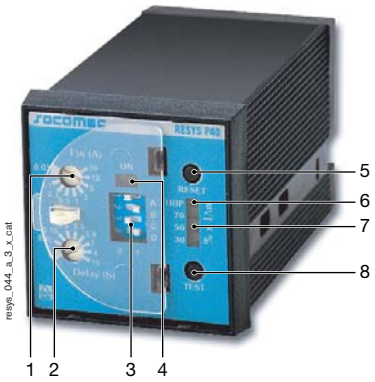
RESYS P40



RESYS P40 (Type AC and A)

1. Setting threshold value IΔn.
2. Time delay setting.
3. Configuration micro-switches (x4).
4. “ON” LED.
5. “RESET” pushbutton.
6. “TRIP” alarm LED.
7. LED bargraph (% x IΔn).
8. “TEST” pushbutton.

Functions

Earth leakage protection relay **RESYS Type P40** is associated with a remote trip breaking device (automatic power cut-off), and provides the following functions:

- protection against indirect contacts,
- limitation of leakage currents.

The relay also monitors electrical installations when used directly as signalling relay.

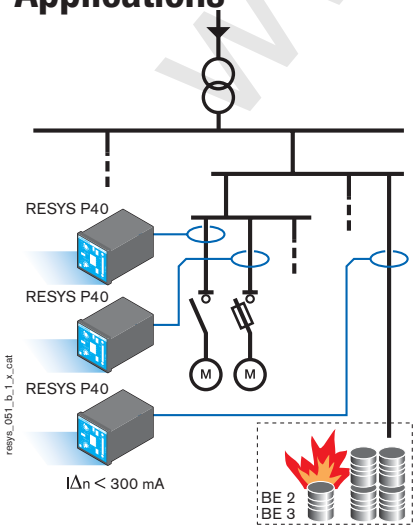
Conformity to standards

- IEC 60755
- IEC 60947-2
- IEC 62020
- IEC 60364

General characteristics

- Compact size.
- RESYS P40 relay with 2 alarm relays:
  - either 2 alarm relays,
  - either 1 alarm relays or 1 pre-alarm (50 % IΔn) relay.
- Adjustment sensitivity 0.03 to 30 A.
- Time delay 0 to 10 s.
- Measurement accuracy by TRMS.
- Automatic instantaneous tripping at 30 mA.
- Positive or negative security configurable by the user.
- Selection of toroid ratio.
- Automatic permanent relay-toroid connection test.
- Sealed cover.

Applications



Rapid recognition of an insulation fault increases the availability of the distribution network by preventing accidental power cuts and the resulting loss of production. TRMS measurement avoids repeated random tripping and the bargraph allows the display of permanent leakage current.

RESYS P40 are particularly suitable for insertion in electricity control panels with withdrawable compartments.

Examples of conventional applications

AC LV networks: TT, TNS, IT.

Monitoring pure AC differential currents (type AC) and pulsed (type A) to provide the following functions:

- protection:
  - against indirect contact,
  - against fire risk,
  - against explosion risk,
  - of earth and protection conductors,
  - motor, equipment and hardware protection;
- preventive signalling;
- monitoring installations where periodic insulation measurement with power off is impossible;
- used with SOCOMEC “Core balance transformers” (see page B.82).

RESYS P40

References

Auxiliary power supply U_s (1)	References
115 VAC	4942 **2711** (2)
230 VAC	4942 **2723** (2)
12 … 125 VDC	4942 **2602** (2)

(1) Other supply voltages: please consult us.
(2) References and characteristics of the "Core balance transformers", see page B.82.

Accessories

IP65 soft protection cover	4942 **0000**

Electrical characteristics

Auxiliary power supply U_s

Frequency	47 … 63 Hz
AC operating zone	0.8 … 1.15 U_s
DC operating zone	0.8 … 1.05 U_s
Consumption	6 VA (AC) / 5 W (DC)

Insulation (according to IEC 60664-1standard)

Rated insulation voltage	250 VAC
Rated impulse voltage	2.5 kV (115 VAC) / 4 kV (230/400 VAC)
Degree of pollution	Class 3

Threshold values

Setting IΔn	0.03 - 0.1 - 0.3 - 0.5 - 1 - 3 - 5 - 10 - 30 A
Accuracy of tripping	- 20 … - 10 % IΔn
Domain of network frequency	15 … 400 Hz
Specified time setting	0 - 0.06 - 0.15 - 0.30 - 0.50 - 0.80 - 1 - 4 - 10 s
PRE-ALARM relay tripping	50 % IΔn
Hysteresis of the PRE-ALARM relay	20 % IΔn

Alarm

Alarm configuration mode	memory / automatic reset
Alarm factory setting	memory
RESET	manual by pushbutton or using the terminals

Output contacts

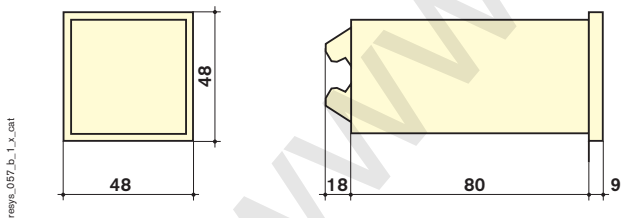
Number of contacts	2
Type of ALARM 1 contact	250 VAC - 8 A - 2000 VA
Type of ALARM 2 or PRE-ALARM contact	250 VAC - 6 A - 1500 VA
ALARM 1 operating mode	positive / negative security
ALARM 2 or PRE-ALARM operating mode	positive / negative security (1)
Factory setting of ALARM 1 operating mode	negative security
Factory setting of ALARM 2 operating mode	positive security

(1) According to configuration described in the technical manual.

Operating conditions

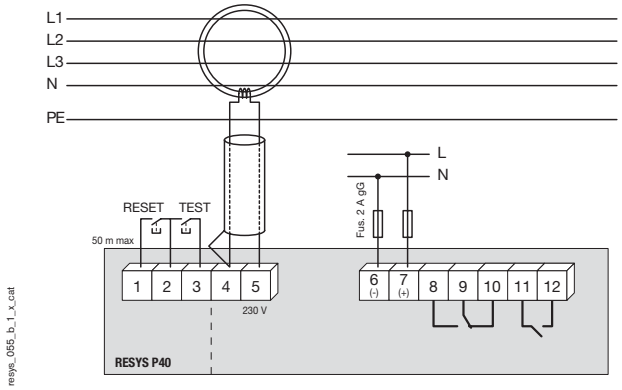
Operating temperature	- 20 … + 55 °C
Storage temperature	- 30 … + 70 °C

Overall dimensions



Type	panel mounting
Dimensions W x H x D	48 x 48 x 107 mm
Case protection rating	IP40
Terminal block protection rating	IP20
Rigid cable connection section	0.2 … 4 mm²
Flexible cable connection section	0.2 … 2.5 mm²
Weight	190 g
Cut-out	45 x 45 mm

Terminals



1 - 2 - 3: external pushbuttons
4 - 5: SOCOMEC differential toroid connections
6 - 7: auxiliary power supplies U_s
8 - 9 - 10: alarm relay 1 outputs
11 - 12: alarm relay 2 or pre-alarm outputs

NOTE: The earth must not pass through the C.T.
For single phase applications, only the live and neutral need to be passed through the C.T.
Cabling: for distances > 1 m, use twisted pair cable between the unit and C.T.