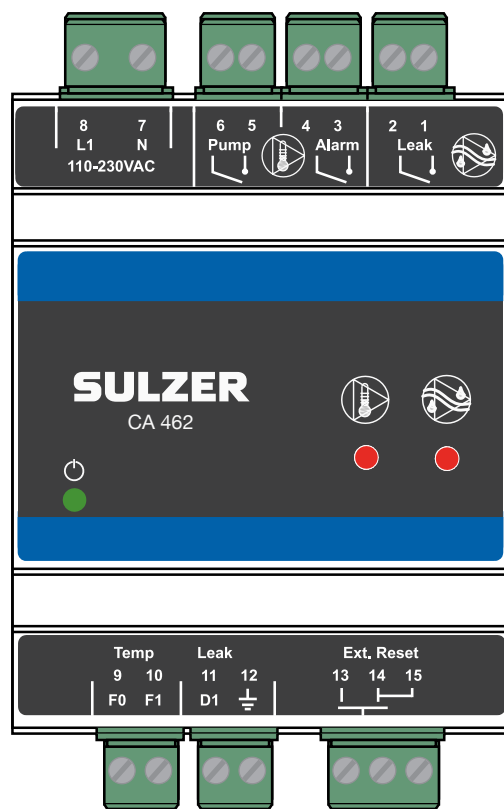

Temperature and Leakage Relay Type ABS CA 462



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1 FUNCTION AND USAGE

CA 462 is a combined standalone leakage detection and temperature blocking relay for DIN rail mount.

1.1 Function leakage

In case of water leakage, the resistance between the sensor electrode and housing will decrease. If the resistance becomes less than 100 kohm ($\pm 10\%$) between terminals 11 and 12, the relay contact on terminal 1 and 2 closes. The signal has to be stable for at least 10 seconds before the relay is been activated.

1.2 Function Temperature blocking

If the temperature in the pump is rising and the terminal protector sets off, the CA 462 is blocking the pump without any delay.

Automatic reset

– **if terminal 14 and 15 are open;** pump starts automatically when the temperature is back to normal.

Manual reset

– **if terminal 14 and 15 are bridged;** manual reset has to be done by terminal 13 and 14 after the temperature is back to normal.

Table 1: Connection chart

| Terminal | Description |
|----------|---|
| 1 | Leakage Alarm Relay (NO) |
| 2 | Leakage Alarm Relay |
| 3 | High Temperature Alarm Relay (NO) |
| 4 | High Temperature Alarm Relay |
| 5 | Pump Relay (NO) (Closed under normal operation) |
| 6 | Pump Relay |
| 7 | Power Supply (0 V or N) |
| 8 | Power Supply (+24 VDC or L1) |
| 9 | Input from pump temperature sensor (PTC / Klixon) |
| 10 | Input from pump temperature sensor (PTC / Klixon) |
| 11 | Input from pump leakage probes |
| 12 | Connect to Ground or Pump chassis |
| 13 | Reset switch for high temperature alarm |
| 14 | Reset switch for high temperature alarm |
| 15 | Manual reset required if bridged to terminal 14* |

* If bridged to terminal 14; manually reset is required after high temperature alarm **after** condition is back to normal. If **not** bridge; pump start automatically when condition is back to normal.

Table 2: Product reference

| Article | Description |
|----------|-----------------------------------|
| 16907006 | CA 462 110-230 VAC Supply voltage |
| 16907007 | CA 462 18-36 VDC Supply voltage |

One item of Xylem MiniCas adapter is included in both 16907006 and 16907007.

Table 3: Logic table of relay

| Alarm Type | Alarm LED | | Input State | | Output Relay State | | | Remark |
|---------------|-------------|---------|---------------|----------------|--------------------|---------------|--------------|------------------|
| | Temperature | Leakage | Temp (9 & 10) | Leak (11 & 12) | Pump (5 & 6) | Alarm (4 & 3) | Leak (2 & 1) | |
| | | | closed | open | closed | open | open | Normal operation |
| Temperature | Yes | - | > 3.3 kohm | open | open | closed | open | Pump stops |
| Leakage | - | Yes | closed | < 100 kohm | closed | closed | closed | Pump runs |
| Temp. + Leak. | Yes | Yes | > 3.3 kohm | < 100 kohm | open | closed | closed | Pump stops |

2 CONNECTION DIAGRAM

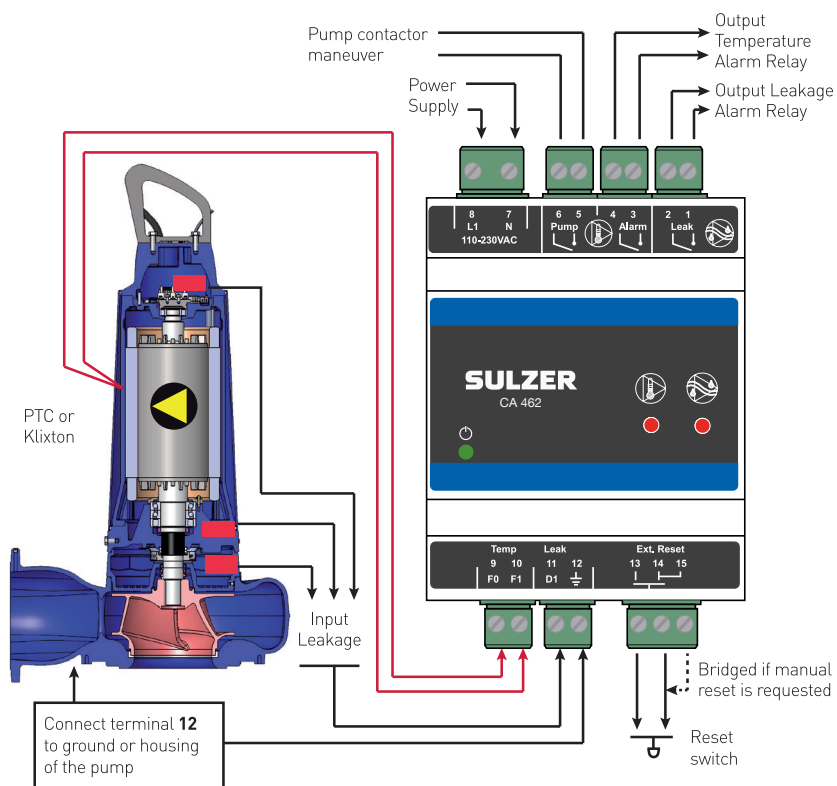


Figure 1 Electrical connection diagram

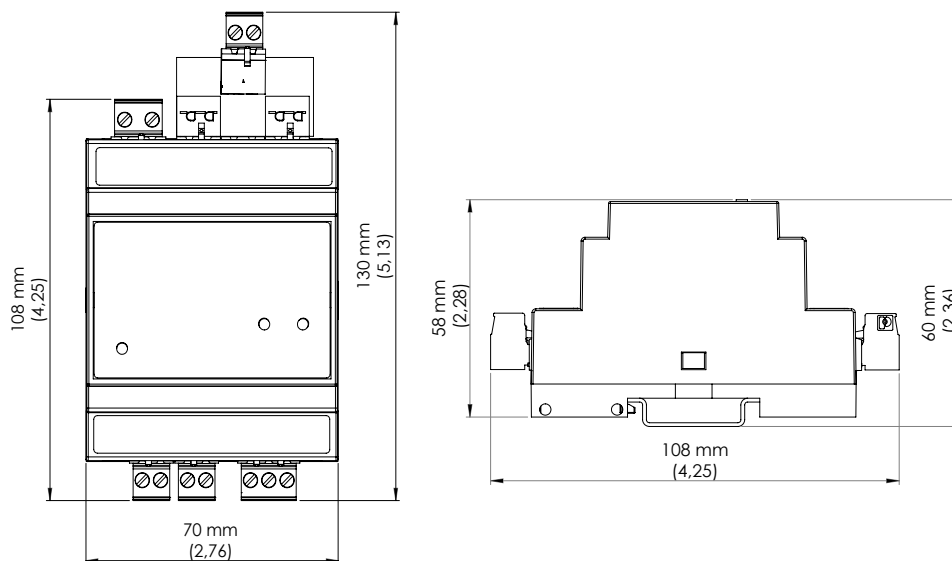


Figure 2 Dimensions

81907004F

3 ACCESSORIES

3.1 Xylem MiniCAS adapter

Table 4: Spare part

| Article | Description |
|----------|-----------------------|
| 16907009 | Xylem MiniCAS Adapter |

3.1.1 Connection Diagram MiniCAS Adapter

Xylem MiniCAS adapter is a PCB with resistor network for interfacing CA 462 to Xylem MiniCAS relay. The output to MiniCas is polarity independent.

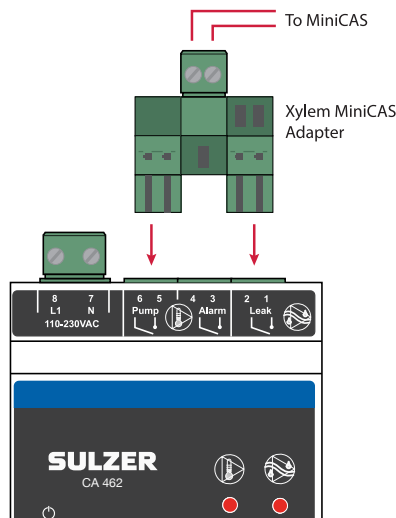




Figure 3 Connection diagram for MiniCAS adapter

Table 5: Logic diagram of output resistance related to the inputs

| Temperature Input | Seal Leak Input | Output Resistance |
|---|------------------------------|-------------------|
| OK | OK | Nominal (1500 Ω) |
| OK | Seal failure Condition | LOW (400 Ω) |
| Over-temperature Condition (open or disconnected) | OK or Seal Failure Condition | HIGH (>4000 Ω) |

4 TECHNICAL DATA

4.1 Technical data CA 462

| | | |
|--|--|---------------------------|
| Temperature input threshold ($\pm 10\%$) | > 3.3 kohm (PTC / Klixon) | |
| Max PTC current | < 0.6 mA | |
| PTC source voltage | 12 VDC | |
| Leakage sensor voltage | 12 VDC | |
| Max leakage sensor current | < 15 μ A | |
| Leakage detection threshold ($\pm 10\%$) | < 100 kohm | |
| Leakage alarm delay | 10 seconds | |
| Ambient operating temperature | -20 to +50 °C (-4 to +122 °F) | |
| Ambient storage temperature | -30 to +80 °C (-22 to +176 °F) | |
| Degree of protection | IP 20, NEMA: Type1 | |
| Housing material | PPO and PC | |
| Mounting | DIN Rail 35 mm | |
| Installation category | CAT II | |
| Pollution degree | 2 | |
| Flame rate | V0 (E45329) | |
| Humidity | 0-95% RH non-condensing | |
| Dimensions | H x W x D: 108 x 70 x 58 mm (4.25 x 2.76 x 2.28 inch) | |
| Power supply | 16907006 | 110-230 VAC |
| | 16907007 | 18-36 VDC SELV or Class 2 |
| Fuse | Max 10 A | |
| Terminal wire size | Use copper (Cu) wire only. 0.2 - 2.5 mm ² flexible core, stripped length 8 mm. | |
| Terminal tightening torque | 0.56 - 0.79 Nm (5 -7 lbs-in) | |
| Power consumption | < 5 W | |
| Max load alarm relays | 250 VAC 3 Ampere resistive load | |
| Altitude | Max 2000 MASL or 6562 ft. AMSL | |
| Max load output pump blocking relay | 250 VAC 6 Ampere resistive load | |
| Compliance |   | |

Attention If the unit is used in a manner not described in this document the protection provided by the equipment may be impaired.

4.2 *Cleaning*

How to clean the unit

Powers off the unit and only outside/front shall be cleaned by using a dry, soft cloth. A good choice would be the microfiber type of cloth and gently wipe the CA 462 unit on front in order not to scratch the overlay. If the dry cloth did not completely remove the dirt, do not press harder in an attempt to scrub it off. If necessary, moisten the cloth by adding a small amount of water with thin solution of mild detergent and try again. Never use detergent with polish or solvent which can have an impact of the plastic surface.

Declaration of Conformity

As defined by:

EMC-Directives 2004/108/EC and 92/31/EEC, Low Voltage Directive 2006/95/EC, Directive for CE-Marking 93/68/EEC

| | |
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| (EL) Δήλωση εναρμόνισης EK | (SK) EC Vyhlásenie o zhode |
| (TR) AT Uygunluk Beyanı | (HU) EK Megfelelőségi nyilatkozat |

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Temperature and leakage relay type ABS CA 462

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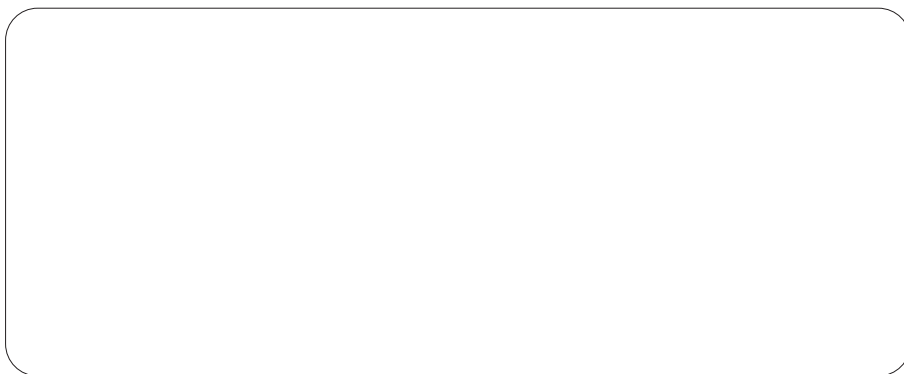
Safety: EN 61010-1:2010

EMC: EN 61000-6-1:2007, EN 61000-6-2:2005, EN 61000-6-3:2007+A1:2011, EN 61000-6-4:2007+A1:2011

Stockholm 2016-09-13



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