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SPARK DETECTION SYSTEM ELECTRICAL CONNECTIONS

general guidelines

The electrical wiring must be made by qualified personnel, and in accordance with local and national rules.
It is highly recommended to connect the metallic enclosure body of all the electrical equipment (RIV-601P/S, PAN-705M, PAC-846, EVS-811, etc.) to a good ground line using the ground terminals provided and signaled by ground label ⏚ .

The electrical connections for spark detector system do not present greater difficulties than are encountered in installing lights and switches.

The system must be powered by an external 24Vdc power supply.

Connections are made on terminal block, marked as per drawing.
Currents are fairly low, typically 0.1 to 0.4A. Cable size can therefore be from 0.5 to 1 mm^2, chosen for mechanical strength more than for voltage loss. Better not greater than 1 mm^2 to avoid inserting problems at the terminal.

The electrical circuit is protected against overload and short circuit by a fast press-to-reset thermal circuit breaker (max 1.5A) housed inside the control panel.
It is also protected against reverse polarity.

See on page MASP 18 for systems type “A” and “B” electrical connections.
See on page MASP 21 for systems type “E1” and “E” electrical connections.

Warning !!!

Fast impulsive electromagnetic noise in the factory can cause false alarms. To avoid them we suggest to take a few measures during wiring of spark detectors:

1. Good **ground** connection of metallic parts and of shields of shielded cables.
2. Keep **separate 24Vdc wiring** from higher voltage wiring (AC power line).
   If possible, run wiring through metallic tubing. Keep spark detectors wiring physically separate from other wiring (motor controls and other high power loads).

For further information see note on false alarms on pages MASP 26 and following.