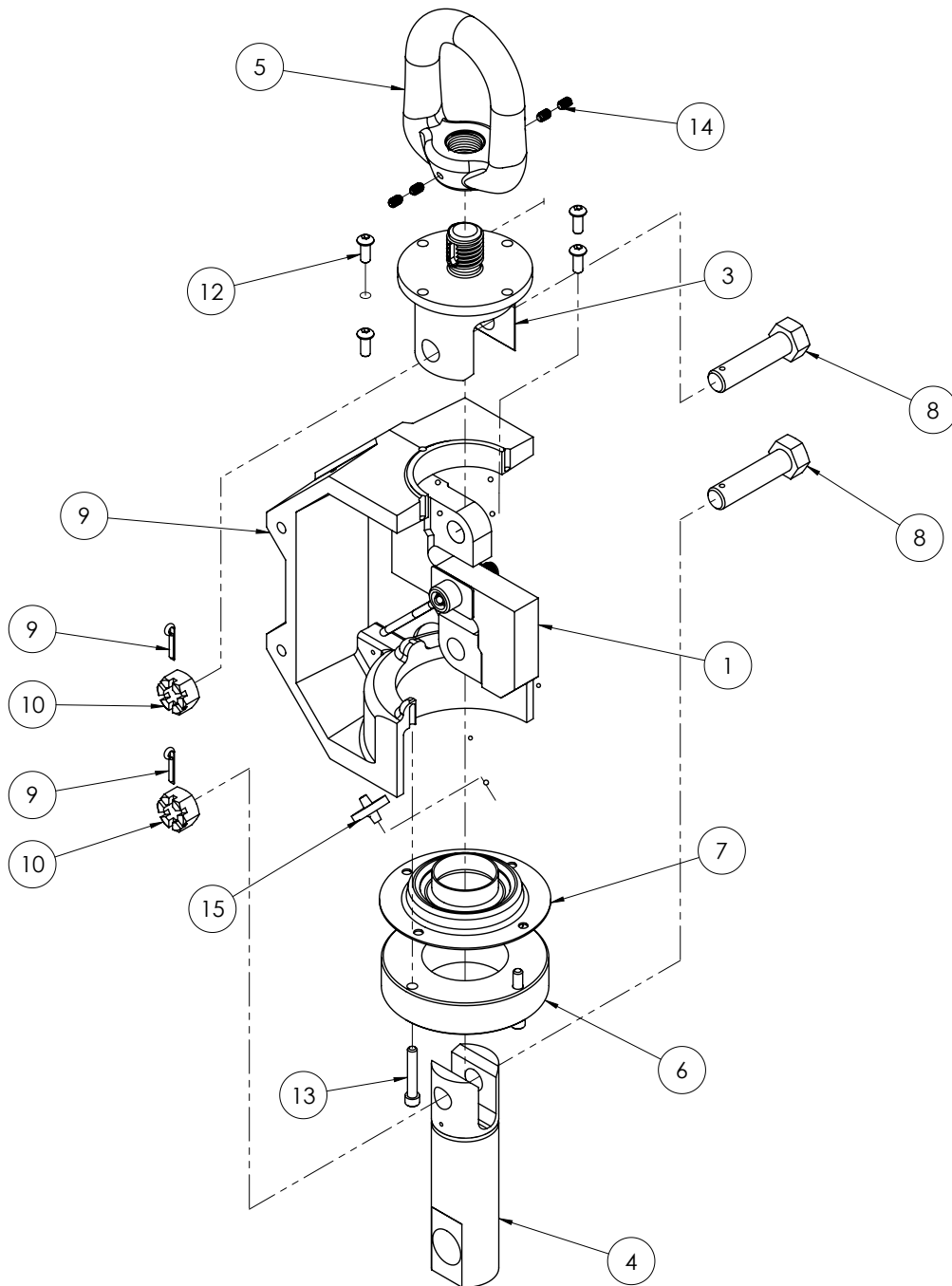
## Part Number/Price

Item #	Part #	Description	Price
1	138663	Load cell assembly 5K s-beam 4260B/4260M	\$1,580.00
2	149175	Casting mid section 5/10K s-beam 6260CS, 4260M	\$340.00
3	203378	Upper link s-beam 5/10K	\$520.00
4	197430	Lower link 5/10K s-beam 4260M	\$1,275.00
5	148225	Eye nut 5/10K	\$265.00
6	204508	Collar 5/10K shackle	\$240.00
7	149165	Seal lower link EDPM	\$56.00
8	149217	Bolt clevis pin hex head 5/8 × 2.75 GRIP. 5K/10K capacity	\$32.00
9	15238	Pin cotter 1/8 × 1 stainless steel	\$1.10
10	142832	Nut hex slotted 5/8-11	\$2.00
11	144878	Washer flat 5/8 × 1.312	\$2.00
12	72031	Screw button head 1/4-20 × 5/8 stainless steel socket hd	\$1.00
13	117599	Screw socket head 1/4-20 × 1-1/2 stainless steel	\$1.50
14	128799	Screw set 1/4-20 × 3/8 stainless steel	\$0.45
15	146322	Filter millipore	\$9.00

REPLACEMENT PARTS

# MSI-4260M Marine

Midsection Assembly



REPLACEMENT PARTS

# MSI-9300

Front Casting Assembly



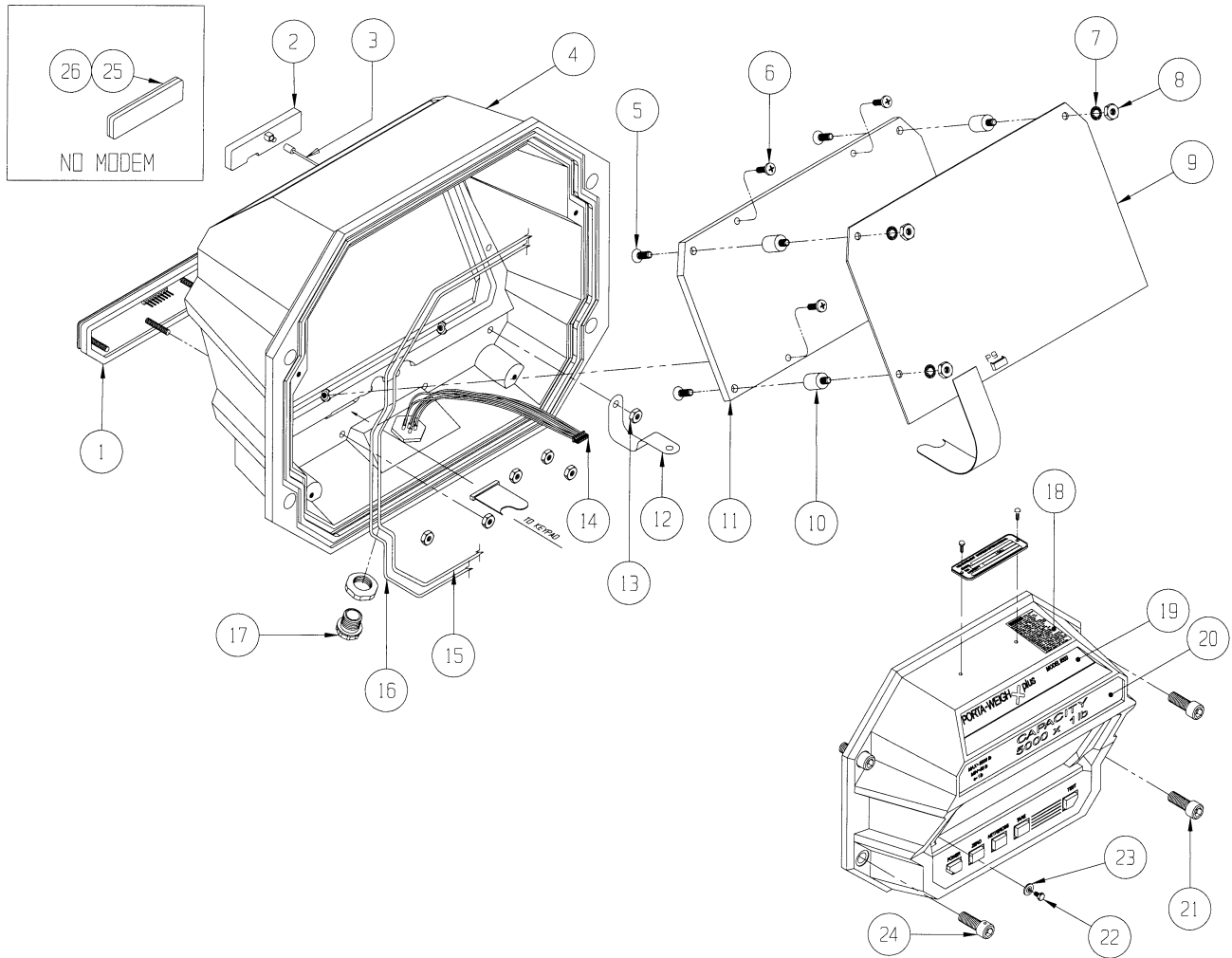
## Part Number/Price

Item #	Part #	Description	Price
1	136324	Switch assembly	\$305.00
2	143454	Antenna housing with straight MMCX connector	\$105.00
3	148874	Cable assembly antenna	\$130.00
4	148824	Casting	\$455.00
5	54356	Screw, flat head, 8-32 x 3/8, Phillips, stainless steel	\$2.00
6	146604	Screw, pan head, 6-32 x 7/16, Phillips, stainless steel	\$0.75
7	15132	Washer internal tooth #8, stainless steel	\$1.50
8	65784	Nut, hex, 8-32, stainless steel	\$0.25
9	148700	PCA, LED display	\$525.00
10	142526	Shock mount flex, 8-32	\$16.00
11	148826	Window	\$170.00
12	139844	Ground strap	\$12.00
13	128445	Nut, hex, 6-32, stainless steel	\$0.10
14	148854	Cable assembly external comm	\$120.00
15	147997	O-ring, bulkhead	\$18.00
16	147996	O-ring, front/back	\$18.00
17	143352	Connector cap	\$3.00
18	148218	Label, warning	\$6.00
19	148867	Label, descriptive	\$49.00
20	Consult	Label, capacity	\$17.00
21	91869	Screw, socket head, 3/8-16 x 1, stainless steel	\$2.00
22	142574	Screw, pan head, 6-32 x 1/4, stainless steel	\$4.00
23	142299	Washer, seal	\$2.00
24	133598	Screw, 3/8-16 x 1, stainless steel, drilled	\$25.00
25	148902	Pad	\$7.00
26	148901	Filler plate	\$41.00

REPLACEMENT PARTS

# MSI-9300

## Front Casting Assembly



REPLACEMENT PARTS

# MSI-9300

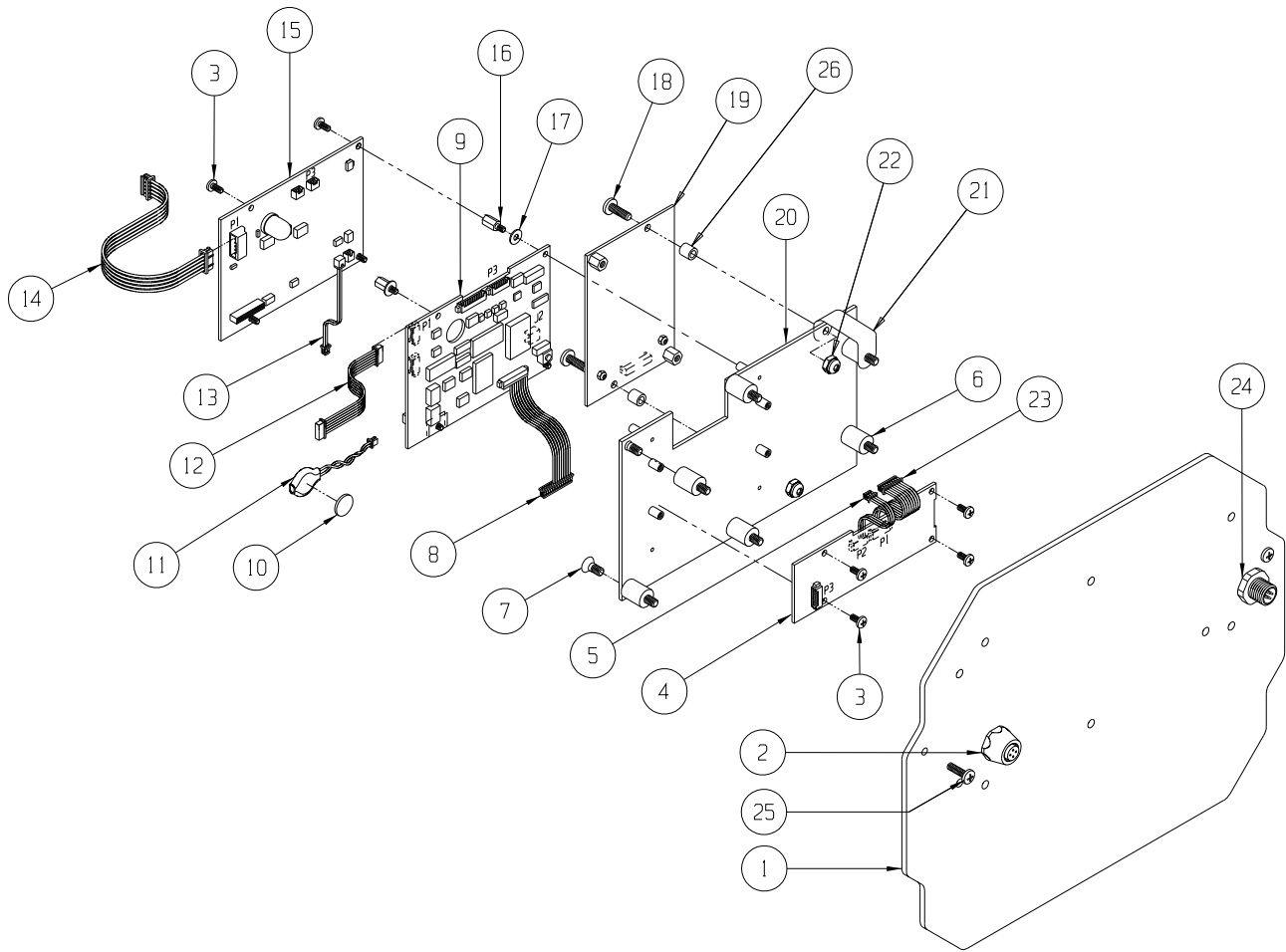
Series Bulkhead Assembly



## Part Number/Price

Item #	Part #	Description	Price
1	149216	Bulkhead plate	\$99.00
2	148843	Cable assembly, load cell	\$120.00
3	128088	Screw, pan head, 4-40 x 1/4, Phillips, stainless steel	\$0.50
4	148548	PCA, high resolution A/D	\$380.00
5	148869	Cable assembly, A/D to power supply	\$31.00
6	142526	Shock mount	\$16.00
7	146567	Screw, flat head, 8-32 x 1/4, Phillips, stainless steel	\$0.75
8	149085	Cable assembly, controller to 2450 modem	\$70.00
9	148547	PCA, controller	\$580.00
10	148592	Pad adhesive, battery	\$10.00
11	137718	Battery assembly, 3V lithium	\$99.00
12	148852	Cable assembly, comm. internal	\$30.00
13	149320	Cable assembly, (Ethernet power)	\$24.00
14	148991	Cable assembly, electronics power	\$25.00
15	148982	PCA, power supply	\$435.00
16	143306	Standoff hex, .312 lg., 4-40 .188 M thd.	\$3.00
17	143384	Washer flat #4, stainless steel	\$2.00
18	146601	Screw, pan head, 6-32 x 1/4, Phillips, stainless steel	\$0.75
19	138304	PCA, with 2450 modem	\$645.00
20	148842	Bracket electronics front	\$70.00
21	139844	Ground strap	\$12.00
22	146627	Nut, hex, 6-32 nyloc, stainless steel	\$0.75
23	148612	Cable assembly, A/D, controller 8P	\$25.00
24	148856	Cable assembly, power battery	\$150.00
25	146604	Screw, 6-32 x 7/16, Phillips, stainless steel	\$0.75
26	144227	Spacer, 1/4 x 1/4, #6	\$3.00

REPLACEMENT PARTS





# MSI-9300

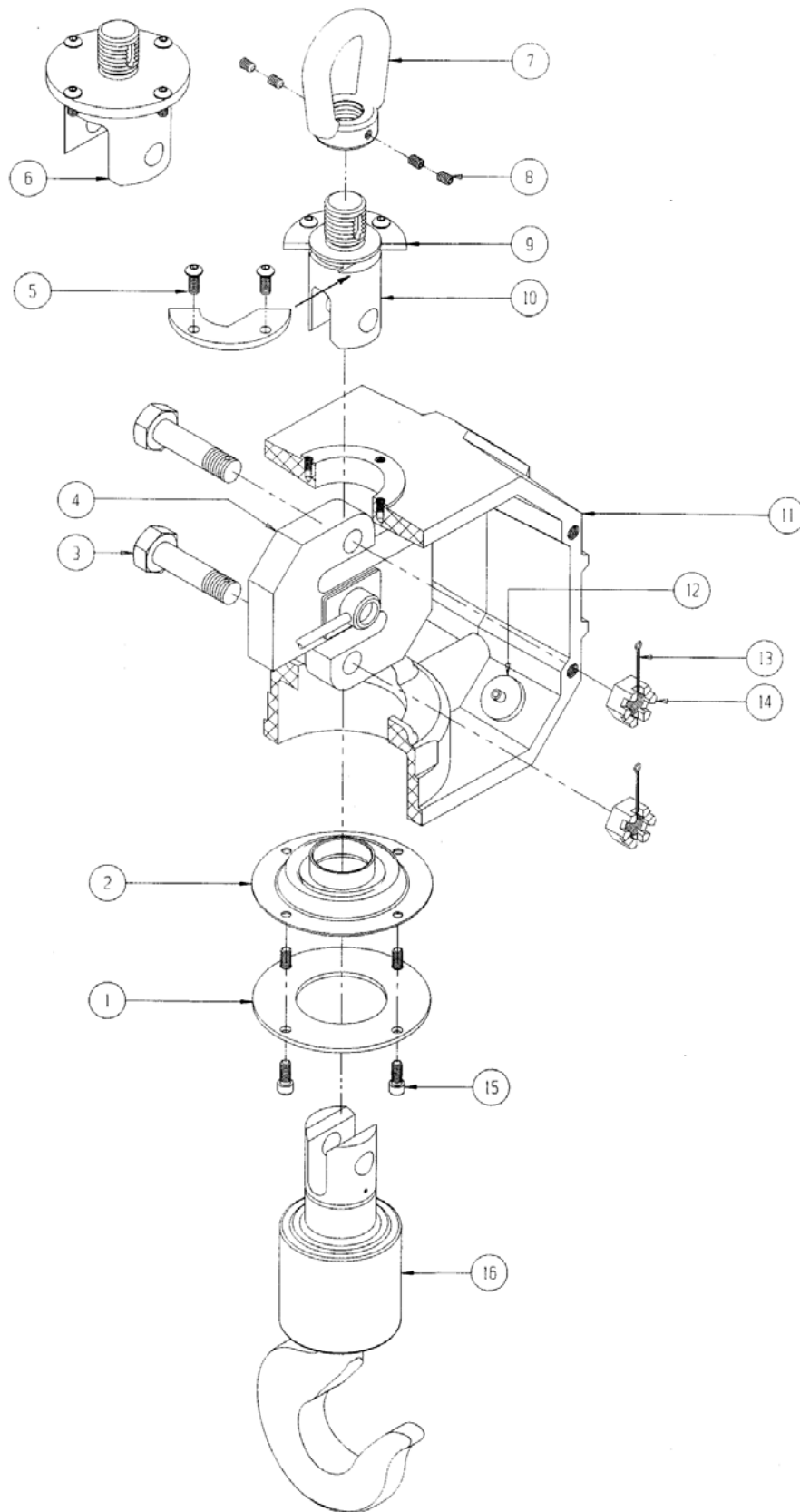
Mid-section Assembly 500 - 10,000 lb (S-beam Load Cell)



## Part Number/Price

Item #	Part #	Description	Price
1	148259	Collar, 500/2K	\$47.00
1	149168	Collar, 5/10K	\$62.00
2	149710	Seal, 500/2K	\$47.00
2	149165	Seal, 5/10K	\$56.00
3	148457	Bolt, clevis, 500/2K	\$25.00
3	149217	Bolt, clevis, 5/10K	\$32.00
Not Shown	144878	Washer, flat, 5/8, must go with 5/10K bolt (4 places)	\$2.00
4	138661	Load cell assembly, 500	\$1,220.00
4	138662	Load cell assembly, 2K	\$1,220.00
4	138663	Load cell assembly, 5K	\$1,580.00
4	138664	Load cell assembly, 10K	\$1,710.00
5	72031	Screw, button head, 1/4-20 x 5/8, stainless steel	\$1.00
6	149126	Link, upper, 5/10K	\$415.00
7	139795	Eye nut, lifting, 500/2K	\$200.00
7	148225	Eye nut, lifting, 5/10K	\$265.00
8	128799	Screw set, 1/4-20 x 3/8, stainless steel	\$0.45
9	148274	Collar, top (2 pcs)	\$38.00/ea
10	148271	Link, upper, 500/2K	\$245.00
11	147884	Casting, mid section, 500/2K	\$485.00
11	149166	Casting, mid section, 5/10K	\$495.00
12	146322	Filter	\$9.00
13	15238	Cotter pin	\$1.10
14	142832	Nut	\$2.00
15	145990	Screw, SH, 1/4-20 x 5/8, stainless steel	\$2.00
16	135043	Hook assembly, swivel, 500/2,000 lb	\$1,630.00
	143236	Latch, safety (fits 500787-0001 hook with hole)	\$25.00
16	134523	Hook assembly, swivel, 5,000/10,000 lb	\$1,320.00
	143233	Latch, safety (fits 500297-0001 hook with hole)	\$40.00

REPLACEMENT PARTS



# MSI-9300

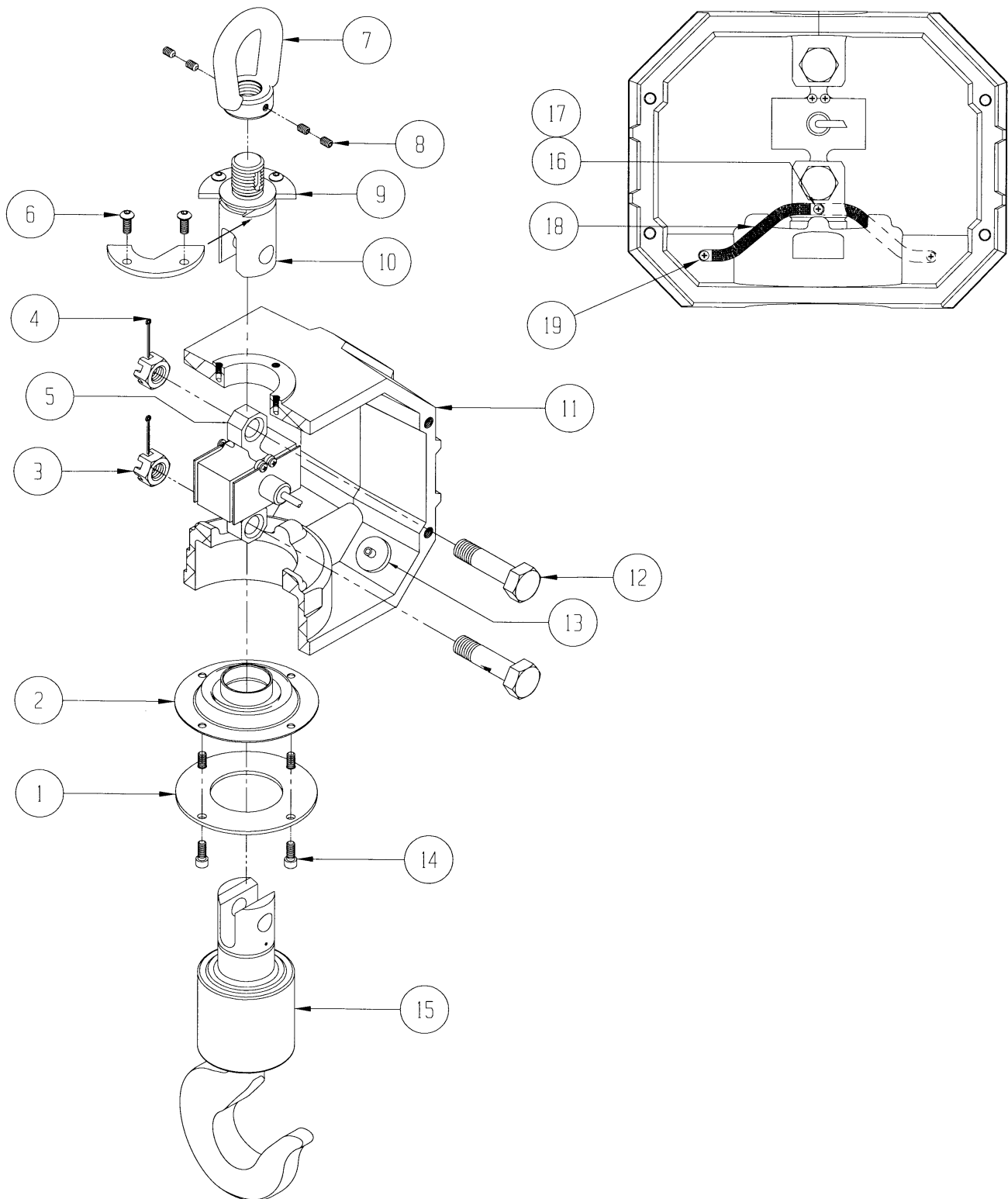
Mid-section Assembly 500 - 10,000 lb



## Part Number/Price

Item #	Part #	Description	Price
1	148259	Collar 500#/10,000 lbs	\$47.00
2	149710	Seal	\$47.00
3	142832	Nut, hex, 5/8-11	\$2.00
4	15238	Cotter pin 1/8 x 1, stainless steel	\$1.10
5	137759	Load cell assembly, 500 lb	Consult
5	137760	Load cell assembly, 2,000 lb	\$1,580.00
5	137761	Load cell assembly, 5,000 lb	\$1,580.00
5	137762	Load cell assembly, 10,000 lb	\$1,710.00
6	72031	Screw, button head, 1/4-20 x 5/8, stainless steel , socket	\$1.00
7	139795	Eye, lifting 500/2,000 lb	\$200.00
7	148225	Eye, lifting 5,000/10,000 lb	\$265.00
8	128799	Screw set, 1/4-20 x 3/8, stainless steel	\$0.45
9	148274	Collar, top (2 pcs)	\$38.00/ea
10	148271	Link, upper	\$245.00
11	147884	Casting	\$485.00
12	148457	Bolt	\$25.00
13	146322	Filter	\$9.00
14	145990	Screw, socket head, 1/4-20 x 5/8, stainless steel	\$2.00
15	135043	Hook assembly, swivel, 500/2,000 lb	\$1,630.00
	143236	Latch, safety (fits 500787-0001)	\$25.00
15	134521	Hook assembly, swivel, 5,000/10,000 lb	\$1,280.00
	143233	Latch, safety (fits 500297-0001)	\$40.00
16	146601	Screw, pan head 6-32 x 1/4, Phillips, stainless steel	\$0.75
17	81280	Washer internal tooth #6	\$1.00
18	139843	Ground strap	\$13.00
19	146101	Screw, pan head, 6-32 x 3/16, Phillips, stainless steel	\$0.75

REPLACEMENT PARTS



# MSI-9300

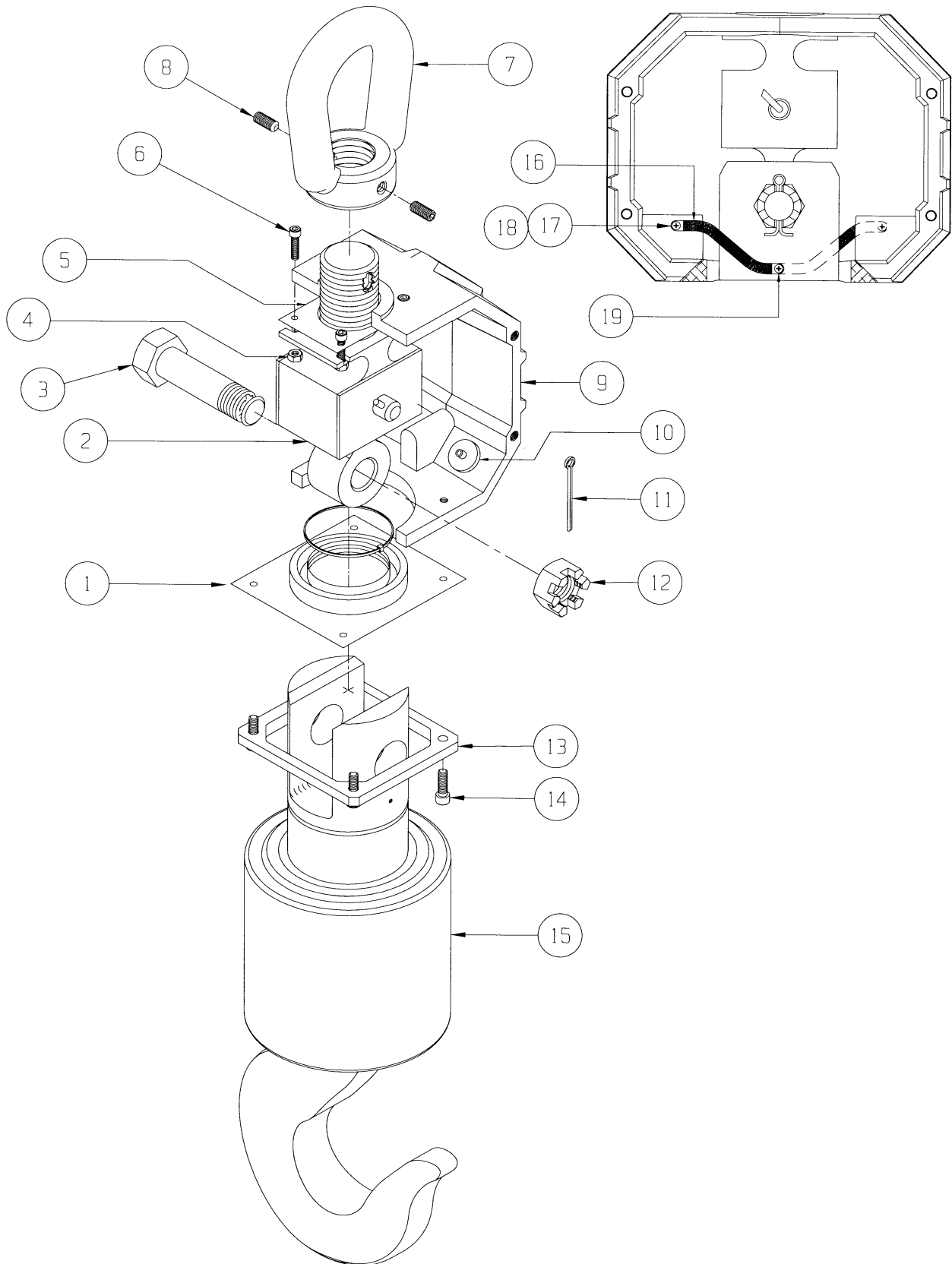
Mid-section Assembly 20,000 lb and 30,000 lb



## Part Number/Price

Item #	Part #	Description	Price
1	148048	Seal	\$200.00
2	137763	Load cell assembly	\$2,150.00
3	148458	Bolt	\$82.00
4	146631	Nut, hex, 1/4-20, nyloc, stainless steel	\$2.00
5	149976	Gasket	\$5.00
6	81405	Screw, socket head, 1/4-20 x 1, stainless steel	\$1.00
7	148110	Eye, lifting	\$610.00
8	146081	Screw set, 3/8-24 x 3/4, cut point, stainless steel	\$2.00
9	147882	Casting	\$465.00
10	146322	Filter	\$9.00
11	142186	Cotter pin, 3/16 x 2, stainless steel	\$2.00
12	142833	Nut, hex, 1.125 - 7	\$11.00
13	147976	Collar	\$68.00
14	145995	Screw, socket head, 5/16-18 x 1, stainless steel	\$2.00
15	134938	Hook assembly, swivel, 20,000 lb	\$2,680.00
	110661	Latch, safety (fits 500729-0001)	\$42.00
15	134939	Hook assembly, swivel, 30,000 lb	\$3,480.00
	143235	Latch, safety (fits 500729-0002)	\$110.00

REPLACEMENT PARTS



# MSI-9300

Mid-section Assembly 50,000 lb and 70,000 lb

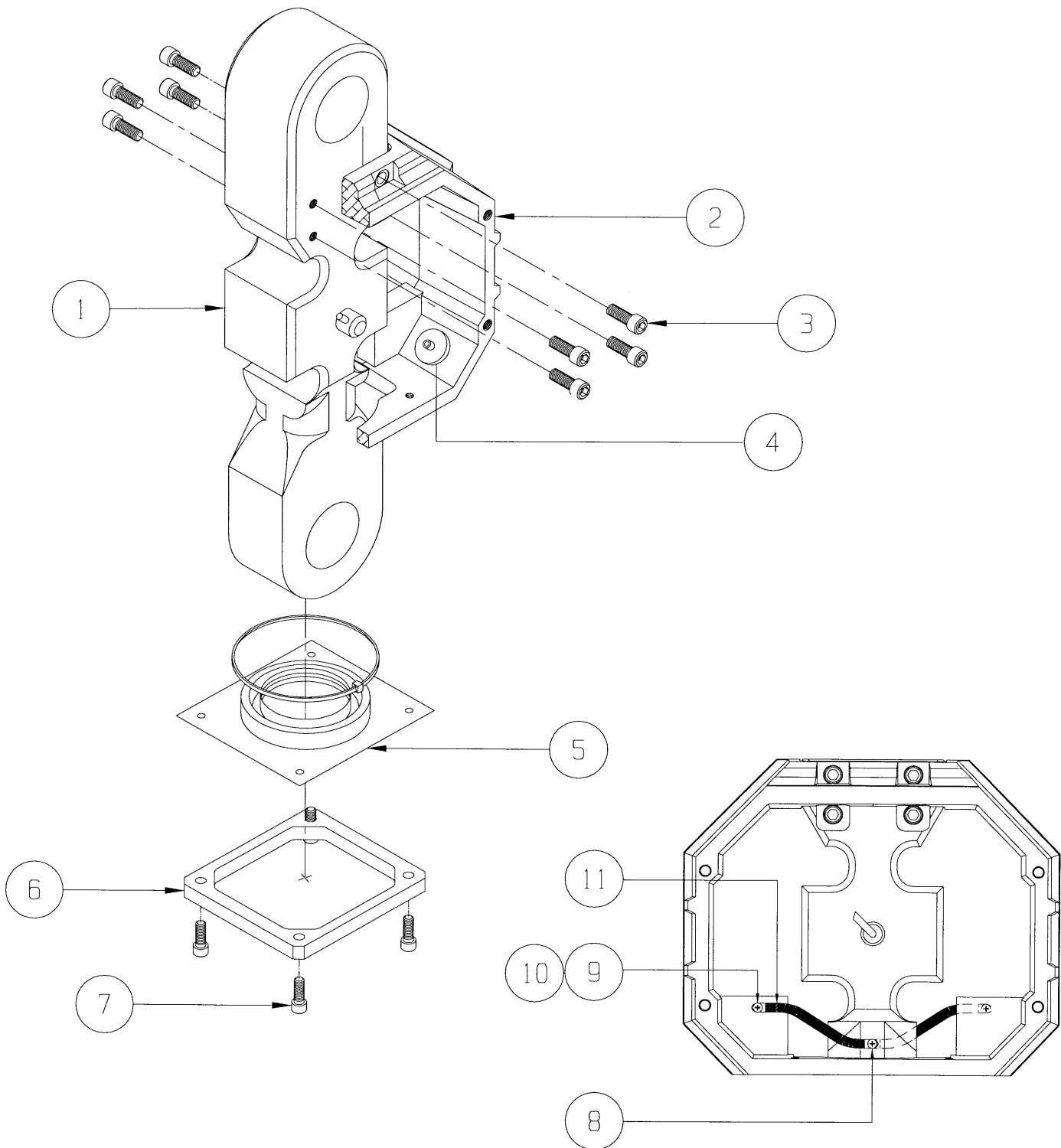


## Part Number/Price

Item #	Part #	Description	Price
1	137764	Load cell assembly	\$5,120.00
2	147974	Casting	\$505.00
3	91869	Screw, socket head, 3/8-16 × 1, stainless steel	\$2.00
4	146322	Filter	\$9.00
5	148048	Seal	\$200.00
6	147976	Collar	\$68.00
7	145995	Screw, socket head, 5/16-18 × 1, stainless steel	\$2.00
8	146601	Screw, pan head, 6-32 × 1/4, Phillips, stainless steel	\$0.75
9	81280	Washer Internal tooth #6, stainless steel	\$1.00
10	146101	Screw, pan head, 6-32 × 3/16, Phillips, stainless steel	\$0.75
11	139843	Ground strap	\$13.00
Not Shown	151356	Shackle, 25T, 50,000 lb	Consult
Not Shown	146335	Shackle, 40T, 70,000 lb	Consult
Not Shown	135035	Hook, swivel, 50,000 lb	\$8,060.00
	142179	Latch, safety (fits 500782-0001 hook)	\$150.00
Not Shown	135036	Hook, swivel, 70,000 lb	\$11,290.00
	142180	Latch, safety (fits 500782-0002 hook)	\$200.00

REPLACEMENT PARTS





# MSI-9300

Battery Casting Assembly



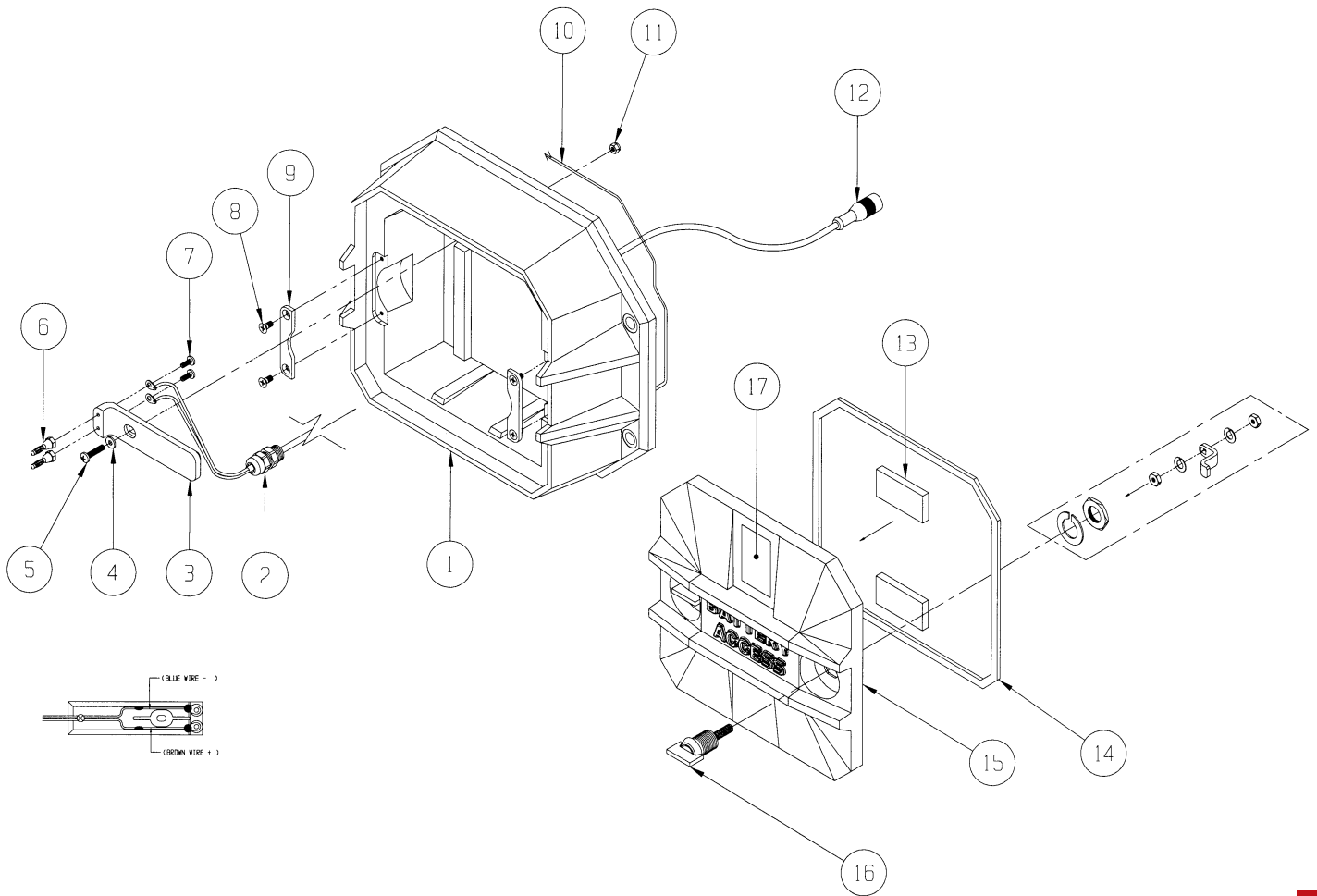
## Part Number/Price

Item #	Part #	Description	Price
1	148878	Casting	\$435.00
2	141593	Connector, feed through, with nut	\$7.00
3	150073	Connector, battery	\$25.00
4	55124	Washer flat #6, stainless steel	\$0.50
5	127036	Screw, pan head, 6-32 x 3/4, Phillips, stainless steel	\$3.00
6	147825	Plug, banana	\$11.00
7	146603	Screw, pan head, 6-32 x 3/8, Phillips, stainless steel	\$0.75
8	54356	Screw, flat head, 8-32 x 3/8, Phillips, stainless steel	\$2.00
9	148857	Plate, catch battery door	\$49.00
10	147996	O-Ring	\$18.00
11	146627	Nut, hex, 6-32, Nyloc, stainless steel	\$0.75
12	137755	Cable assembly battery	\$150.00
13	148882	Pad, 1 x 2.25 with adhesive	\$2.00
14	148858	Gasket, casting door	\$13.00
15	148855	Casting	\$265.00
16	143883	Latch, compression 1/4 to 3/8	\$44.00
17	137803	Label, warning	\$36.00
*	137757	Door assembly	\$390.00
*	137754	Rear well assembly	\$895.00

REPLACEMENT PARTS

# MSI-9300

## Battery Casting Assembly



REPLACEMENT PARTS

# MSI-9300

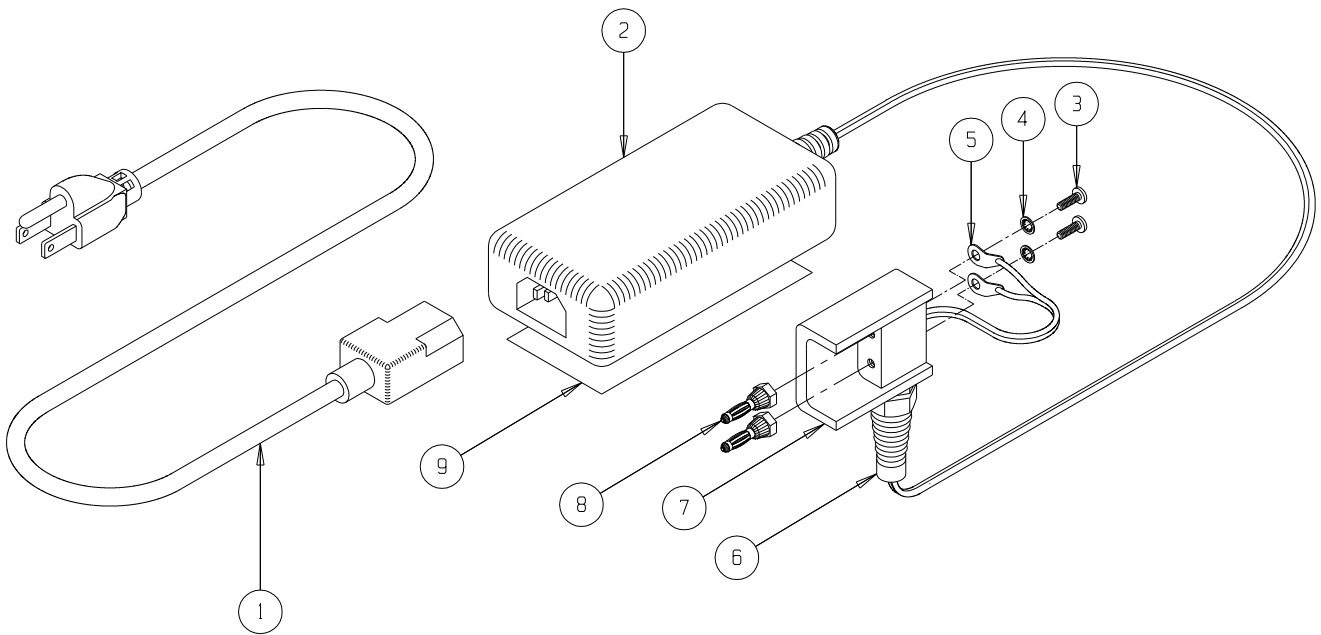
Universal Battery Charger



## Part Number/Price

Item #	Part #	Description	Price
1	143974	Power cord, North America	\$32.00
1	143981	Power cord, United Kingdom (not shown)	\$73.00
1	143979	Power cord, European (not shown)	\$62.00
1	143980	Power cord, Australian (not shown)	\$73.00
2	144890	Universal power adapter	\$140.00
3	146603	Screw, RH 6-32 x 3/8, Std., stainless steel	\$0.75
4	81280	Washer internal tooth #6, stainless steel	\$1.00
5	141635	Lug, solder #6, copper	\$2.00
6	144936	Feed through	\$6.00
7	149434	Housing battery plug	\$44.00
8	147825	Plug, banana	\$11.00
9	139369	Label, descriptive 12V	\$13.00
	138006	Universal battery charger 115/230 VAC, 50/60 Hz (North American plug configuration is standard; contact factory if alternate is required)	\$330.00

REPLACEMENT PARTS



# MSI-9600HT

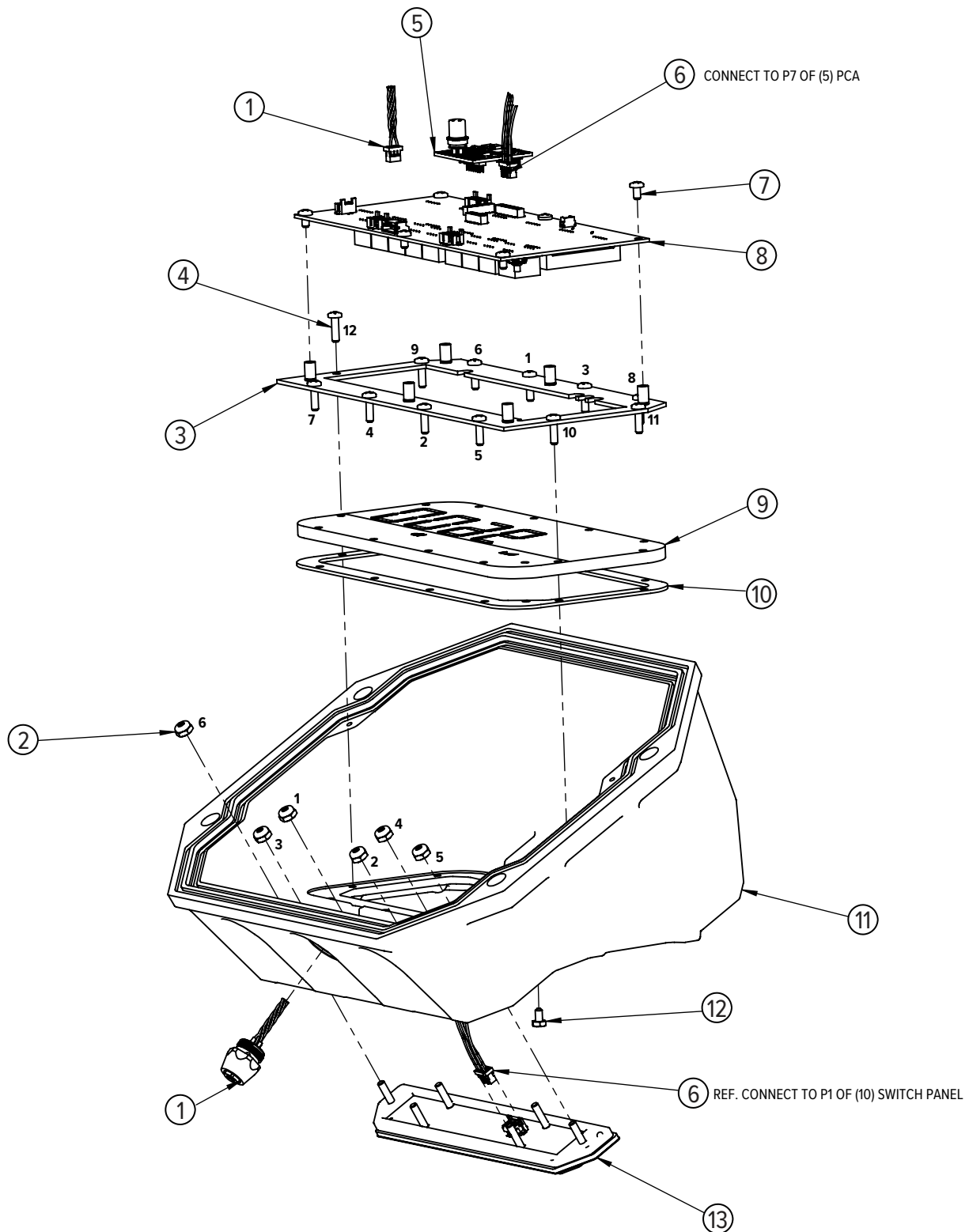
Front Casting Assembly



### Part Number/Price

Item #	Part #	Description	Price
1	139449	Cable assembly, communication serial data RS-232	\$53.00
2	146627	Nut, hex 6-32 nyloc stainless steel	\$0.75
3	213965	Bracket, display PCA	Consult
4	146605	Screw, pan head 6-32 × 12 Phillips head stainless steel	\$0.75
5	153429	PCA ScaleCore3 1 channel with turck insert - controlled	\$265.00
6	214142	Cable assembly switch	\$27.00
7	144537	Screw, lkg pch pan head 6-32 × 1/4 Phillips stainless steel	\$0.75
8	212425	PCA LED display	\$660.00
9	213973	Window, ND gray	Consult
10	214763	Gasket, display window	Consult
11	213628	Casting front machined	\$400.00
12	142574	Screw hex head stainless steel blk 6-32 1/4	\$4.00
13	213678	Switch panel assembly	\$205.00

REPLACEMENT PARTS





# MSI-9600HT

Bulkhead Assembly



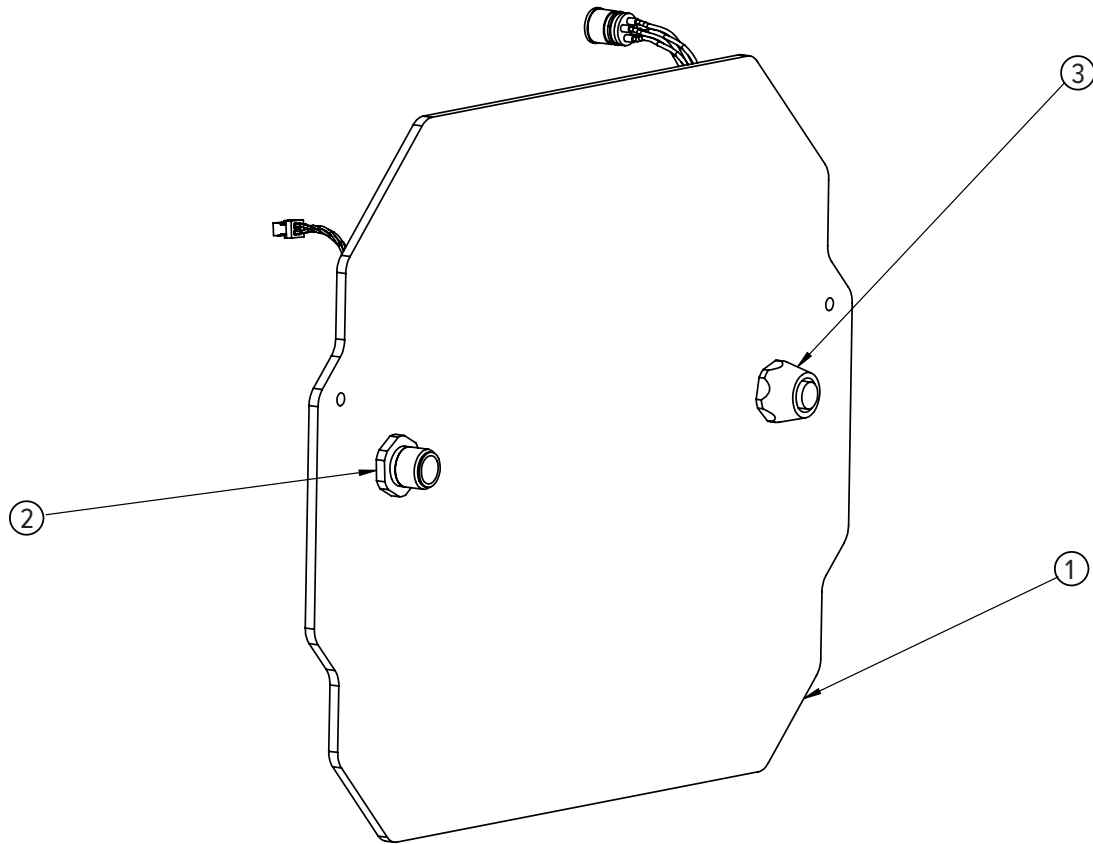
### Part Number/Price

Item #	Part #	Description	Price
1	214089	Bulkhead front casting	Consult
2	139472	Cable assembly, bulkhead power 12.0 in	\$47.00
3	139471	Cable assembly, bulkhead load cell 12.0 in	\$63.00

REPLACEMENT PARTS

# MSI-9600HT

Bulkhead Assembly



REPLACEMENT PARTS

# MSI-9600HT

Mid-section Assembly 10,000 lb



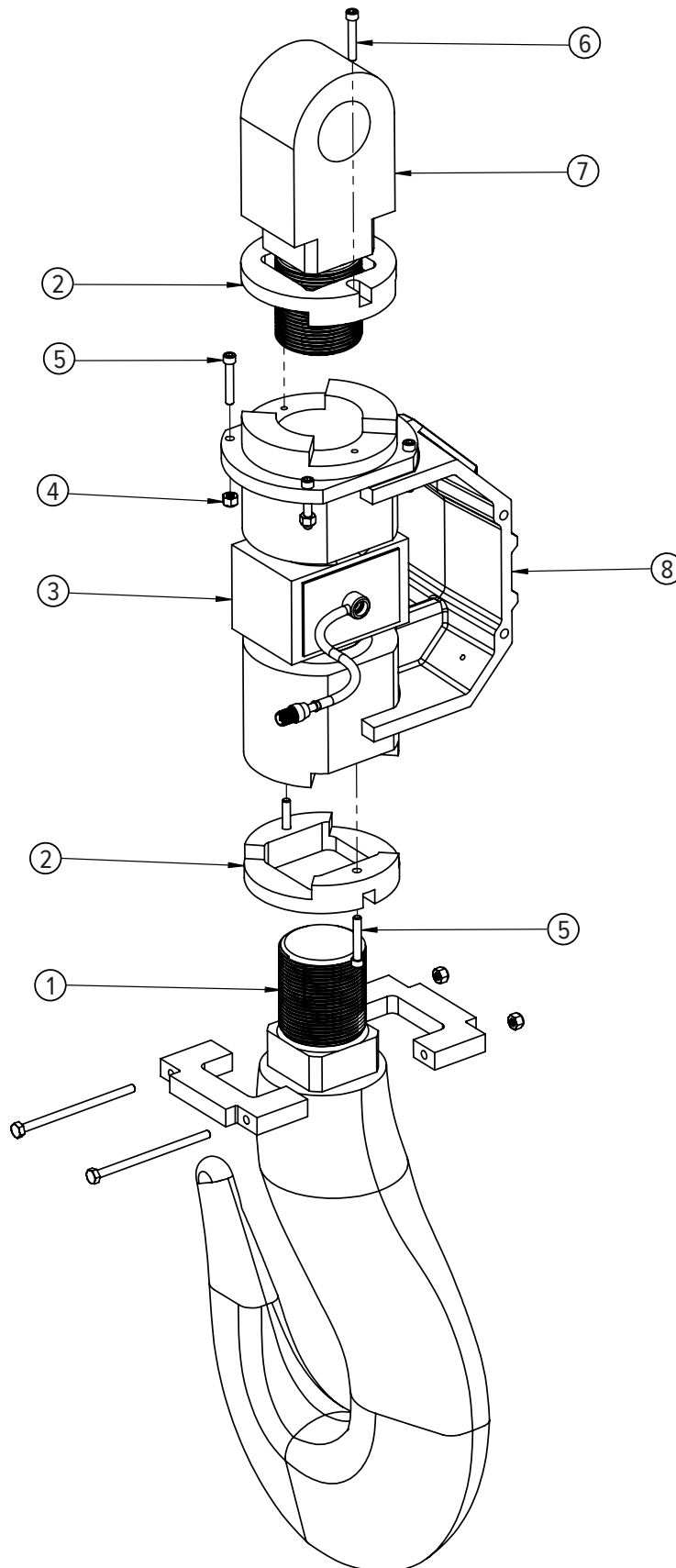
### Part Number/Price

Item #	Part #	Description	Price
1	138220	Hook, machined, torque	\$1,530.00
2	148994	Collar, torque resistant	\$465.00
3	138147	Load cell assembly, torque	\$3,050.00
4	109955	Screw, socket head, 1/4-20 × 3/4, stainless steel	\$1.00
5	148995	Lug, upper, torque	\$1,390.00
6	148964	Casting, mid-section, machined	\$610.00
Not Shown	143233	Latch, safety kit	\$40.00

REPLACEMENT PARTS

# MSI-9600HT

Mid-section Assembly 10,000 lb



REPLACEMENT PARTS

# MSI-9600HT

Mid-section Assembly 30,000 lb



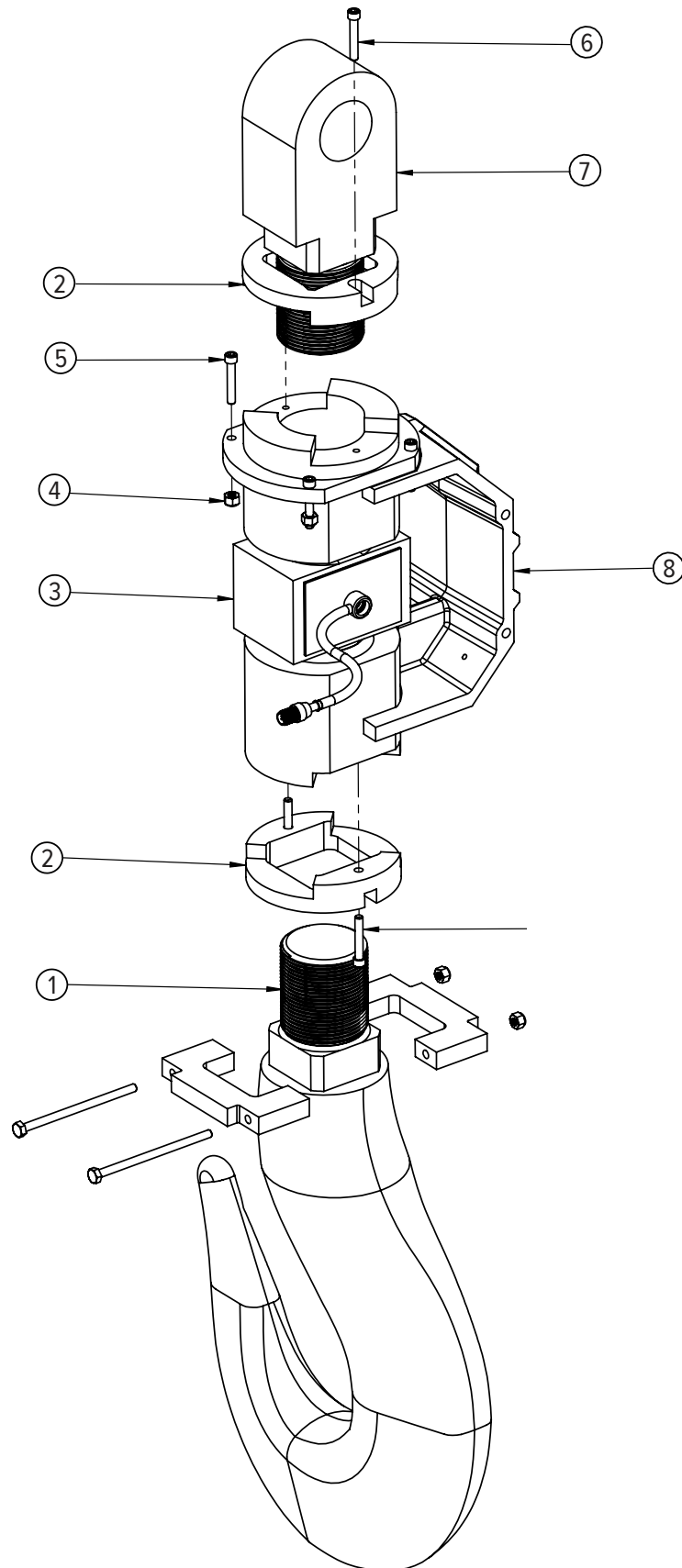
### Part Number/Price

Item #	Part #	Description	Price
1	137813	Hook, machined, torque	\$2,310.00
2	148865	Collar, torque resistant	\$570.00
3	138145	Load cell assembly, torque	\$4,190.00
4	109955	Screw, socket head, 1/4-20 x 3/4, stainless steel	\$1.00
5	149037	Lug, 30K torque resistant	\$1,820.00
6	148963	Casting, mid-section, machined	\$610.00
Not Shown	143235	Latch, safety kit	\$110.00

REPLACEMENT PARTS

# MSI-9600HT

Mid-section Assembly 30,000 lb



REPLACEMENT PARTS

# MSI-9600HT

Mid-section Assembly 70,000 lb



### Part Number/Price

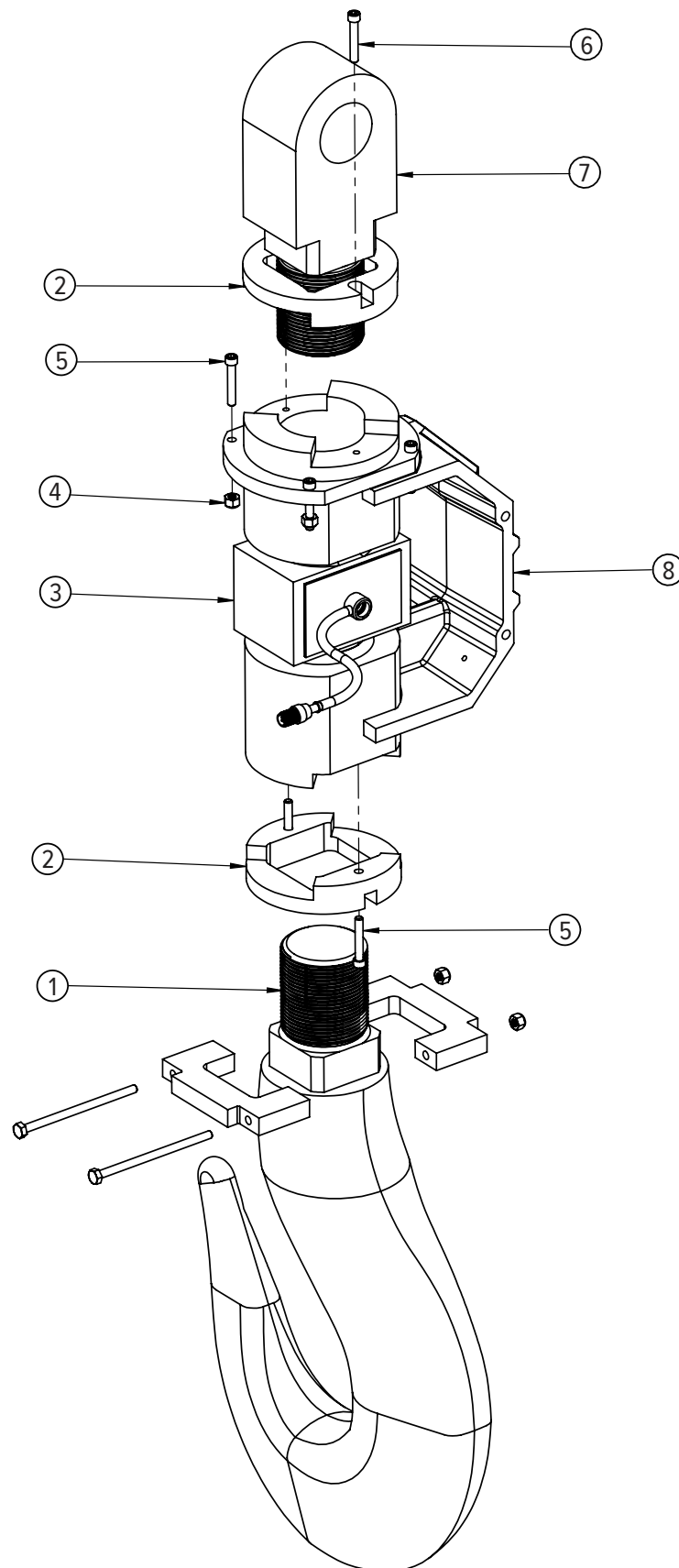
Item #	Part #	Description	Price
1	138142	Hook, machined, torque	Contact Factory
2	148960	Collar, torque resistant	\$620.00
3	138146	Load cell assembly, torque	\$4,520.00
4	146631	Nut, hex, 1/4-20 nyloc, stainless steel	\$2.00
5	117599	Screw, socket head, 1/4-20 × 1-1/2	\$1.50
6	109955	Screw, socket head, 1/4-20 × 3/4, stainless steel	\$1.00
7	149018	Lug, 70K torque resistant	\$1,780.00
8	138149	Casting, mid-section, machined	\$675.00
Not Shown	142180	Latch, safety kit	\$200.00

REPLACEMENT PARTS



# MSI-9600HT

Mid-section Assembly 70,000lb



REPLACEMENT PARTS

# MSI-9600HT

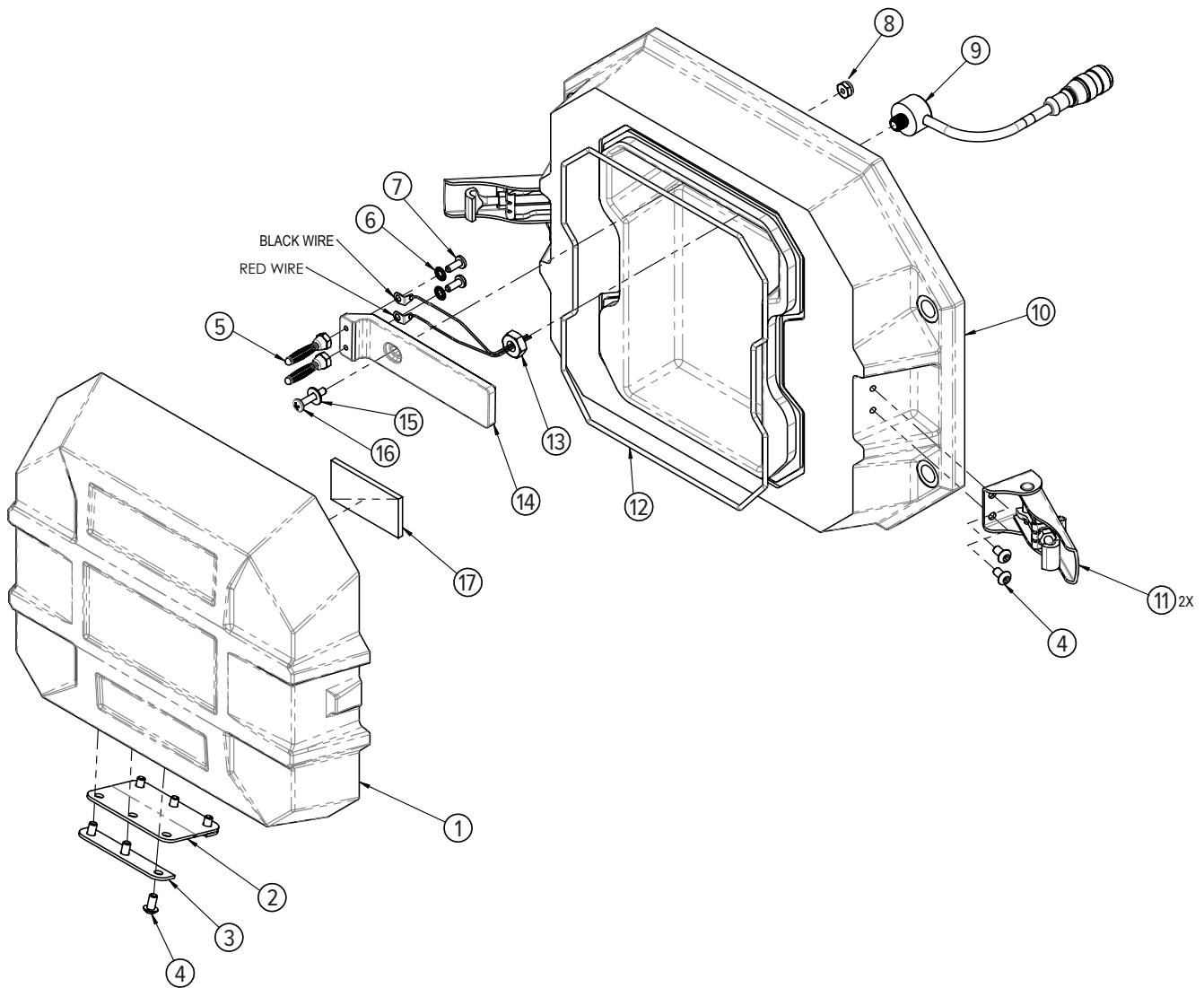
Back Assembly



## Part Number/Price

Item #	Part #	Description	Price
1	193557	Casting, rear cover, 12V, machined	\$275.00
2	149719	Fastener battery door	\$10.00
3	149718	Plate aluminum battery	\$13.00
4	213050	Screw, button head 8-32 × 5/16 stainless steel (T15) torx drive	\$2.00
5	147825	Plug banana jack	\$11.00
6	81280	Washer, lock no 6 type A	\$1.00
7	146603	Screw, pan head 6-32 × 3/8 Phillips stainless steel	\$0.75
8	146627	Nut, hex 6-32 nyloc stainless steel	\$0.75
9	214737	Cable assembly power 12 in	Consult
10	204844	Casting rear 12V SLA machined	\$400.00
11	145934	Latch camloc	\$38.00
12	149723	O-ring assembly batter well casting	\$13.00
13	146661	Nut, hex 5/16-18 jam stainless stell	\$2.00
14	169440	Connector block 12V battery casting intrinsically safe	Consult
15	55124	Washer, flat #6 cres	\$0.50
16	127036	Screw, 6-32 × 3/4 Phillips pan head 18-8 stainless steel	\$3.00
17	146640	Pad poron 2.0 × 1.0	\$3.00

REPLACEMENT PARTS



# MSI-6260CS

Front Casting Assembly



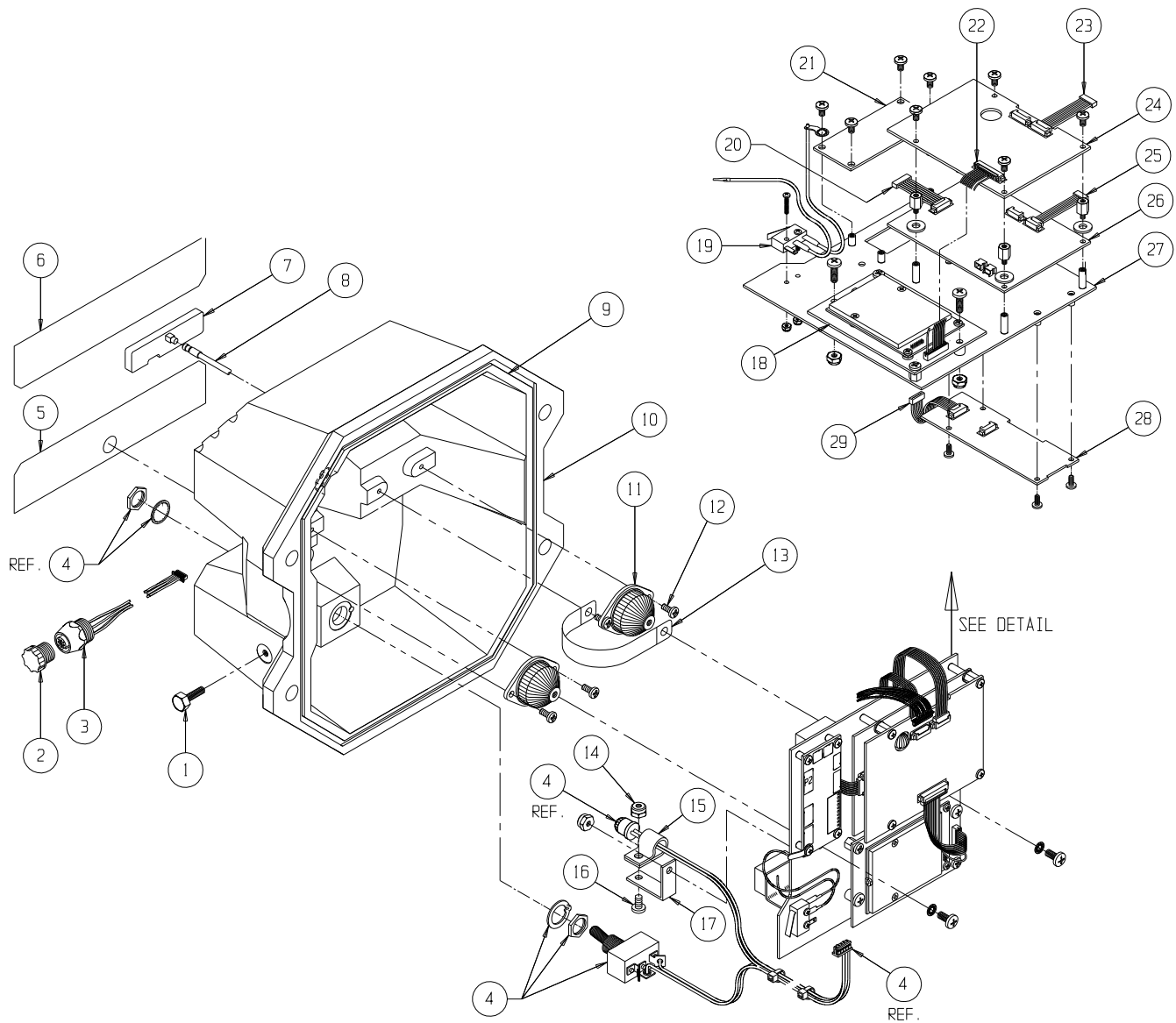
## Part Number/Price

Item #	Part #	Description	Price
1	142591	Screw, seal, 8-32 x .4375 stainless steel	\$23.00
2	143352	Closure cap, connector, male	\$3.00
3	148733	Connector assembly, serial I/O interface	\$285.00
4	137819	Switch, LED assembly	\$225.00
5	148689	Label, descriptive	\$56.00
6	150094	Label, descriptive	\$25.00
7	143454	Antenna, 2.4 Ghz	\$105.00
8	148691	Cable assembly, RF antenna	\$160.00
9	149724	O-Ring	\$13.00
10	150421	Casting	\$435.00
11	143688	Shock mount	\$38.00
12	146602	Screw, 6-32 x 5/16 pan head, stainless steel	\$0.75
13	139844	Ground strap	\$12.00
14	146627	Nut, Hex, 8-32 nyloc, stainless steel	\$0.75
15	143075	Clamp, cable	\$2.00
16	146608	Screw, 8-32 x 7/16, pan head, stainless steel	\$0.50
17	143076	Bracket angel	\$25.00
18	138304	PCA with 2450 modem	\$645.00
19	138609	Cable assembly cal switch	\$49.00
20	148990	Cable assembly power supply to adapter	\$44.00
21	137519	PCA, connector adapter	\$225.00
22	149085	Cable assembly, micro-controller	\$70.00
23	148614	Cable assembly, A/D micro-controller	\$44.00
24	148547	PCA, micro-controller	\$580.00
25	148869	Cable assembly, A/D to power supply	\$31.00
26	148982	PCA, wide input power supply	\$435.00
27	148676	Mounting plate, electronic assembly	\$61.00
28	148548	PCA, high resolution A/D	\$380.00
29	148872	Cable assembly, A/D to adapter	\$82.00

REPLACEMENT PARTS

# MSI-6260CS

## Front Casting Assembly



REPLACEMENT PARTS

# MSI-6260CS

Midsection Assembly (500 - 10,000 lb) (S-Beam Load Cells)



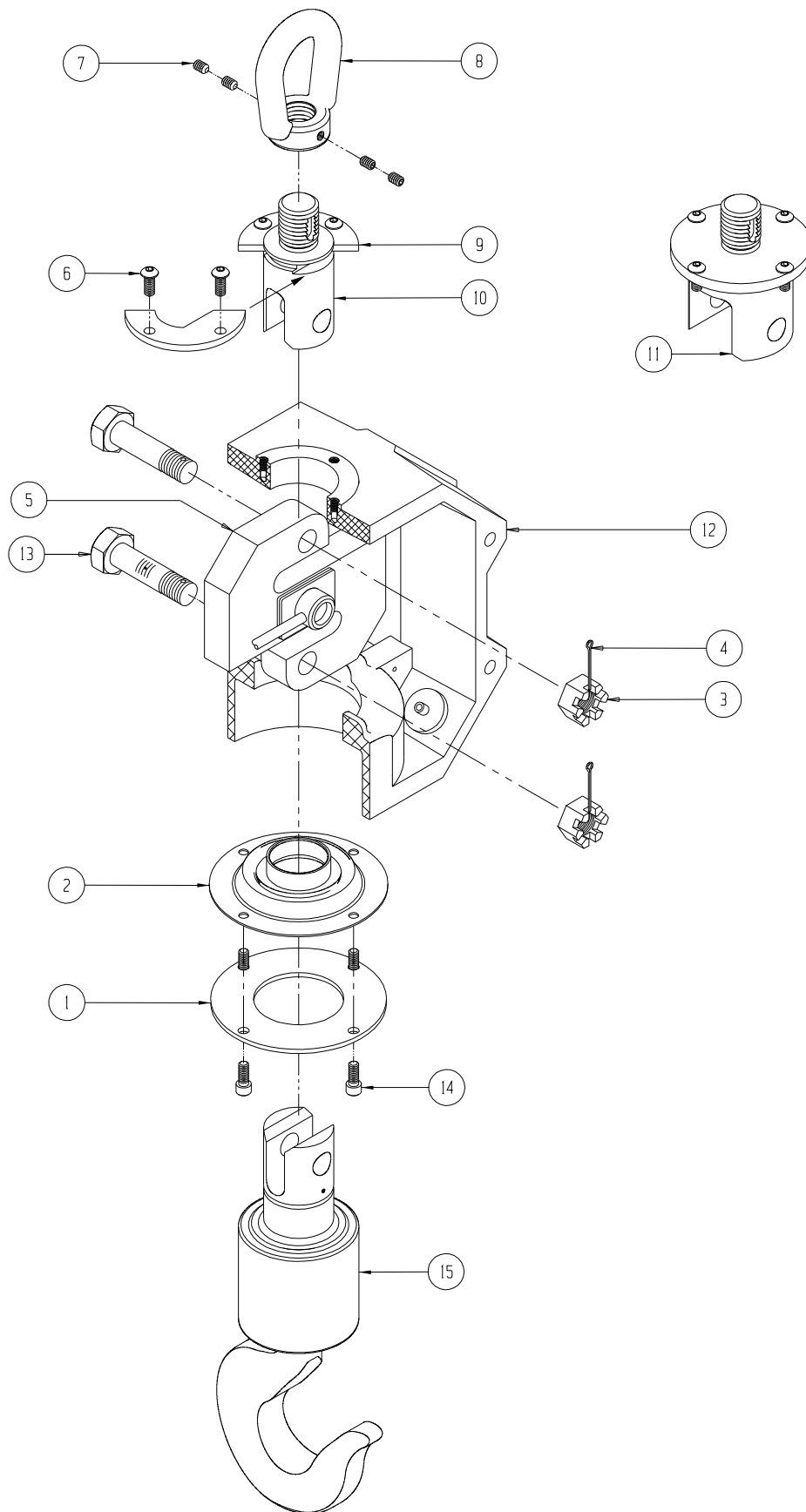
## Part Number/Price

Item #	Part #	Description	Price
1	148259	Collar, 500/2K	\$47.00
1	149168	Collar, 5/10K	\$62.00
2	149710	Seal, 500/2K	\$47.00
2	149165	Seal, 5/10K	\$56.00
3	142832	Nut, hex	\$2.00
4	15238	Cotter pin	\$1.10
5	138665	Load cell assembly, 500	\$1,220.00
5	138666	Load cell assembly, 2K	\$1,220.00
5	138667	Load cell assembly, 5K	\$1,580.00
5	138668	Load cell assembly, 10K	\$1,710.00
6	72031	Screw, button head, 1/4-20 x 5/8, stainless steel	\$1.00
7	128799	Screw set, 1/4-20 x 3/8, stainless steel	\$0.45
8	139795	Eye nut, lifting, 500/2K	\$200.00
8	148225	Eye nut, lifting 5/10K	\$265.00
9	148274	Collar, top (2 pcs.)	\$38.00
10	148271	Link, upper, 500/2K	\$245.00
11	149126	Link, upper, 5/10K	\$415.00
12	150519	Casting, mid section, 500/2K	\$560.00
12	149175	Casting, mid section, 5/10K	\$340.00
13	148457	Bolt, clevis, 500/2K	\$25.00
13	149217	Bolt, clevis, 5/10K	\$32.00
Not Shown	144878	Washer, flat 5/8, must go with 5/10K bolt (4 places)	\$2.00
14	145990	Screw, socket head, 1/4-20 x 5/8, stainless steel	\$2.00
15	135043	Hook assembly, swivel, 500/2K	\$1,630.00
	143236	Latch, safety (fits 500787-0001 hook with hole)	\$25.00
15	134523	Hook assembly, swivel, 5/10K	\$1,320.00
	143233	Latch, safety (fits 500297-0001 hook with hole)	\$40.00

REPLACEMENT PARTS

# MSI-6260CS

Midsection Assembly (500 - 10,000 lb) (S-Beam Load Cells)



REPLACEMENT PARTS

# MSI-6260CS

Midsection Assembly (500 - 10,000 lb)



## Part Number/Price

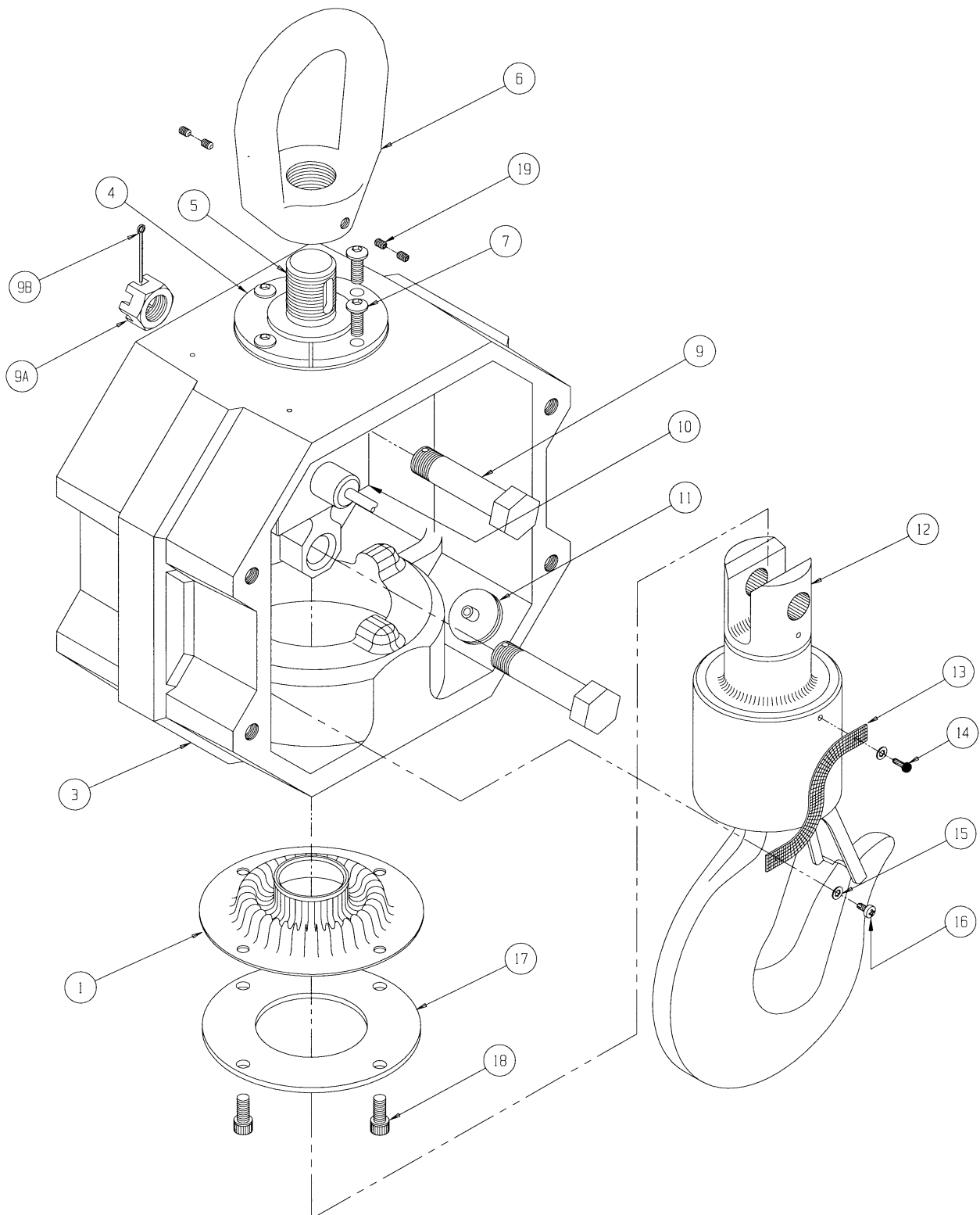
Item #	Part #	Description	Price
1	149710	Seal, lower	\$47.00
3	150519	Casting	\$560.00
4	148274	Collar, top (2 pcs.)	\$38.00
5	148271	Link, upper	\$245.00
6	139795	Eye, lifting 500/2,000 lb	\$200.00
6	148225	Eye, lifting 5,000/10,000 lb	\$265.00
7	72031	Screw, button head, 1/4-20 x 5/8, stainless steel	\$1.00
9	148457	Bolt, clevis	\$25.00
9A	142832	Nut, hex	\$2.00
9B	15238	Cotter pin	\$1.10
10	140003	Load cell assembly, 500 lb	Consult
10	141198	Load cell assembly, 2,000 lb	\$1,580.00
10	141199	Load cell assembly, 5,000 lb	\$1,580.00
10	141200	Load cell assembly, 10,000 lb	\$1,710.00
11	146322	Filter	\$9.00
12	135043	Hook assembly, swivel, 500/2,000 lb	\$1,630.00
	143236	Latch, safety (fits 500787-0001 hook with hole)	\$25.00
	111410	Latch, safety (fits 500787-0001 hook)	\$20.00
12	134521	Hook assembly, swivel, 5,000/10,000 lb	\$1,280.00
	143233	Latch, safety (fits 500297-0001 hook with hole)	\$40.00
	146295	Latch, safety (fits 500297-0001 hook)	\$36.00
13	139843	Ground strap	\$13.00
14	142110	Screw, drive, #6 x .25, stainless steel	\$0.75
15	81280	Washer, internal tooth, 6-32	\$1.00
16	146102	Screw, pan head, 6-32 x 1/4, Phillips stainless steel	\$0.75
17	148259	Collar	\$47.00
18	145990	Screw, socket head, 1/4-20 x 5/8, stainless steel	\$2.00
19	128799	Screw set, 1/4-20 x 3/8, stainless steel	\$0.45

REPLACEMENT PARTS



# MSI-6260CS

Midsection Assembly (500 - 10,000 lb)



REPLACEMENT PARTS

# MSI-6260CS

Midsection Assembly (20 & 30,000 lb)



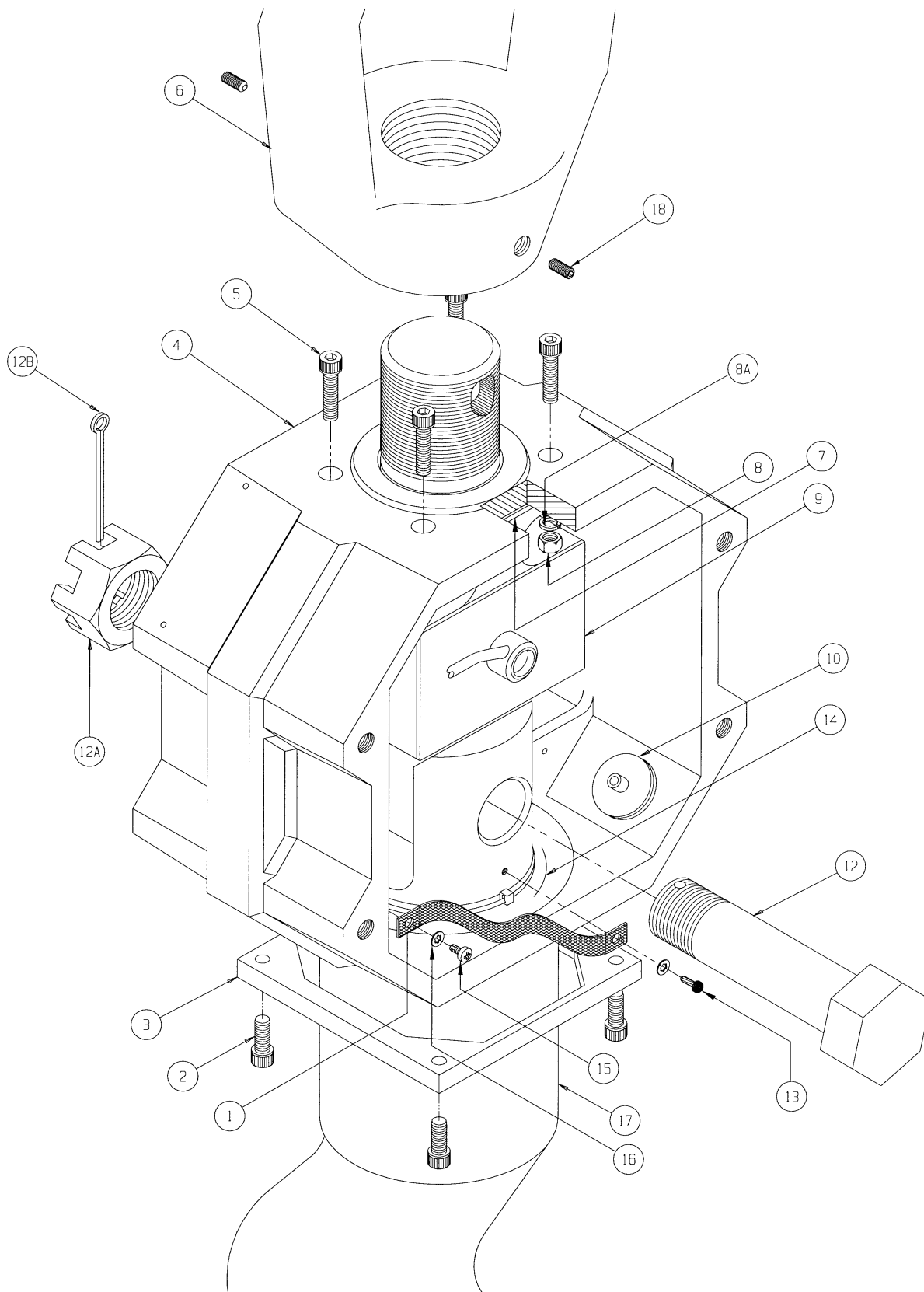
## Part Number/Price

Item #	Part #	Description	Price
1	139843	Ground strap	\$13.00
2	145990	Screw, socket head, 1/4-20 x 5/8, stainless steel	\$2.00
3	149958	Collar, lower	\$130.00
4	150523	Casting	\$465.00
5	81405	Screw, socket head, 1/4-20 x 1, stainless steel	\$1.00
6	148110	Eye, lifting	\$610.00
7	149976	Seal, upper	\$5.00
8	14642	Nut, hex, 1/4-20, stainless steel	\$1.50
8A	15148	Washer split	\$1.00
9	134566	Load cell assembly	\$2,140.00
10	146322	Filter	\$9.00
12	148458	Bolt	\$82.00
12A	142833	Nut	\$11.00
12B	142186	Cotter pin	\$2.00
13	142110	Screw, drive, #6 x .25, stainless steel	\$0.75
14	149957	Seal, lower	\$82.00
15	146102	Screw, pan head, 6-32 x 1/4, Phillips, stainless steel	\$0.75
16	81280	Washer, internal tooth, #6, stainless steel	\$1.00
17	134938	Hook assembly, swivel 20,000 lb	\$2,680.00
	110661	Latch, safety (fits 500729-0001 hook with hole)	\$42.00
	142138	Latch, safety (fits 500729-0001 hook)	\$38.00
17	134939	Hook assembly, swivel 30,000 lb	\$3,480.00
	143235	Latch, safety (fits 500729-0002 hook with hole)	\$110.00
	142139	Latch, safety (fits 500729-0002 hook)	\$99.00
18	146081	Screw set, 3/8-24 x 3/4, stainless steel	\$2.00

REPLACEMENT PARTS

# MSI-6260CS

Midsection Assembly (20 & 30,000 lb)



REPLACEMENT PARTS

# MSI-6260CS

Midsection Assembly (50 & 70,000 lb)



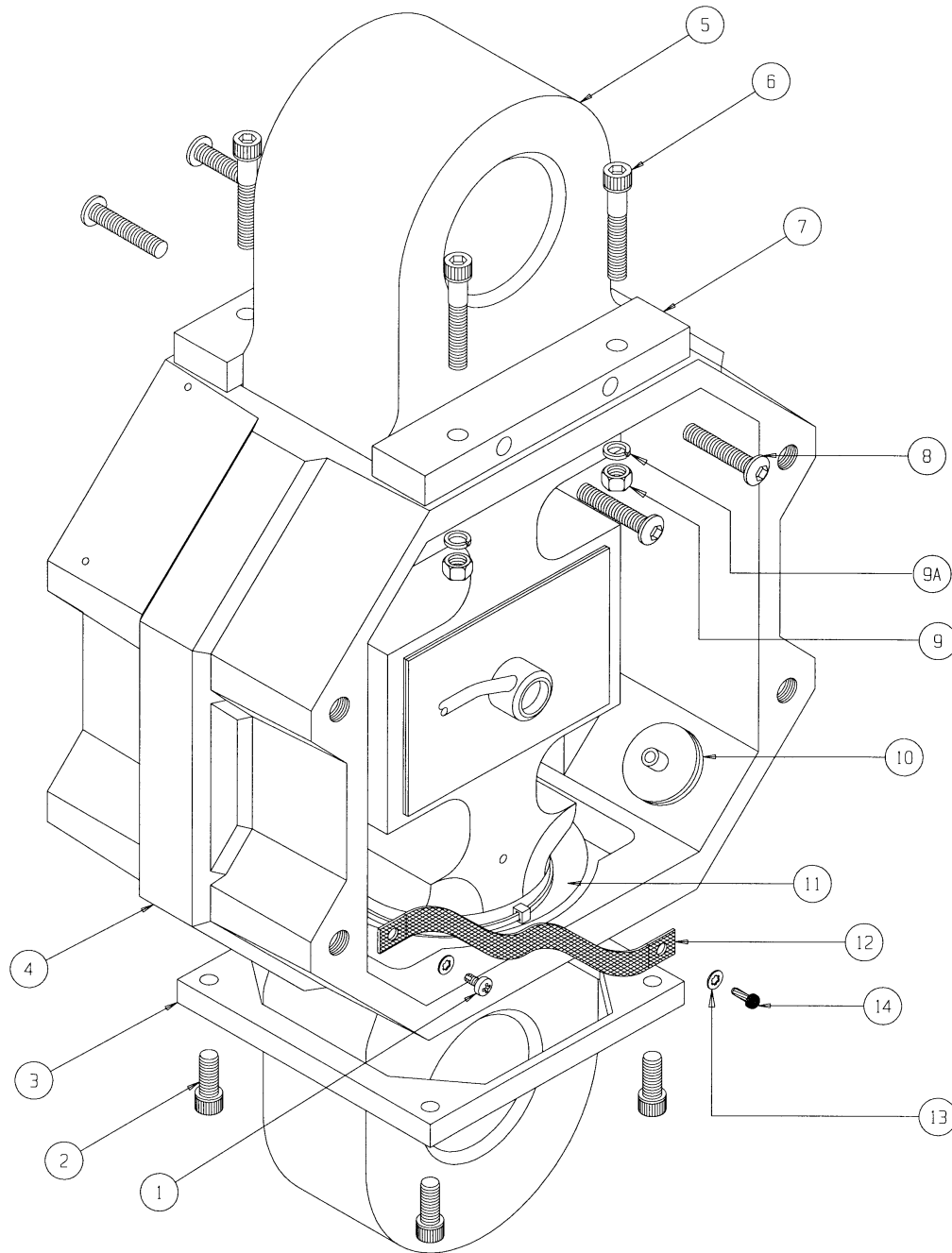
## Part Number/Price

Item #	Part #	Description	Price
1	146102	Screw, pan head, 6-32 × 1/4, Phillips, stainless steel	\$0.75
2	145990	Screw, socket head, 1/4-20 × 5/8, stainless steel	\$2.00
3	149958	Collar	\$130.00
4	150525	Casting	\$495.00
5	134716	Load cell assembly	\$4,060.00
6	117599	Bolt, socket head, 1/4-20 × 1-1/2, stainless steel	\$1.50
7	148213	Collar	\$93.00
7	149964	Collar (pre 1992 only)	\$435.00
8	145982	Screw, button head, 1/4-20 × 1, stainless steel	\$2.00
9	14642	Nut, hex, 1/4-20, stainless steel	\$1.50
9A	15148	Washer split	\$1.00
10	146322	Filter	\$9.00
11	149957	Seal	\$82.00
12	139843	Ground strap	\$13.00
13	81280	Washer, internal tooth, #6, stainless steel	\$1.00
14	142110	Screw, drive, #6 × .25, stainless steel	\$0.75
Not Shown	151356	Shackle, 25T 50,000 lb	Consult
Not Shown	146335	Shackle, 40T 70,000 lb	Consult
Not Shown	135035	Hook, swivel, 50,000 lb	\$8,060.00
	142179	Latch, safety (fits 500782-0001 hook)	\$150.00
Not Shown	135036	Hook, swivel, 70,000 lb	\$11,290.00
	142180	Latch, safety (fits 500782-0002 hook)	\$200.00

REPLACEMENT PARTS

# MSI-6260CS

Midsection Assembly (50 & 70,000 lb)



REPLACEMENT PARTS

# MSI-6260CS

Battery Casting Assembly



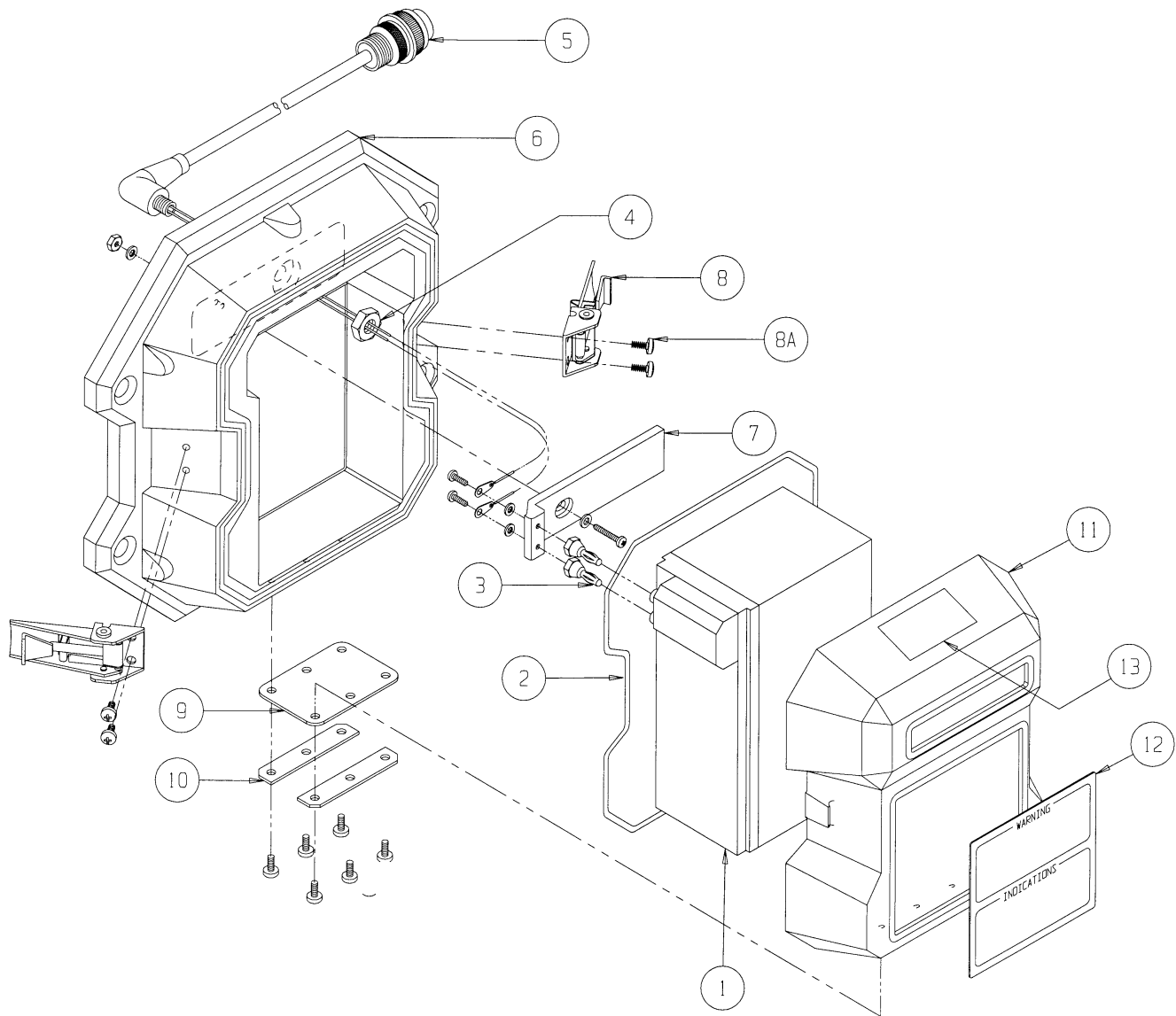
## Part Number/Price

Item #	Part #	Description	Price
1	150367	Battery assembly	\$135.00
2	149723	O-Ring	\$13.00
3	147825	Plug, banana	\$11.00
4	114485	Nut, jam, 5/16-24, hex, stainless steel	\$1.00
5	133795	Cable assembly, power	\$190.00
6	150517	Casting	\$315.00
7	150073	Connector, battery	\$25.00
8A	146107	Screw	\$2.00
8	145934	Latch	\$38.00
9	149719	Hinge, rubber	\$10.00
10	149718	Plate, hinge	\$13.00
11	150516	Casting	\$93.00
12	137353	Label, RF battery warning, 2450 modem	\$19.00
12	137352	Label, RF battery warning, 2400 modem	\$18.00
13	137351	Label, FCC	\$19.00
Complete Battery Casting Assembly			
-	141254	Battery casting assembly	\$830.00
-	141100	Battery casting assembly, 115 or 230 VAC, 50/60 Hz	\$1,525.00

REPLACEMENT PARTS

# MSI-6260CS

Battery Casting Assembly



REPLACEMENT PARTS

# MSI-6260CS

Universal Battery Charger Assembly



## Part Number/Price

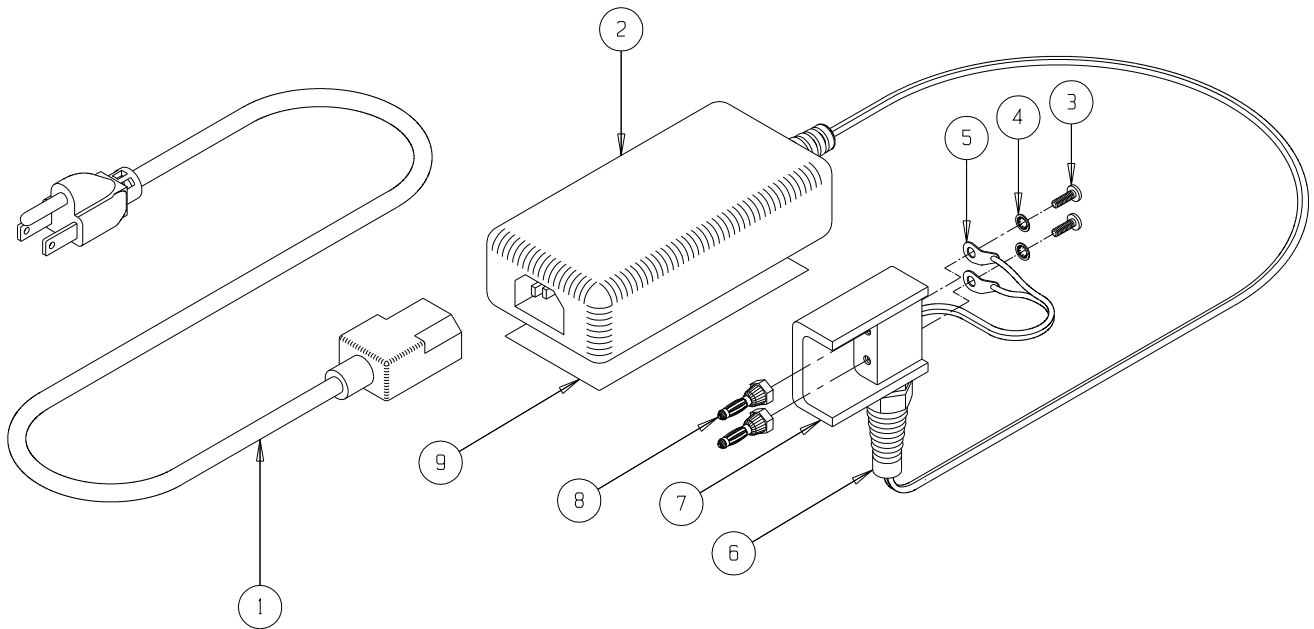
Item #	Part #	Description	Price
1	143974	Power cord, North America	\$32.00
1	143981	Power cord, United Kingdom (not shown)	\$73.00
1	143979	Power cord, European (not shown)	\$62.00
1	143980	Power cord, Australian (not shown)	\$73.00
2	144890	Universal power adapter	\$140.00
3	146603	Screw, pan head 6-32 x 3/8, Std., stainless steel	\$0.75
4	81280	Washer internal tooth #6, stainless steel	\$1.00
5	141635	Lug, solder #6, copper	\$2.00
6	144936	Feed through	\$6.00
7	149434	Housing battery plug	\$44.00
8	147825	Plug, banana	\$11.00
9	139369	Label, descriptive 12V	\$13.00
-	138006	Universal battery charger 115/230 VAC, 50/60 Hz (North American plug configuration is standard; contact factory if alternate is required)	\$330.00

REPLACEMENT PARTS



# MSI-6260CS

Universal Battery Charger Assembly



REPLACEMENT PARTS

# MSI-7300 Dyna-Link

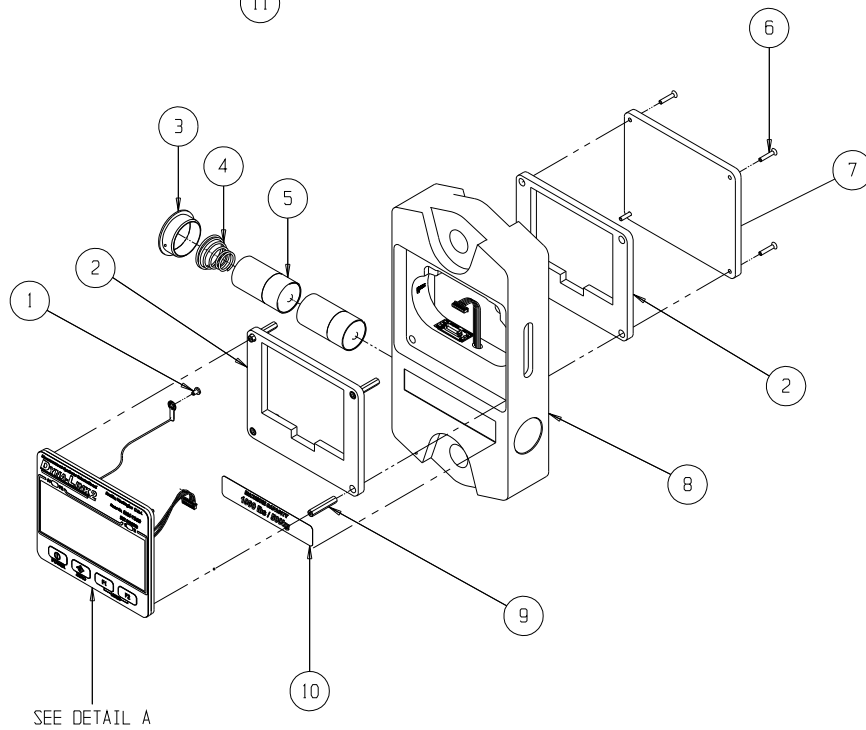
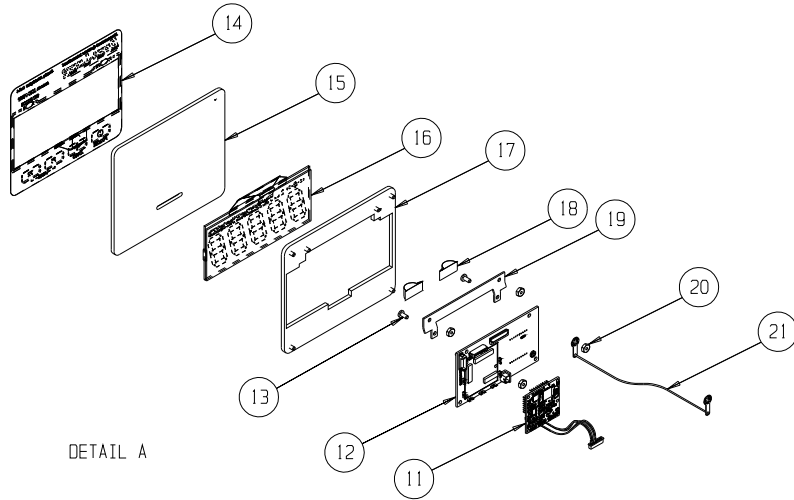
Standard Assembly



## Part Number/Price

Item #	Part #	Description	Price
1	146593	Screw, pan head, 4-40 × 3/16, stainless steel	\$0.75
2	149340	Gasket, front	\$30.00
3	144709	Cap, 25, 50 and 100k capacities	\$47.00
3	144710	Cap, 1,2,5 and 10k capacities	\$30.00
4	144788	Spring, 25, 50 and 100k	\$6.00
4	144769	Spring, 1, 2, 5 and 10k	\$5.00
5	42741	Battery "D" cell alkaline	\$5.00
5	74619	Battery, "C" cell alkaline	\$2.75
6	146556	Screw, flat head, 4-40 × 5/8, Phillips, stainless steel	\$1.00
7	149381	Panel, back	\$58.00
8	139155	Load cell assembly, 1,000 lb	\$925.00
8	139156	Load cell assembly, 2,500 lb	\$925.00
8	139157	Load cell assembly, 5,000 lb	\$925.00
8	139158	Load cell assembly, 10,000 lb	\$1,110.00
8	139159	Load cell assembly, 25,000 lb	\$1,510.00
8	139160	Load cell assembly, 50,000 lb	\$2,030.00
8	139161	Load cell assembly, 100,000 lb	\$3,040.00
9	144789	Spacer, 1.062, 4-40, stainless steel	\$15.00
9	144790	Spacer, 1.312, 4-40, stainless steel	\$15.00
9	144791	Spacer, 1.812, 4-40, stainless steel	\$15.00
9	144792	Spacer, 2.562, 4-40, stainless steel	\$15.00
9	144758	Spacer, 2.00, 4-40, stainless steel	\$15.00
10	148022	Label, capacity, 1,000 lb	\$18.00
10	148029	Label, capacity, 2,500 lb	\$17.00
10	148024	Label, capacity, 5,000 lb	\$18.00
10	148025	Label, capacity, 10,000 lb	\$18.00
10	148026	Label, capacity, 25,000 lb	\$18.00
10	148027	Label, capacity, 50,000 lb	\$18.00
10	134160	Label, capacity, 100,000 lb	Consult
11	153431	PCA, Scalecore assembly	\$265.00
12	149290	PCA, display assembly	\$150.00
13	144536	Screw, pan head, 4-40 × 1/4, Phillips, stainless steel	\$0.75
14	149336	Label, descriptive	\$105.00
15	149339	Panel, front	\$24.00
16	149295	LCD	\$36.00
17	149338	Bezel, assembly	\$74.00
18	144991	Gasket	\$2.00
19	149460	Bracket, LCD	\$24.00
20	146542	Nut, hex 4-40, stainless steel	\$2.00
21	139407	Ground wire	\$5.00

REPLACEMENT PARTS



# Dyna-Clamp

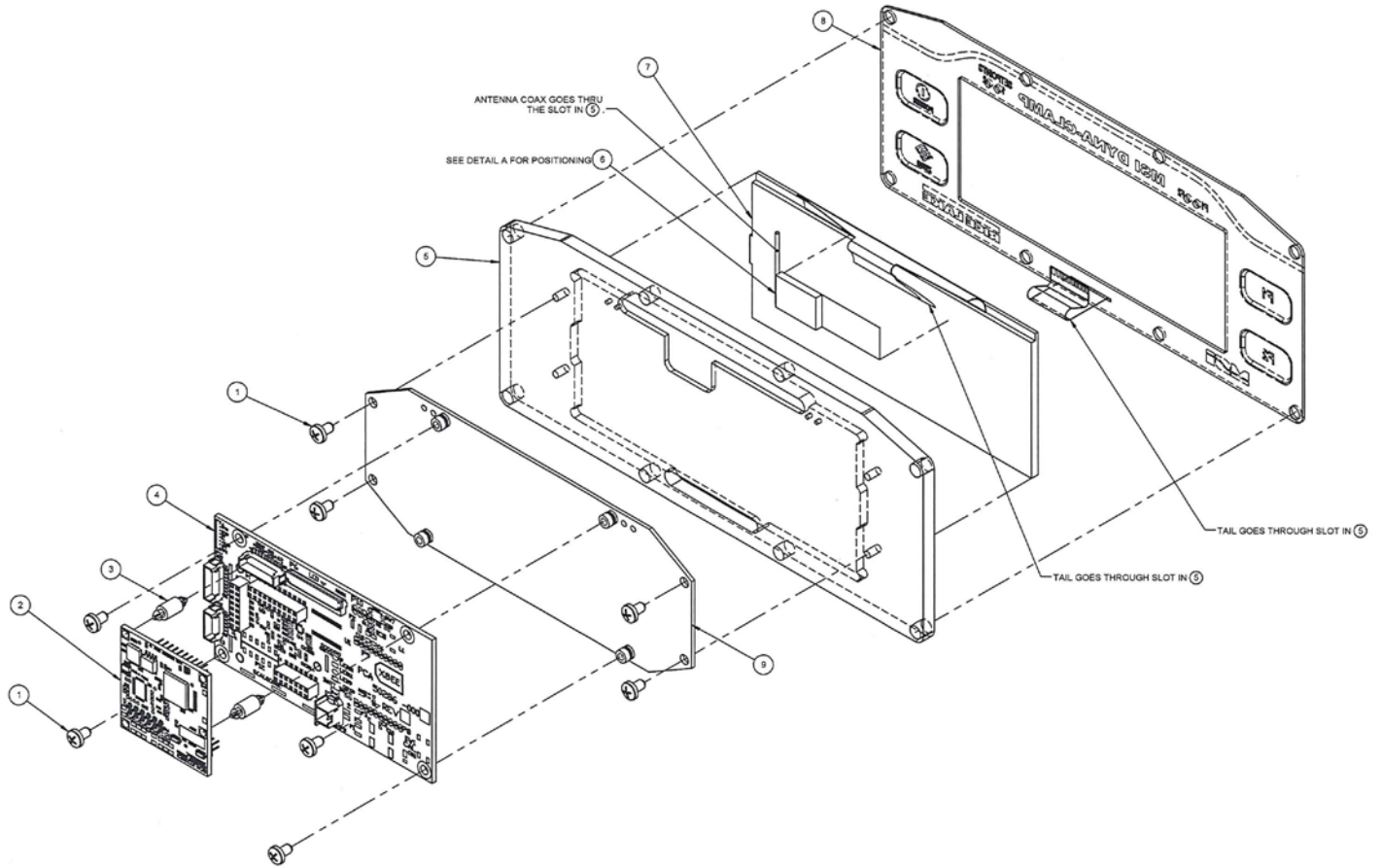
Display Assembly



## Part Number/Price

Item #	Part #	Description	Price
1	142233	Screw, pan head, locking, 4-40 × 3/16, Phillips, stainless steel	\$2.00
2	153431	PCA scalecore 3 4-channel with board to board header (not field installable)	\$265.00
3	144939	Spacer miniature dual locking 6 mm long	\$1.05
4	151918	PCA 6-digit LCD 7300	\$225.00
5	189582	Front plate LCD mount	\$235.00
6	197204	Antenna, 2.4 GHz, 2dBi with u.fl cable, 100 mm	\$13.00
7	186658	LCD module dual line 4.5 × 2.0 in (6 primary display digits) line tension check lcd display	\$32.00
8	191640	Overlay with dome switches	\$135.00
9	191813	Mounting plate electronics	\$42.00

REPLACEMENT PARTS



# Dyna-Clamp

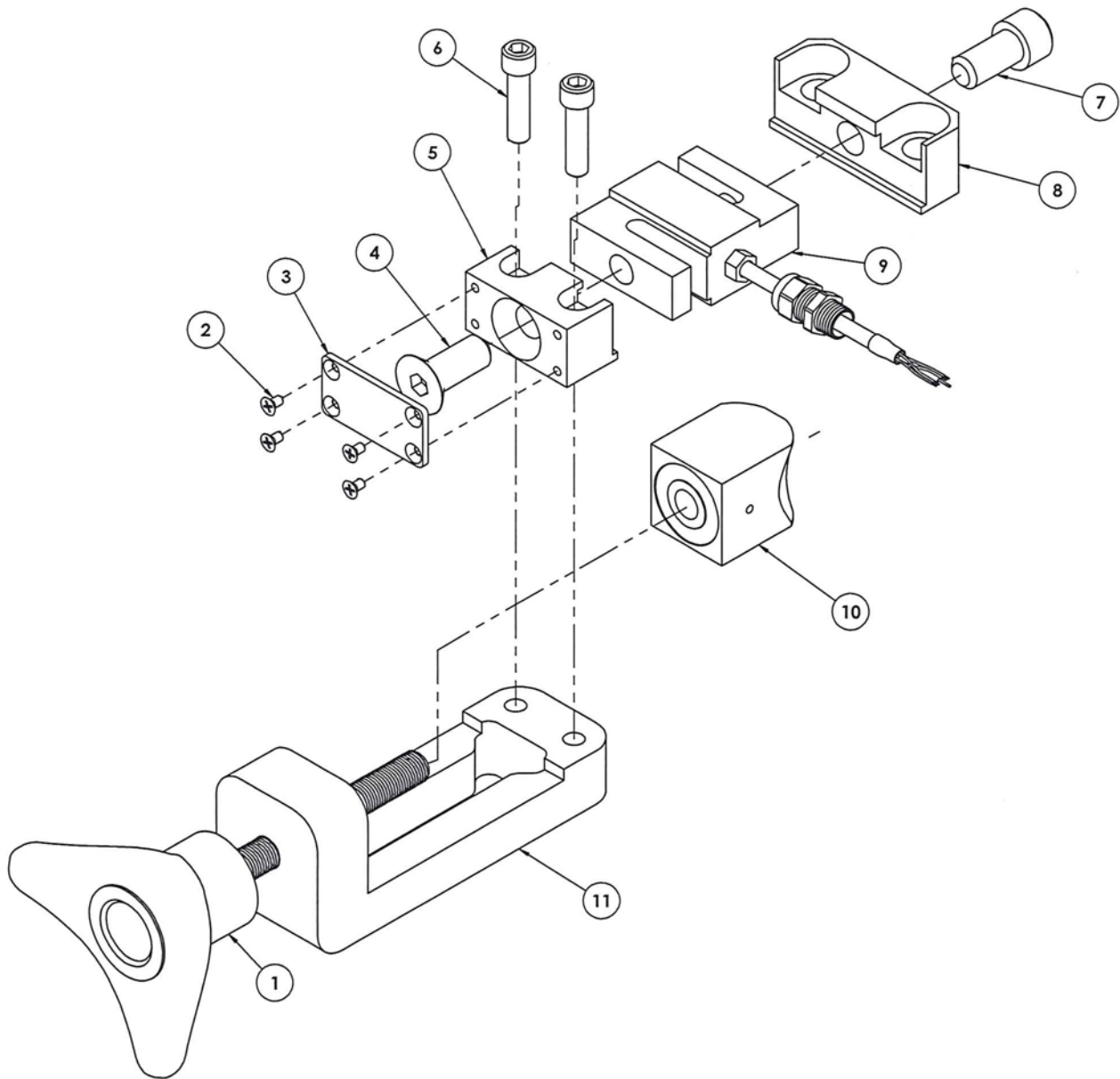
Rod Assembly



## Part Number/Price

Item #	Part #	Description	Price
1	196441	Handle and drive rod assembly	\$340.00
2	146560	Screw flat head 6-32 × 1/4 Phillips stainless steel	\$0.75
3	192405	Striker plate	\$36.00
4	192718	Screw cap flat head 82 deg 1/2-20 unf × 1.25 lg hex drive alloy steel black oxide	\$3.00
5	191072	Lower load cell mount	\$170.00
6	192747	Screw socket head 5/16-18 uc × 1.25 lg alloy steel black oxide cap screw	\$2.00
7	192746	Screw socket head 1/2-20 unf × 1.00 lg alloy steel black oxide cap screw	\$5.00
8	191071	Upper load cell mount	\$185.00
9	192740	Load cell assembly 500 lb (not field installable)	Consult
10	193410	Drive rod end assembly	\$835.00
11	192416	Drive block	\$565.00

REPLACEMENT PARTS



# Dyna-Clamp

Front and Back Assembly

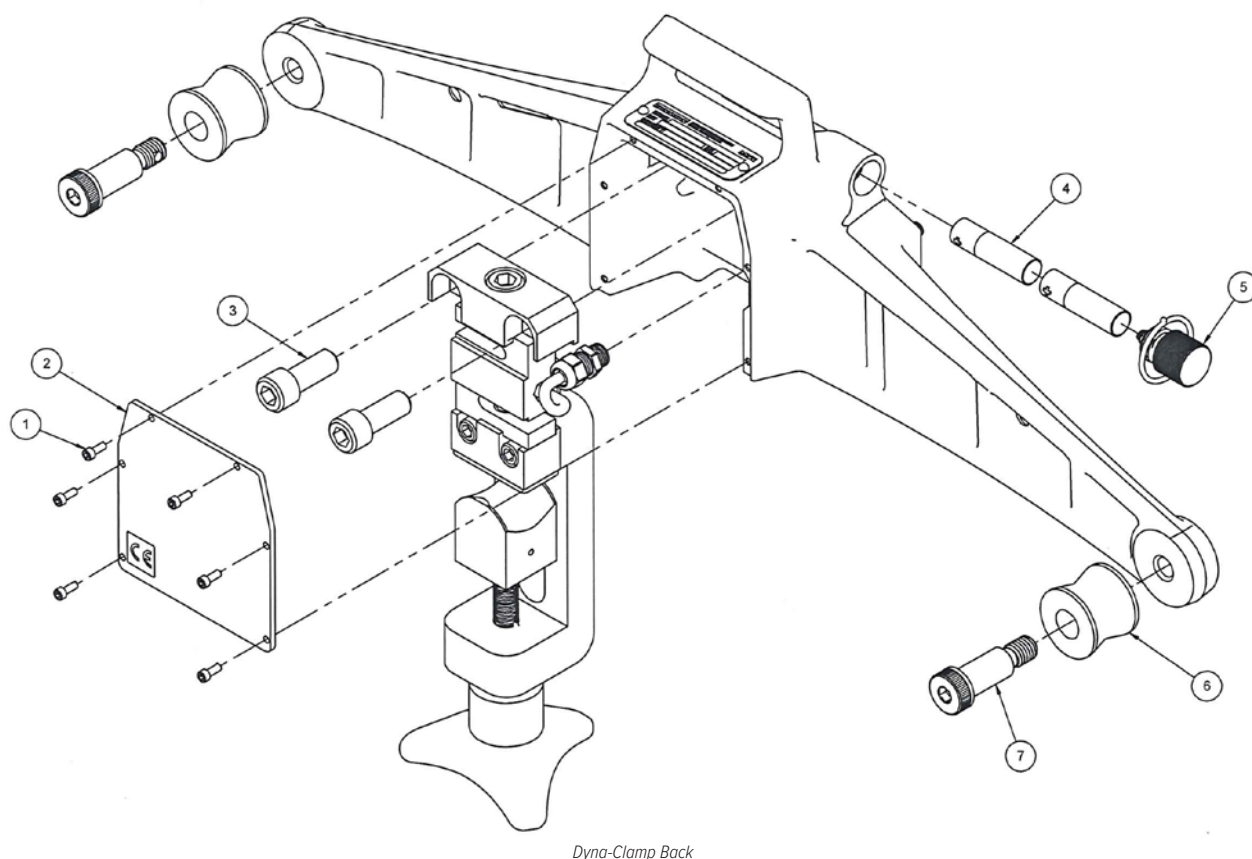
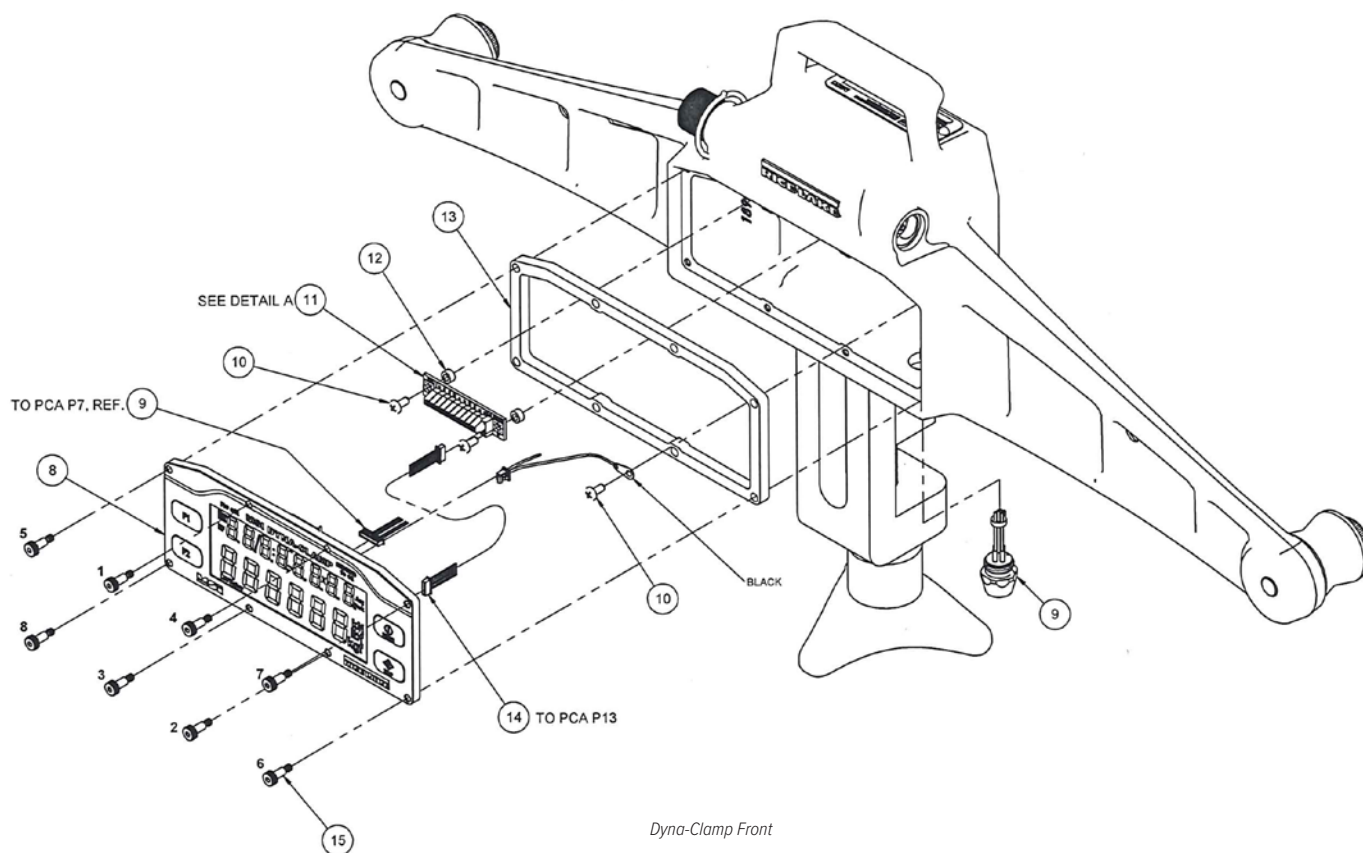


## Part Number/Price

Item #	Part #	Description	Price
1	145988	Screw socket head 6-32 × 3/8 stainless steel	\$1.50
2	192406	Cover plate load train	\$37.00
3	146001	Screw socket head 1/2-20 × 1-1/4 pltd	\$4.00
4	16431	Battery, 1.5V AA alkaline pack of 8	\$4.00
5	191147	Battery cap assembly	\$170.00
6	191155	Cable roller	\$130.00
7	192660	Bolt shoulder 1/2-13 unc shoulder diameter 0.623-621 × 1.25 length with thread locker black oxide	\$21.00
8	189583	Electronics assembly LCD	\$935.00
9	192858	Cable assembly serial RS-232	\$44.00
10	142197	Screw, pan head 6-32 × 5/16 long Phillips drive stainless steel with locking patch material applied	\$2.00
11	158437	PCA terminal block 8000HD	\$48.00
12	146226	Spacer .140 inch id × .125 inch lg #6 clearance #4001	\$2.00
13	191038	Gasket display silicone	\$17.00
14	161622	Cable assembly int load cell term block to display board input	\$16.00
15	194530	Screw shoulder socket head 6-32 5/32 diameter × 5/16 long alloy steel black oxide	\$7.00

REPLACEMENT PARTS





REPLACEMENT PARTS

# MSI-8000

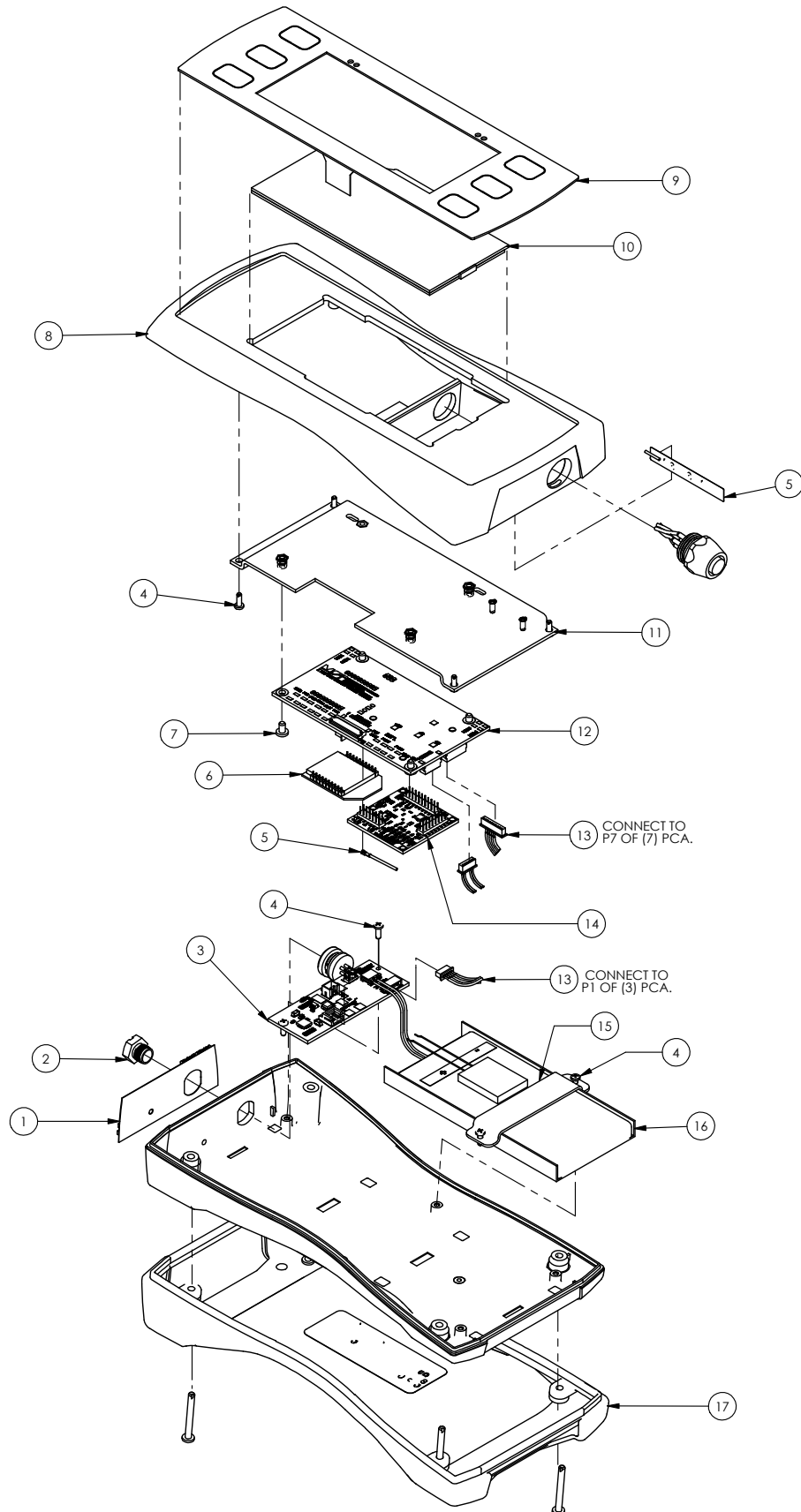
Remote Display



## Part Number/Price

Item #	Part #	Description	Price
1	149451	Label charger serial FCC handheld display	\$19.00
2	144908	Conn closure cap IP68 picofast male	\$12.00
3	162339	PCA Li-Po battery charger 5VDC	\$185.00
4	144935	Screw pan head 2-32 × 1/4 type B Phillips stainless steel	\$2.00
5	145065	Antenna patch 2.4 GHz ADH mount with fl. u coax	\$20.00
6	144773	Radio module Xbee-pro 802.15.4 u.fl connect	\$120.00
7	146593	Screw pan head 4-40 × 3/16 Phillips stainless steel	\$0.75
8	149407	Enclosure machined DynaLink2 REM display	\$160.00
9	149409	Label descriptive switch remote display	\$95.00
10	151575	LCD display 6-digit	\$36.00
11	149408	Mounting plate LCD PCA	\$34.00
12	151918	PCA 6-digit LCD 7300	\$225.00
13	139380	Cable assembly power/comm handheld	\$16.00
14	153428	PCA ScaleCore3 no a/d	\$265.00
15	179169	Bracket assembly	\$33.00
16	139336	Battery pack/charger li-polymer 3.7 V	\$130.00
17	144874	Enclosure seal rubber armor blue	\$52.00

REPLACEMENT PARTS



# MSI-8000HD

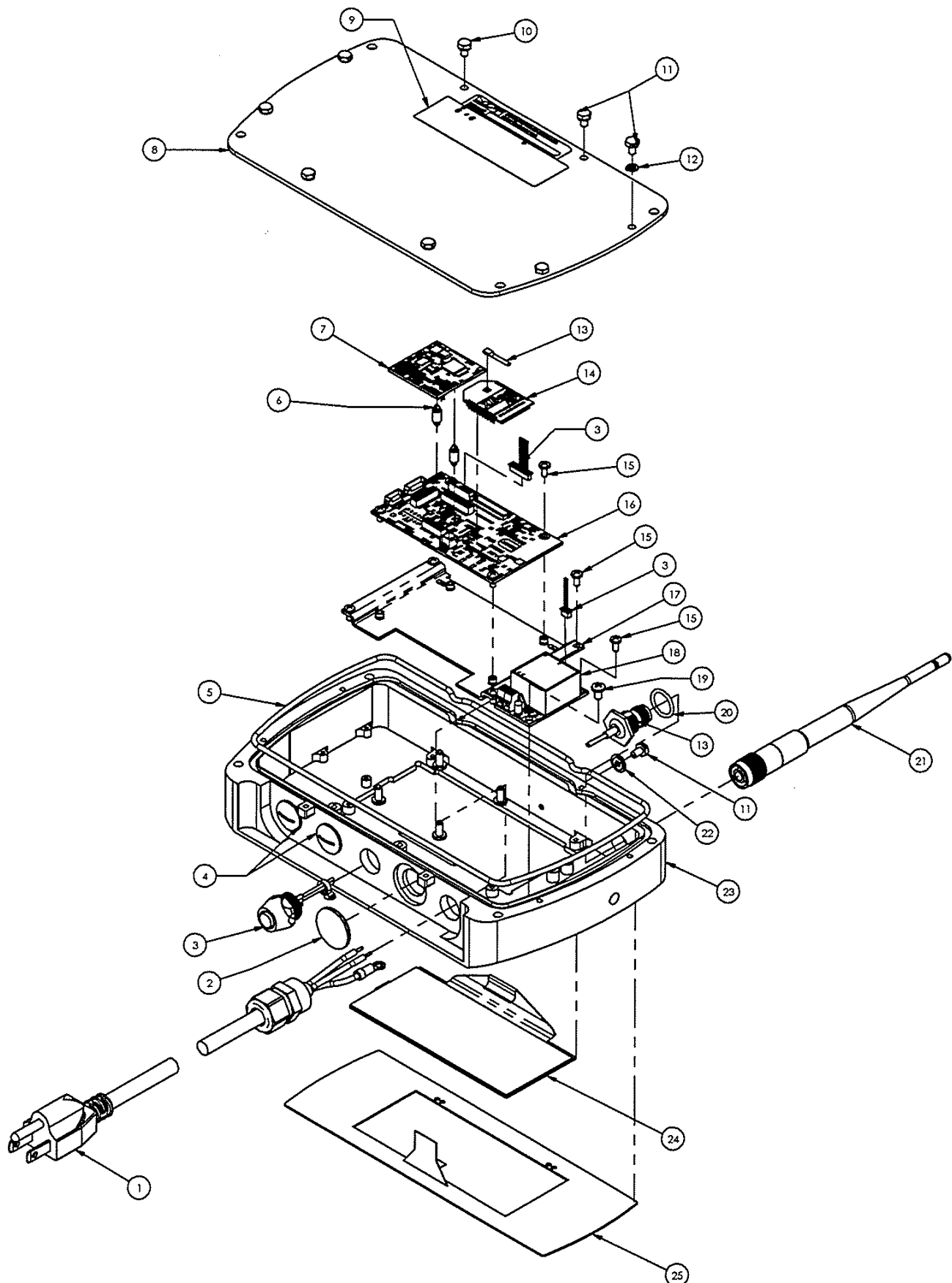
Final Assembly Remote Display



## Part Number/Price

Item #	Part #	Description	Price
1	160518	Power cord AC in	\$41.00
2	154863	Plug diameter 0.900 with adhesive	\$16.00
3	161591	Cable assembly serial M12	\$73.00
4	143746	Plug domed PG9 IP65	\$13.00
5	153110	O-ring 7-1/4 x .103	\$5.00
6	144929	Spacer miniature dual	\$6.00
7	153428	PCA ScaleCore3 no a/d	\$265.00
8	152034	Cover fixed mount	\$47.00
9	159855	Overlay TranSend FCC	\$5.00
10	146022	Bolt hex head 6-32 x 1/4 cap stainless steel	\$3.00
11	143271	Screw mach hex head	\$7.00
12	146538	Washer split lock stainless steel #6	\$2.00
13	152051	Cable assembly RF coax	\$30.00
14	144773	Radio module Xbee-pro	\$120.00
15	128088	Screw 4-40 x 1/4 pan head Phillips	\$0.50
16	151918	PCA 6-digit LCD	\$225.00
17	152046	Bracket electronics	\$70.00
18	151599	PCA, AC power supply 5 V 5 W	\$190.00
19	146601	Screw pan head 6-32 x 1/4 Phillips	\$0.75
20	153793	O-ring 1/2 id x .070	\$2.00
21	143283	Antenna 2.4 GHz	\$61.00
22	143272	Washer seal #6 steel	\$3.00
23	151492	Enclosure fixed meter	\$210.00
24	151575	LCD display 6-digit	\$36.00
25	149409	Label descriptive switch	\$95.00

REPLACEMENT PARTS



REPLACEMENT PARTS

# MSI-8004HD

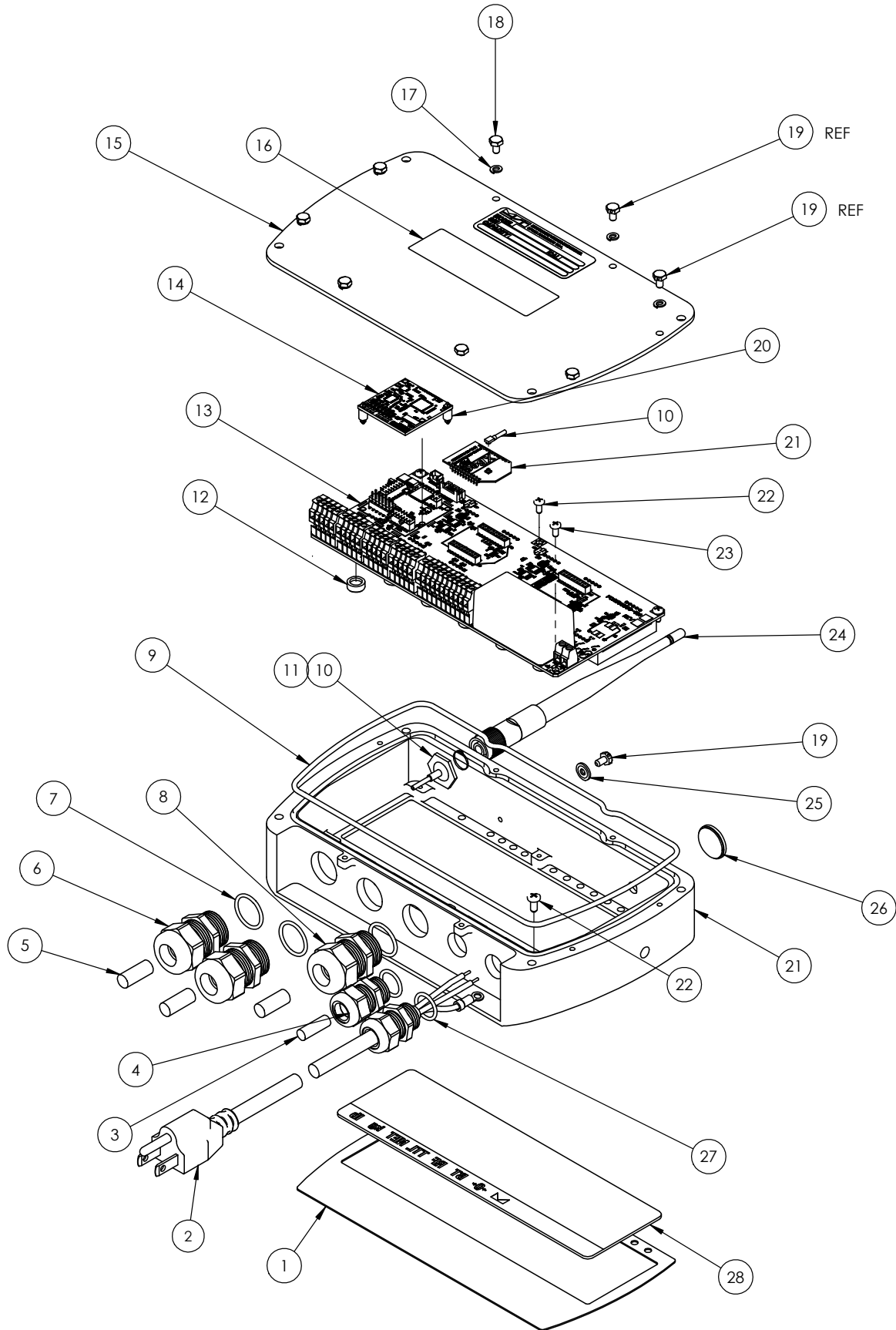
Indicator AC



## Part Number/Price

Item #	Part #	Description	Price
1	178180	Overlay, standard	\$40.00
2	160518	Power cord AC in	\$41.00
3	141991	Pin round acetal 0.25 in diameter	\$0.75
4	141593	Conn feed through liquid	\$7.00
5	142554	Pin round acetal 0.312 in diameter	\$0.75
6	177368	Conn, feed through, liquid	\$5.00
7	177366	O-ring, PG13, Buna-N	\$2.00
8	177364	Conn feed through	\$5.00
9	153110	O-ring 7-1/4 x .103	\$5.00
10	152051	Cable assembly RF coax	\$30.00
11	153793	O-ring 1/2 Id x .070	\$2.00
12	177362	Key cap, SMS switches	\$2.00
13	176192	PCA 8004 indicator green/red	\$880.00
14	153431	PCA ScaleCore3 4-channel	\$265.00
15	152034	Cover fixed mount 8000	\$47.00
16	159855	Overlay TranSend FCC	\$5.00
17	146538	Washer split lock stainless steel #6	\$2.00
18	146022	Bolt hex head 6-32 x 1/4 cap stainless steel	\$3.00
19	143271	Screw mach hex head	\$7.00
20	144929	Spacer miniature dual	\$6.00
21	144773	Radio module Xbee-pro	\$120.00
22	144537	Screw LKG PCH pan head 6-32	\$0.75
	142233	Screw, pan head, locking, 4-40 x 3/16, Phillips, stainless steel	\$2.00
23	146543	Screw pan head 4-40 x 1/4 nylon	\$0.75
24	143283	Antenna 2.4 GHz	\$61.00
25	143272	Washer seal #6 steel	\$3.00
26	158438	Plug diameter 0.750 in with adhesive	\$13.00
27	177363	O-ring, PG9, Buna-N	\$0.75
28	177579	LED filter med grey	\$29.00

REPLACEMENT PARTS



# MSI-8004HD

Optional Kit Tilt Stand

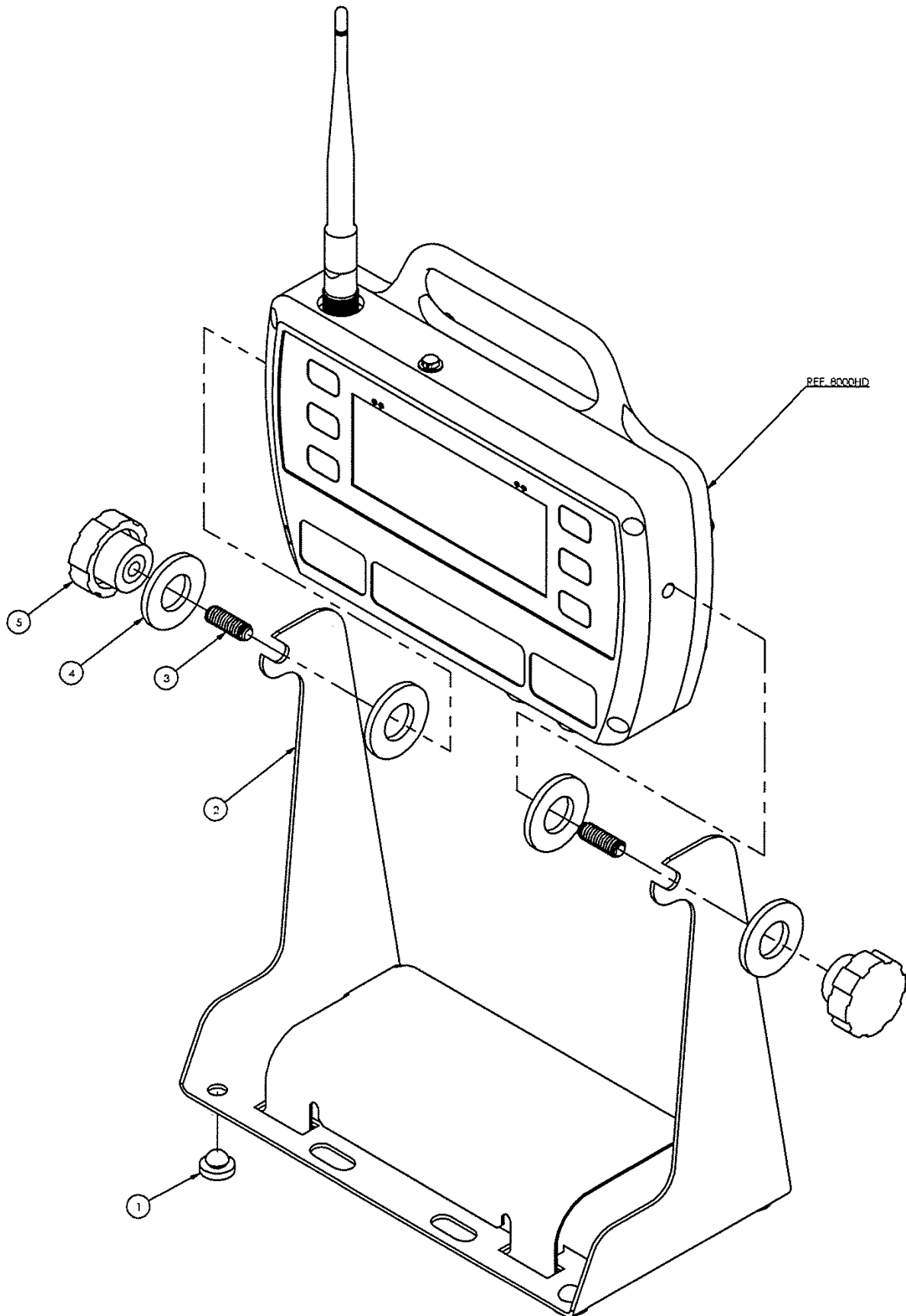


### Part Number/Price

Item #	Part #	Description	Price
1	143224	Bumper molded sbr .078	\$1.00
2	155172	Tilt stand 8000HD	\$53.00
3	155192	Screw set 5/16-18 × 7/8	\$0.50
4	146200	Washer flat nylon .315 ID	\$2.00
5	143879	Knob fluted 5/16-18	\$13.00

REPLACEMENT PARTS





# MSI-7000HD

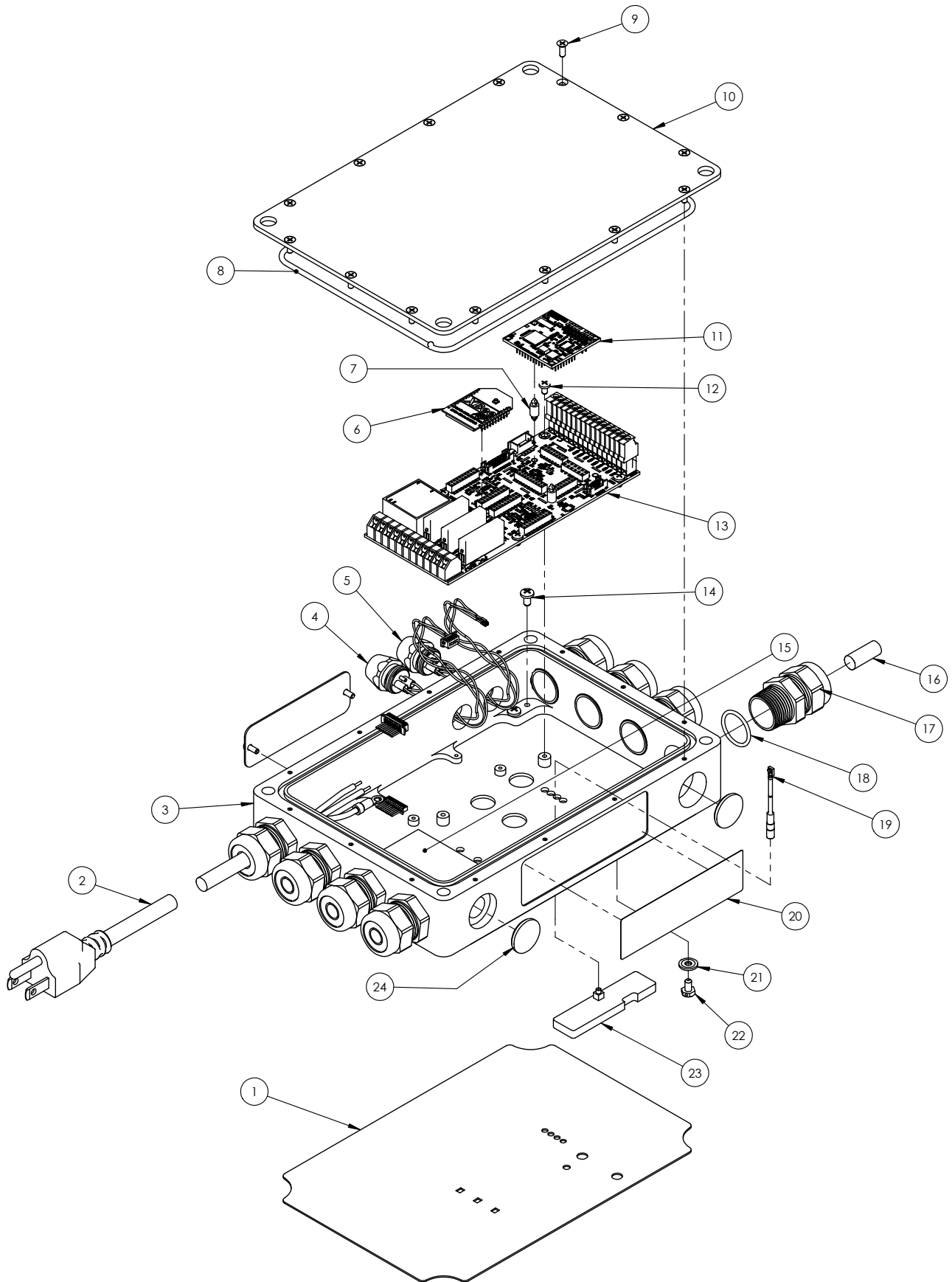
4 CH 85-265 VAC



## Part Number/Price

Item #	Part #	Description	Price
1	178160	Overlay	\$37.00
2	179558	Power cord AC in	\$28.00
3	178022	Enclosure	\$380.00
4	178557	Cable assembly serial comm	\$225.00
5	178491	Cable assembly serial comm	\$48.00
6	144773	Radio module Xbee-pro	\$120.00
7	144929	Spacer miniature dual	\$6.00
8	174106	O-ring	\$2.00
9	146553	Screw pan head 4-40 × 5/16 Phillips	\$0.75
10	178172	Cover standard	\$95.00
11	153431	PCA ScaleCore3 4-channel	\$265.00
12	142233	Screw, pan head, locking, 4-40 × 3/16, Phillips, stainless steel	\$2.00
13	175315	PCA dual modem, ac	\$300.00
14	144537	Screw lkg pch pan head 6-32	\$0.75
15	174214	Insulator AC and relays	\$7.50
16	142554	Pin round acetal 0.312 diameter	\$0.75
17	142229	Conn feed through liquid	\$9.00
18	181774	O-ring AS568-018 neoprene	\$0.75
19	139450	RF cable assembly MMCX str	\$24.00
20	159855	Overlay TranSend FCC	\$5.00
21	143272	Washer seal #6 steel	\$3.00
22	143271	Screw mach hex head	\$7.00
23	143454	Antenna 2.4 GHz patch	\$105.00
24	158438	Plug diameter 0.750 with adhesive	\$13.00

REPLACEMENT PARTS



# MSI-7001HD

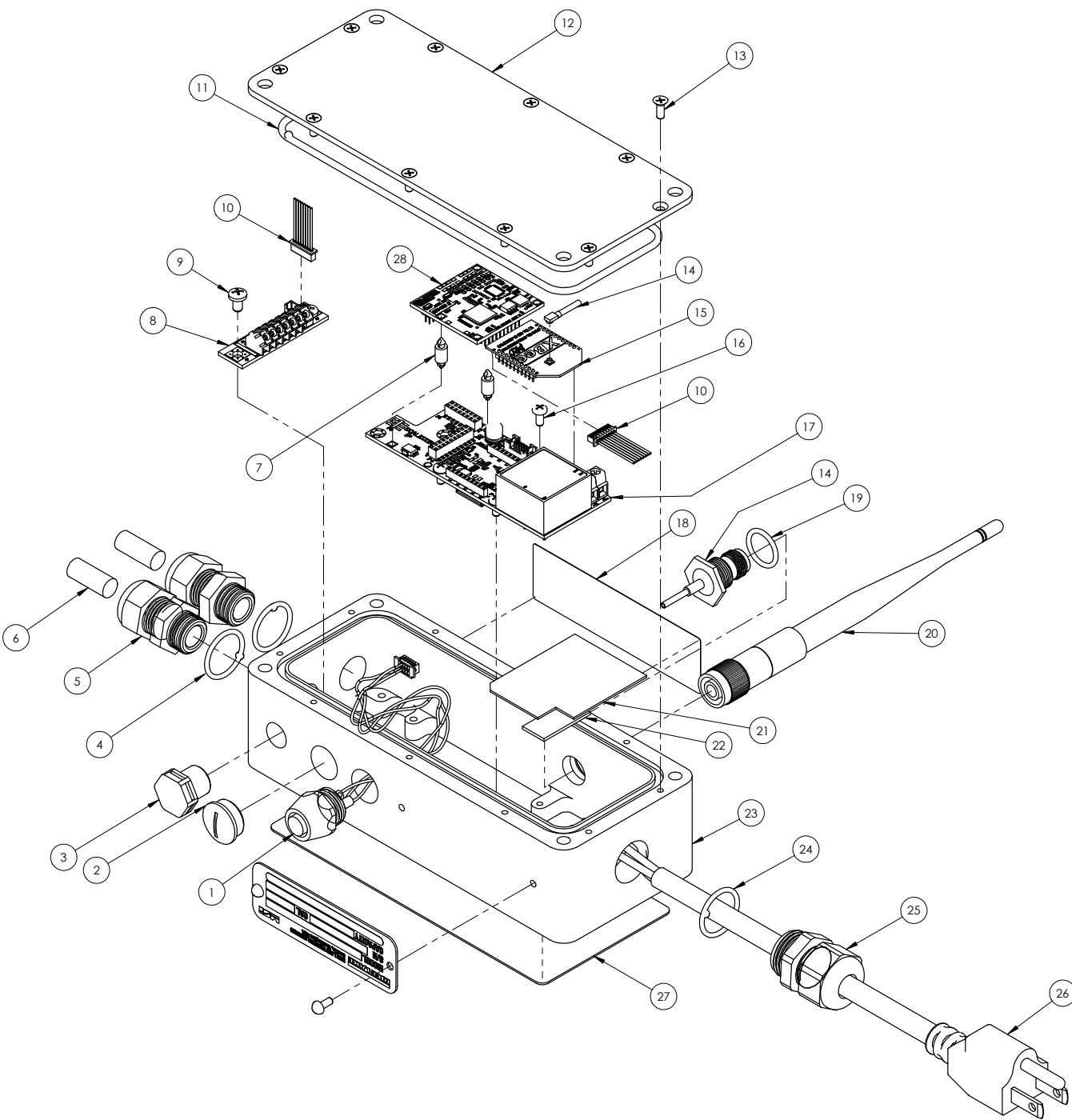
2 CH 85-265 VAC



## Part Number/Price

Item #	Part #	Description	Price
1	178557	Cable assembly serial comm	\$225.00
2	143746	Plug domed PG9 IP65	\$13.00
3	88733	Vent, breather sealed	\$22.00
4	177363	O-ring, PG9, Buna-N, 8004	\$0.75
5	141593	Conn feed through liquid	\$7.00
6	142554	Pin round acetal 0.312 diameter	\$0.75
7	144929	Spacer miniature dual	\$6.00
8	179595	PCA 7001HD LC term blk	\$235.00
9	146601	Screw pan head 6-32 x 1/4 Phillips	\$0.75
10	182635	Cable assembly int load cell	\$35.00
11	181832	O-ring	\$1.00
12	179213	Enclosure cover	\$28.00
13	146553	Screw flat head 4-40 x 5/16 Phillips	\$0.75
14	152051	Cable assembly RF coax	\$30.00
15	144773	Radio module Xbee-pro	\$120.00
16	128088	Screw 4-40 x 1/4 pan head Phillips	\$0.50
17	176036	PCA 7001A, AC power supply	\$275.00
18	159855	Overlay TranSend FCC	\$5.00
19	153793	O-ring 1/2 ID x .070	\$2.00
20	143283	Antenna 2.4 GHz	\$61.00
21	181880	Insulator AC	\$2.25
22	148591	Adhesive pad	\$2.25
23	178490	Enclosure	\$130.00
24	146251	O-ring 70 durometer	\$2.00
25	142885	Conn feed through liquid	\$7.00
26	179558	Power cord AC in	\$28.00
27	179390	Overlay	\$21.00
28	153430	PCA ScaleCore3 2-channel	\$200.00

REPLACEMENT PARTS



REPLACEMENT PARTS

# MSI-9750A

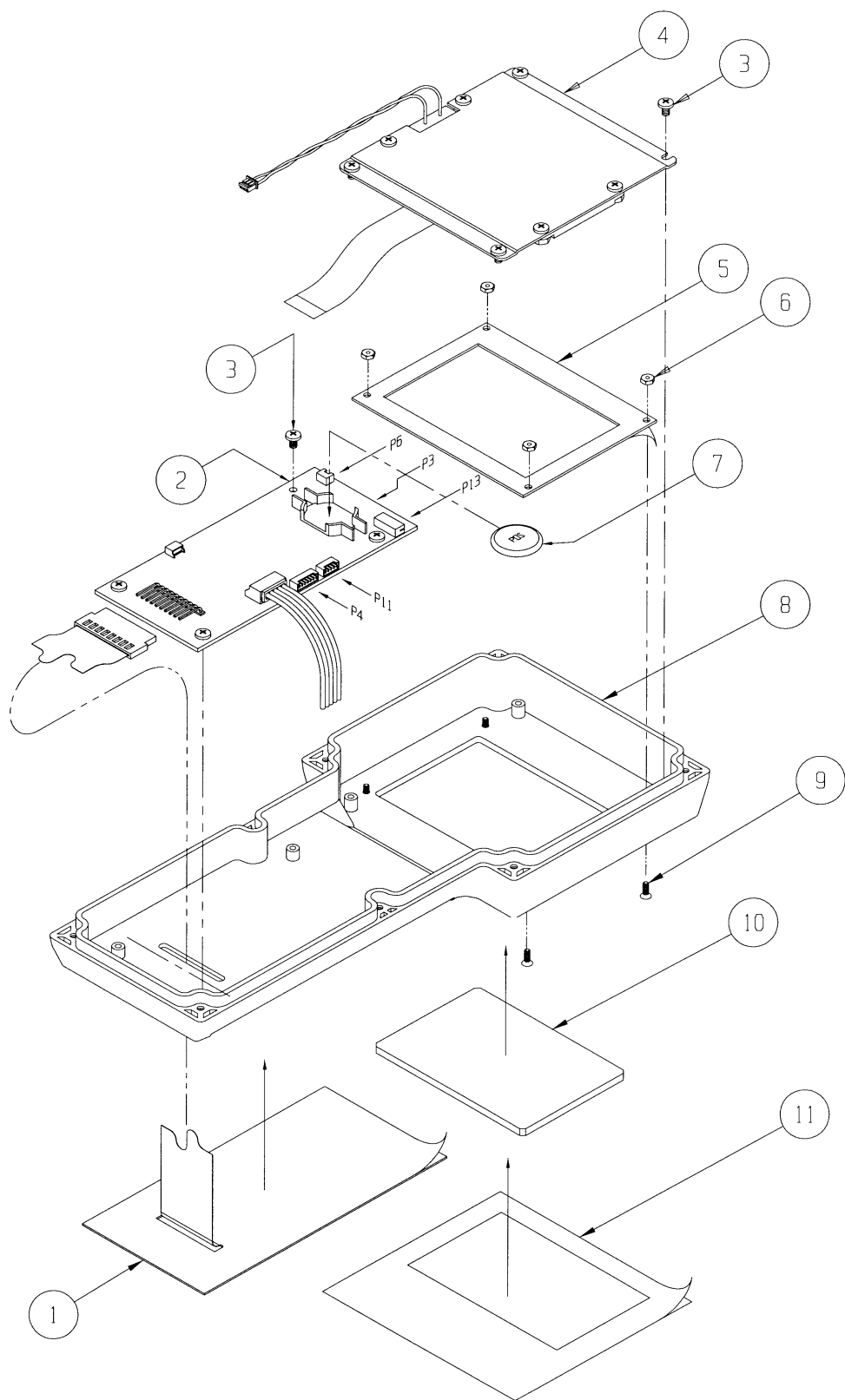
Front Assembly



## Part Number/Price

Item #	Part #	Description	Price
1	148847	Keypad	\$235.00
2	148889	PCA, controller	\$705.00
3	143842	Screw, pan head 4-24 × 3/16, Phillips, stainless steel	\$0.75
4	138115	PCA, display assembly	\$190.00
5	148923	Bracket, window	\$45.00
6	146541	Nut, hex, 2-56, stainless steel	\$0.75
7	71408	Battery, lithium coin cell	\$6.00
8	148950	Enclosure	\$180.00
9	146547	Screw, pan head, 2-56 × 1/4 Phillips, stainless steel	\$0.75
10	148922	Window	\$16.00
11	148951	Label, display	\$61.00

REPLACEMENT PARTS



# MSI-9750A

Back Assembly

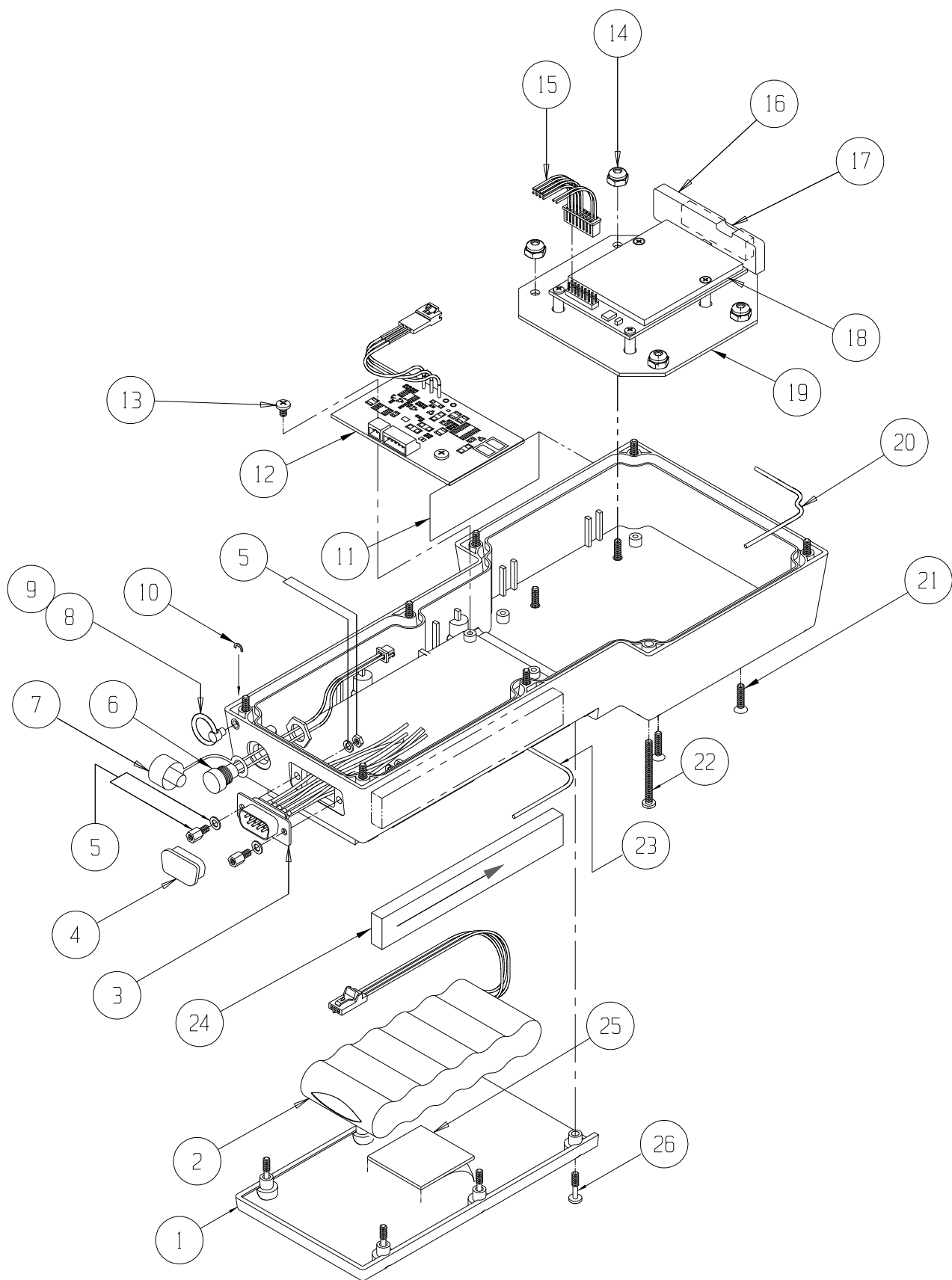


## Part Number/Price

Item #	Part #	Description	Price
1	148950	Enclosure	\$180.00
2	143709	Battery assembly 7.2 volt	\$150.00
3	149079	Cabel assembly, RS232	\$120.00
4	143787	Dust cover	\$4.00
5	143751	Screwlock assembly female 4-40	\$4.00
6	148949	Cable assembly, power jack	\$45.00
7	144095	Cover power jack	\$15.00
8	148953	Lanyard pin 1/8 in	\$22.00
9	144096	Split ring .6	\$2.00
10	144097	E-clip .125	\$2.00
11	148637	Tag, serial	\$3.35
12	148955	PCA, battery charger	\$225.00
13	143842	Screw, pan head, 4-24 × 3/16, Phillips, stainless steel	\$0.75
14	146627	Nut, hex, #6, nyloc	\$0.75
15	138489	Cable assembly, 2450 modem to CPU	\$88.00
16	143454	Antenna housing with straight MMCX connector	\$105.00
17	148799	Pad, poron 1.5 × .375 × .188	\$2.35
18	144158	2450 modem, RF, 2.4 GHz	\$645.00
19	149112	Mounting bracket, 2450 modem	\$44.00
20	143843	Gasket, enclosure	\$16.00
21	146577	Screw, flat head, 6-32 × 1/2, Phillips, stainless steel black	\$0.75
22	143881	Screw, pan head, 4-40 × 1.38, Phillips, stainless steel	\$2.00
23	143844	Gasket, battery	\$16.00
24	148859	Pad poron 4.25 × .63 × .25	\$2.35
25	148837	Pad poron 1.25 × 1.25 × .60	\$2.35
26	143882	Screw, pan head, 4-40 × .50 Phillips, stainless steel	\$2.00

REPLACEMENT PARTS





REPLACEMENT PARTS

# MSI-9850

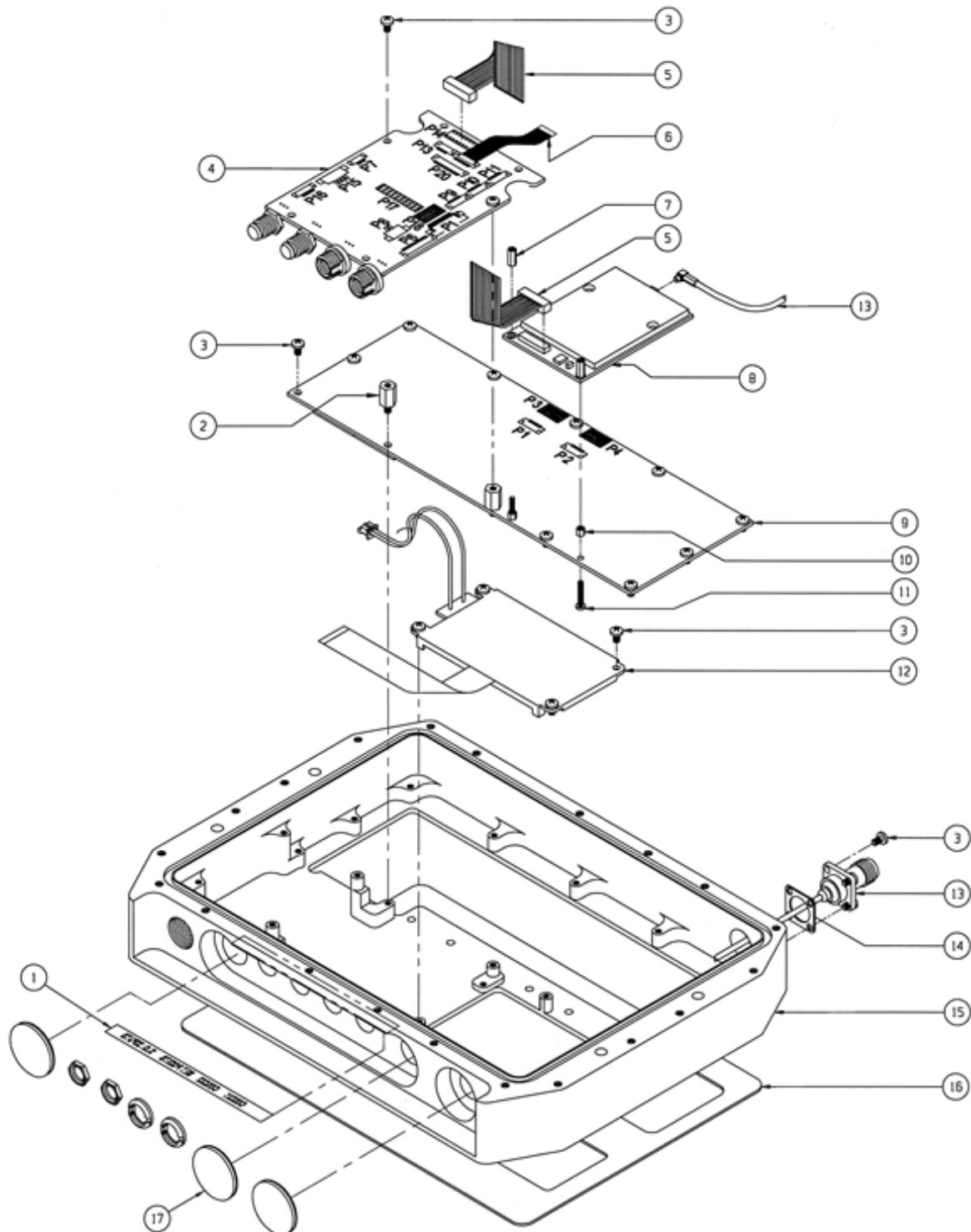
Meter Assembly



## Part Number/Price

Item #	Part #	Description	Price
1	149148	Label, connector, 9850 description	\$18.00
2	143305	Standoff, hex, 3/8 LG, stainless steel	\$5.00
3	128088	Screw, pan head, 4-40 × 1/4, Phillips, stainless steel	\$0.50
4	138291	PCA, ARM microcontroller, 9850 pico mount	\$1,290.00
5	144224	Cable, IDC plug	\$25.00
6	143227	Cable, flat flex	\$19.00
7	144376	Standoff, hex, 2-56 × 1/8 × .312 LG, steel	\$4.00
8	144158	2450 modem, RF, 2.4 GHz	\$645.00
9	148971	PCA, display, LED	\$525.00
10	144375	Standoff, hex, 2-56 × 1/8 × .125 LG, steel	\$4.00
11	146591	Screw, pan head, 2-56 × 3/8, stainless steel	\$0.75
12	138333	Assembly, display, LCD	\$160.00
13	149080	Cable assembly, antenna	\$120.00
14	143336	Gasket, flange mtg, .689 SQ	\$10.50
15	149045	Enclosure	\$895.00
16	149056	Label, keypad	\$265.00
17	149094	Plug, 1.00 × .063, with adhesive	\$5.00
—	Consult	Cover, enclosure	\$55.00
—	Consult	Assembly, O-ring	\$6.85

REPLACEMENT PARTS



# MSI-9850

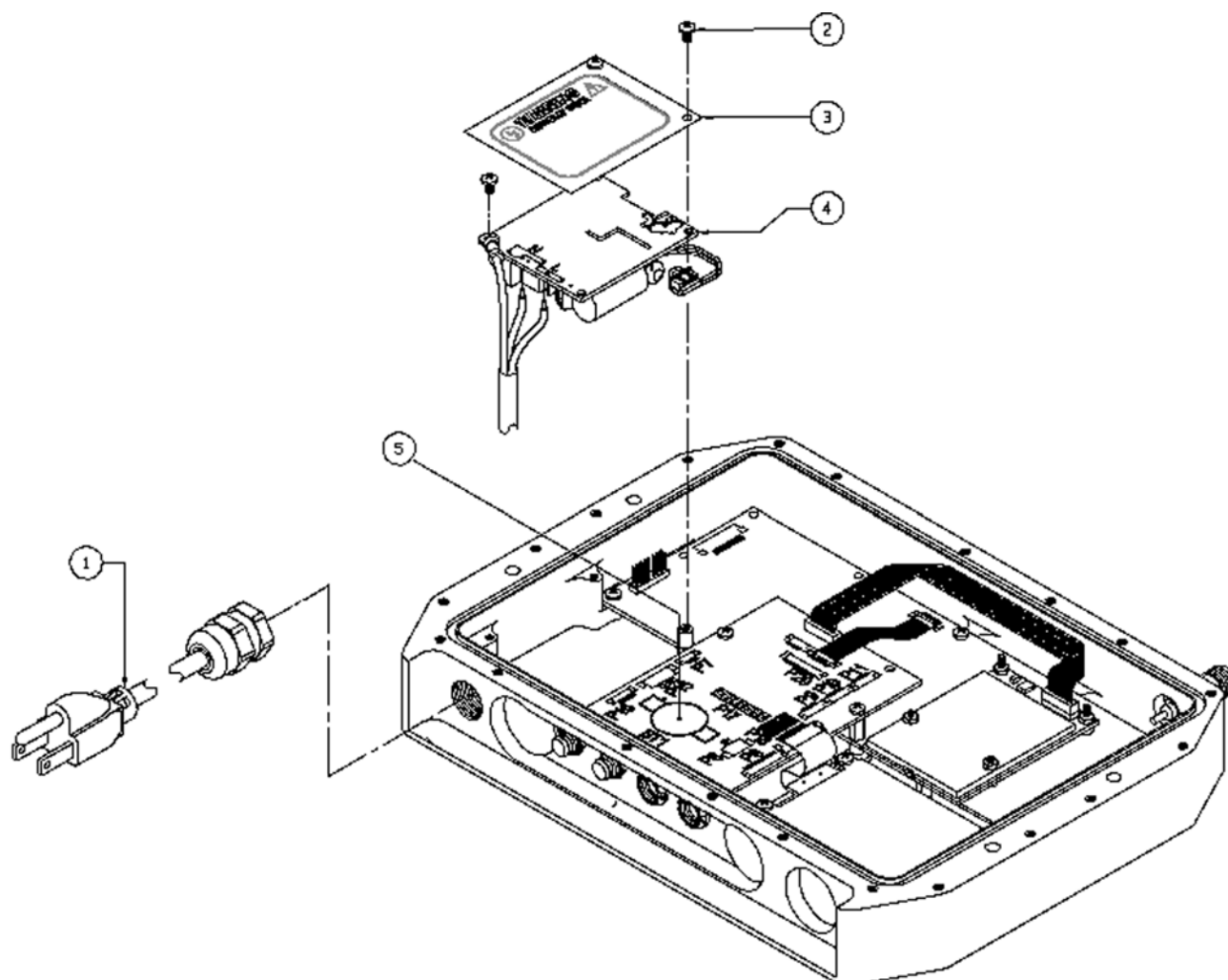
Power Assembly



## Part Number/Price

Item #	Part #	Description	Price
1	138331	Assembly, AC power cord	\$76.00
2	144536	Screw, pan head, 4-40 × 1/4, Phillips, stainless steel	\$0.75
3	138334	Label, warning	\$10.00
4	138332	Power supply, 85-265 VAC	\$225.00
5	71408	Battery, lithium	\$6.00

REPLACEMENT PARTS



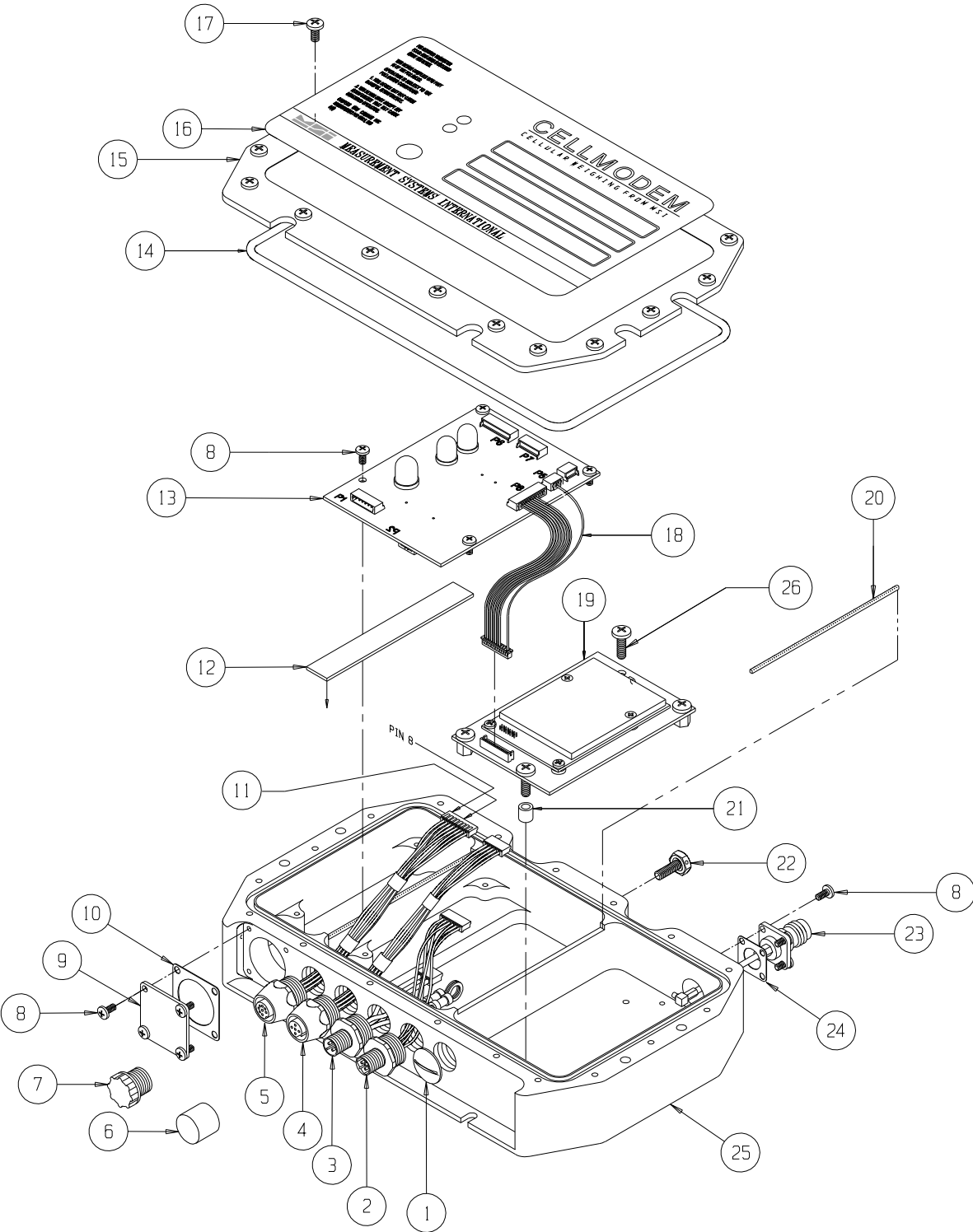
# MSI-9020 CellScale



## Part Number/Price

Item #	Part #	Description	Price
1	143746	Closure cap, connector	\$13.00
2	148988	Connector assembly, power & switch input	\$68.00
3	148811	Connector assembly, power input	\$120.00
4	149000	Connector assembly, RS422	\$99.00
5	137503	Connector assembly, RS232	\$160.00
6	143353	Closure cap, connector, female	\$2.00
7	143352	Closure cap, connector, male	\$3.00
8	144536	Screw, pan head, 4-40 × 1/4, Phillips, stainless steel	\$0.75
9	148630	Plate, cover	\$65.00
10	142500	Gasket	\$7.00
11	143696	Connector, housing	\$0.75
12	143309	Pad, thermal, conductive, 3.6 × .5 x .1	\$16.00
13	137528	PCA, power supply, AC	\$1,200.00
14	148488	O-Ring assembly	\$13.00
15	148566	Cover, enclosure	\$225.00
16	148794	Label, descriptive	\$160.00
17	142197	Screw, pan head, 6-32 × 5/16, Phillips, stainless steel	\$2.00
18	149125	Cable assembly, power supply to 2450 adapter	\$88.00
19	138306	PCA, with 2450 modem assembly	\$645.00
20	143307	Gasket, foam filled mesh, EMI	\$4.00
21	144227	Spacer, #6, 1/4	\$3.00
22	142591	Screw, seal, 8-32 × .4375, stainless steel	\$23.00
23	148680	Cable assembly, antenna	\$93.00
24	143336	Gasket, flange	\$10.50
25	148683	Enclosure	\$795.00
26	146605	Screw, pan head, 6-32 × 1/2, Phillips, stainless steel	\$0.75

REPLACEMENT PARTS



REPLACEMENT PARTS

# MSI-9000 CellScale



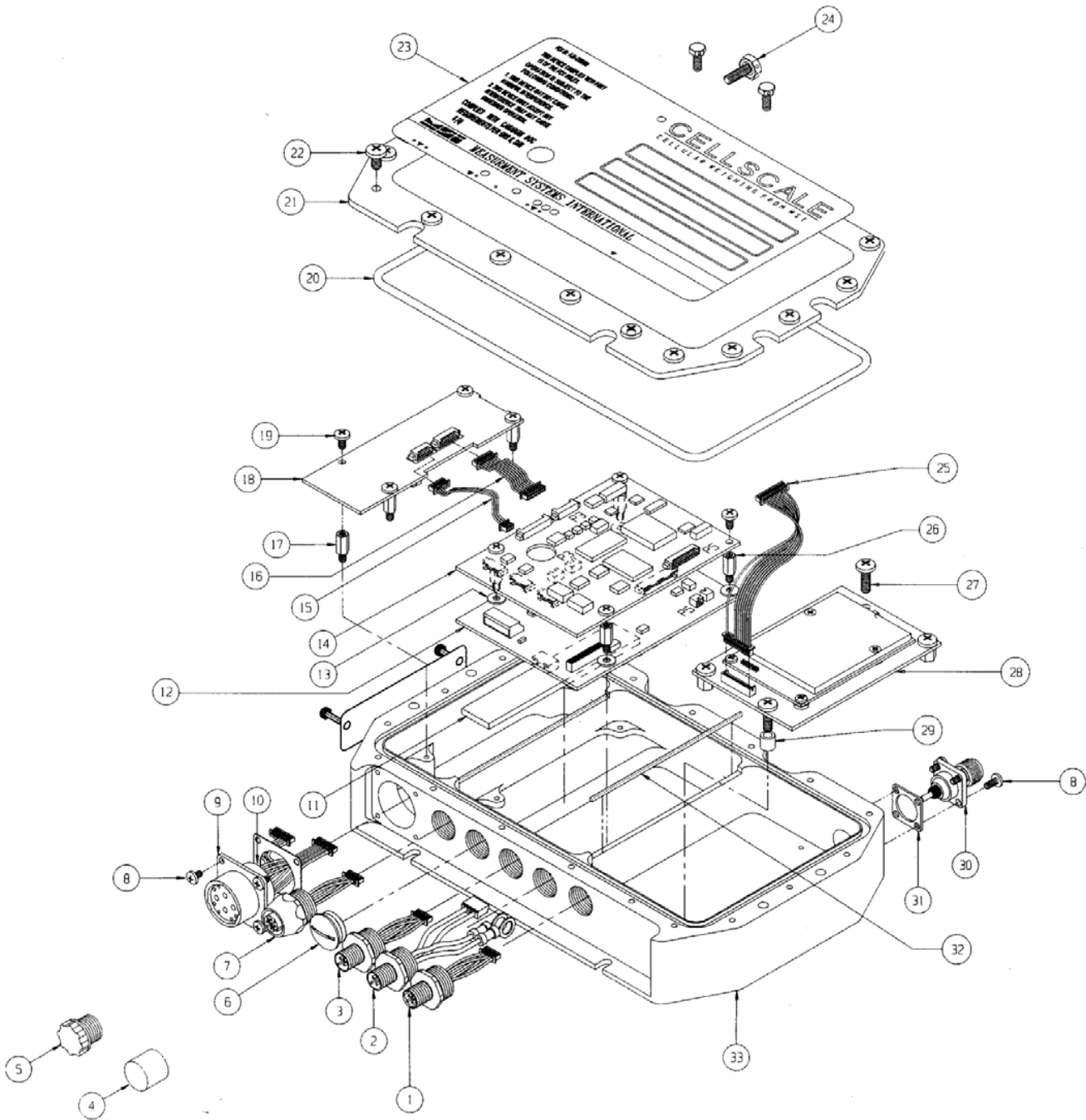
Part Number/Price

Item #	Part #	Description	Price
1	148989	Connector assembly, power & switch input	\$92.00
2	148811	Cable assembly, power input	\$120.00
3	148583	Connector assembly, serial I/O interface, male	\$130.00
4	143353	Closure cap, connector, female	\$2.00
5	143352	Closure cap, connector, male	\$3.00
6	143746	Plug, domed PG9	\$13.00
7	148584	Connector assembly, serial I/O interface, female	\$99.00
8	144536	Screw, pan head, 4-40 × 1/4, Phillips, stainless steel	\$0.75
9	148580	Connector assembly, L/C input	\$190.00
10	142500	Gasket flange, 1.125 square	\$7.00
11	143309	Pad, 3.6 × 0.5 × 0.1	\$16.00
12	137534	AC power supply PCA	\$705.00
13	143384	Washer, flat #4	\$2.00
14	148547	Micro-Controller PCA	\$580.00
15	148868	Cable assembly, A/D to power supply	\$25.00
16	148612	Cable assembly, A/D micro-controller	\$25.00
17	142948	Standoff, hex, 3/8 Lg, 4-40 × 0.188, aluminum	\$3.00
18	148548	High resolution PCA, A/D	\$380.00
19	128088	Screw, pan head, 4-40 × 1/4, Phillips, stainless steel	\$0.50
20	148488	O-ring assembly	\$13.00
21	148566	Cover, enclosure	\$225.00
22	142197	Screw, 6-32 × 5/16 machined, stainless steel	\$2.00
23	148934	Label, descriptive	\$61.00
24	142591	Screw, seal, 8-32 × 0.4375, FDA, stainless steel	\$23.00
25	149085	Cable assembly, micro-controller to 2450 modem	\$70.00
26	143306	Standoff, hex, 0.312 Lg, 4-40 × 0.188, aluminum	\$3.00
27	146605	Screw, pan head, 6-32 × 1/2, Phillips, stainless steel	\$0.75
28	138304	PCA with 2450 modem	\$645.00
29	144227	Spacer, round, 1/4 diameter aluminum, #6 CL × 1/4 LG	\$3.00
30	148680	Cable assembly, antenna	\$93.00
31	143336	Gasket flange, 0.689 square	\$10.50
32	143307	Gasket, foam filled mesh, EMI	\$4.00
33	148683	Enclosure, CellScale	\$795.00

REPLACEMENT PARTS



# MSI-9000 CellScale



REPLACEMENT PARTS

# MSI-9002 CellScale

Breakout / Summing Box



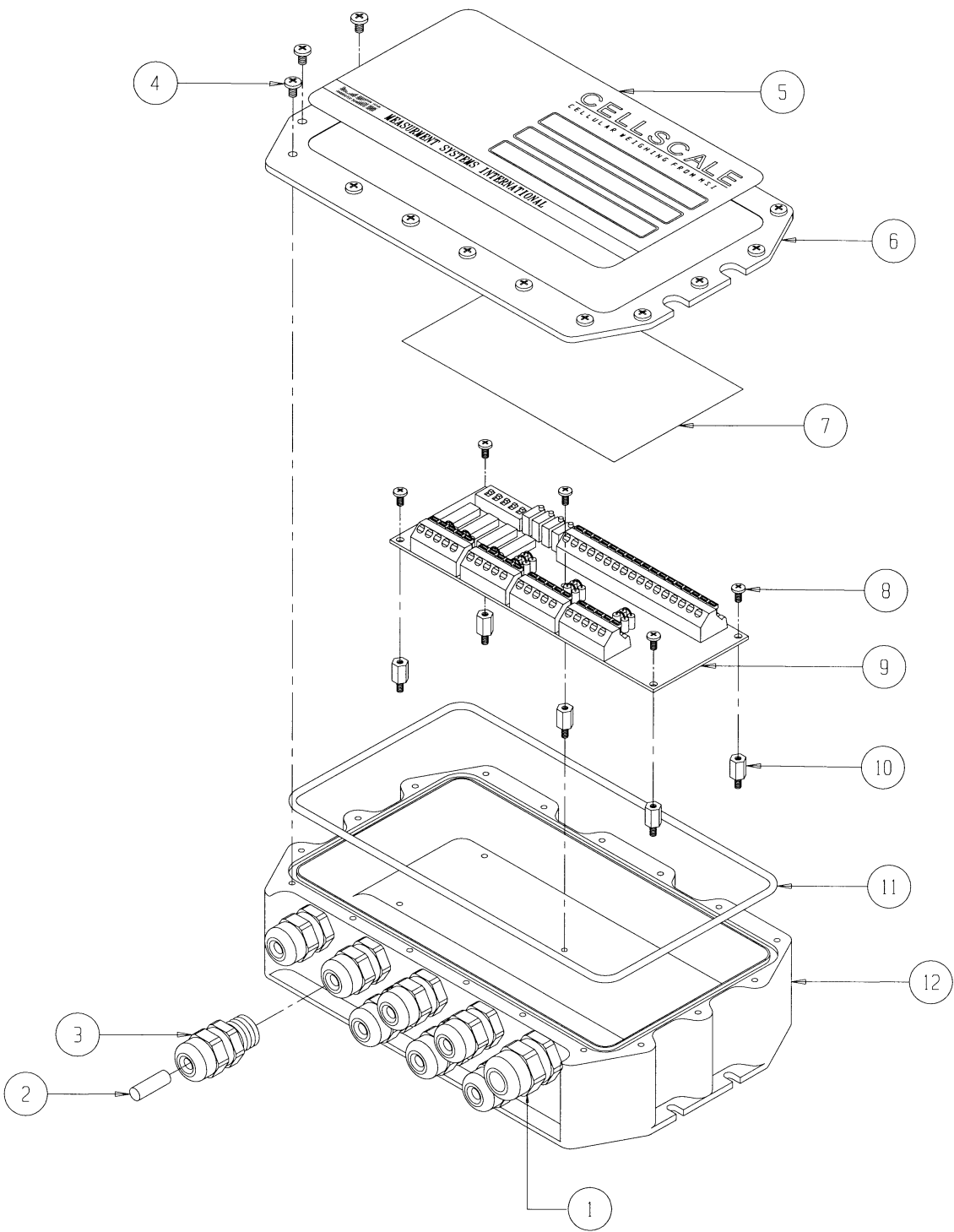
## Part Number/Price

Item #	Part #	Description	Price
1	143636	Cord grip, PG11	\$8.00
2	141991	Pin, acetal, 1/4 diameter × 3/4	\$0.75
3	141593	Cord grip, PG9	\$7.00
4	146601	Screw, pan head, 6-32 × 1/4, Phillips, stainless steel	\$0.75
5	148758	Label, descriptive	\$49.00
6	148759	Cover, enclosure	Consult
7	137542	Label, wiring detail	\$7.00
8	128088	Screw, pan head, 4-40 × 1/4, Phillips, stainless steel	\$0.50
9	137091	PCA assembly	\$465.00
10	143305	Standoff, hex, 3/8 Lg, 4-40 × 0.188, stainless steel	\$5.00
11	148488	O-ring assembly	\$13.00
12	148625	Enclosure, breakout / summing box	\$525.00

REPLACEMENT PARTS

# MSI-9002 CellScale

Breakout / Summing Box



REPLACEMENT PARTS

# MSI-6000 Check-Weigh

Head Assembly



## Part Number/Price

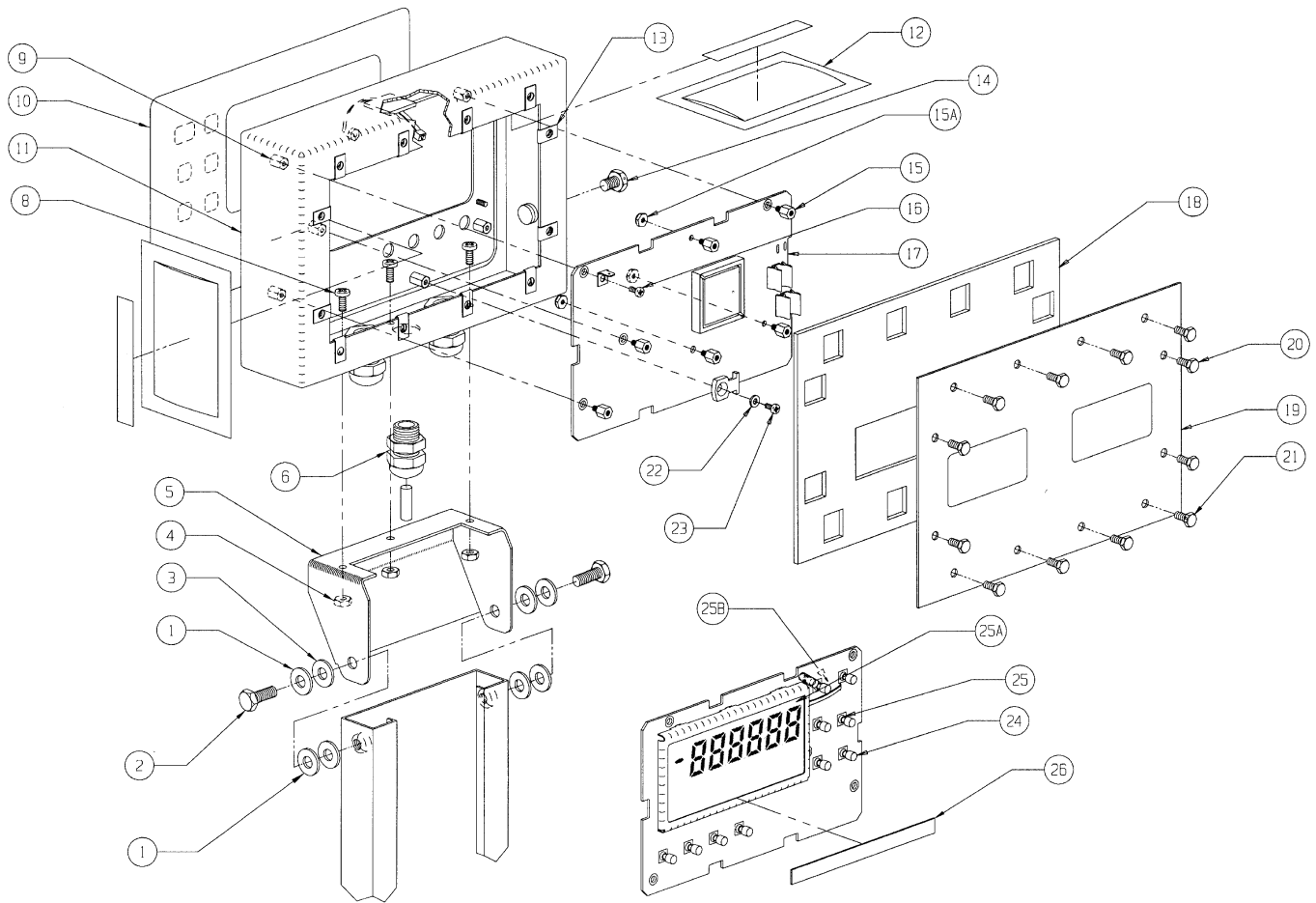
Item #	Part #	Description	Price
1	146532	Washer, flat, 1/4, stainless steel	\$0.75
2	21948	Bolt, hex head, 1/4-20 × 5/8, stainless steel	\$2.90
3	142167	Washer, nylon, .260 × .687 × .060	\$0.75
4	65784	Nut, hex, 8-32, stainless steel	\$0.25
5	148224	Bracket, mounting	\$130.00
6	141593	Connector, feed through, with nut	\$7.00
8	142082	Screw, seal, pan head, 8-32 × 3/8, Phillips, stainless steel	\$11.00
9	142989	Standoff, hex, 4-40 × 3/8, aluminum	\$4.00
10	148560	Label	\$130.00
11	134647	Head	\$630.00
12	141708	Desiccant	\$1.00
13	142104	U-Nut, 8-32	\$2.00
14	142209	Screw, seal, hex head, 1/4-20 × 3/8, stainless steel	\$13.00
15	142989	Standoff, hex 1/4 stainless steel	\$4.00
15A	146635	Nut hex, 4-40, nyloc	\$2.00
16	142233	Screw, pan head, locking, 4-40 × 3/16, Phillips, stainless steel	\$2.00
17	136161	PCB, AC, computer/display	\$1,600.00
17	136160	PCB, DC, computer/display	\$1,600.00
18	148190	Gasket	\$14.00
19	148176	Panel	\$99.00
20	146025	Screw, hex head, 8-32 × 7/16, stainless steel	\$4.00
20A	146241	Washer, seal #8	\$3.00
21	142591	Screw, seal, hex head, 8-32 × 7/16, drilled	\$23.00
22	146201	Washer, flat, .120 × .280, nylon	\$4.00
23	128088	Screw, pan head, 4-40 × 1/4, Phillips, stainless steel	\$0.50
24	142126	Cap, black	\$2.00
25	141739	Switch	\$5.00
25A	147875	LCD liquid crystal	\$93.00
25B	141979	Fuse, 1/4 amp	\$13.00
26	Consult	Label, specify capacity, 1st generations	Consult
26	Consult	Label, specify capacity, current generation	Consult

Due to the large number of possible configurations of this assembly, please contact factory for assistance.

REPLACEMENT PARTS

# MSI-6000 Check-Weigh

## Head Assembly



REPLACEMENT PARTS

# MSI-6000 Check-Weigh

Base Assembly 6 & 12 lb



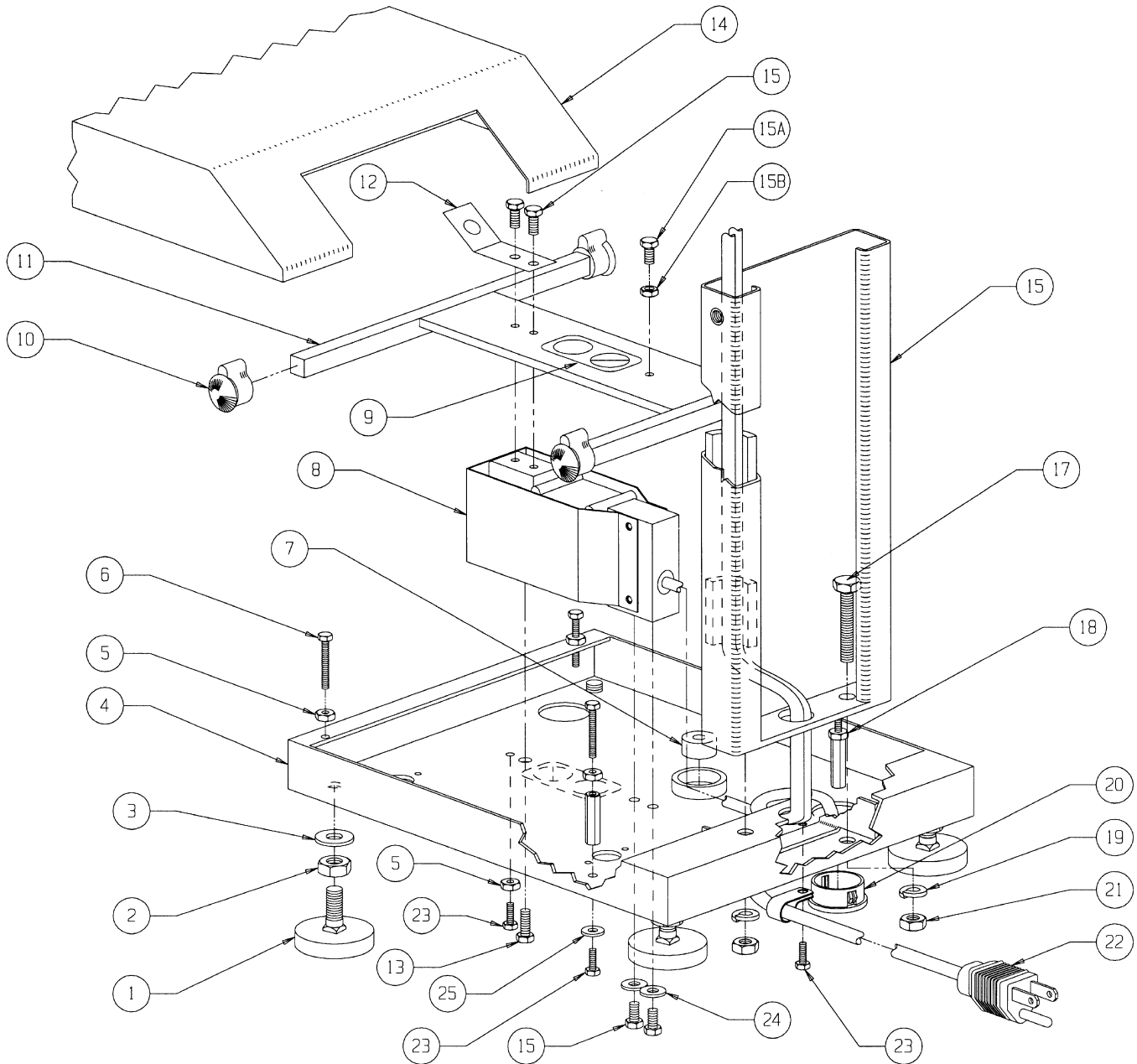
## Part Number/Price

Item #	Part #	Description	Price
1	134969	Foot, support	\$24.00
2	146661	Nut, hex, 5/16-18, stainless steel	\$2.00
3	44237	Washer, flat, 5/16, stainless steel	\$2.00
4	148234	Base	\$370.00
5	65784	Nut, hex, 8-32, stainless steel	\$0.25
6	146027	Bolt, hex head, 8-32 × 1, stainless steel	\$2.00
7	56987	Level, circular	\$9.00
8	134889	Load cell assembly, 6 lb, 350Ω (AC power)	\$1,210.00
8	134891	Load cell assembly, 6 lb, 2000 Ω (DC power)	\$1,210.00
8	134890	Load cell assembly, 12 lb, 350 Ω (AC power)	\$1,210.00
8	134892	Load cell assembly, 12 lb, 2000Ω (DC power)	\$1,210.00
9	148305	Label, warning	\$23.00
10	149781	Bumper	\$16.00
11	148275	Spider	\$255.00
12	149741	Ground strap	\$59.00
13	146030	Bolt, hex head, 10-32 × 1/2, stainless steel	\$2.00
14	148240	Platter	\$255.00
15	146029	Bolt, hex head, 10-32 × 3/8, stainless steel	\$2.00
15A	146028	Screw, hex head, 10-32 × 5/16, stainless steel	\$2.00
15B	81941	Nut, hex head, 10-32, stainless steel	\$0.50
16	148235	Neck	\$150.00
17	106452	Bolt, hex head, 1/4-20 × 1-1/2, stainless steel	Consult
18	141814	Standoff, 1/4 hex, 8-32 × 1, stainless steel	\$7.00
19	15148	Washer, lock, split, 1/4, stainless steel	\$1.00
20	142193	Grommet	\$2.00
21	14642	Nut, hex, 1/4-20, stainless steel	\$1.50
22	148228	Cable, power	\$30.00
23	146023	Bolt, hex head, 8-32 × 3/8, stainless steel	\$0.75
24	15141	Washer, flat, #10, stainless steel	\$1.10
25	146531	Washer, flat, #8, stainless steel	\$0.75

REPLACEMENT PARTS

# MSI-6000 Check-Weigh

Base Assembly 6 & 12 lb



REPLACEMENT PARTS

# MSI-6000 Check-Weigh

Base Assembly 30 to 220 lb



## Part Number/Price

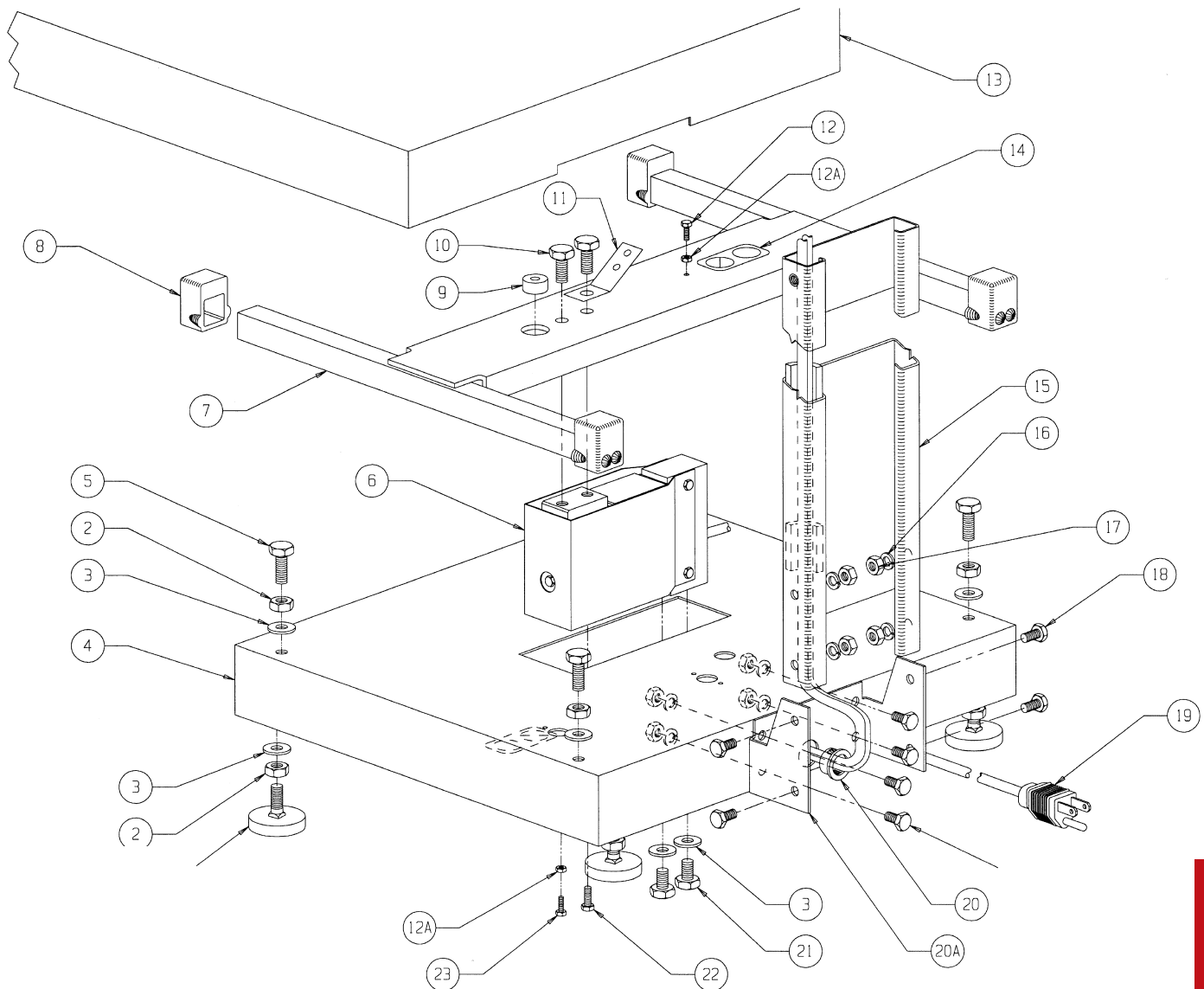
Item #	Part #	Description	Price
1	134969	Foot, support	\$24.00
2	146661	Nut, hex, 5/16-18, stainless steel	\$2.00
3	44237	Washer, flat, 5/16, stainless steel	\$2.00
4	148239	Base	\$645.00
5	26669	Bolt, hex head, 5/16-18 × 3/4, stainless steel	\$2.00
6	134911	Load cell assembly, 30/60 lb, 350Ω (AC power)	\$1,210.00
6	134913	Load cell assembly, 30/60 lb, 2000Ω (DC power)	\$1,210.00
6	134912	Load cell assembly, 120/220 lb, 350Ω (AC power)	\$1,210.00
6	134914	Load cell assembly, 120/220 lb, 2000Ω (DC power)	\$1,210.00
7	148242	Spider	\$435.00
8	148241	Bumper	\$19.00
9	56987	Level, circular	\$9.00
10	146041	Bolt, hex head, 5/16-24 × 5/8, stainless steel	\$2.00
11	149741	Ground strap	\$59.00
12	146025	Bolt, hex head, 8-32 × 1/2, stainless steel	\$4.00
12A	65784	Nut, hex, 8-32, stainless steel	\$0.25
13	148243	Platter	\$255.00
14	148305	Label, warning	\$23.00
15	148210	Neck	\$170.00
16	15148	Washer, lock, split, 1/4, stainless steel	\$1.00
17	14642	Nut, hex, 1/4-20, stainless steel	\$1.50
18	14956	Bolt, hex head, 1/4-20 × 1/2, stainless steel	\$1.50
19	148228	Cable, power	\$30.00
20	142192	Grommet	\$2.00
20A	148201	Bracket neck mounting	\$180.00
21	146040	Bolt, hex head, 5/16-24 × 1/2, stainless steel	\$2.00
22	146030	Bolt, hex head, 10-32 × 1/2, stainless steel	\$2.00
23	146024	Bolt, hex head, 8-32 × 7/16, stainless steel	\$6.00

REPLACEMENT PARTS



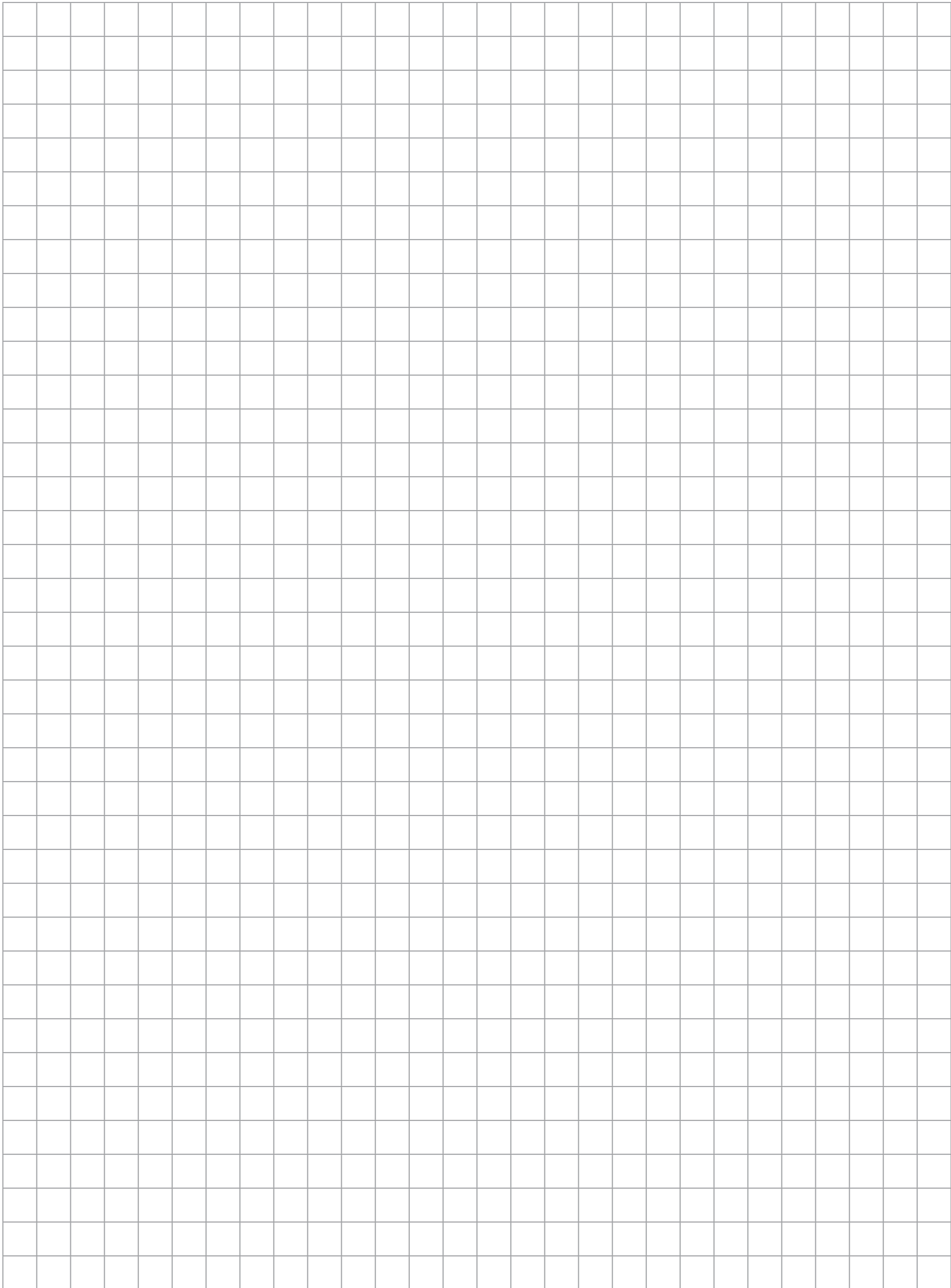
# MSI-6000 Check-Weigh

Base Assembly 30 to 220 lb



REPLACEMENT PARTS

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## This image shows a full page of blank graph paper. The grid consists of small, equal-sized squares formed by thin, light gray lines. There are 20 columns and 20 rows of squares, creating a total of 400 square units. The background is white, and the grid lines extend to the edges of the page without any margins or additional markings.

# Questionnaires

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*Product names, logos, brands, and other trademarks featured or referred to within this publication are the property of their respective trademark holders.*

# System Questionnaire

System/Application Description \_\_\_\_\_

Goals for Weighing System \_\_\_\_\_

Scale Type \_\_\_\_\_

Scale/System Capacity \_\_\_\_\_ ☐ lb ☐ kg ☐ Ton ☐ Metric Ton ☐ Other

# of Load Cells \_\_\_\_\_

Required System Accuracy \_\_\_\_\_ % ☐ of Capacity ☐ of Applied Load

Legal for Trade? ☐ Yes ☐ No

Transmitter Power (at Load Cells) ☐ AC ☐ DC \_\_\_\_\_ Voltage ☐ Battery

Receiver Power ☐ AC ☐ DC \_\_\_\_\_ Voltage ☐ Battery

Check any Desired Output Options (If Applicable):

mV output ☐ Yes ☐ No

Analog output ☐ Yes ☐ No

Relays ☐ Yes ☐ No

Do you require a serial cable? ☐ Yes ☐ 9pin ☐ 25pin ☐ No

Remote Control Required? ☐ Yes ☐ No

Remote Display Required? ☐ Yes ☐ No

If Remote Display is not Required:

Are Zero, Tare, On/Off Capabilities Required? ☐ Yes ☐ No

If Remote Display is Required:

Are Zero, Tare, On/Off Capabilities Required from the Remote Display? ☐ Yes ☐ No

Does the Remote Display need to be Handheld or Mounted? ☐ Handheld ☐ Mounted

Is the Remote Display Wireless or Hardwired? ☐ Wireless ☐ Hardwired

## Note for SendIt Applications:

**Every SendIt needs to be calibrated using a laptop/pc with a serial port (or a USB adapter). The calibration of the SendIt pair must be done during the installation.**

# System Questionnaire

## RF

Transmission Distance \_\_\_\_\_ ☐ ft ☐ m

Line of Sight ☐ Yes ☐ No

Obstructions (list any) \_\_\_\_\_

Potential Sources of RF Interference \_\_\_\_\_

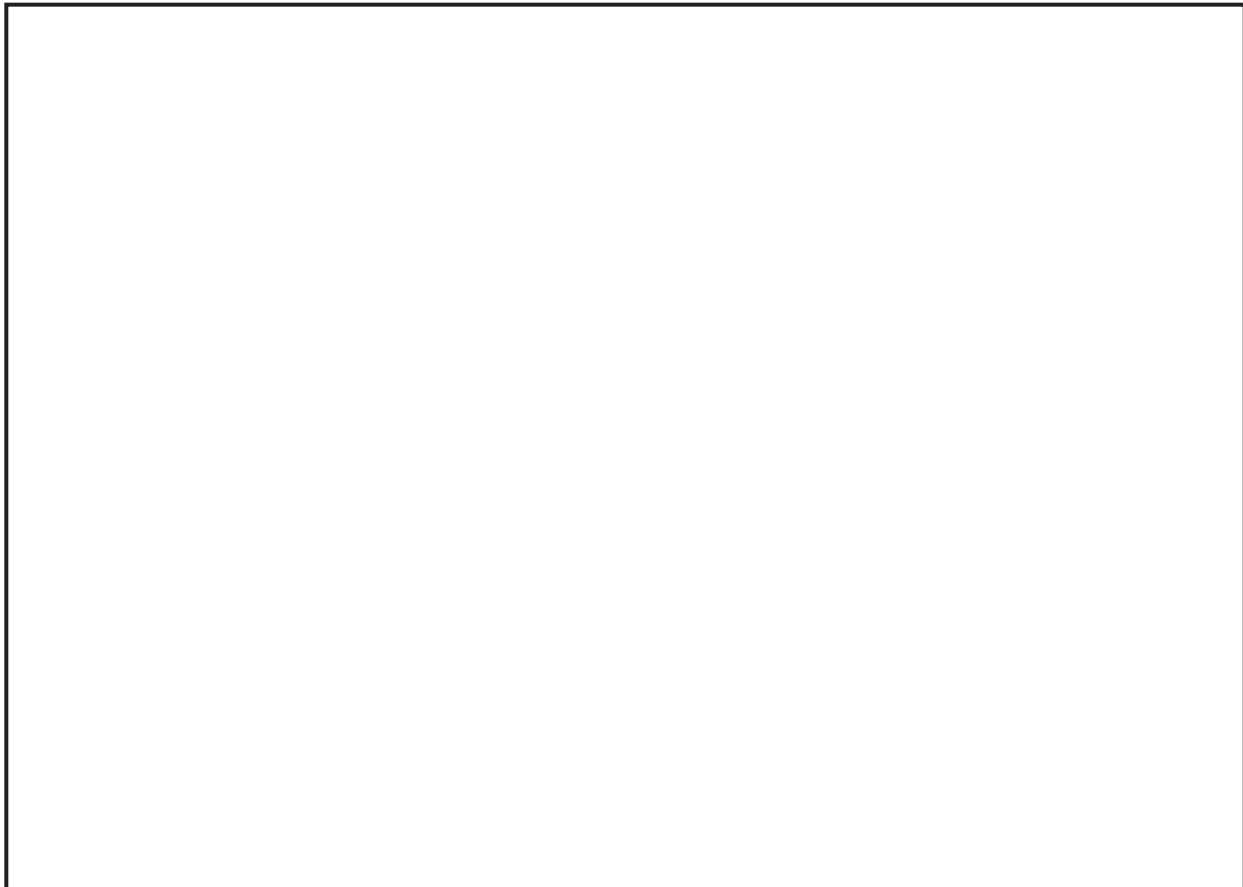
Other RF Systems Present ☐ Yes \_\_\_\_\_ ☐ No

Indoor ☐ Outdoor ☐

### Sketch of RF Field

This sketch will be used by our technicians to help find the optimal antenna types and locations for this application.

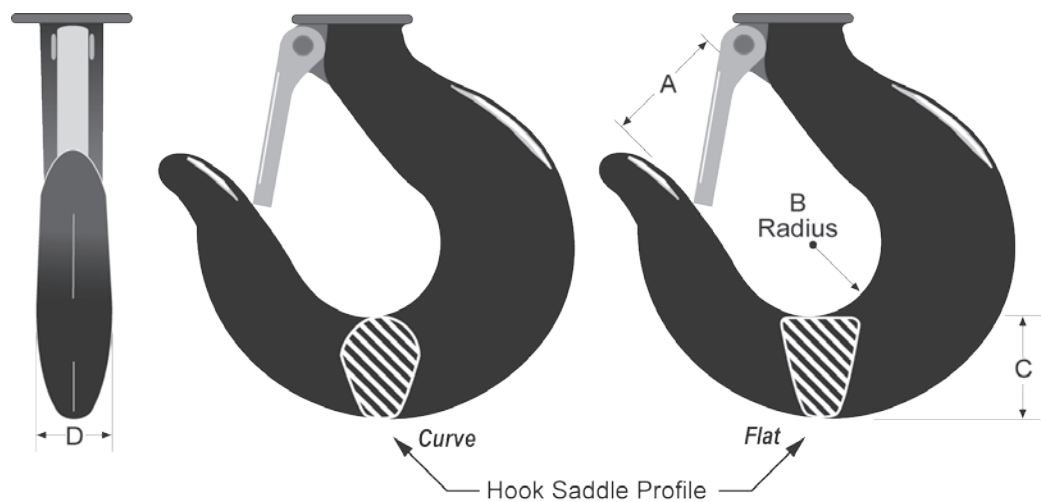
- Include all transmitters and receivers that are part of this weighing system
- Include any other transmitters or receivers operating at 2.4 GHz
- Include any RF barriers, such as concrete walls, large steel equipment, cages
- Include sources of interference, such as high-power electrical motors and generators
- Include dimensions so we can understand the range and antenna gain requirements



Rev. 4 10/2021

# Hook Questionnaire

## Dimensions from crane's existing hook



### Required Dimensions

A= \_\_\_\_\_in/mm

B= \_\_\_\_\_in/mm

C= \_\_\_\_\_in/mm

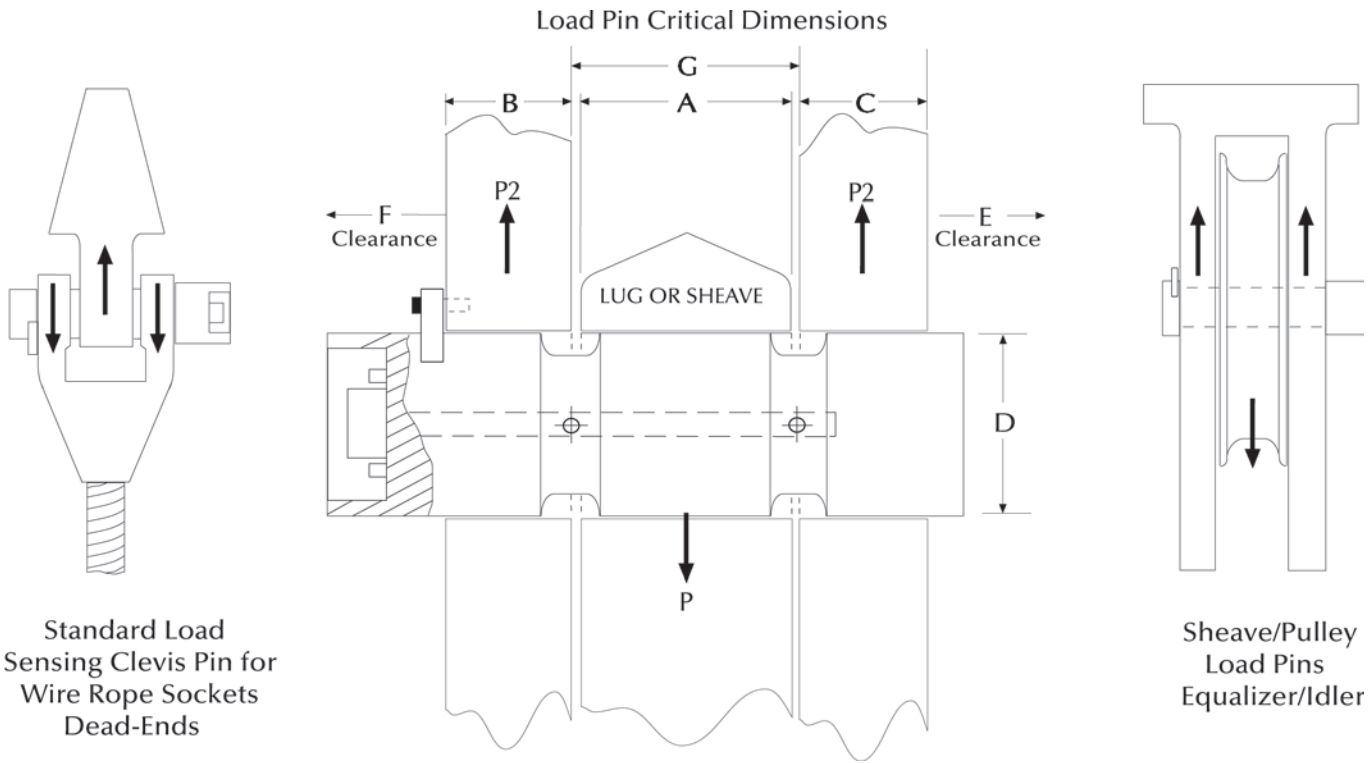
D= \_\_\_\_\_in/mm

Profile: ☐Curve ☐Flat

Hook Capacity \_\_\_\_\_



# Load Pin Questionnaire

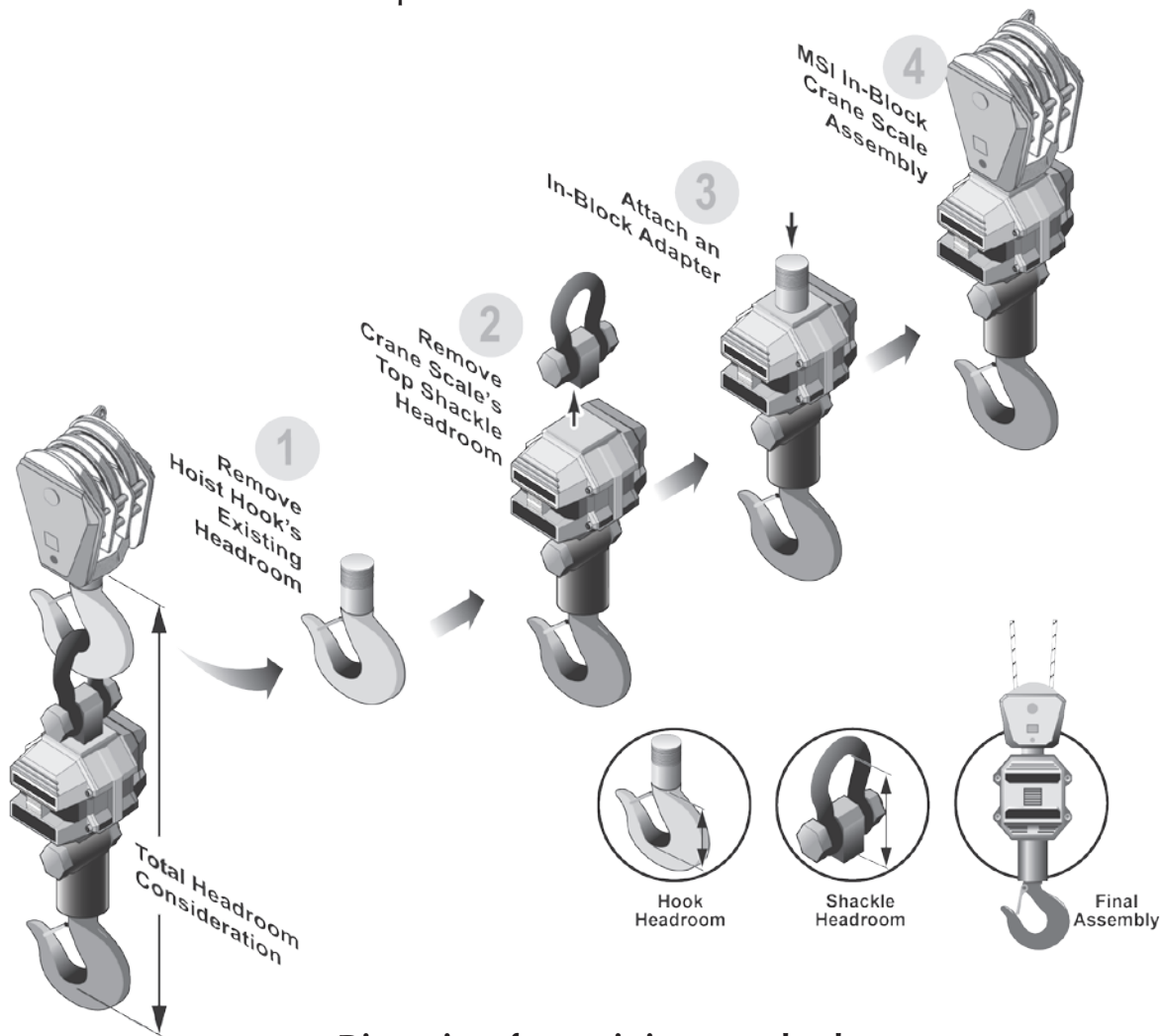


Load Pin Data	
A=Width _____	Inch
B=Width _____	Inch
C=Width _____	Inch
D=Pin Diameter _____	Inch
E=Clearance _____	Inch
F=Clearance _____	Inch
G=Width _____	Inch
Lube Port <input type="checkbox"/> No <input type="checkbox"/> Yes _____	# of exits
Hoist Capacity _____	Tons
Parts of Wire Rope _____	
Sensor Capacity _____	Tons
Factor of Safety <input type="checkbox"/> 3:1 <input type="checkbox"/> 5:1 <input type="checkbox"/> 7:1 <input type="checkbox"/> 10:1	
Application _____	
Accuracy Requirement _____	
Temperature Requirement _____	
Required Output _____	
Material Testing Requirement _____	
Load Vector Orientation/Alignment <input type="checkbox"/> ← <input type="checkbox"/> → <input type="checkbox"/> ↙ <input type="checkbox"/> ↗	
Name _____	
Company _____	
Phone _____	
Note: Minimum clearance between "A" and "G" = 0.0625 inch.	

Cable Connections	
End-Mounted Cable	
End-Mounted Connector (standard)	
Side-Mounted Cable	
Side-Mounted Connector	
Recessed Connector	
Sensor's Cable Length _____ Feet	
Comments _____	

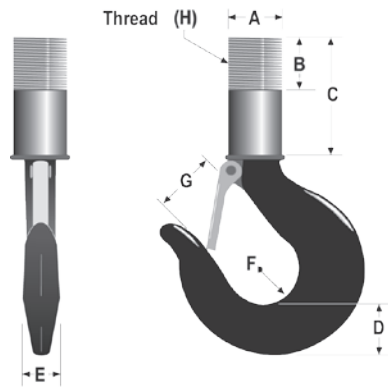
# Low Headroom Weighing Consideration

**Concern:** Customer wants MSI crane scale accuracy, but has vertical headroom concerns  
**Solution:** Consider an in-block adapter



Dimensions from existing crane hook

Required Dimensions	
A= _____	in/mm
B= _____	in/mm
C= _____	in/mm
D= _____	in/mm
E= _____	in/mm
F= _____	in/mm
G= _____	in/mm
H= _____	UNC
Hook Capacity _____	



# Weighing System Questionnaire

Company \_\_\_\_\_  
Name \_\_\_\_\_ Date \_\_\_\_\_  
Phone \_\_\_\_\_ Fax \_\_\_\_\_ Email \_\_\_\_\_  
Project Name \_\_\_\_\_  
System Objective \_\_\_\_\_  
System Description \_\_\_\_\_

## APPLICATION PARAMETERS

Basic System Design: ☐ BTH\* ☐ Equalizer Sheave ☐ Dead-End ☐ C-Hook  
☐ Spreader Bar ☐ Coil Grab ☐ Coil Lifter ☐ Rotating Crane Hook/Grab

System Capacity: \_\_\_\_\_ ☐ lb ☐ kg ☐ tons ☐ metric tons ☐ Other \_\_\_\_\_

System Accuracy: \_\_\_\_\_ % ☐ Applied Load ☐ Rated Capacity  
Legal for Trade ☐ Yes ☐ No

Crane Type: ☐ Bridge ☐ Mobile Fixed Boom ☐ Mobile Ext. Boom Gantry  
☐ Container ☐ Lattice Boom ☐ Jib ☐ Other \_\_\_\_\_

Reeving: \_\_\_\_\_ Parts of Wire-Rope \_\_\_\_\_ At Bottom Load Block \_\_\_\_\_ At Load Sensor  
☐ N/A

Power Supply: ☐ DC ☐ AC Voltage \_\_\_\_\_

## LOAD SENSOR(S)

Number of Sensors: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ Other \_\_\_\_\_

Load Sensor Design: ☐ Tension Link ☐ Clevis/Sheave Load Pin ☐ Single End Shear  
☐ Double Ended Shear ☐ Compression

Load Sensor Capacity: \_\_\_\_\_ ☐ lb ☐ kg ☐ tons ☐ metric tons ☐ Other \_\_\_\_\_

Load Sensor Location: ☐ BTH\* ☐ Equalizer/Idler Sheave ☐ Dead End  
☐ Other \_\_\_\_\_

Environment: ☐ Indoor ☐ Outdoor ☐ Other \_\_\_\_\_

Other Requirements: \_\_\_\_\_

## INSTRUMENTATION

# Dyna-Clamp Questionnaire

Industry Dyna-Clamp will be used in: \_\_\_\_\_

Is protective case required: ☐ YES ☐ NO

## Wire Rope Pre-Calibration:

1. Rope/Cable Diameter: \_\_\_\_\_ Inch / mm Strand Arrangement: \_\_\_\_\_

Rope/Cable Material \_\_\_\_\_

Minimum Breaking Load (MBL) if known: \_\_\_\_\_

Working Load Limit (WLL) if known: \_\_\_\_\_

2. Rope/Cable Diameter: \_\_\_\_\_ Inch / mm Strand Arrangement: \_\_\_\_\_

Rope/Cable Material \_\_\_\_\_

Minimum Breaking Load (MBL) if known: \_\_\_\_\_

Working Load Limit (WLL) if known: \_\_\_\_\_

3. Rope/Cable Diameter: \_\_\_\_\_ Inch / mm Strand Arrangement: \_\_\_\_\_

Rope/Cable Material \_\_\_\_\_

Minimum Breaking Load (MBL) if known: \_\_\_\_\_

Working Load Limit (WLL) if known: \_\_\_\_\_

4. Rope/Cable Diameter: \_\_\_\_\_ Inch / mm Strand Arrangement: \_\_\_\_\_

Rope/Cable Material \_\_\_\_\_

Minimum Breaking Load (MBL) if known: \_\_\_\_\_

Working Load Limit (WLL) if known: \_\_\_\_\_

5. Rope/Cable Diameter: \_\_\_\_\_ Inch / mm Strand Arrangement: \_\_\_\_\_

Rope/Cable Material \_\_\_\_\_

Minimum Breaking Load (MBL) if known: \_\_\_\_\_

Working Load Limit (WLL) if known: \_\_\_\_\_

6. Rope/Cable Diameter: \_\_\_\_\_ Inch / mm Strand Arrangement: \_\_\_\_\_

Rope/Cable Material \_\_\_\_\_

Minimum Breaking Load (MBL) if known: \_\_\_\_\_

Working Load Limit (WLL) if known: \_\_\_\_\_

7. Rope/Cable Diameter: \_\_\_\_\_ Inch / mm Strand Arrangement: \_\_\_\_\_

Rope/Cable Material \_\_\_\_\_

Minimum Breaking Load (MBL) if known: \_\_\_\_\_

Working Load Limit (WLL) if known: \_\_\_\_\_

8. Rope/Cable Diameter: \_\_\_\_\_ Inch / mm Strand Arrangement: \_\_\_\_\_

Rope/Cable Material \_\_\_\_\_

Minimum Breaking Load (MBL) if known: \_\_\_\_\_

Working Load Limit (WLL) if known: \_\_\_\_\_

*If working load limit is not known, we will calculate it as a maximum of 20% of the MBL.*



## QUESTIONNAIRES

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## QUESTIONNAIRES

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# The Overhead Weighing Solutions Buyer's Guide

Information to help you choose a system for your overhead weighing needs



**RICE LAKE®**  
WEIGHING SYSTEMS

800-472-6703  
[www.ricelake.com](http://www.ricelake.com)

Contact Information

U.S. Sales/Technical Support  
Phone 206-433-0199  
Toll Free 800-874-4320

Canada/Mexico Sales/Technical Support  
Phone 800-321-6703

Fax 206-244-8470

Email [prodinfo@ricelake.com](mailto:prodinfo@ricelake.com)

Website [www.ricelake.com/msi](http://www.ricelake.com/msi)

Customer Assistance and Service  
Department Hours

Weekdays 6:30 AM to 6:30 PM (CST)  
Saturday 8:00 AM to 12:00 PM (CST)

Customer assistance available  
in English, Spanish and French

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# Introduction

Rice Lake Weighing Systems' Measurement Systems International (MSI) brand of overhead weighing systems offers a comprehensive selection of quality weighing devices from tension dynamometers to crane scales.

MSI's tension dynamometer and selection of crane scales make durable and dependable solutions for a wide range of capacities and applications. Whether you need custom overload protection, a simple load monitoring device or a Legal for Trade system, MSI has a product to fit your unique requirements. Master challenging and high-temperature environments using proven load-sensing systems designed with a minimum of 5:1 Ultimate Safety Factor. From fishing and marine scale applications to heavy capacity coil handling, MSI overhead weighing equipment has a place in virtually every environment.

## Overhead Weighing Systems Complement Every Industry

- Aviation/Helicopter Load Monitoring
- Port and Freight Terminals
- Construction
- Concrete Production
- Mining Facilities
- Steel Mills and Foundries
- Waste Management
- Chemical Processing
- Fishing Industry
- Energy Production
- Material Handling





MSI-4260M



MSI-3460  
Challenger 3

## Crane Scales

Crane scales ensure safety and deliver accurate load measurements in many applications. When used properly, crane scales can help prevent unsafe conditions by providing real-time measurement of the operational load and immediate feedback to operators and safety systems.

### MSI-3460 Challenger 3

The MSI-3460 offers long-range viewing with a 1.5-inch, ultra-bright LED digital display. The MSI-3460 is suitable for light- to medium-duty applications up to 15,000 pounds.

### MSI-4260 Port-A-Weigh

The MSI-4260 is built for heavy-duty dynamic weighing, ideal in bridge crane, foundry and in-process material handling applications.

### MSI-4260 IS Intrinsically Safe Port-A-Weigh

The MSI-4260 IS is intrinsically safe, featuring a 5:1 safety factor and exceeding OSHA, ANSI and ASME safety requirements.

### MSI-4260M

The MSI-4260M is the most robust scale on the market for marine and industrial weighing, able to capture weight with  $\pm 0.1\%$  accuracy and a resolution between 3,000 and 5,000 divisions.





MSI-9600HT Hi-Torque  
Port-A-Weigh Plus

## MSI-6360 Trans-Weigh

The MSI-6360 is ideal for medium- to heavy-capacity and duty-cycle applications not requiring an integral display.

## MSI-9600HT Hi-Torque Port-A-Weigh Plus

The MSI-9600HT is designed with a high torque load train for fixed hook applications. Available in capacities up to 60 tons.



MSI-6360  
Trans-Weigh



## Tension Dynamometers

Tension dynamometers, or simply dynamometers, can be used to measure either vertical or horizontal tension. Rugged but lightweight, dynamometers are ideal for measuring tension in rigging, load tests, crane and elevator certification, and other straight-line lifting applications.

### MSI-7300 Dyna-Link 2

The MSI-7300 is the industry's most advanced digital tension dynamometer. Constructed of high-grade, aircraft-quality aluminum with an anodized finish and gasket sealing, the Dyna-Link 2 is built to address caught-load or slack-line issues that may cause unsafe conditions.

### MSI Dyna-Clamp Tension Meter

The MSI Dyna-Clamp clamp-on tension meter is safe and easy to use, with a site window ensuring accurate placement of the wire rope being tested by the operator. Unlike other clamp-on tension meters, the Dyna-Clamp is designed with an easy-turn power screw that doesn't require as much manual force to engage the wire rope the operator is testing.



MSI-7300



MSI Dyna-Clamp  
Tension Meter



# Integrated Solutions

MSI integrated solutions are versatile enough to be applied no matter the headroom, capacity or environment. Load pin sensors, tension links and clamp-on load cells can bring overhead weighing solutions to the next level.

## MSI Clamp-On Load Cell

Clamp-on load cells measure wire rope tension to prevent overloads on overhead cranes and hoists with minimal modification to existing infrastructure.

## Low Headroom Option

The low headroom option integrates a below-the-hook crane scale directly into the bottom block by replacing the existing hook.

Clamp-on

Load Pin

## MSI Clevis Load Pin Sensors

Load pin sensors are custom-designed and constructed of strictly industrial-grade stainless steel, providing extreme durability and a minimum 5:1 factor of safety to any integrated overhead weighing solution.

Shear Web

## MSI Shear Web Load Cell

Shear web load cells compensate for hook rotation and eliminate headroom loss without sacrificing accuracy.

## MSI Tension Link

The tension link is suited for integration with cranes, offering force measurement for lifted items by measuring at the dead-end becket.

Crane Scales



*Rugged Remote*

## Indicators, Remotes and Remote Displays

Indicators communicate weight data and increase process control. Remotes enable certain commands to be sent, wirelessly, to a crane scale. Remote displays allow operators to use weighing systems from a distance, promoting safety and efficiency.

### MSI-8000 RF Remote Display

The MSI-8000 is a full-featured handheld remote display enabling users to operate weighing systems from a distance—and out of harm's way.

### MSI-8000HD Indicator/RF Remote Display

The MSI-8000HD's full waterproof construction resists harm from the elements, making it an especially resilient indicator.

### Rugged Remote

The MSI Rugged Remote is a heavy duty remote control that allows the operator to wirelessly zero or tare their crane scale, as well as power on or off.



*MSI-8000 RF Remote Display*





## MSI-8004HD Indicator/RF LED Remote Display

With the option to view the display in either red or green LEDs, the MSI-8004HD provides longer viewing distances for more diverse environments and applications.



*MSI-8004HD  
Indicator/RF LED  
Remote Display*



## Indicators, Remotes and Remote Displays



*SCT-2200 Advanced Series Signal Conditioning Weight Transmitter*

### 1280 Enterprise™ Series Indicator

The 1280 Enterprise Series with color touchscreen, web server view and multiple protocol types delivers uncompromising speed in any overhead weighing environment.

### SCT-2200 Advanced Series Signal Conditioning Weight Transmitter

For PLC systems that require weight data from a scale, Rice Lake's compact SCT transmitters deliver equivalent signal-conditioning function without the cost or bulk of a full-sized weight indicator or controller.



# Wireless Network Solutions

From the initial weighment on the scale to the final numeric value on the indicator, efficient communication is key to the success of the entire overhead weighing process. Wireless transmitters and receivers easily communicate data between various electronics in your scale system.

## TranSend™ Wireless Load Cell Interface

TranSend is a wireless load cell interface that transforms load cell signal and transmits the data wirelessly to a receiving unit.

## MSI ScaleCore Webserver

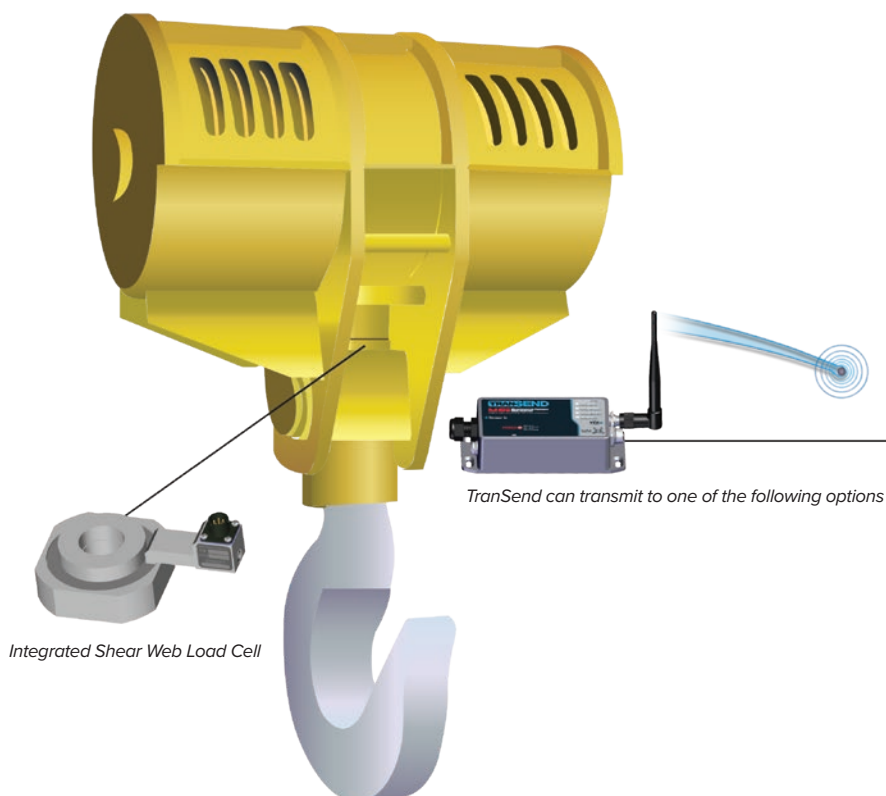
The MSI ScaleCore Webserver is a network interface with a built-in web browser for remote monitoring of a scale system. Communicate with any combination of up to seven devices and any MSI ScaleCore based scale or weighing instrument equipped with a Wi-Fi module.



TranSend Wireless Load Cell Interface

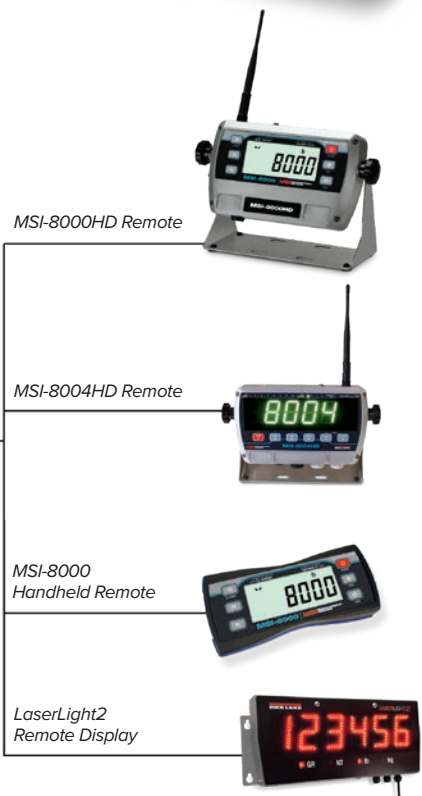


MSI ScaleCore Webserver



Integrated Shear Web Load Cell

TranSend can transmit to one of the following options



MSI-8000HD Remote

MSI-8004HD Remote

MSI-8000 Handheld Remote

LaserLight2 Remote Display



## Before You Buy

Crane scales measure real-time operational loads and provide immediate feedback to operators to prevent unsafe conditions. Determine the best crane scale for your application by exploring your overhead weighing goals and analyzing aspects of your environment.

### Overhead Weighing Goals

- Load monitoring prevents crane accidents, ensures compliance, maintains employee safety and protects equipment. Scales should meet OSHA, ANSI, ASME and other safety design standards (5:1 ultimate safety factor). Accuracy is 1-3% full scale.
- Process control helps meet the requirements of in-process crane scales, which include accurate weighments, real-time information and integration with manufacturing data acquisition systems. Accuracy is 0.1% full scale.
- Data integration systems increase informational exactness and control, stream data from the weighing system to a customer's database program and help reduce human error.

### RF and Signal Processing Solutions

Add traceability and transparency to your processes. With several methods of radio frequency (RF) technology, wireless communication products can be easily integrated with almost any industry or environment.

Whether used in shipping, material handling, foundries, shipyards, construction or freight applications, Rice Lake's MSI brand of trusted overhead weighing solutions assists in creating safe and efficient operations.

---

## Crane Weighing Solutions

Common overhead weighing equipment includes below-the-hook crane scales, integrated scales, integrated sensors and RF and signal processors. From bridge cranes to gantry and tower cranes, rugged, reliable overhead weighing solutions are available for many different applications.

Below are common types of cranes and their ideal weighing systems:

### Monorail Hoist

The most commonly used hoist is the monorail hoist, which uses a chain hoist or block with wire rope or cable and has a one- to 10-ton capacity. Due to their high capacity and versatility, monorail hoists are often used in industrial facilities.

Recommended scale: MSI-3460

### Jib Crane

A jib crane is designed with a horizontal member supporting a moveable hoist and is commonly used in workstation applications and machine shops. It is also useful in production and shipping where there may be a need to weigh smaller machine parts during or after production to check weight for shipment.

Recommended scale: MSI-3460

### Overhead Bridge Crane

Overhead bridge cranes can range from 1 to 100T capacity, or greater. The trolley moves laterally while the bridge moves longitudinally to cover a specific area or the entire facility. This crane offers a wide range of motion and creates efficiency for lifting and moving applications.

Recommended scales: MSI-4260, MSI-4260M, MSI-6360, MSI-9600HT and MSI Integrated Sensor System

### Rail Mounted or Rubber Tire Gantry

The rail mounted or rubber tire gantry moves similarly to a bridge crane and is frequently found in outdoor factory applications such as steel yards, paper mills and other heavy industrial facilities. They are common on rails or tires, as well as in heavy capacity weighing industries where capacities can range from one to 200 tons.

Recommended scale: MSI-4260, MSI-6360 and MSI Integrated Sensor System

### Semi Gantry

Similar to a gantry crane, a semi gantry has one end of the bridge rigidly supported on one or more legs that run on a fixed rail or runway. The other end of the bridge is supported by a truck running on an elevated rail or runway.

Recommended scale: MSI-3460, MSI-4260, MSI-6360 and MSI Integrated Sensor System

## Integrated Weighing Solutions

Most bridge, monorail, jib, gantry and straddle crane safety systems employ an integrated load sensing system. An integrated load sensor is installed and integrated where load is consistently applied relative to the actual load the crane is handling, generally with sheave pin, load link and compression designs.

Contact your MSI sales/solution specialist for assistance in selecting the right solution for you.



*We recommend the MSI-3460 for jib cranes.*



*Bridge cranes pair well with a variety of MSI scales, though environment can impact the choice.*



*Multiple MSI scales can be used with rail mounted and rubber tire gantry cranes.*



# Create an Integrated System

01

Determine what type of sensor you need.

- Load pins offer accuracy of 1-3% of their rated capacity
- Load links and shear web load cells have an accuracy of 0.5% of their rated capacity
- Clamp-on load cells have an accuracy of 3-5% of the hoist capacity and will accommodate a wire rope up to 3/4" in diameter
- Custom sensors are also available

02

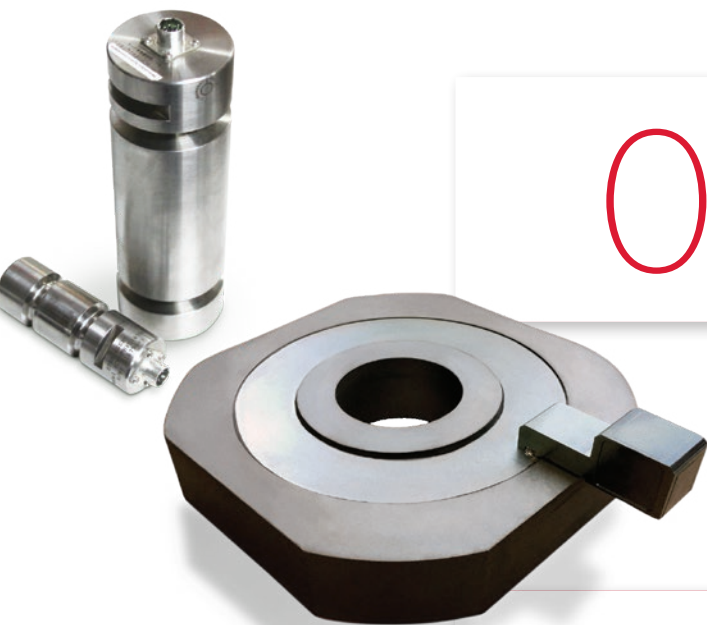
Choose a cable length.

- Options include 5, 10, 15, 20, 25 and 30 feet
- Rice Lake recommends using a bulkhead connector with mating cable
- Custom length cables are available

03

Decide whether you want an RF transmitter or signal conditioner.

- MSI-7000/7001 TranSend (100-300 ft)
- SCT-2200 (N/A)





04

Choose a remote display or controller.

- Handheld: MSI-8000
- Desktop LCD: MSI-8000HD
- Desktop LED: MSI-8004HD
- Tablet
- Desktop Programmable: 1280 Enterprise Series\*

*\*custom user programs are available.*

05

Your RF transmitter or signal conditioner will have the following relays:

- 2, 3, 4, 8 (MSI-7000 TranSend)
- 2, 4, 8 (MSI-8000HD, MSI-8004HD)
- 2 (SCT-2200)
- Inquire about other available I/O and fieldbus options

06

Select a remote display.

- Hardwired or wireless
- 4- or 6-inch LaserLight2\*





# Tips for Installation

Get years of successful operation from your MSI overhead weighing systems with these tips and best practices for installation and calibration.

## Required Equipment and Documentation

The following items are necessary for successful installation, configuration, simulated calibration, pre-calibration or final calibration of MSI scales and systems:

- Laptop with MSI Configuration Program downloaded
- Product-specific serial cables
- Tripp Lite USB-to-serial converter cable
- Manuals (digital or hard copy)

Load cell simulators and system schematics, available by request at the time of order, are technically optional equipment and documents. However, simulators and system schematics can help troubleshoot problems that may occur during installation.

Additionally, test weights for calibration and weight verification are required for integrated systems, but are recommended for calibrating other MSI products as well.

## Best Practices for a Successful and Timely Installation

Before beginning installation, power on all of electronics to ensure basic system functionality. If there is an issue with any electronics in the system, contact customer support for help resolving the issue. To become more familiar with the MSI scale or system, review all manuals before beginning setup or calibration procedures.

In addition, perform a practice calibration on the system before attempting a full calibration on-site. If your system was factory calibrated, test the current calibration of the system before installation by performing a simulated calibration. A serial cable should be stored at the weighing system site after installation to ease any troubleshooting during future maintenance.

## Troubleshooting Tips for Problems During Installation

- If there are installation problems, refer to the optional system schematic for a wiring guide. Check connection points and ensure components are properly grounded.
- If the system has communication errors, review antenna locations to ensure they are within the recommended distance and have no solid objects blocking the transmission. Locate crane remotes, Wi-Fi or Bluetooth® modems and competing RF weighing systems to determine whether these sources may be causing an interference.
- Phone support or an RF site survey may be necessary for persistent issues. To assist with phone support, record all the networks, IDs, serial numbers and print strings associated with the system.
- If problems continue during installation, request on-site support from an MSI product specialist.

Rice Lake offers a comprehensive line of MSI overhead weighing systems, including crane scales, tension dynamometers and integrated solutions. Rental supplies for RF site surveys are also available to assist with product installation and troubleshooting. Live customer support can be reached 24/7 by phone and industry experts are always ready to help with any product questions.



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# Calibration and Maintenance

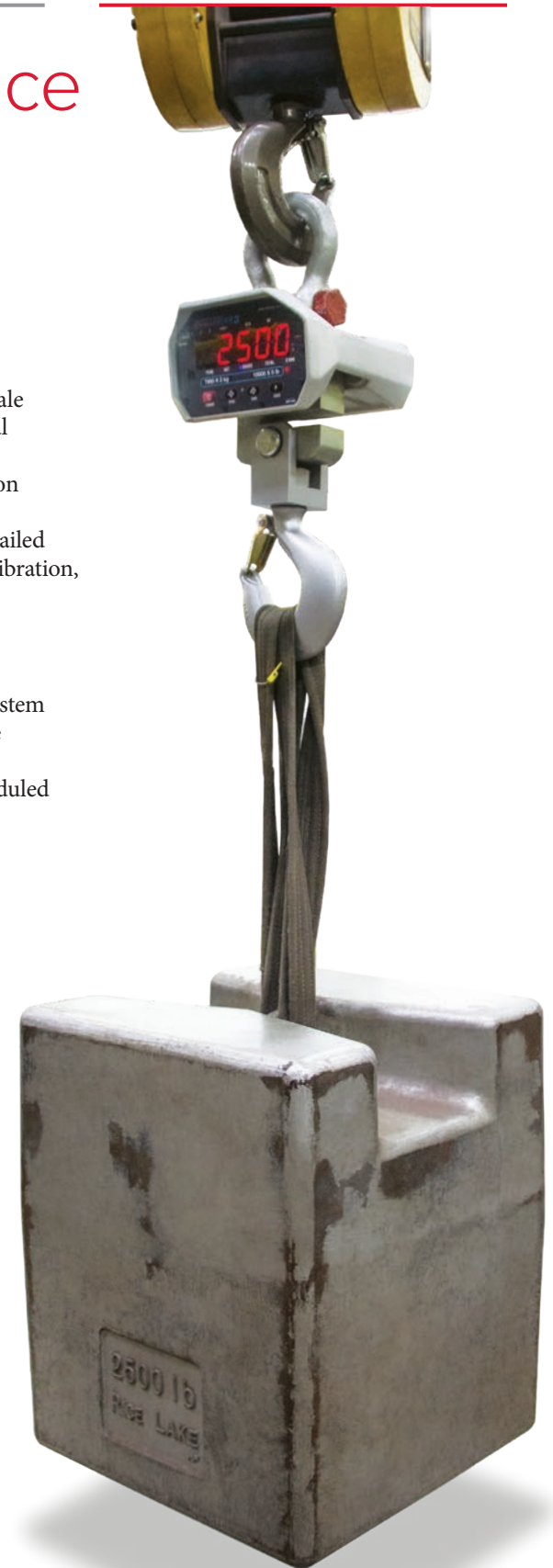
## Calibration

Overhead weighing systems should undergo scheduled calibration tests to make sure weight readouts are accurate. This is particularly important for applications where Legal for Trade certification is necessary.

A certified scale dealer will calibrate overhead weighing equipment after installation. If your overhead weighing system is going to provide weight readouts for commerce, the scale will need to have a Legal for Trade approval to ensure the weight is within a certain degree of accuracy. Discuss with your scale supplier if you will need a crane scale that meets Legal for Trade approval, and which approval agencies, such as the National Type Evaluation Program (NTEP), Measurement Canada, or state and local approval agencies, need to provide certification for commerce in your area. The scale's calibration interval is determined by the frequency of use, individual application requirements, and federal, state and local guidelines. Each scale component should be tested and detailed test reports should be provided to the customer and government authorities. After calibration, detailed reports must be provided to weights and measures authorities.

## Protective Features and Scheduled Maintenance

Many manufacturers design scales with protective features to reduce the chances of system failure and minimize the amount of maintenance needed. For example, a scale may be built with self-contained protective features to prevent it from being loaded above its rated capacity. Still, inspections of your overhead weighing equipment should be scheduled regularly to make sure your system is running properly.



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# Glossary

## Accuracy

The ability of a scale to measure a known weight value correctly.

## Analog to Digital

Conversion of continuously varying (analog) voltage levels to discrete binary-numbered (digital) values (e.g., a load cell output can be fed through an A/D converter to produce a continuous stream of digitized information and sent to a digital indicator).

## Calibration

The comparison of load cell outputs against standard test loads.

## Capacity

The amount of weight the scale is capable of weighing accurately.

## Clamp-On Load Cell

Load cells used for measuring wire rope tension and preventing and detecting overload for overhead cranes and hoists.

## Crane Scale

A suspended scale that is used for light-to heavy-capacity overhead weighing.

## Handbook H-44

A comprehensive set of requirements for weighing and measuring devices that are used in commerce and law enforcement activities; not a federal law, but developed and updated annually by the National Conference on Weights and Measures. Its complete title is “Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices.”

## Indicator/Controller

Indicators function as control devices for overhead weighing systems. They collect the digital weight readout from the scale’s load cells and also provide process reports and data.

## Integrated Solution

A permanently-installed shear web load cell, clevis load pin or clamp-on load cell used to provide constant load monitoring and prevent overloads.

## International Organization of Legal Metrology (OIML)

Treaty organization that recommends technical requirements for weighing and measuring equipment prior to the sale or distribution of a model or type within the state, nation, etc.

## Legal for Trade

An industry recognized term to distinguish approval from the appropriate weights and measures regulating authority to use a scale for weight-based transactions and commerce.

## Linearity

A factor that makes up a scale’s accuracy. Linearity is the scale’s ability to measure as close to the target weight as possible.

## Load Cell

A device that produces an output signal proportional to the applied weight or force.

## Load Pin Sensor

A unique, industrial-grade integrated solution that offers safety, strength and corrosion resistance in overhead weighing applications.

## Maximum Allowable Variation

A deficiency in the weight, measure, or count of an individual package beyond which the deficiency is considered to be an unreasonable error.

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## Glossary Continued

### National Institute of Standards and Technology (NIST)

An agency within the United States Department of Commerce. NIST regulates measurement in the United States to ensure accurate weight-based commerce. NIST's specifications and requirements for fair and accurate weighing systems are documented in Handbook 44 (H-44).

### National Type Evaluation Program (NTEP)

A program of cooperation between the National Conference on Weights and Measures, NIST, state weights and measures officials and the private sector for determining conformance of weighing equipment with the provisions of H-44.

### Output

The signal (voltage, current, pressure, etc.) produced by a load cell. Where the output is directly proportional to excitation, the signal must be expressed in terms such as volts per volt, millivolts per volt, or volts per ampere, etc., of excitation.

### Remote Display

An instrumentation device for displaying weight data separately from an indicator/controller.

### Repeatability

A factor that makes up a scale's accuracy. Repeatability is the scale's ability to measure and display the same weight each time it is tested. Repeatability is measured in standard deviation.

### Shear Web Load Cell

An integrated, low-profile load cell that compensates for hook rotation and eliminates headroom loss.

### Tare

The weight of an empty container or vehicle, or the allowance or deduction from gross weight made on account thereof.

### Tension Link

An integrated solution for cranes designed to provide force measurement for lifted items.

### (Tension Link) Dynamometer

An instrument used for measuring vertical and horizontal tension in overhead weighing applications such as rigging, load tests or crane and elevator certification.

### Tolerance

A value fixing the limit of allowed departure from the labeled contents, usually presented as a plus (+) and minus (-) value.

### Twist Lock Sensor

A durable, accurate SOLAS solution equipped with an internal strain gauge for measuring vertical tension while a crane is under load.

### Units

The unit of measure that is to be represented: lb, kg, kN, etc.

### Wireless Network Solutions

Used to communicate data between scale electronics.



Rice Lake Weighing Systems has been manufacturing and distributing weight-related products since 1946 and is a global leader in measurement and weighing solutions.

In 2012, Rice Lake acquired Measurement Systems International to better serve our customers with an expanded product offering. MSI has been providing niche weighing technologies worldwide since 1977. Rice Lake's MSI overhead weighing solutions are advanced products designed to meet the unique application requirements of a variety of industries.

Find additional resources at [www.ricelake.com/MSI](http://www.ricelake.com/MSI)





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When you need help, rely on Rice Lake.  
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