

Residual Current Monitor RCM1000V

Monitoring of AC-currents in grounded power supply systems

RCM1000V



Part number:
S225710 AC/DC 24-240 V

RCM100V monitors residual currents in grounded power supply systems. Used as a current relay it monitors AC- or pulsing DC-currents for exceeding upper or lower limits.

Insulation faults can be caused by damages (mechanical, thermic or chemical) of insulations or also by humidity or pollution. At currents > app. 250 mA (at 230 V) at a location, the fault can lead to danger of fire.

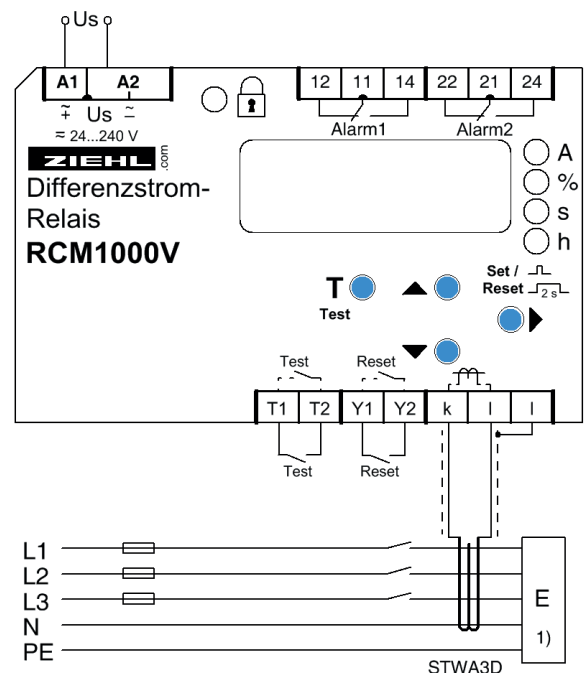
Applied as current relays RCM1000V can among others monitor current in the neutral conductor. Nonlinear loads, e.g. switching power supplies in PC, printers or lights with EGC, cause harmonics in the neutral conductor: Even when the load is symmetric, the harmonics can lead to an overload in the neutral conductor. RCM1000V detect and report this overload.

Residual current monitors detect these faults in widely branched power supply systems and make a signal before additional damage develops.


By displaying the residual current also stealthy changes can easily be detected and localized by switching on and off parts of the power supply system.

Particularly useful in monitoring in systems in which no fault current circuit breaker can or shall be used, because an immediate switching would have wide-ranging consequences, such as breakdown of computer systems or interruption of processes of sensitive goods. RCM1000V do NOT replace fault current circuit breakers for protection from electric shock but they can complement it by detection of a fault in the insulation before the systems has to be shut off.

- Monitoring of residual currents
- 2 limits for alarm and trip
- Monitoring of current, 2 x under- or overcurrent or windows
- Measuring range 0,003 ... 9,999 A
- Setting range 0,010...9,999 A
- Display can be scaled
- Test-button and automatic test every 24 hours
- Input for current transformer STWA3D with monitoring of transformer
- Start-up delay to suppress alarms when switching on
- 4 digits bright LED-display for measured values and programming
- LEDs for alarms, state of relays and units
- Limit, hysteresis, switching delay and switch off delay individually programmable
- Function of relays (nc-, or no-mode) and interlocked switching or autoreset programmable
- Universal supply voltage AC/DC 24-240 V
- Housing for DIN-rail mount, 70 mm wide, mounting height 55 mm



Technical Data

Rated supply voltage	AC/ DC 24V - 240V, < 1,5W, < 5 VA DC 20,4 - 297 V, AC 20-264 V 50 ...500 Hz
Relays K1, K2 (alarm 1, 2)	2 x 1 co-contacts, type 2, see "general technical informations"
Monitoring of current (program 1 and 2)	Type STWA3D... (20, 35, 70, 125) ≤ 10 m, single wire, ≥ 0,75 mm ² 0,003 A ... 9,999 A 10 % ... 25 % 50 ...500 Hz adjustable 0 ... 10 s adjustable 0,03 ... 10,0 s (Prog. 2 = 0,03 ... 500,0 s) adjustable 0 ... 999 s
Residual current relay (program 1 only)	EN 62020 Alarm 2 -> adjustable 0,010 A ... 9,999 A Alarm 1 -> adjustable 50% ... 100% of alarm 2 0 ... -20% depending of configuration of relays: closed current -> relays release = alarm operating current -> relays remain released (= no alarm) type A 
Current relay (program 2 only)	EN 50178 / EN 60947-5-1 0,010 A ... 9,999 A 10%...25% ± 2%, ± 3 digit ± 10%, ± 3 digit
Insulation	EN 60664-1 4000 V AC 300 V III 2
EMC tests	EN 62020 EN 61000-6-3 EN 61000-4-4 ± 4 kV pulse 5/50 ns, f = 5 kHz, t = 15 ms, T = 300 ms IEC 61000-4-5 ± 2 kV IEC 61000-4-2 ± 3,8 kV discharge contact, ± 6 kV discharge air -20...+65 °C -20...+70 °C
Housing	Design V4, 4 TE, mounting height 55 mm 70 x 90 x 58 mm IP30/20 Snap mount on standard rail 35 mm acc. to EN 60715 or screws M4 app. 170 g