

# JM400

## Quick Installation Guide

JM400 is a junction box that allows easy and safe connections for fieldbus and standard instrumentation wiring as well as for sensors, actuators and measuring instruments, in hazardous areas or not.

The JM400-C3 offers protection against short circuits in the spurs (between + and - terminals), limiting the current to 50 mA on each spur. Thus, the short circuit does not propagate between the spurs nor in the main trunk. This option has short circuit indication LED and built-in terminator.

In normal operation, each short circuit protective consumes less than 1 mA. After removing the short circuit, the spur returns to normal operation, the circuit protection is disabled and the LED is dimmed.

### ATTENTION!

*This installation guide provides basic guidelines for JM400. In explosion proof, nonincendive, or intrinsically safe (I.S.) installations the JM400 must be installed according to local standards and protection type adopted.*

### Explosions and electrical shocks can result in death or serious injury.

- Do not remove the JM400 cover in explosive environments when the circuit is live.
- JM400 cover must be fully engaged, and use suitable plugs and cable glands to meet explosion proof requirements.
- In hazardous areas make sure the JM400 is installed according to required practices for safety and wiring.
- Refer to JM400 catalog to check the parameters for hazardous areas.
- Avoid contact with the wires and the terminals. High voltage can be present on wires and can cause electrical shock.
- Use suitable cable glands, and properly seal the JM400 cover and unused connections. The humidity can cause low insulation, damaging signals and electronic circuits. This type of problem is not covered by Smar warranty.

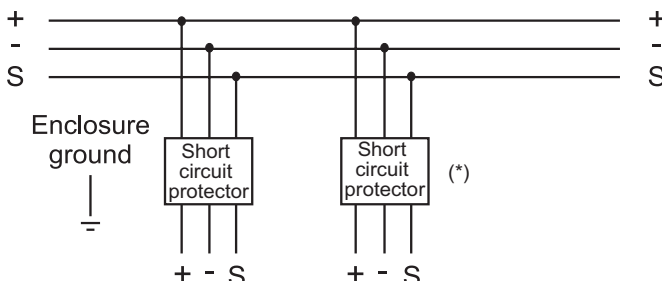
### Step 1: Mounting the JM400

1. Mount the JM400 in easy access place to connections. The JM400 must be properly located so as to minimize the length of spurs to the devices.
2. You can attach it directly to the panel or wall, using adequate screws.

3. Choose the right plugs and cable glands if necessary to meet explosion proof requirements. Plug and seal unused conduit connections to comply with IP66/68 protection requirements.

### Step 2: Wiring Connection

The JM400 has an internal connection structure as the following diagram:



(\*) The short circuit protectors are only available for the JM400-C3 model.

There are three aspects which have to be considered when designing the shielding and grounding of a fieldbus system:

- Electromagnetic compatibility (EMC);
- Explosion proof protection;
- Personal protection.

Evaluate your system grounding and check with the fieldbus system supplier the possibility to ground or not the bus shield, within the JM400.

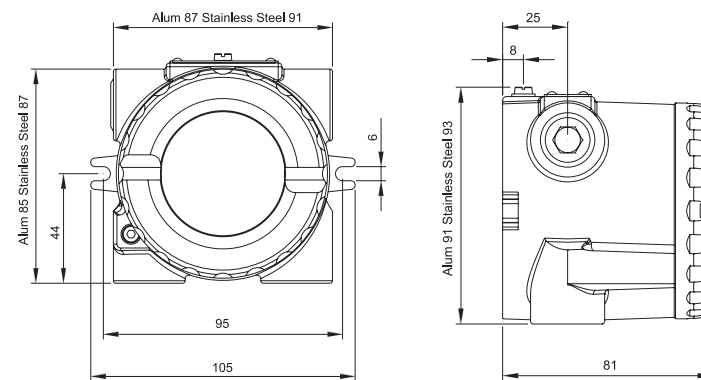
1. Power off the connections.
2. Remove the JM400 housing cover.
3. Remove the 3-ways female connectors.
4. Connect the positive wire to the "+" label in the internal terminal bar, and the negative wire to the "-" label, as well as the shield cable in the "S" label. Special attention should be taken when handling and connecting the shield and wires to avoid short-circuits, shield interruption and/or improper grounding in contact with the housing. If the bus terminator (BT302) is necessary, connect it to the female connector and arrange it adequately. The JM400-C3 has a switch to enable the bus terminator.
5. Connect the female connectors in the male receivers, and tighten the side screws.
6. Ground the JM400's housing and the shield according to the area safe requirements.

7. Close the housing cover, checking if it is tightened to keep weather proof and explosion proof conditions.

### Disassembling Procedure

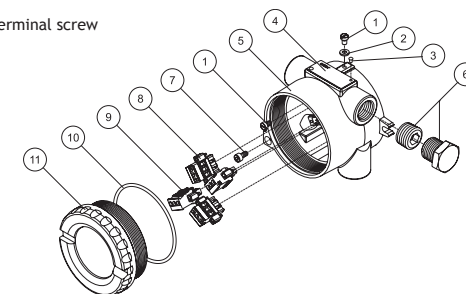
With the power disconnected, refer to JM400 exploded view to disassemble.

### Indicative dimensions



Spare parts	
400-0822	Cover with window
400-1257	Cover without window
204-0120	Locking mechanism screw
204-0122	O-ring
400-0812	¼ female NPT to ½ male NPT reduction sleeve, 316 SST Ex d
400-0808	½ NPT internal hexagon plug, plated CS BR Ex d
400-0809	½ NPT internal hexagon plug, 304 SST BR Ex d
400-0810	M20 X 1.5 external hexagon plug, 316 SST BR Ex d
400-0811	PG 13.5 external hexagon plug, 316 SST BR Ex d
400-0583-11	½ NPT internal hexagon plug, plated CS SAE 1020
400-0583-12	½ NPT internal hexagon plug, 304 SST
400-1267	Terminal block

- 1 - External/Internal ground terminal screw
- 2 - Washer
- 3 - Identification plate screw
- 4 - Identification plate
- 5 - Housing
- 6 - Plug
- 7 - Locking mechanism screw
- 8 - Black female connector
- 9 - Green female connector
- 10 - Cover o-ring
- 11 - Male cover



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