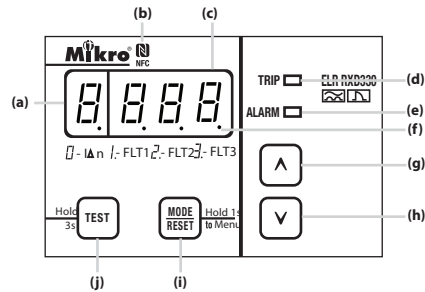


RXD330 Earth Leakage Relay User Guide

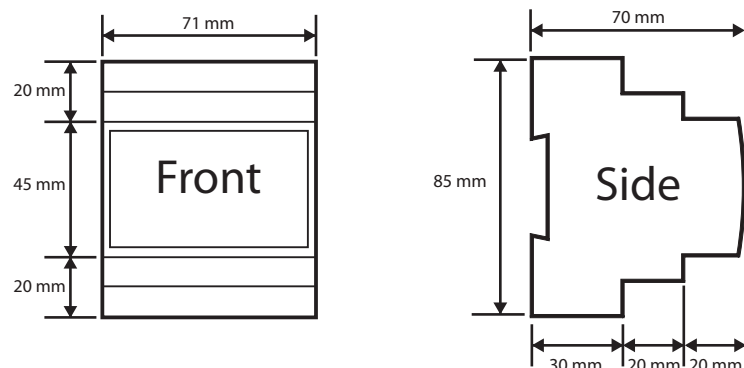


- (a) Function indication
- (b) NFC detection area
- (c) Data indication
- (d) Trip status indicator
- (e) Alarm status indicator
- (f) mA indicator
- (g) Up button
- (h) Down button
- (i) Reset/Mode button
- (j) Test button

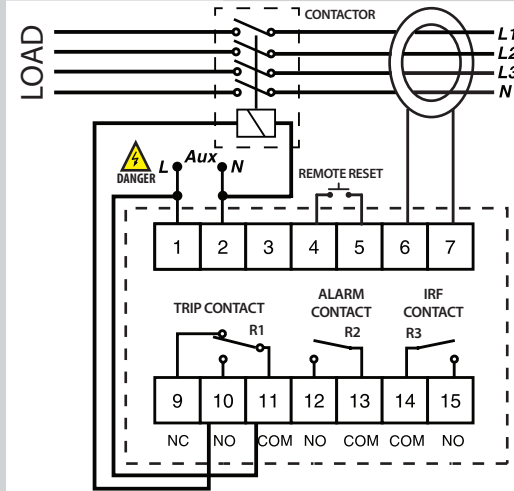
Features

- Built-in NFC for reading and setting parameters through mobile app
- Real-time monitoring of system condition
- Built-in self test and soft recovery watchdog
- Internal relay failure (IRF) alarm for system abnormalities
- Time stamp event record of power failure and setting changes up to 120 events
- Time-stamp record of up to 30 faults and 30 pickups
- Selectable 50 or 60 Hz frequency
- Selectable fundamental or true RMS detection
- Detection of no connection to ZCT
- Protected against nuisance tripping
- Remote reset function
- Incorporated fail-safe feature into trip contact
- Self-reclosing feature

Case Dimensions



Typical Application Diagram



NFC Communication



Relay provides convenient NFC communication for users to read parameter values or change settings through an Android phone with NFC feature and Android OS version above 10. The Mikro RX app can be downloaded on the mobile device using one of the following methods:

{Make sure phone NFC function is turned on}

- Scan the QR code or align the mobile phone NFC antenna with the NFC logo on relay front panel. This will take you directly to the app on Google play



Technical Data

Auxiliary Supply

Supply Voltage.....	198 ~ 265VAC
Supply Frequency.....	50 or 60Hz
VA Rating.....	3VA max

Accuracy

Protection Thresholds.....	-15% to 0%
Time Delay.....	±3% or 40ms whichever is greater

Setting Ranges

(i)Earth-leakage Setting	
I _{Δn} Sensitivity.....	20mA - 30.0A
Time Δt.....	INST - 10.0s
Pre-fault.....	10mA - 24.0A
Reset Hysteresis.....	2% - 10%

(ii)Self Reclosing Setting

Number of Shots.....	OFF/1 - 30
Dead Time.....	1s - 500s
Persistent fault time.....	OFF/1s - 500s
Reclaim Time.....	OFF/1min - 500min
Lockout Self Reset Time.....	OFF/1h - 200h

Output Contacts

Rated Voltage.....	250VAC
Continuous Carry.....	5A(Cosφ = 1.0)
Expected Electrical Life.....	10 ⁵ operations
Expected Mechanical Life.....	5 x 10 ⁶ operations

Enviromental Conditions

Temperature.....	-10°C to 55°C
Humidity.....	5% to 95% non-condensing

Mechanical

Mounting.....	DIN rail mounting
Dimension (mm)	71 (w) x 85 (h) x 70 (d)
Enclosure Protection.....	IP54 at the panel IP20 at the body
Approximate Weight.....	0.4kg

NFC Communication

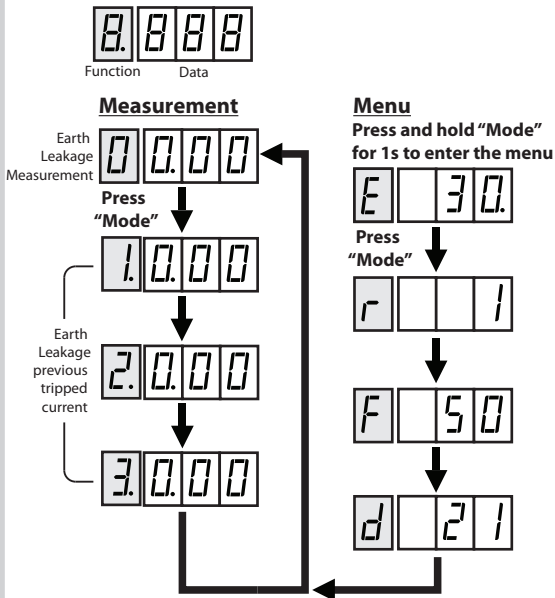
Operation System.....	Android OS
Software Version	Version 10 and above

Earth Leakage Protection Class

Type A ☒

Zero-Phase Current Transformer

To operate with Mikro's ZCT series of current transformer



Push Button Operation

Trip Test	Press and hold "TEST" button for 3.5 seconds
Trip Reset	Press "RESET" button
Scroll Display	Press "MODE" button
Enter Menu Mode	Press and hold "MODE" button for 1 second
Set/Save Setting	Press "UP" and "DOWN" buttons simultaneously
Adjust Setting	Press "UP" or "DOWN" button
Display Off Mode	Press "RESET" button for 10 seconds to toggle the display off mode. The display will switch off after 6 minutes if no key is pressed.

Display Indicator

LED	7-Segment	Status
TRIP	ALARM	
0	0	No Auxilliary power supply
0	0	Normal condition, no tripping
1	X	Leakage pickup
B	X	Trip value
X	1	Ct
X	B	X
X	B	PLo/Loc
X	B	Persistent/ Transient fault lockout alarm

1 = ON 0 = OFF B = Blinking X = don't care

Parameter Settings

E	Earth Leakage Setting
1	I _{an} Sensitivity [DEF=0.30]
2	Time Δt [DEF=0.50]
3	Pre-fault [DEF=0.15]
4	Reset Hysteresis [DEF=5]

r	Self Reclosing Setting
1	Number of Shots [DEF=1]
2	Dead Time [DEF=100]
3	Persistent fault time [DEF=OFF]
4	Reclaim Time [DEF=OFF]
5	Lockout Self Reset Time [DEF=OFF]

d	Date and Time Setting
1	Year
2	Month
3	Day
4	Hour
5	Minute
6	Second

[DEF=Default setting]

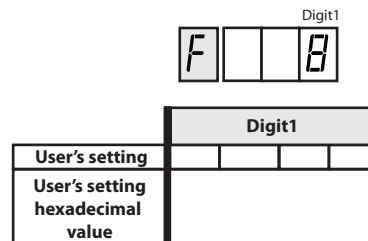
F	Functions Setting
1	Frequency [50Hz/60Hz] [DEF=50]
2	Measurement display [Fn=Fundamental, RnS=RMS][DEF=rnS]
3	Output R1 reset type [n-A=Manual, AUt=Auto][DEF=AUt]
4	Output R2 reset type [n-A=Manual, AUt=Auto][DEF=n-A]
5	Fail-safe into trip contact [Yes/No] [DEF=No]
6	Output R2 link element [Refer figure 1][DEF=0F]
7	NFC remote set [Yes/No] [DEF=No]

	Digit1			
HEX	PLO	CFA	PFA	LFA
00	0	0	0	0
01	0	0	0	1
02	0	0	1	0
03	0	0	1	1
04	0	1	0	0
05	0	1	0	1
06	0	1	1	0
07	0	1	1	1
08	1	0	0	0
09	1	0	0	1
0A	1	0	1	0
0B	1	0	1	1
0C	1	1	0	0
0D	1	1	0	1
0E	1	1	1	0
0F	1	1	1	1

Figure 1:
Link element in
Hexadecimal
value

0= Off,
1= On

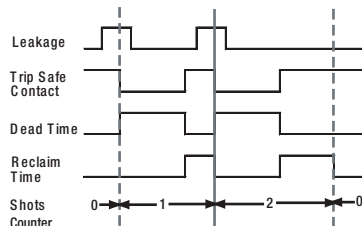
LFA - Leakage Fault alarm
PFA - Pre-fault alarm
CFA - ZCT connection fault alarm
PLO - Persistent fault lockout alarm/Transient fault lockout alarm *Only applicable for RX330



Self Reclosing

Terms	Description
Shots	Nos of self-reclosing operation before the lockout.
Dead time	Trip safe contact is activated by the recloser when the trip safe contact is de-activated due to a leakage fault.
Persistent fault time	Fault detected immediately after the trip safe contact is activated by recloser.
Reclaim time	Time required by the recloser to reset back to reset shot count.
Lockout self reset	Time required to unlock and reset the self-reclosing module during lockout state. The unlock operation is carried out when no operators attended the relay during the lockout state.
Transient fault lockout	When the number of self-reclosing operations matches the number of shots set, further fault trips will perform the lockout
Persistent fault lockout	Relay lockout when the tripping is initiated by the persistent fault.

a) Shots, Dead Time and Reclaim Time



b) Persistent fault monitoring time

