

RESYS M40

Type A differential relays

for motor load break



Function

RESYS M40 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% I∆n).
- Adjustment of I∆n 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 modular design

44 mm in width, the unit allows easy integration into dedicated enclosures. 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

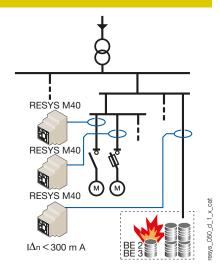
The device has new electronics which improve electromagnetic compatibility.

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.

Protection against fire or explosion risks

The use of Residual Differential Devices (with adjustment I∆n ≤ 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.



- > Processes
- > Manufacturing
- > Oil, gas and petrochemistry
- > Energy production

Strong points

- > Fully configurable
- > Measurement accuracy by TRMS
- > 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 60664
- > IEC 61543 A1



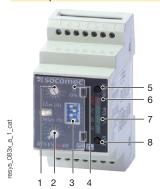
Approvals and certifications⁽¹⁾



(1) Product reference on request



Front panel



- 1. I∆n setting.
- 2. Time delay setting.
- 3. Configuration micro-switches (x4).
- 4. "ON" LED.
- 5. "RESET" pushbutton.
- 6. "TRIP" alarm LED.
- 7. LED bargraph (% x l∆n).
- 8. "TEST" pushbutton.

General characteristics

- RESYS M40 with 2 configurable relays:
 - either 2 alarm relays,
 - or 1 alarm relay and 1 pre-alarm relay (50 % $I\Delta n$).
- Adjustment sensitivity from 0.03 mA to 30 A.
- Time delay 0 to 10 s.
- Tripping accuracy by TRMS measurement.
- Automatic instantaneous tripping at 30 mA.
- Positive or negative security configurable by the user.
- Selection of toroid ratio.
- Automatic permanent relay-toroid connection test.
- Sealable cover.

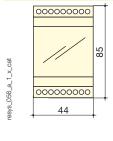
Characteristics

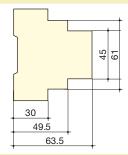
47 00 11			
	- 0		
	0		
6 VA (AC) / 5 W (DC)			
Insulation (according to IEC 60664-1 standard) Rated insulation voltage 250 VAC			
,	2.5 kV (115 VAC) / 4 kV (230/400 VAC)		
Class 3			
0.03 - 0.1 - 0.3 - 0.5 - 1 - 3 - 5 - 10 - 30 A			
- 20 10 % l∆n			
15 400 Hz			
0 - 0.06 - 0.15 - 0.30 - 0.50 - 0.80 - 1 - 4 - 10 s			
50 % l∆n			
20 % l∆n			
storage / automatic reset			
storage			
manual by pushbutton / using terminal			
Number of contacts			
Type of ALARM 1 contact			
l contact	250 VAC - 6 A - 1500 VA		
	positive / negative security(1)		
ALARM 1 operating mode ALARM 2 or PRE-ALARM operating mode			
Factory setting of ALARM 1 operating mode			
Factory setting of ALARM 2 operating mode			
	664-1 standa 250 VAC 2.5 kV (115 Class 3 0.03 - 0.1 - 20 10 15 400 F 0 - 0.06 - 0. 50 % IΔn 20 % IΔn storage / au storage manual by p contact ng mode ting mode		

(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

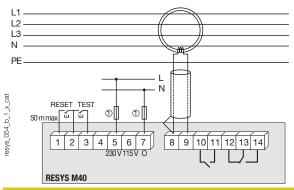
Case





Туре	modular
Number of modules	2.5
Dimensions W x H x D	44 x 85 x 63.5
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

Terminals and connections



- 1 2 3: external push buttons
- **5 6 7:** auxiliary power supplies U_{s}
- 8 9: SOCOMEC differential toroid connections
- 10 11: alarm relay 2 or pre-alarm outputs
- 12 13 14: alarm relay 1 output

Note: The earth conductor must not pass through the toroid.

For single phase applications, only the live and neutral need to be passed through the toroid.

Cabling: for distances > 1 m, use twisted pair cable between the unit and toroid. Do not connect the shield to earth.

1. Fuses 2 A gG.

References

	RESYS M40
Auxiliary power supply U _s ⁽¹⁾	Reference
115 / 230 VAC	4941 3723 ⁽²⁾
400 VAC	4941 3740 ⁽²⁾
12 125 VDC	4941 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"

