

# JB400

smar -

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JB400



## JB400 - Intelligent Junction Box



J B 4 0 0 M E

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Up-to-date address information is available on our website.

web: [www.smar.com/contactus.asp](http://www.smar.com/contactus.asp)

## AVOIDING ELECTRICAL DISCHARGES



### ATTENTION

Electrostatic discharges may damage semiconductor electronic components in printed circuit boards. They usually occur when touching components or connector pins from devices, without wearing the appropriate equipment to prevent discharges. It is recommended to take the following precautions:

- Before handling the devices, remove the electrostatic charge from your body by wearing a proper wristband or touching grounded devices;
- Avoid touching electronic components or connector pins of the devices.

## PREVENTING LOW INSULATION AND HUMIDITY



### ATTENTION

Use suitable cable glands, and properly seal the JB400 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.



# JB400 – INTELLIGENT JUNCTION BOX

## Description

JB400 offers spur protection against short circuits (between + and – terminals), limiting the short circuit current in each spur at 50 mA. During a short circuit situation there is no effect in the other spur or the main trunk. There is a LED to indicate short circuits and JB400 has an integrated bus terminator.

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

## Main characteristics

- Intelligent Junction Box for fieldbus installations in compliance with the IEC61158-2 standard (PROFIBUS-PA and Foundation fieldbus);
- 4, 6 or 8 spurs;
- Intelligent protection against short circuit in each spur, preventing the short circuit propagation. After removing the short circuit, the spur goes back to normal operation;
- Quick and easy installation;
- Maintenance during operation;



Figure 1 – JB400

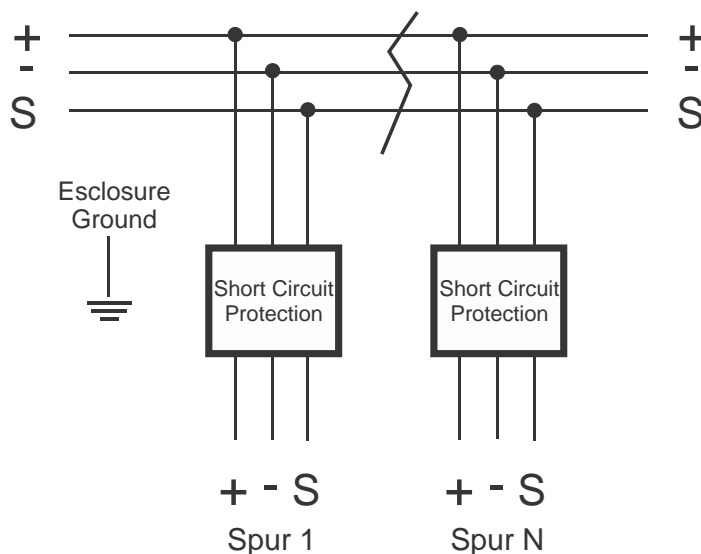
## Installation

- Mount the JB400 in easy access place to connections. The JB400 must be properly located so as to minimize the length of spurs to the devices.
- The JB400 can be mounted directly on walls or panels using fixation screws.
- Close and seal unused connections properly to meet the protection class IP66 requirements.

### IMPORTANT

Close the JB400 properly and ensure the correct cable glands mounting. Close unused connections properly, preventing humidity penetration, as it can generate low insulation. In situations with humidity, JB400 damage is not covered by warranty.

## Wiring Diagram



N = 4, for model with 4 spurs.  
 N = 6, for model with 6 spurs.  
 N = 8, for model with 8 spurs.

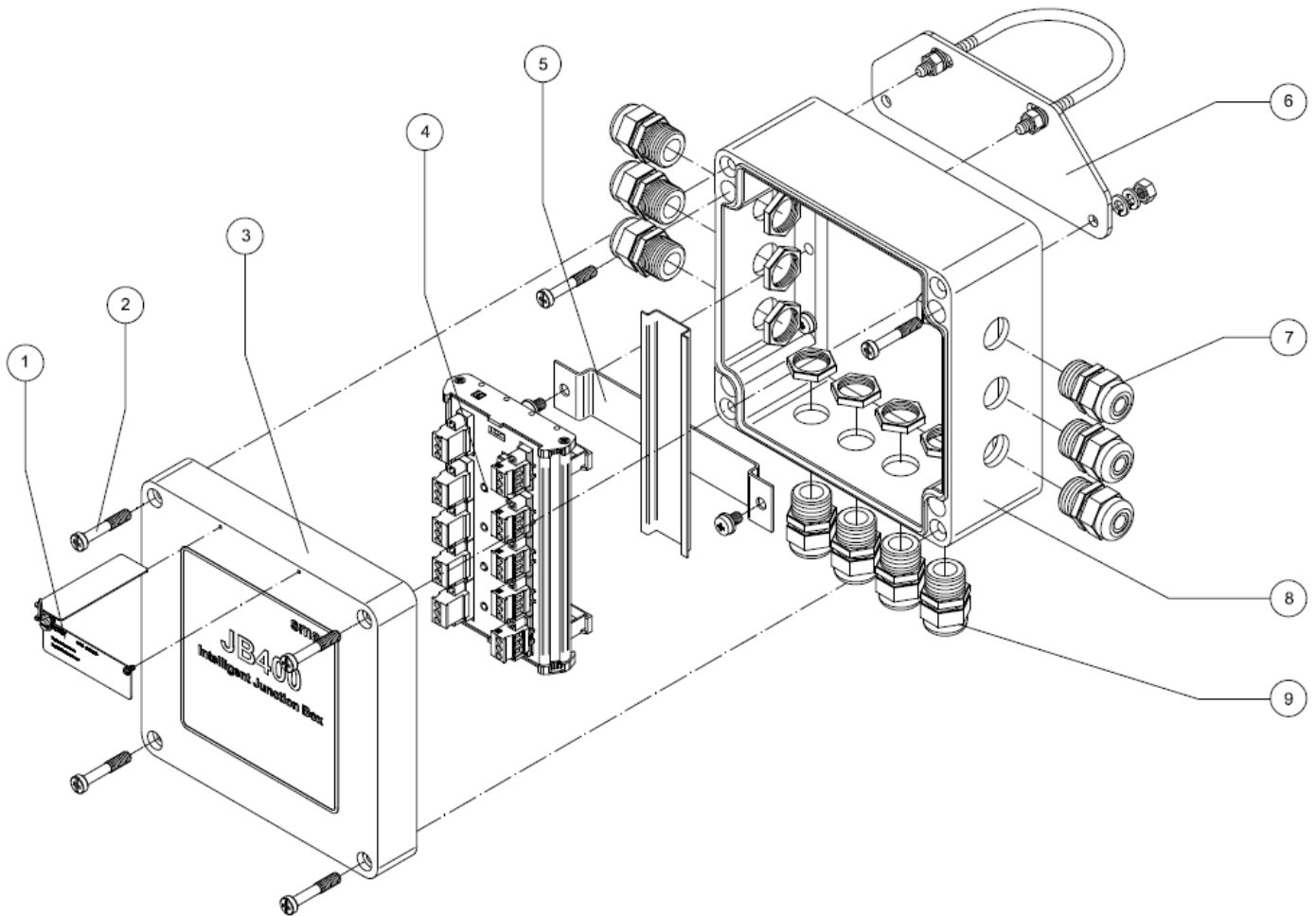
## Technical Specifications

CHARACTERISTICS	
Physical layer	In compliance with IEC 61158-2
Power supply	Bus-powered 9 to 32 Vdc
Communication protocols	Profibus-PA and FOUNDATION fieldbus
Maximum trunk current	2.5 A
Quiescent current per spur in normal operation	< 1 mA
Maximum current per spur during a short circuit	50 mA
Maximum voltage drop per spur	0.3V@20mA
Number of spurs	4, 6 or 8
Spur connections	Removable 3-pin terminal blocks, 2.5 mm <sup>2</sup>
Surge protector at input	Cut in 62 V, 1500 W
Cover closing	4 screws with O-ring
Housing Material	Aluminum
Mounting	Via screws (for panel) or support with pipe clamp
Protection degree	IP 66
Terminator	100 Ω resistor and 1μF capacitor selectable by switch
Status LED	On (red): spur in short circuit condition; Off: spur in normal operation

ENVIRONMENTAL CONDITIONS	
Operation Temperature	-20°C to 70°C
Storage	-40°C to 85°C
Humidity	0-95% non-condensing

DIMENSIONS AND WEIGHT	
Dimensions (mm)	180 x 180 x 100
Weight	1.6 kg

## Exploded View and Dimensional Drawing



**EXPLODED VIEW - JB-400 8 SPURS**

1	Identification plate
2	Housing fixation screw
3	Cover
4	WSP300-8
5	WSP300 fixation rail
6	Fixation bracket for 2" pipes
7	M20x1.5 cable gland (black)
8	Spur box
9	M20x1.5 cable gland (gray)

