

- Measures its own power supply voltage
- 3 versions : 9.6 V  $\approx$ , 20 V to 80 V  $\approx$ , 90 V to 270 V  $\approx$
- Threshold adjustable on absolute direct scale
- Normal or reverse relay selection by switch on front face
- Delay on upward crossing of threshold adjustable from 0.1 to 3 seconds on front face



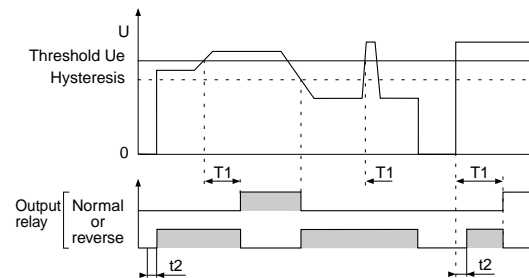
### Operating principle

Voltage threshold relay DSR2/LSR2 controls an electrical voltage which acts as its own power supply voltage (simplified wiring).

#### 1 - Control of AC/DC current WITHOUT latching

When the value of the AC or DC current being controlled reaches threshold  $U_e$ , displayed on the front face, the output relay changes state at the end of time delay  $T_1$  (adjustable between 0.1 and 3 seconds on front face).

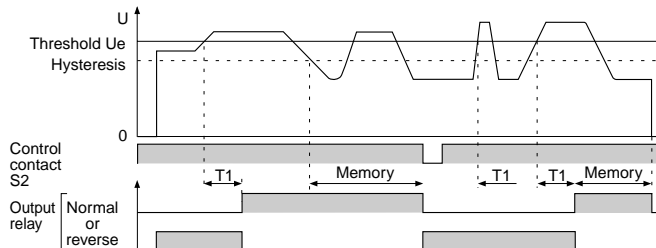
As soon as the current drops to below 5 to 25 % of the threshold (hysteresis) the output relay changes state again instantly. Changing the hysteresis value (on the front face) does not therefore change the value of the preset threshold.



#### 2 - Control of AC/DC current WITH latching (Terminals Y1 and M or 9 and 8 connected)

When the value of the current being controlled reaches threshold ( $U_e$ ) displayed on the front face the output relay changes state, after time delay  $T_1$  (adjustable between 0.1 and 3 seconds on the front face) and remains latched in this position.

To reset the relay, open contact S2 between Y1 and M (9 and 8) or disconnect the power supply to the unit.



#### Note :

Time delay  $T_1$  on downward crossing of the threshold (adjustable between 0.1 and 3 seconds on front face) provides protection against transients and other interference that can cause spurious triggering of the output relay.

To control a DC current, connect a link between terminals Y2 and M (11 and 8).

Connections Y1-M (9-8) and Y2-M (11-8) should be as short as possible (less than 1 metre).

A red LED indicates the state of the relay : LED "ON" = Relay "ON".

A green LED indicates the presence of the power supply.

### Type

DIN rail or face mounting	DSR2	LSR2
11-pin plug-in		

### Part numbers (and voltages)

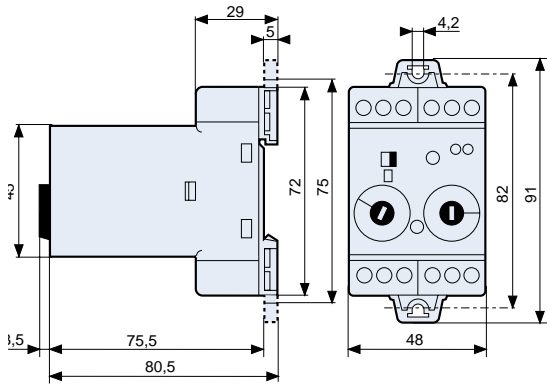
12 V $\approx$	84 893 011	84 893 021
20 - 80 V $\sim \approx$	84 893 015	84 893 025
90 - 270 V $\sim \approx$	84 893 016	84 893 026

### Technical specification

Supply voltage $U_n$	7.5 V • 16 V $\approx$
with protection against polarity errors	15 V • 87 V $\approx$ 67.5 V • 275 V $\approx$ 50/60 Hz
Voltage thresholds (shown directly as absolute values)	9.6 V • 15.6 V $\approx$ (-20 % +30 % from 12 V $\approx$ ) 20 V • 80 V $\approx$ 90 V • 270 V $\approx$
Maximum power consumption	Version V $\sim$ 3.5 VA Version $\approx$ 1.5 W
Adjustable hysteresis	20 - 80 V $\sim \approx$ 5 • 25% of displayed threshold 90 - 270 V $\sim \approx$ 5 • 20% of displayed threshold
Display accuracy	of the full scale $\pm 10 \%$
Repetition accuracy with constant parameters	$\pm 0.5 \%$
Drifts with temperature variations	$\pm 0.02 \%$ / °C
Delay on upward crossing of threshold $T_1$ (including relay's own response time)	0.1 • 3 s, 0 + 30 %
Delay on pick-up $T_2$ (position I)	50 ms
Output relay (to meet AC1 requirements, resistive load)	1 AgCdO changeover, 10 A~ max.
Temperature limits	Use -10 °C • +60 °C Stored -20 °C • +70 °C
Weight	250 g

# Dimensions

D2 clip-on casing  
Rear connections

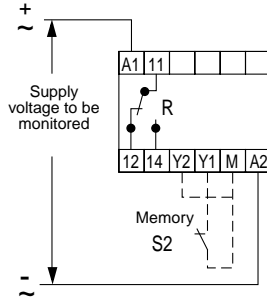
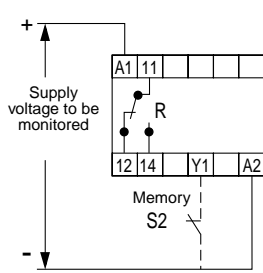


# Wiring diagrams and applications

## DSR2/LSR2

12 V  $\approx$  version

20 - 80 V  $\sim$   $\approx$   
and 90 - 270 V  $\sim$   $\approx$  version



To control DC currents, short-circuit terminals Y2 and M (11 and 8).

DSR2	A1	A2	11	12	14	M	Y1	Y2
LSR2	2	10	1	4	3	8	9	11