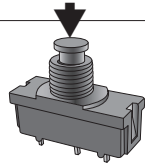


SYSTEMS TYPE "A" AND "B" electrical wiring

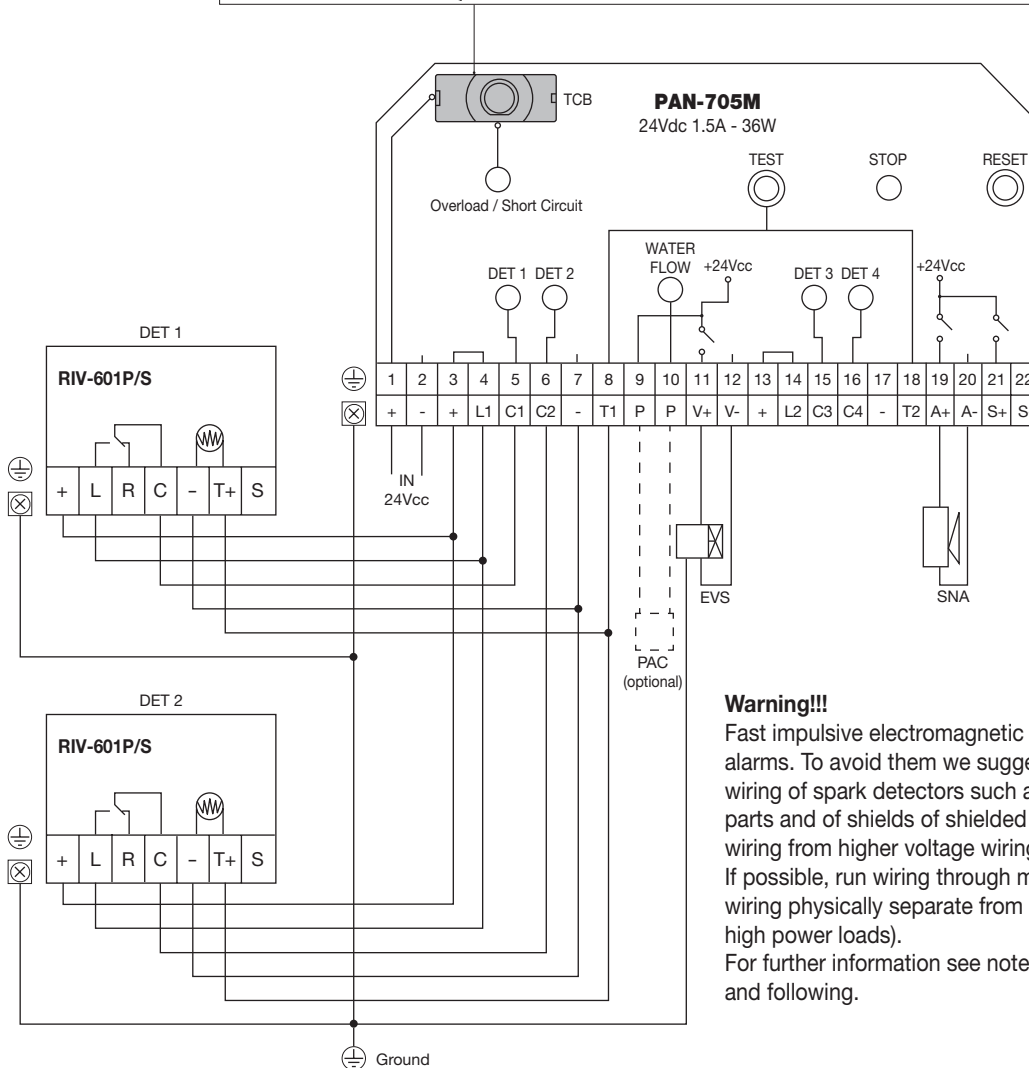
System type "A" comprises only one detector and one nozzle and it is used for "small" ducts up to 500mm diameter.
 System type "B" comprises 2 spark detectors and two nozzles and it is used for "large" ducts over 500mm diameter.

The PAN-705M control panel allows the simple systems type "A" and "B" expanding, transforming them into complete systems type "E1" and "E".

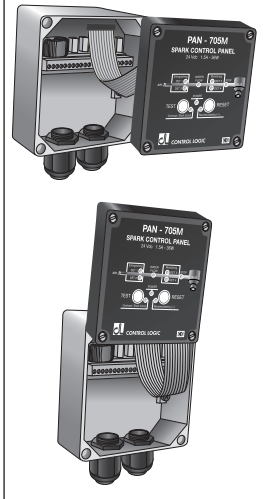


1.5A Thermal circuit breaker

In the event of overload or short circuit it automatically interrupts the current flow. Yellow LED on front panel lights up. Solve the problem and push the switch to resume normal operation.



The front panel should not be hung by the internal electrical connections. When you open the control panel it is suggested to place the front panel as represented by the pictures below.



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 such as good ground connection of metallic parts and of shields of shielded cables and to keep separate 24Vdc wiring from higher voltage wiring (A. C. 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 MASP26 and following.

No connection on spark detectors terminal "S".

Voltage 24Vdc – max 1,5A output current.

All wiring and grounding must be done in accordance with local and national rules and regulations.

Notes:

- It is highly recommended to connect the enclosure base to a good ground line using the ground terminal provided inside lower on the right. Then, connect base and cover using the ground terminal provided inside the base lower on the left and the ground terminal provided inside the cover lower on the right. All the ground terminals are signalled by ground label. The ground connection must be done using a yellow-green conductor and a M4 double crimp eyelet. The yellow-green conductor must be longer than the other conductors.
- In order to ensure an **IP66 protection grade** the cover must be tightly closed turning the four screws provided. The suggested closing torque value is $1 \div 1.5\text{Nm}$.

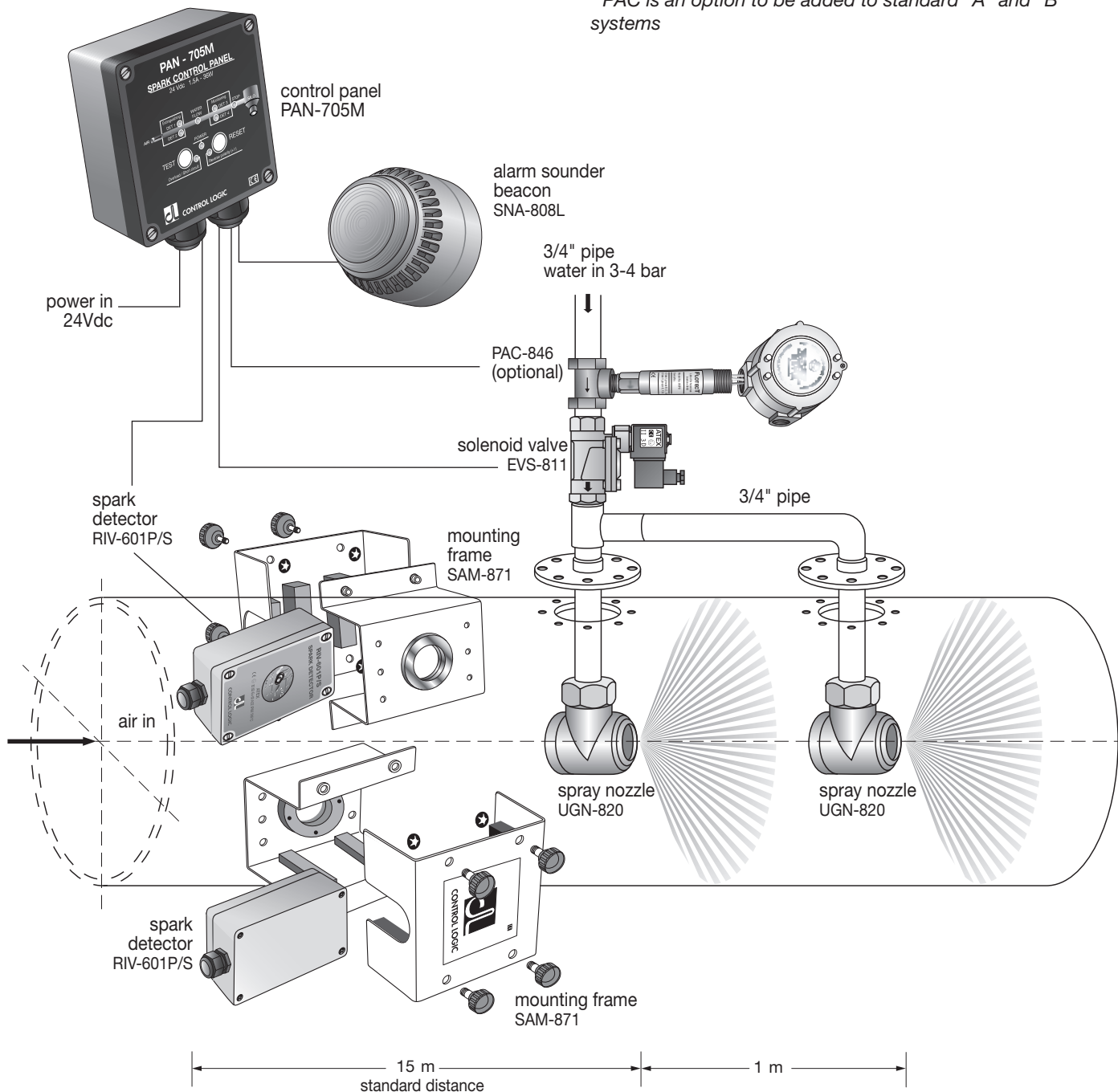
SYSTEMS TYPE "A" AND "B" system diagram

System type "A" comprises only one spark detector and one nozzle, and is used for "small" ducts up to 500mm diameter. System type "B" comprises 2 spark detectors and 2 nozzles, and is used for "large" ducts over 500mm diameter.

Component list:

Type "A"	Type "B"		
n. 1	n. 2	RIV - 601P/S	Spark detector
n. 1	n. 2	SAM - 871	Mounting frame
n. 1	n. 1	PAN - 705M	Control panel
n. 1	n. 1	SNA - 808L	Alarm sounder beacon
n. 1	n. 1	EVS - 811	Solenoid valve
n. 1	n. 2	UGN - 820	Spray nozzle
n. 1	n. 1	PAC - 846	Flow switch*

* PAC is an option to be added to standard "A" and "B" systems



DETECTION

See page MASP 13
for minimum distance between
detection and extinguishing

EXTINGUISHING



SYSTEMS TYPE "A" AND "B" startup operations

It is advisable to put on the front panel of the PAN-705M Control Panel the "NOT PRESENT" labels positioned on the missed components, e.g. DET 2, DET 3, DET 4, etc. (see page DESP 13).

- 1) Check that electrical connections are correct.
Do not open water
- 2) Apply voltage. The POWER LED will light on. All other LEDs should be off. The sound alarm should not sound and the solenoid valve should be de-energized and closed.
- 3) Execute the TEST operation. A pulse on the TEST button simulates a spark. The detectors turn active for 3 sec. The EXTINGUISHING DET LEDs light on for 3 sec, when alarm stops they blink.

The WATER FLOW LED stays off.

The sound alarm sounds for 3 sec.

The nozzle does not spray because the water supply is closed.

Remember that detectors are inactive for about 3 seconds after power voltage is applied (power-on delay).

- 4) Open the water supply. Check pressure: should be 3-4 bar at least.
- 5) Repeat the TEST sequence as per point (3). While the nozzle sprays, be sure that water really flows by observing the manometer or, if flow switch PAC-846 is provided, observing the WATER FLOW LED lighted for 3 sec. on the control panel. When alarm stops DET and WATER FLOW LEDs blink.
- 6) Press the RESET pushbutton to reset the alarm memory and bring the LED signals back to the stand-by state (LEDs turn off).

To check the sensitivity of detectors, remove them from the mounting frame and direct the front window to a light or a cigarette lighter. In this way each detector can be tested in turn, checking that the system is correctly installed.

List of possible malfunctions

1) The detector fails to operate with TEST.

Check the 24Vdc voltage on the +/- terminals of the detector and the 24Vdc voltage pulse on the "T+" and "-" terminals when pressing the TEST button.

If voltages are correct, the detector is faulty.

2) The detector is permanently in alarm.

Check the 24Vdc voltage on the +/- terminals of the detector and power supply unit. If it is correct, and provided that no light falls on the detector window, the detector is faulty. If the voltage is incorrect or unstable, maybe the power supply unit is faulty. The detector circuits could generate alarm signals in response to intermittent power voltage, even if the power-on delay will eliminate most of this problem.

3) The WATER FLOW LED (when flow switch PAC-846 is installed) is permanently on and the sound alarm sounds, while all other LEDs are off.

This signals a water leak in the solenoid valve due to rubber diaphragm being jammed by dirt or having a malfunction. Close the water supply and check. If necessary, open the solenoid valve body.

4) One or more LEDs do not blink after an alarm.

Check that the corresponding switches, positioned on the front panel circuit, are in "on" position (DIP switch 1-2-3-4 = DET 1-2-3-4, DIP switch 5 = WATER FLOW).

Notice: The detector is very sensitive. Movements of lights or sun light penetrating through openings in the duct may cause false alarms.