



Series 8150/5

Explosion Protected Metallic Control Stations For Hazardous and Corrosive Applications

Please read this entire document before beginning any work.

1. Safety Instructions

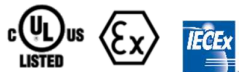
Installation and maintenance of these stainless steel control stations should only be performed by skilled and experienced personnel in accordance with the National Electrical Code (NEC) - ANSI/NFPA 70 or the Canadian Electrical Code Part 1 (CEC) – C22.1 respectively and any local regulations

CAUTION:

- Disconnect power supply before installing or servicing these control stations.
- Cable or conduit entries may be field installed per Section 3.4 & 3.5 of these instructions. All other modifications can only be made after consulting the manufacturer.
- Operate only undamaged and clean devices with observations of the operating parameters found in Section 2.
- For a Class I Zone 1 conduit installation refer to the NEC® or CEC® for proper sealing requirements.
- For a Class I Division 2 installation **NO SEALS** are required.
- Use only approved wiring methods for the location, with the associate conduit / cable fittings. Reference your local code.
- Supply Wires shall be rated for 75°C and internal wires shall be rated 90°C.

2. Technical Data

Please also refer to the technical data on the panel board nameplate.



2.1 Certifications:

- Class I, Zone 1, AEx db eb mb [ia] IIC T6 Gb
- Class I, Div. 2, Groups A,B,C & D
- Class I, Zone 1, Ex db eb mb [ia] IIC T6 Gb
- Class I, Div. 2, per CEC J18-150(C)
- II 2 G Ex db eb ia/ib [ia/ib] ma mb IIA, IIB, IIC T6...T4 Gb
- 2D Ex tb IIIC IP66 T130°C, T95°C, T80°C Db
- PTB 09 ATEX 1109
- Ex db eb ia/ib [ia/ib] ma mb IIA, IIB, IIC T6... T4 Gb
- Ex tb IIIC IP66 T130°C, T95°C, T80°C Db
- IECEX PTB 09.0049

2.2 Environmental Protection:

IP 66 / Type 3, 4, 4X (depending on entry types.)

2.3 Ambient Temperature:

85°C (185°F) max.; -60°C (-75°F) min.

2.4. Component Data

2.4.1 Pilot Light, type 8010

12V – 240V AC/DC, 0-60Hz
Terminal capacity 12-22 AWG or 2.5mm²
tightened to 18in-lbs. or 2 Nm

2.4.2 Contact Block, type 8082

600V AC, 10A max.
Terminal capacity 12-22 AWG or 2.5mm²
tightened to 18in-lbs. or 2 Nm

2.4.3 Control Switch, type 8008/2-0 & 8008/2-1

600V AC, 10A max.
Terminal capacity 12-22 AWG or 2.5mm²
tightened to 18in-lbs. or 2 Nm

2.4.4 Ammeter, type 8405

600V Ampere rating, see data on device
Terminal capacity 12-22 AWG or 2.5mm²
tightened to 18in-lbs. or 2 Nm

3. Directions for Installation

3.1 Opening the enclosures

Fully loosen the cover screws using a screwdriver.
Do not remove these captive screws from the covers.

3.2 Enclosure Mounting

Mounting feet are provided in the enclosure which will accept up to 1/4" (6mm) screws.

3.3 Electrical Installation Methods

There are two types of installation methods:
Conduit installation or cable installation.

If the panel is complete with factory installed entry hardware, proceed to section 3.4.

If the panel does not include entry hardware, select the appropriate hubs or cable glands from section 8.1 and install them as follows.

3.4 Installation of approved conduit hubs or cable connectors

CAUTION: FIELD INSTALLED OPENINGS:

Drilling, milling or sanding these Stainless Steel enclosures is not recommended! For field- installed openings, use a hand punch or pneumatic type punch. Always wear safety glasses and protective clothing when working with hand tools and equipment.

3.5 Conduit/Cable Installation

These metallic enclosures allow for the metal cable gland and conduit hubs to be bonded to the ground system. This can be accomplished by installing them either by method 1 or 2 as shown.



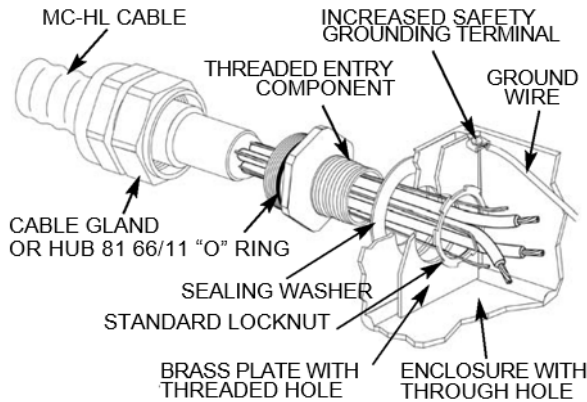
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13259 N. Promenade Blvd.
Stafford, TX 77477

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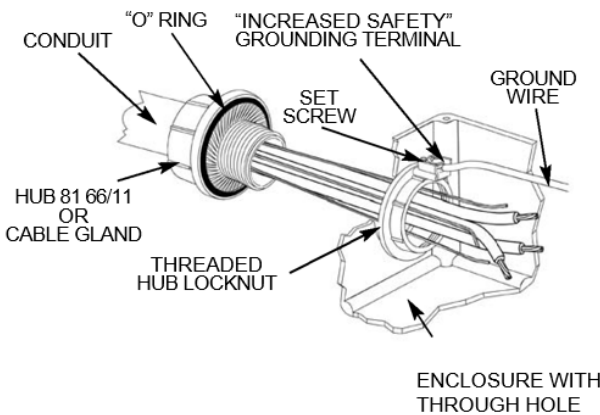
INSTALLATION OPERATION & MAINTENANCE SHEET

Method 1: Installation using a hole “through the enclosure” with a factory installed metal plate with a threaded opening and increased safety ground terminal.



Refer to IOM sheet of cable gland for proper installation

Method 2: Installation using without flange plates using a hole “through the enclosure” with an “increased safety” grounding locknut.



These locknuts may be bonded between each other and to the grounding system using a jumper wire. This is not necessary though as they are part of the grounding system of the enclosure. After the entry hardware is installed, connect the appropriate conduit or cable.

Note: All unused enclosure openings must be closed using approved close-up plugs with standard locknuts. (see section 5.3.2 for NPT close-up plugs).

4. Wiring

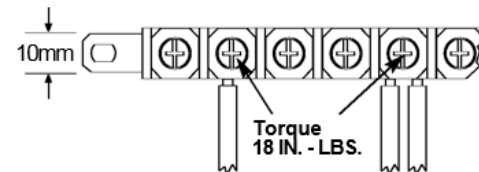
IMPORTANT: When connecting conductors

- Strip the wire so that the insulation covers the wire up to the terminal.
- Make sure that all wires are connected to the correct terminals.
- Tighten all terminal blocks.
- Keep wires separated between different voltage systems.

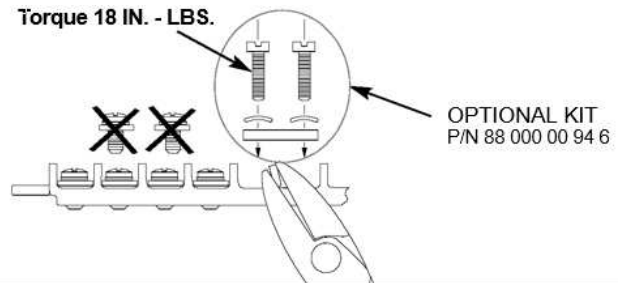
4.1 Internal Ground Rail (PE Terminals) Conductor Installation and Modification for larger Conductors

4.1.1 PE04 Ground Bar for solid and stranded wire 16-10 AWG.

One or two ground conductors can be terminated as shown. When connecting two conductors under the same terminal, it is mandatory that both conductors be identical. They must both be solid or stranded, and must be the same size and type. It is important to torque all terminal screws, including unused to 18 in. - lbs.



4.1.2 Modification of PE04 Ground Rail for installation of 10-6 AWG conductors.





4.2 Terminal Blocks (optional)

4.2.1 Jumpering of Terminal Blocks

Increased safety terminal blocks only allow one conductor on either side of the terminal. Should more termination points be required the terminals need to be jumped with appropriate jumpers from the same manufacturer as the terminals. Jumper connections are inserted into the center recessed areas of the appropriate terminal blocks and fastened to the current bar. Use of jumpers may reduce the current rating of the terminal. Contact terminal manufacturer for details.

4.2.2 Partitions provide visual separation between groups of terminal blocks in an assembly. Partitions are also required to provide electrical separation between adjacent jumpering connections. An end plate can also be used to provide the electrical separation at jumpering connections.

4.2.3 End plates. The open side of each terminal block must be completely covered by an end plate, or a partition. Use an end plate for the last block in an assembly or whenever the open side of a terminal block abuts a block with smaller dimensions.

4.2.4 Creepage and clearances as specified in ANSI/UL 486E; ANSI/UL 60079-7; CSA C22.2 No.65, & CSA C22.2 No.60079-7.

4.3 Wire Connections to Components

Connect conductors to the component terminals (capacity: 12AWG or 2.5mm²). Conductor insulation must reach to the terminals. Tighten all terminals to 18 in.-lb. (including those unused) and secure components on the mounting rail.

4.4 Perform a continuity check

4.5 Replace the enclosure cover ensuring alignment between actuators and internal components. Actuate any switch and pushbutton to check for free operation.

4.6 Energize the supply circuit and test the system.

5. Maintenance

5.1. Cleaning

Use only a damp cloth to clean the enclosure. A solvent-free household detergent can be added to the cleaning water.

5.2. Repairs and Maintenance

Only authorized and trained personnel should perform repairs and maintenance work on hazardous location equipment.

5.3. We recommend an Electrical Prevention Maintenance program as described in the National Fire Protection Association Bulletin NFPA No. 70B. It is recommended that it should be at least once a year.

5.4. Perform visual, electrical and mechanical checks on all components on a regular basis.

- Visually check for undue heating evidenced by discoloration of wires or other components, damaged or worn parts, or leakage evidenced by water or corrosion in the interior.
- Electrically check to make sure that all connections are clean and tight.
- Mechanically check that all parts are properly assembled, and operating mechanisms move freely.
- Replacement parts are available, see R. STAHL Catalog or Contact factory.



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**INSTALLATION OPERATION
& MAINTENANCE SHEET**

E-mail: sales@rstahl.com
 Website: www.rstahl.com

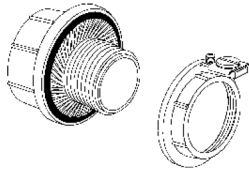
6. Parts & Accessories

Use only the following spare parts & accessories in order to maintain the ratings and warranty.

6.1 Entry Hardware

**8.1.1 Hazardous Location Conduit Hubs with
"increased safety" Ground Terminal**

Size	Type Code	Ordering Code / SAP #
1/2"	8166/11-01-NE	139082
3/4"	8166/11-02-NE	139083
1"	8166/11-03-NE	139084
1-1/4"	8166/11-04-NE	139085
1-1/2"	8166/11-05-NE	139086
2"	8166/11-06-NE	139087
2-1/2"	8166/11-07-NE	139088
3	8166/11-08-NE	139089



For all other entry hardware, please refer to R. STAHL, Inc. Catalog or web site, www.rstahl.com

Contact factory for any additional questions.

Note: The nature of these instructions is only informative and does not cover all of the details, variations or combinations in which this equipment may be used, its storage, delivery, installation, safe operation and maintenance. Since conditions of use of the product are outside of the care, custody and control of the manufacturer, the purchaser should determine the suitability of the product for his intended use, and assumes all risk and liability whatsoever in connection therewith.