

Earth leakage relays type A "Motor feeder"

Function

RESYS M40 earth leakage relays are associated with a remote trip breaking device (automatic power breaking), thus providing the following functions:

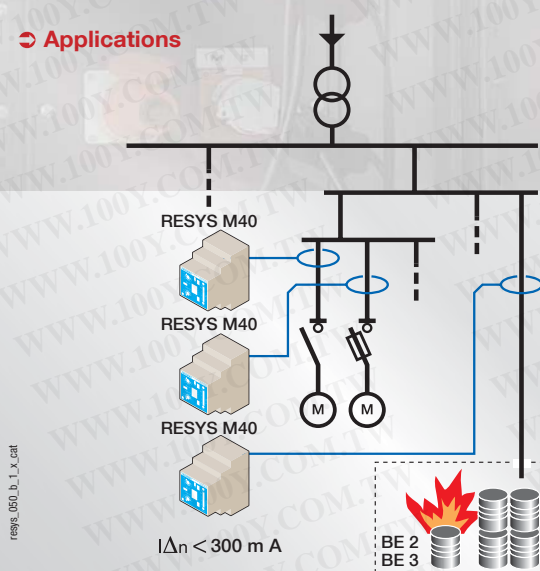
- protection against indirect contact,
- limitation of leakage currents.

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

Conformity to standards

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

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.

Examples of conventional applications

AC LV networks: IT, TT, TNS.

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

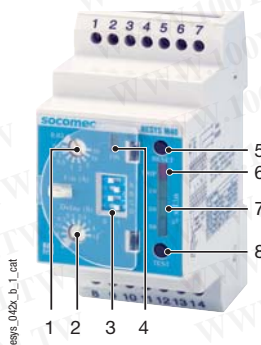
- protection
 - against indirect contact,
 - against fire or explosion risk, (classified sites BE2 and BE3 depending NF C 15-100),
 - of earth and protection conductors.
- preventive signalling,
- monitoring installations where periodic insulation measurement with power off is impossible.

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

General characteristics

- RESYS M40 with 2 configurable relays:
 - either 2 alarm relays,
 - or 1 alarm relay and 1 pre-alarm relay (50 % IΔn).
- Adjustment sensitivity from 30 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.

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 Us	
Frequency	47 ... 63 Hz
AC operating zone	0.8 ... 1.15 Us
DC operating zone	0.8 ... 1.05 Us
Max. 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

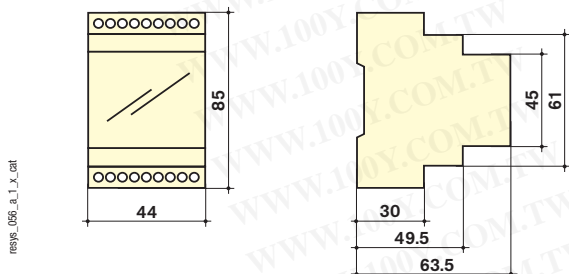
Alarm	
Alarm configuration mode	storage / automatic reset
Alarm factory setting	storage
Reset	Manual by pushbutton / contact on terminals

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.

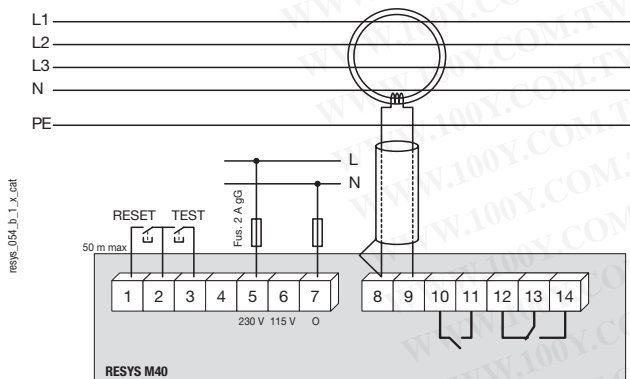
Operating conditions	
Operating temperature	- 20 ... + 55 °C
Storage temperature	- 30 ... + 70 °C

Case



Type	Modular
Number of modules	2.5
Dimensions W x H x D	44 x 85 x 63.5
Case degree of protection	IP40
Terminal block degree of protection	IP20
Rigid cable connection section	0.2 ... 4 mm ²
Flexible cable connection section	0.2 ... 2.5 mm ²
Weight	190 g

Terminals and connections



- 1 - 2 - 3: external pushbuttons
- 5 - 6 - 7: auxiliary power supplies Us
- 8 - 9: SOCOMEC differential toroid connections
- 10 - 11: alarm relay 2 or pre-alarm outputs
- 12 - 13 - 14: alarm relay 1 output

NOTE: The earthing 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.

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

References

Auxiliary power supply Us ⁽¹⁾	RESYS M40 Reference
115 / 230 VAC	4941 2723 ⁽²⁾
400 VAC	4941 2740 ⁽²⁾
12 ... 125 VDC	4941 2602 ⁽²⁾

(1) Other rating: please consult us.

(2) References and characteristics of closed, split core and rectangular toroids: see page 410 "Core balance transformers type A and type B".