882IS/882IS Plus

Conditions of Use in Hazardous Locations

The 882IS/882IS Plus is certified as being intrinsically safe and appropriate for use in hazardous locations as long as the conditions of use stated in this document are followed. This is a controlled document, any revisions must be reviewed by Factory Mutual (FM) Approvals.

Certification and Classification

The 882IS/882IS Plus indicator is certified for use in hazardous locations per United States, Canadian, ATEX and IECEx standards.

882IS/882IS Plus Hazardous (Classified) Location Electrical Equipment Per U.S., Canadian, UK, ATEX and IECEx Requirements

Certificate No: FM18US0195X, FM18CA0092X, FM22UKEX0061X, FM18ATEX0047X, IECEx FMG 18.0018X

Equipment Ratings: FM/cFM:

INTRINSICALLY SAFE

Class I,II,III, Division 1, Groups ABCDEFG T4

Class I, Zone 0 AEx/Ex ia IIC T4 Ga
Zone 21 AEx/Ex ib IIIC T135°C Db

Ta = -10°C to +40°C (14°F to 104°F)

ATEX/IECEx

II 1 G Ex ia IIC T4 Ga
II 2 D Ex ib IIIC T135°C Db

Model IS6V2 (Battery) Hazardous Location Electrical Equipment Per U.S., Canadian, UK, ATEX and IECEx Requirements

Certificate No: FM18US0195X, FM18CA0092X, FM22UKEX0061X, FM18ATEX0047X, IECEx FMG 18.0018X

Equipment Ratings: FM/cFM:

INTRINSICALLY SAFE

IS for Class I,II,III, Division 1, Groups ABCDEFG T4

Class I, Zone 0 AEx/Ex ia IIC T4 Ga
Zone 21 AEx/Ex ib IIIC T135°C Db

Ta = -10°C to +40°C (14°F to 104°F)

ATEX/IECEx

II 1 G Ex ia IIC T4 Ga
II 2 D Ex ib IIIC T135°C Db

Model mb-EPS-100-240-X2 (Power Supply) Hazardous Location Electrical Equipment Per U.S., Canadian, UK, ATEX and IECEx Requirements

Certificate No: FM18US0195X, FM18CA0092X, FM22UKEX0061X, FM18ATEX0047X, IECEx FMG 18.0018X

Equipment Ratings: FM/cFM:

Class I,II,III, Division 1, Groups ABCDEFG T4 with IS outputs for
Class I,II,III, Division 1, ABCDEFG
Class I, Zone 1, AEx/Ex mb [ia Ga] IIC T4 Gb
Zone 21, AEx/Ex mb [ia Da] IIIC T135°C Db
Ta = -10°C to +40°C (14°F to 104°F)

ATEX/IECEx

II 2(1) G Ex mb [ia Ga] IIC T4 Gb
II 2(1) D Ex mb [ia Da] IIIC T135°C Db

Specific Conditions of Use

WARNING:

- ***The surface of the LCD display of the 882IS/882IS Plus weight indicator is considered to constitute an electrostatic discharge hazard. Clean only with a damp cloth.***
- ***The IS6V2 battery module cable lockout device must be installed over the connection between the battery and the cable. The lockout device must be in place at all times in the hazardous area and can only be removed in a non-hazardous area. The lockout device must be re-installed prior to re-entering the hazardous area.***
- ***The IS6V2 battery module is for use only with the Model NP10-6 battery manufactured by ENERSYS.***

AVERTISSEMENT:

- ***La surface de l'écran LCD de l'indicateur de poids 882IS/882IS Plus est considéréé comme présentant un risque de décharge électrostatique. Nettoyez uniquement avec un chiffon humide.***
- ***L'appareil de verrouillage du câble du module de batterie IS6V2 doit être installé sur la connexion entre la batterie et le câble. L'appareil de verrouillage doit toujours être en place dans la zone hasardeuse et ne peut être retiré que dans une zone non hasardeuse. L'appareil de verrouillage doit être réinstallé avant de rentrer dans la zone hasadeuse.***
- ***Le module de batterie IS6V2 doit être utilisé uniquement avec la batterie modèle NP 10-6 fabriquée par ENERSYS.***

Approval Standards

United States

Title	Number	Issue Date
Electrical Equipment for Use in Hazardous (Classified) Locations - General Requirements	FM Class 3600	2018
Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II & III, Division I, Hazardous (Classified) Locations	FM Class 3610	2018
Explosion-Proof Electrical Equipment General Requirements	FM Class 3615	2018
Electrical Equipment for Measurement, Control and Laboratory Use	FM Class 3810	2018
Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements	ANSI/ISA 61010-1 (82.02.01) CSA C22.2 No. 1010.1 ANSI/UL 61010-1	2015
Explosive Atmospheres - Part 0: Equipment - General Requirements	ANSI/ISA 60079-0	2013
Explosive Atmospheres - Part 11: Equipment protection by intrinsic safety "i"	ANSI/ISA 60079-11	2011
Explosive Atmospheres - Part 18: Equipment protection by encapsulation "m"	ANSI/ISA 60079-18	2015
Degrees of Protection Provided by Enclosures (IP Code)	ANSI/IEC 60529	2004

Table 1. United States Approval Standards

Canadian

Title	Number	Issue Date
General Requirements - Canadian Electrical Code, Part II	CSA C22.2 No. 0	R2015
Bonding of Electrical Equipment	CSA C22.2 No. 0.4	2017
Threaded Conduit Entries	CSA-C22.2 No. 0.5	R2012
Enclosures for Use in Class II Groups E, F and G Hazardous Locations	CSA C22.2 No. 25	2017
Explosion-Proof Enclosures for Use in Class I Hazardous Locations	CSA C22.2 No. 30	R2012
Explosive Atmospheres - Part 0: Equipment - General Requirements	CAN/CSA-C22.2 No. 60079-0	2015
Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety “i”	CAN/CSA-C22.2 No. 60079-11	2014
Explosive Atmospheres - Part 18: Equipment Protection by Encapsulation “m”	CAN/CSA-C22.2 No. 60079-18	2016
Degrees of Protection Provided by Enclosures (IP Code)	CAN/CSA C22.2 No. 60529	2005
Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory use - Part 1: General Requirements	CAN/CSA C22.2 No. 61010-1	2015

Table 2. Canadian Approval Standards

IEC

Title	Number	Issue Date
Electrical Apparatus for Explosive Gas Atmospheres. Part 0: General Requirements	IEC 60079-0	2018
Explosive Atmospheres Part 11: Equipment Protection by Intrinsic Safety “i”	IEC 60079-11	2011
Explosive Atmospheres — Part 18: Equipment Protection by Encapsulation “m”	IEC 60079-18	2014

Table 3. IEC Approval Standards

ATEX

Title	Number	Issue Date
Electrical Apparatus for Explosive Gas Atmospheres. Part 0: General Requirements	EN 60079-0	2018
Explosive Atmospheres Part 11: Equipment Protection by Intrinsic Safety “i”	EN 60079-11	2012
Explosive Atmospheres — Part 18: Equipment Protection by Encapsulation “m”	EN 60079-18	2015
Degrees of Protection Provided by Enclosures (IP Code)	EN 60529 +A1 +A2	1991 2000 2013

Table 4. ATEX Approval Standards

Conditions of Use

Service

The entire unit must be shipped back to Rice Lake Weighing Systems for repair. Please contact a local dealer or Rice Lake Weighing Systems to obtain a return material authorization (RMA). There are no user serviceable parts within the 882IS/882IS Plus. All repairs are to be performed by the manufacturer. Removing the serial tag compromises the FM rating.

Equipment

An optional battery, Rice Lake Weighing Systems PN 180831, can be used to power the 882IS/882IS Plus. This battery must be charged using the Rice Lake Weighing System's battery charger, PN 191394. The charger is 90-230 VAC auto detecting. Use of any other battery or battery charger voids the intrinsically safe certification and can damage the battery and other components.

WARNING: Failure to heed could result in serious injury or death.

- ***The battery must be charged in a non-hazardous area. Do not bring the battery charger into a hazardous area.***
- ***The battery charger is not certified for use in hazardous environments.***
- ***The IS6V2 battery module can be removed from the product in the hazardous environment, but must be charged in a non-hazardous area.***
- ***The IS6V2 battery module cable lockout device must be installed over the connection between the battery and the cable. The lockout device must be in place at all times in the hazardous area and can only be removed in a non-hazardous area. The lockout device must be re-installed prior to re-entering the hazardous area.***

AVERTISSEMENT: Le non-respect des directives pourrait entraîner des blessures graves ou la mort.

- ***La batterie doit être chargée dans une zone non dangereue. N'amène pas le chargeur de batterie dans une zone dangereuse.***
- ***La chargeur de batterie n'est pas certifié pour une utilisation dans des environnements dangereux.***
- ***La IS6V2 batterie peut être retirée du produit dans un environnement dangereux, mais doit être chargée dans une zone non dangereuse.***
- ***L'appareil de verrouillage du câble du module de batterie IS6V2 doit être installé sur la connexion entre la batterie et le câble. L'appareil de verrouillage doit toujours être en place dans la zone hasardeuse et ne peut être retiré que dans une zone non hasardeuse. L'appareil de verrouillage doit être réinstallé avant de rentrer dans la zone hasadeuse.***

IMPORTANT: The 882IS/882IS Plus must not be used in locations where ambient temperature falls outside -10° C to +40° C (14° F to 104° F).

Connecting AC Power to the mb-EPS-100-240-X2 Power Supply

The power supply AC line voltage must be run through rigid metal conduit and properly sealed. The installer must comply with Rice Lake Weighing Systems control drawings as well as national and local electrical codes for installation of equipment in hazardous areas. An appropriate conduit seal rated for the hazardous area is required at enclosures entrance for AC power.

882IS Cable Glands

Cable Gland Size	Cable Diameter Range	Dome Nut Torque Around Cable
PG9	4-8mm (0.157-0.15")	2.5 N-m (22 in-lb)
PG11	5-10mm (0.197-0.394")	2.5 N-m (22 in-lb)

Table 5. Cable Gland Specification

882IS/882IS Plus Indicator System Limitations and Restrictions

The following label will be affixed to the 882IS/882IS Plus Indicator.

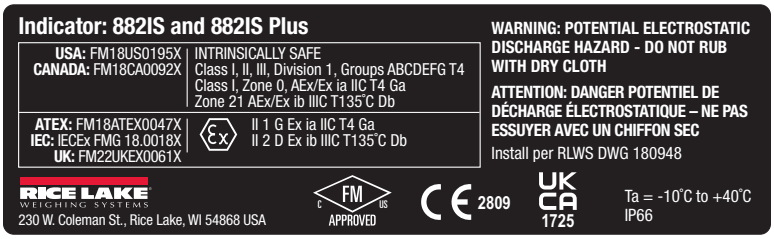

Figure1. 882IS and 882IS Plus Indicator Label

- All instrumentation must have identification nameplates in compliance with control drawings
- Field modifications are not permitted
- It is mandatory to return the 882IS/882IS Plus to Rice Lake Weighing Systems for service

NOTE: Install per Rice Lake Weighing Systems control drawing PN 180948.

Model IS6V2 Battery Box System Limitations and Restrictions

The following label will be affixed to the IS6V2 battery box.

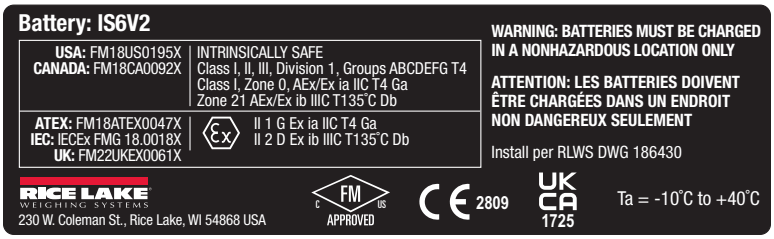

Figure 2. IS6V2 Battery Box Label

- All instrumentation must have identification nameplates in compliance with control drawings
- Field modifications are not permitted
- It is mandatory to return the IS6V2 battery box to Rice Lake Weighing Systems for service

NOTE: Install per Rice Lake Weighing Systems control drawing PN 186430.

Model mb-EPS-100-240-X2 Power Supply

The following label will be affixed to the mb-EPS-100-240-X2 power supply.

Figure 3. mb-EPs-100-240-X2 Power Supply Label

- All instrumentation must have identification nameplates in compliance with control drawings
- Field modifications are not permitted
- It is mandatory to return the mb-EPS-100-240-X2 power supply to Rice Lake Weighing Systems for service

NOTE: Install per Rice Lake Weighing Systems control drawing PN 182301.

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