RESYS P40

Type A earth leakage relays for motor load break

new

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RESYS P40

Function

RESYS P40 earth leakage relays associated with a remote trip breaking device (automatic power breaking), provide the following functions:

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

They also preventively monitor electrical installations via their (configurable) pre-alarm function or when used as signalling relays.

Advantages

Fully configurable

- 2 relays with configurable function (alarm or pre-alarm at 50% IΔn).
- Adjustment of IΔn from 0.03 to 30 A.
- Time delay 0 to 10 s.
- Positive or negative security configurable by the user.
- Selection of toroid ratio.

Tripping accuracy by TRMS measurement.

Improves immunity to nuisance tripping.

Instantaneous display of permanent leakage currents.

The LED bargraph provides a real-time display of fluctuations in leakage currents.

Compact 48x48mm panel-mounted unit

The adjustment buttons are protected by a sealable cover, while the display of available alarms is displayed directly on the front face of the device.

Improved immunity to EMC interferences

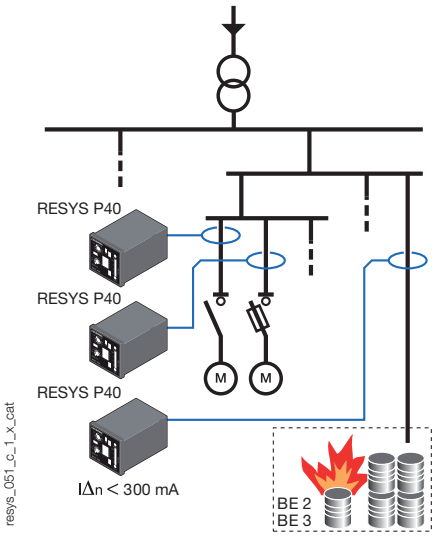
The device has new electronics which improve electromagnetic compatibility.

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

Protection against fire or explosion risks

The use of Residual Differential Devices (with adjustment IΔn ≤ 300 mA) provides protection against the risk of fire or explosion generated by tracking currents to earth, in areas classed as BE2 or BE3 respectively. This protection is mandatory in TT, TN and IT neutral systems.



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The solution for

- Process.
- Manufacturing.
- Oil, gas and petrochemistry.

Strong points

- Fully configurable.
- Tripping accuracy by TRMS measurement.
- Instantaneous display of permanent leakage currents.
- Compact and modular case with LED bargraph.
- Improved immunity to EMC interferences.

Conformity to standards

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

Approvals and certifications(1)

(1) *Product reference on request.*

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Front panel

1. IΔn setting.
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.

Characteristics

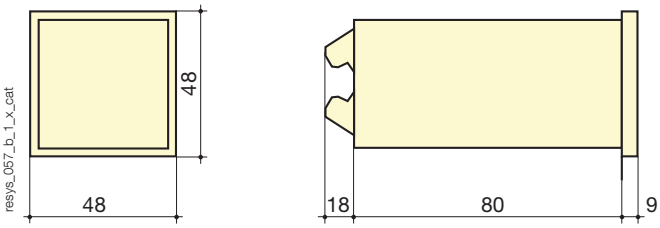
Auxiliary power supply U_s	
Frequency	47 … 63 Hz
AC operating zone	0.8 … 1.15 U_s
DC operating zone	0.8 … 1.05 U_s
Consumption	6 VA (AC) / 5 W (DC)
Insulation (according to IEC 60664-1 standard)	
Rated insulation voltage	250 VAC
Rated impulse voltage	2.5 kV (115 VAC) / 4 kV (230/400 VAC)
Degree of pollution	Class 3
Threshold values	
IΔn setting	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
Time delay 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	storage / automatic reset
Alarm factory setting	storage
Reset	manual by pushbutton / using terminal
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(1)
ALARM 2 or PRE-ALARM operating mode	positive security(1)
Factory setting of ALARM 1 operating mode	negative security
Factory setting of ALARM 2 operating mode	positive security

(1) Negative security: relay activated in case of alarm / Positive security: relay not activated in case of alarm.

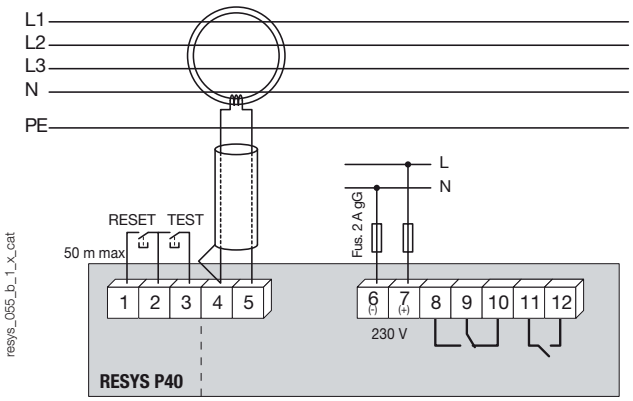
Operating conditions	
Operating temperature	- 20 … + 55 °C
Storage temperature	- 30 … + 70 °C

Case



Type	panel mounting
Dimensions W x H x D	48 x 48 x 107
Case protection index	IP40
Terminal protection index	IP20
Rigid cable cross-section	0.2 … 4 mm^2
Flexible cable cross-section	0.2 … 2.5 mm^2
Weight	190 g
Cutout	45 x 45 mm

Terminals and connections



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

Note: The earth conductor 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.
Do not connect the shield to earth.

References

Auxiliary power supply U_s(1)	**RESYS P40 Reference**
115 VAC	4942 **3711**(2)
230 VAC	4942 **3723**(2)
12 … 125 VDC	4942 **3602**(2)

(1) Other rating: Please consult us. (2) References and characteristics of closed, split core and rectangular toroids: see "Core balance transformers type A" p. 522.

Description of accessories	**Reference**
Soft protection cover IP65	4942 **0000**