



Code	Type	Sensitivity (A)	Tripping delay (S)
P244530007000	WRU-10 RAL	0,03 - 0,1 - 0,3 - 0,5 - 1 - 3 by direct setting 5 - 10 - 30 by SETUP	INS-SEL - 0,02 - 0,1 - 0,2 - 0,3 - 0,4 - 0,5 - 0,75 - 1 by direct setting 3- 5 - 10 by SETUP

GENERAL DESCRIPTION

Super-immunized Type A electronic relay. Built-in core balance transformer, Ø28 mm. Device with self-reclosing system. Symbol **REC** on display. It has programmable relays, 3 outputs. Main trip and 2 pre-alarm signals. It has 1 free voltage input for external ON / OFF. Mounting in DIN rail 46277 (En50022) or PANEL 72x72 by means of accessories M5ZF1. Displays setting values and instantaneous earth leakage current value (TRMS)

SIKKERHETSINFORMASJON

KONTROLL VED MOTTAK

Ved mottak av instrumentet, sjekk følgende:

- Enhetsens spesifikasjoner er lik de på din ordre.
- Kontroller at enheten ikke har blitt utsatt for skade under transport.

Før mer informasjon besøk www.micromatic.no

SIKKERHETS TILTAK

Personer som håndterer dette produktet må følge de generelle sikkerhetstiltak og -informasjon som er beskrevet i denne manualen. Installasjon må utføres av kvalifisert personell.

WRU-10 er spesielt designet for installasjon i elektriske tavler/skap på DIN-skinne. Produktet har en blinkende grønn LED (ON/PA) når den er i drift for å indikere at det er spenning og strøm i den elektroniske kretsen.

INSTALLATION AND STAR-UP

The user must take into account and observe the informations and warnings included in this instruction manual to guarantee the correct operation of the equipment and comply with the safety specifications. The equipment must not be turned on until it is fully installed in the electrical panel.



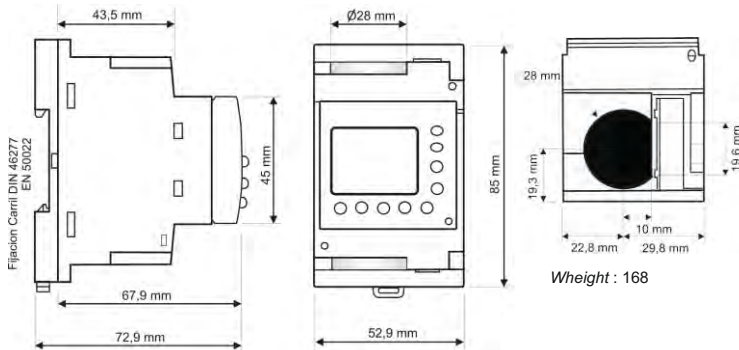
IMPORTANT !

Produktets beskyttelsesfunksjoner kan bli kompromittert dersom produktet brukes utenfor tiltenkt bruksområde eller spesifikasjoner oppgitt av produsent

Disconnect the equipment from the power supply when the unit's safety protection systems are not working or there are signs of a problem (in case of visible damage). In this case, contact a qualified technical service or with our own technical service (TAS).

INSTALLING THE EQUIPMENT

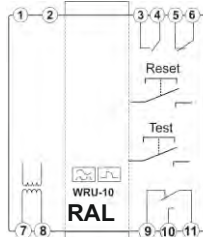
DIN rail installation. On the inside of the hole must pass all live conductors supplying electrical energy to loads or part of the installation which requires it to earth leakage protection with this device. In single-phase installation (phase and neutral, L and N), three phase - 3 wires (three phases, L1, L2 and L3) or three phases - 4 wires (L1, L2, L3 and N). Depending on the level of wiring insulation can be pass through the hole of 28 mm (inner diameter) 4-wire 35 mm² of section, although it advisable is 25 mm². All connections should be inside the electrical board. Please note that with the connected equipment, terminals and opening covers or removing elements, can give access to dangerous parts to touch. The equipment must not be used until it has completely finished installation. The unit must be connected to a power supply circuit protected by fuses in line with the range and power consumption. In turn, the supply circuit must be provided with a circuit breaker or equivalent device to disconnect the equipment from the mains. During the wiring cable is advisable a section permitted between 1 - 1.5 mm². A recommended torque of 0.5-0.6 N.M. Cable Stripping Tools length 7 mm.



Power supply	Operating conditions	Safety
Voltage 230 Va.c. +/- 30% Frequency 50/60 Hz Burden 4,5 VA	Temperature -20...70 C Relative humidity 95% Max. Altitude 2.000 m Protection IP20	Category III - 300 Vac (En61010) Double - insulated electric shock protection class II- UL 1053 UL LISTED Certification - IEC 60755 - IEC 60947-2 Annex M

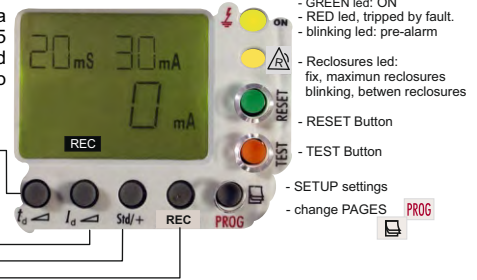
CONNECTIONS BY MEANS OF PLUG-IN CONNECTORS

TERMINAL DESCRIPCIÓN	FEATURES
1 - 2 EXTERNAL INPUT TRIP / RECLOSE	Free voltage, not isolated
3 PRE-ALARM OUTPUT RELAY, NO	Rated current: 0,25 A.c.a.
4 PRE-ALARM OUTPUT RELAY COMMON	Rated voltage: 230 Vc.a.
5 LOCKED OUTPUT RELAY, NC	Rated Load: 62,5 V-A
6 LOCKED OUTPUT RELAY COMMON	
7 SUPPLY 230 Va.c. (Phase or Neutral)	Protected by varistor: 420 Vc.a. - 10 A.c.a.
8 SUPPLY 230 Va.c. (Neutral or Phase)	
9 TRIPPING OUTPUT RELAY, NC	Rated current: 5 A.c.a.
10 TRIPPING OUTPUT RELAY, NA	Rated voltage: 250 Vc.a.
11 TRIPPING OUTPUT RELAY COMMON	Rated Load: 1.250 V-A
12 WITHOUT USE	



DESCRIPTION LED AND BUTTONS

Shows equipment status via a display and 2 LED's. It has 5 button equipment setup and setting and 2 button equipment to do TEST and RESET.



- t_d** - DELAY SETTING
- REC** - SETUP ROTATION

- I_n** - SENSITIVITY SETTING

- Std/+** - outputs contacts SETTING (LOCKED SIGNAL)

- REC** - ENABLE/DISABLE SELF-RECLOSE SYSTEM

- GREEN led: ON
- RED led, tripped by fault.
- blinking led: pre-alarm
- Reclosures led: fix, maximum reclosures blinking, between reclosures
- RESET Button
- TEST Button
- SETUP settings
- change PAGES

INDICATION BY LED AND DISPLAY

- **MAIN TRIP RELAY.** LED and display signals a change of status by changing from green to red.

Display event type messages or values.

- **PREALARM SIGNAL.** The LED green is blinking between green and red.

- **BETWEEN RECLOSURES.** LED is blinking

- **LOCKED BY RECLOSURES.** The yellow LED is fixed. The equipment arrives at maximum number of reclosures established by the self-reclosing sequence. Red display shows the cause.

- **No OF RECLOSURES.** By short press on the display shows the number of reclosures by earth leakage faults, partial and total number. The partial number are floating pages. In these pages it can configure the self-reclosing sequence by press button.

Tripping cause	Message display
Test	TEST
Remote signal trip/reclose	EXT
Earth leakage fault	DIF / value

Other messages by display	
SAVE	Enter setting values
EXIT	Exits setting mode
OVR	Value reading off scale

RECLOSEING THE EQUIPMENT.

- BY TRIP LOCKED BY RECLOSURES

1. Automatic (earth leakage fault or manual). Is **REC** shown on display.
2. Manual reclose by pushing button **RESET**.
3. External reclose system by remote or communications signal. When it forces a trip by remote signal, only it can reclose by another remote signal. In the case 2 and 3 the partial counters of reclosures returns to a zero.

! IMPORTANT !

The relay only self-recloses after a trip by earth leakage current fault. The Test (red button) only verifies the relay trips the protection. It recloses only by manual pressing **RESET** button.

MAIN RELAY PARAMETER SETTING (t_d, I_n and std/+)

- **SETTING TRIP DELAY, t_d.** The **PROG** message and two values appear on the screen after pressing the t_d button. The lowest value indicates the current set value and the highest is the values to be configured which are displayed by pressing **REC**. The selected value to be saved is displayed by showing the message **SAVE**.

- **SENSITIVITY SETTING, I_n.** The same operation as above setting is carried out by pressing I_n.

- **SIGNALLING CONTACTS RELAY STATE, std/+.** Select the default position of the relay contacts 4-5-6 that indicates the situation of locked by reclosures of the device. In (Std) 4-6 NO / 4-5 NC and (+) 4-5 NC / 4-6 NO and appears the symbol in display **+**.

- **SELF-RECLOSE SYSTEM, REC.** In reclosure partial numbers by press **REC** button we configure the self-reclosing sequence referred at the page which it's showing us. By default is configured n° 2 by earth leakage protection.

SREC	No RECLOSURES	TIME SEQUENCES	RESET TIME
0		DISABLED	
1	6	8, 16, 30, 59, 115 y 224 s	15 minutes
2	30	20, 40 s y 5 min. to the end.	15 minutes
3	8	30 s, 1, 2, 3, 4, 5, 6 y 7 min	15 minutes
4	6	10, 20, 30, 60, 130 y 600 s	15 minutes
5	6	2, 4 y 8 min. to the end.	15 minutes
6	7	30 s, 1, 2, 3, 4, 8 y 16 min	30 minutes
7	10	1 min	30 minutes
8	10	90 s	30 minutes
9	8	2, 4 y 6 min. to the end.	15 minutes
10	10	3 min	30 minutes
11	7	2, 4, 8, 16, 32, 32 y 32 min	15 minutes
12	31	2, 4 y 6 min. to the end.	60 minutes
13	3	2, 4 y 8 min	15 minutes
14

SETUP SETTINGS **PROG**

With the **PROG** button the submenus are browsed and with the **REC** button the values to be selected are displayed.

Press **PROG** to enter the value. The equipment configures the value by displaying "SAVE" on the display and then exits Setting Mode. If the keypad remains inactive for a certain time, the equipment automatically exits Setting Mode and displays

Default values in SETUP

- **FREQ.** (50) frequency (Hz)
- **LIM.** (0,4 s, 0,1 A), range of values (I/d / td)
- **ALAR.** pre-alarm.
- **Id** (OFF), It's not pre-alarm.
- **Td** (20 ms), time.
- **SP** (NO), contact states.
- **AU** (Auto), Relay reclaim the state.
- **RSTC.** (NO), Reset the partial reclosures.
- **SREC** sequence number: 2

Button PROG →	
FREQ	50 Hz
	60 Hz
LIM	10 s, 30 A
	1 s, 3 A
ALAR	Pre-alarm current %
	OFF
	50
	60
	70
	80
ALAR	Delay pre-alarma seg.
	MAIN
	0,02
	0,1
	0,2
SP	Contact NO/NC
	NO
AU	Reconnectable
	YES
RSTC	MANU
	NO
	YES

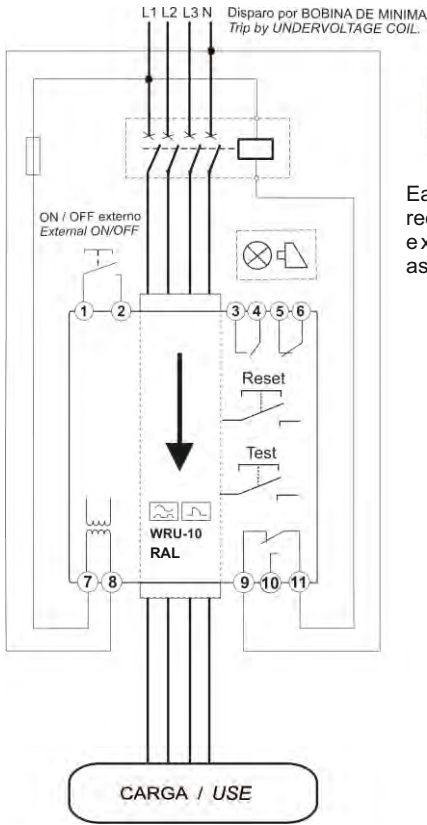
Teknisk kundesenter

Teknisk support eller andre henvendelser vennligst kontakt:



Micro Matic Norge AS
Nye Våkås vei 28, 1395 Hvalstad
T: 66 77 57 50
E: support@micromatic.no
www.micromatic.no

WIRING DISAGRAM



Earth leakage protection and self-reclosing system by means of external breaking element associated to output contacts 9-11.

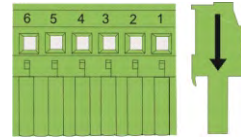
CONTACTOR



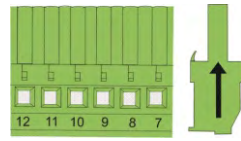
SELF-RECLCING SEQUENCES SETUP



ACCESORIES



PLUG IN CONNECTORS



SETUP MENU

