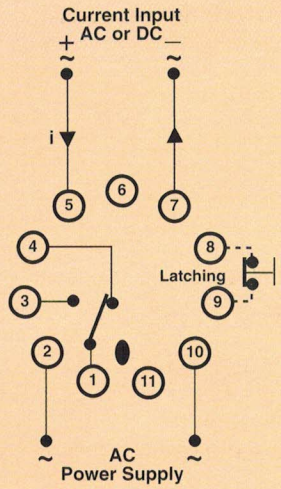
Wiring and Connection

Power Supply: to be connected to pin 2 (phase/positive) and 10 (neutral/negative).

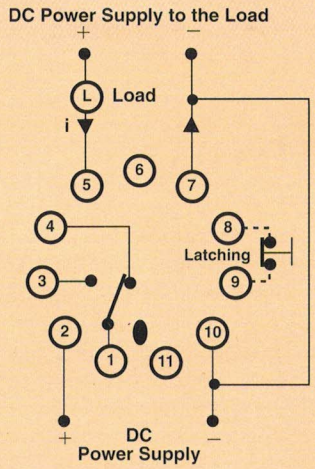
Relay Contacts: to be connected:
1 + 3 normally open
1 + 4 normally closed.

Latching: Latching to be enabled by interconnecting pin 8 and pin 9 (eg. push-to-open reset button).



APPLICATION 1

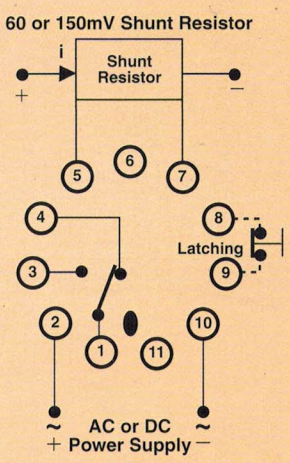
Direct In-Line Sensing: (NB: NOT suitable for DC supply on pin 2 and pin 10). Connect the sensing pin 5 and pin 7 input in series with the current loop. For DC monitoring, the polarity must be observed (pin 5 positive, pin 7 negative).



APPLICATION 2

DC Current Sensing: DC power supply on pin 2 and pin 10 : In this mode, the DC power supply and current sensing input share a common negative connection, since no galvanic isolation is provided. **Therefore, the current input, pin 5 and pin 7, has to be connected in series between the negative lead and the load.**

NB: Pin 10 and pin 7 are to be externally linked. DO NOT CONNECT THE LOAD BETWEEN PIN 7 AND PIN10.



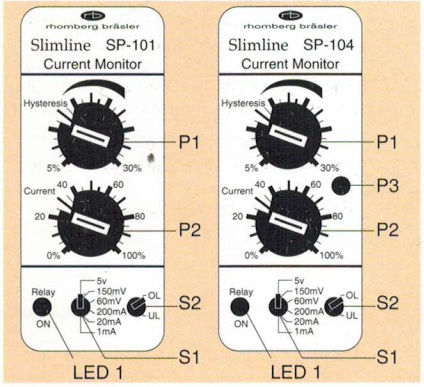
APPLICATION 3

DC Current Sensing with External Shunt: Connect the shunt between pin 5 (+) and pin 7 (-) observing the correct polarity.

For extended wiring between the shunt and the module, screened wire is recommended to prevent induction of hum or noise on the sensing inputs. The screen should be connected to pin 7 or earth.

Note: For DC supply on pin 2 and pin 10, pin 7 and pin 10 are to be externally linked, (refer to application 2).

Description of Controls



P1: **Hysteresis** ie. the difference between the tripping point and the recovery point is set between 5% and 30% on P1. (Hysteresis relates to set-point P2)

P2: **The Current Threshold** (tripping point) is adjusted on P2. Maximum setting of 100% corresponds with a current (millivolt) level selected on S1.

P3: Adjustable response delay from 0,1 to 10 seconds (SP-104).

S1: **The Input Range** is set on S1.

S2: **Function Selection** is provided by S2. If set to "OL" the unit operates as an overload detector. If set to "UL" the unit operates as an underload detector.

LED 1: The LED1 illuminates to indicate that the relay is energised. The LED will be off if the unit registers a fault condition (overload/underload) or the power supply to the unit is interrupted.

Technical Specification

Power Supply:

AC: Supply voltage: 12, 24, 110, 230, 400, 415, 525V ±15%
Isolation (current input to power supply): 2kV
Power consumption:
3VA (approx.)
6VA for 415,525V (approx.)

DC: Supply voltage: 10-30V, 48, 60, 110V ± 15%
Isolation: no galvanic isolation.
Power consumption:
100mA (10-30V),
30 mA for 48V and higher.

Current Input:

Repetitive accuracy:1%
Hysteresis:5% to 30% (adjustable).

Range	Input Impedance	Maximum Input (continuous)
1mA	60 Ohm	60mA
20mA	3 Ohm	350mA
200mA	0,7 Ohm	800 mA
60mV	10k	50V
150mV	10k	50V
5mV	10k	50V

Response:

Start-up delay:
Approximately 10 seconds standard (0,1 to 15 seconds also possible on special order)

Response delay:
SP-101 - 1 second.
SP-104 - adjustable from 0,1 to 10 seconds (other ranges on special order).

Additional Slimline technical information on page 69