

# SMART module

## → Control module for solid state relays

- Patented operating principle (96 050 16).
- Provides both visual and electrical information if a fault occurs in the circuit or on the solid state relay being controlled
- For mounting on single-phase "hockey-puck" type solid state relays.
- Peak voltage 1200 V AC : suitable for solid state relays with DC input and A AC output.
- Alarm output : 4-32 V = push-pull transistor.
- Optical isolation 4000 V AC.
- Conforms with EC low-voltage directive.



### Specifications

Type	Current	Output voltage	Input voltage	Code
" hockey puck "	15 → 35 mA	4 → 32 V DC	5 → 24 V DC	84 060 001

### General characteristics

#### Electrical characteristics

Maximum voltage (V DC)	32
Minimum voltage (V DC)	3
Max. voltage in stopped state (V DC)	1
Line voltage V(rms)	48 → 660
Peak voltage (1 min. max) V(peak)	1200
Leaking current (at maximum line voltage) mA (rms)	8

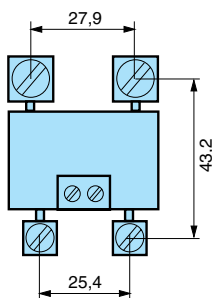
#### DC power supply / Alarm output

Voltage alarm output (V DC)	4 → 32
Current alarm output (mA)	60

#### Characteristics

Operating temperature range (°C)	-20 → +80
Storage temperature range (°C)	-40 → +100
Input / output insulation voltage (limited to 1 mA for 1 sec. - Ta = 25 °C) V(rms)	4000

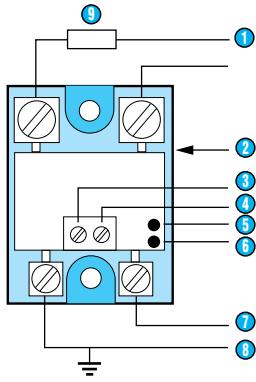
### Dimensions



To order, see page 6

For more information [www.crouzet.com](http://www.crouzet.com)

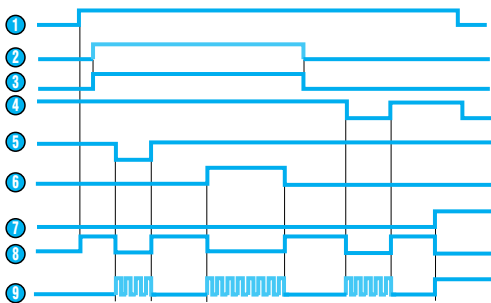
## Connections



- ① Mains 48-660 V AC
- ② Solid state relay
- ③ Alarm output (4-32 V DC) (1)
- ④ Auxiliary power supply (4-32 V DC) (1)
- ⑤ Red LED : Alarm
- ⑥ Green LED : Input
- ⑦ SSR Input (3-32 V DC) (1)
- ⑧ Common
- ⑨ Load

The SSR input, the SMART MODULE alarm output and the SMART MODULE + power supply all share the same-terminal

## Curves



- ① SMART SSR power supply
- ② SSR input
- ③ Green LED
- ④ Mains presence
- ⑤ Load : closed circuit
- ⑥ SSR : external short-circuit on output terminals
- ⑦ SSR : output failed (internal short-circuit)
- ⑧ Alarm output
- ⑨ Alarm LED

### Operating principle

The SMART MODULE can be mounted on any single-phase solid state relay with DC input / AC output in a "hockey puck" casing. The SMART MODULE has constant power supply to ensure that both the relay and the load being controlled are functioning correctly. The SMART MODULE provides information on the relay status by means of an LED display and an alarm output.

### Operation

Power is supplied to the SMART MODULE between its 4-32 V DC terminal (+) and the - terminal of the solid state relay control input. During correct operation when the relay is not being controlled, the alarm output is at 4-32 VDC and the LED are off. During correct operation when the relay is not being controlled, the green LED is on and the alarm remains at 4-32 VDC. If the mains voltage is lost or there is a short-circuited on the relay output, the alarm output changes to 0 VDC and the red LED flashes. If the relay output is faulty, the alarm output changes to 0 VDC and the red LED comes on.