882IS Digital Weight Indicator

Fiber Optics to RS-422 Converter

The fiber optics to RS-422 converter (PN 196770) takes fiber-optic light and turns it into a signal for RS-422 communications. The converter is located in an external FRP enclosure that is remotely powered.

NOTE: The converter can be used in applications up to 500 ft with the blue 882IS CPU board (PN 221062) or RS-422 Fiber Optics board (PN 180633).

Manuals are available from Rice Lake Weighing Systems at www.ricelake.com/manuals

Warranty information is available at www.ricelake.com/warranties

IMPORTANT: Use anti-static protection for grounding and to protect components from electrostatic discharge (ESD) when working inside the enclosure.

WARNING: Disconnect the enclosure from power source before opening.

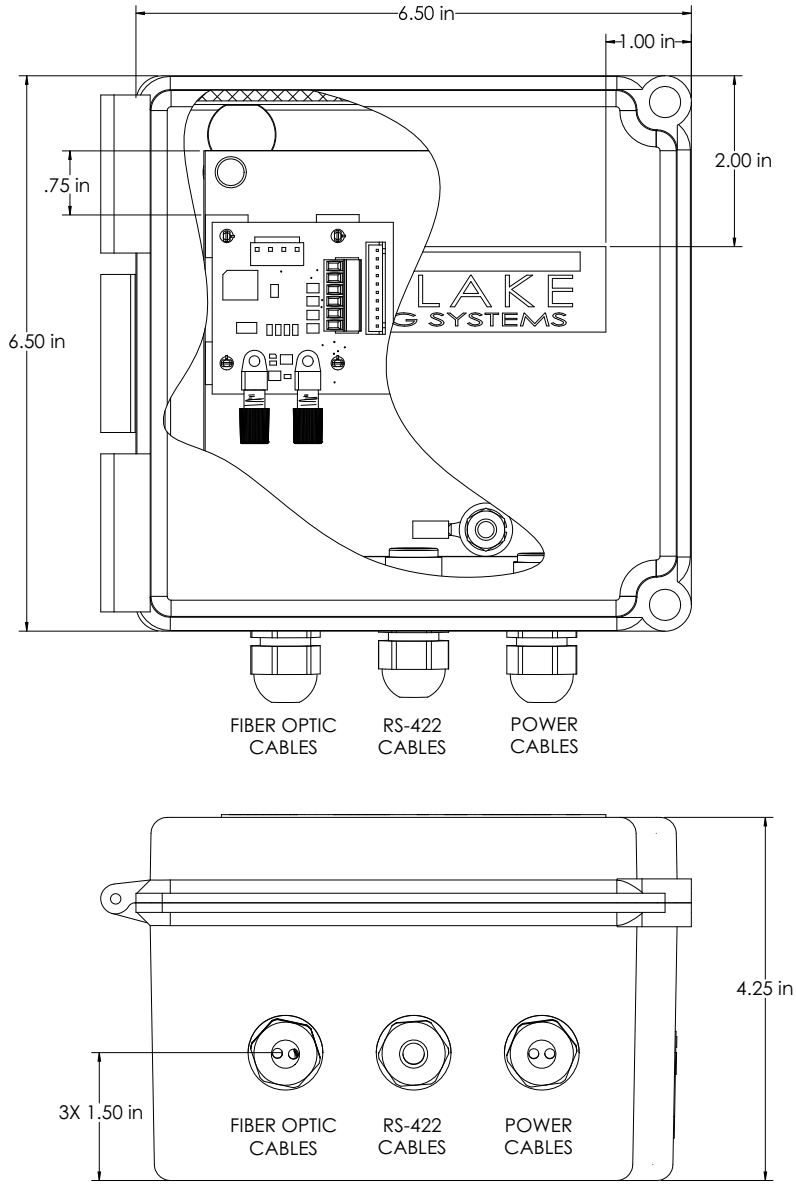

Figure 1. Fiber Optics to RS-422 Converter FRP Enclosure

Fiber Optics Assembly

The fiber optics to RS-422 converter is equipped with a duplex fiber-optic port for communicating with an 882IS or 882IS Plus located in the safe area. It provides electrical isolation and eliminates the use of I/O barriers commonly used in intrinsically safe systems. The optical fibers are plastic and the terminated ends must be cleanly cut perpendicular to the fiber prior to installation. See Figure 1 on page 1 for the location of the duplex fiber-optic port in the fiber optics to RS-422 converter.

WARNING: Disconnect all power before opening the units being updated.

IMPORTANT: The fiber-optic connections between the 882IS and 882IS Plus indicator and the RS-422 converter needs to be cross-linked. The optical output of the 882IS indicator should be attached to the input of the RS-422 converter, and the indicator input to the module output.

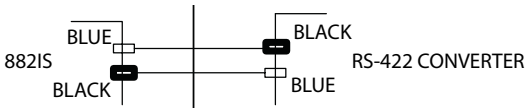

Figure 2. Fiber-Optic Cross Connection

Use the following steps for assembling the fiber-optic connectors of the fiber-optic to RS-422 converter:

1. Cut off the ends of the fiber-optic cable (500 ft length maximum), with a proper cutting tool such as a fiber-optic hot knife (PN 85548) or cutting block (PN 80892), ensuring no bends tighter than a 1 inch radius are present.

NOTE: The cut end of the fiber-optic cable must be cut flush so that the core and outside insulation are equal. Core exposure can lead to failure.

2. Insert the fiber-optic cable through the locking nut and into the connector until the core tip seats against the internal micro-lens; then back it out 1/16th in (1 mm).
3. Screw the connector locking nut down to a snug fit, locking the fiber-optic cable in place.

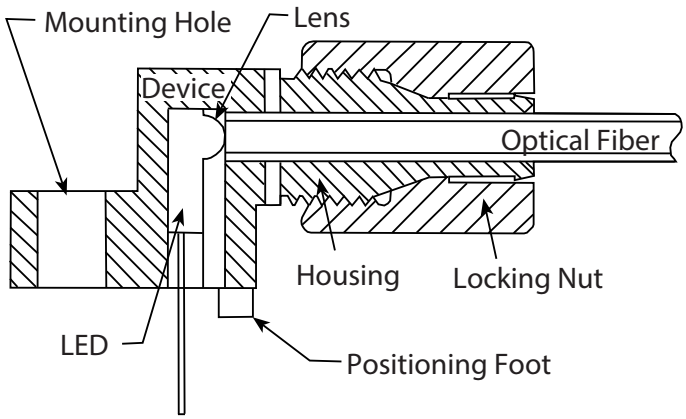

Figure 3. Fiber Optics Connector

Remote Power Source for Fiber Optics to RS-422 Converter

NOTE: If source indicator has a digital input/output, it will provide 5V which can be used to power the card.

Connector J3 provides connections for power/RS-422.

Pin	Description
1	V+ (6 V–24 V)
2	V- (GND)
3	TX- (Z)
4	TX+ (Y)
5	RX- (B)
6	RX+ (A)

Table 1. J3 Power/RS-422 Connections

NOTE: For 2-wire connection, jump pin 3 to 5 and pin 4 to 6.

Connector J1 provides a high and low power mode for fibers of varying materials and lengths.

Power Mode	Pin	Fiber Material/Length
High	1 and 2	Any length glass fiber; 200-500 ft plastic fiber
Low	2 and 3	1-200 ft plastic fiber

Table 2. Fiber Power Modes

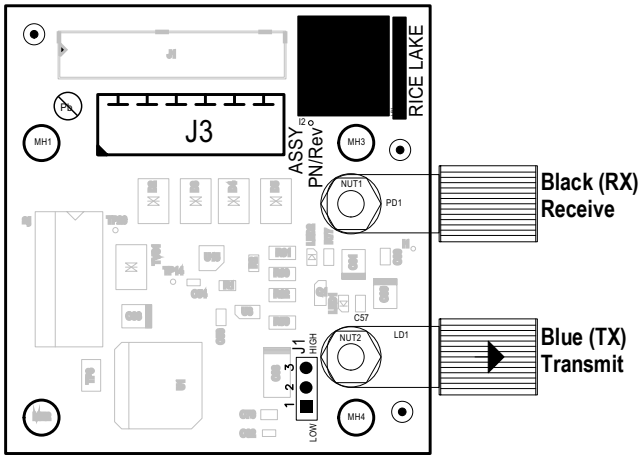

Figure 4. RS-422 Fiber Optics Board (PN 180633)

Replacement Parts

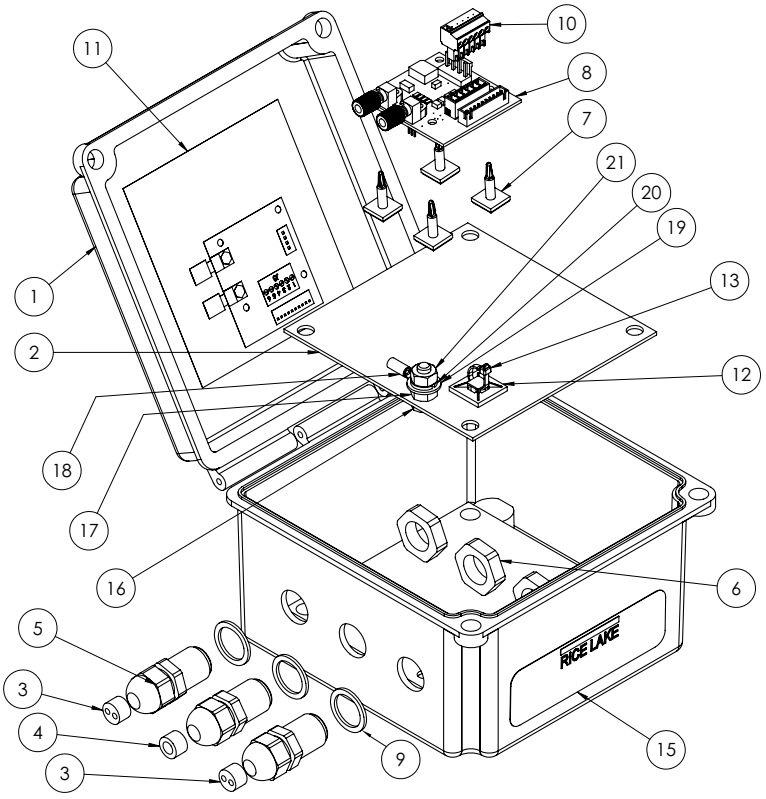

Figure 5. Replacement Parts

Item No.	Part No.	Description	Qty.
1	197028	Enclosure, Machined FRP	1
2	85308	Backplate, FRP	1
3	73997	Bushing, Multiple Cable Gland 9mm - 3/8 NPT	2
4	15664	Reducing Gland, 9mm - 3/8 NPT	1
5	15655	Cord Grip, 3/8 NPT	3
6	15656	Locknut, 3/8 NPT	3
7	31595	Support Post, PC Board 9/16 in with Adhesive Backing	4
8	180633	Fiber Optic Board, RX/TX Option Internal Mount	1
9	178464	Seal Ring, 3/8 NPT, Nylon	3
10	153883	Connector, 6 Position Pluggable Screw Terminal	1
11	198338	Label, Wiring, Fiber Optic to RS-422 Converter Option	1
12	15650	Mount, Cable Tie 3/4 in	3
13	15631	Cable Tie, 3 in Nylon	6
14	197846	Power Supply, 1.5 W, 12 VDC Universal Input, 100-240 VAC (not shown)	1
15	52342	Label, 4.0 x 1.25	1
16	14729	Bolt, 1/4 - 20NC x 3/4 Hex Head Bronze	1
17	14637	Nut, 1/4 - 20NC Hex Bronze Width Across Flats	1
18	33188	Connector, Ring Terminal, 1/4 in Stud Size 22-16 AWG	1
19	15149	Washer, Plain Std, 1/4 SST ID	1
20	15148	Washer, Lock 1/4 Regular Helical Spring SST ID	1
21	14642	Nut, 1/4 - 20NC Hex SST Width Across Flats	1

Table 3. Replacement Parts List

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