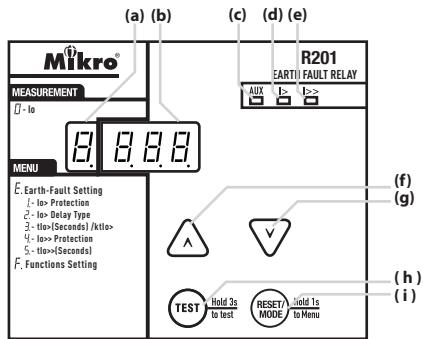
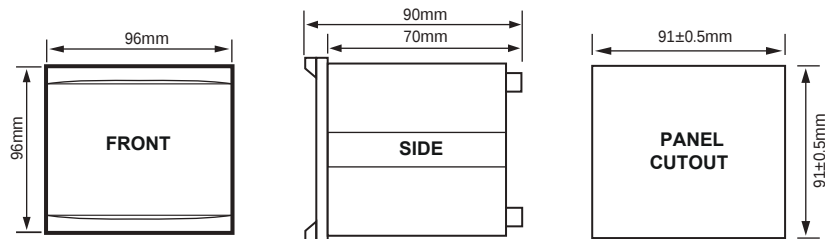


R201 Earth-fault Relay User Guide



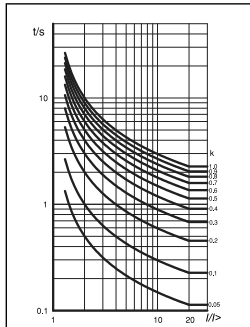
- (a) Function indication
- (b) Data indication
- (c) Auxiliary power supply indicator
- (d) Low-set start/trip status indicator
- (e) High-set start/trip status indicator
- (f) Up button
- (g) Down button
- (h) Test button
- (i) Reset/Mode button

Case Dimensions

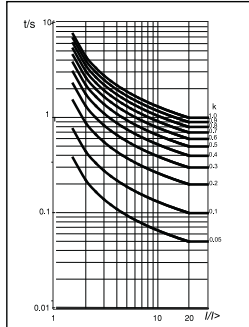


IDMT Curve

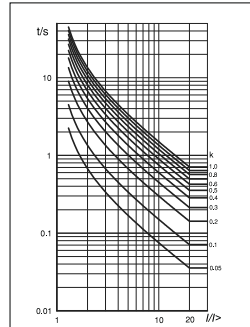
Normal Inverse 3/10 (NI3/10)



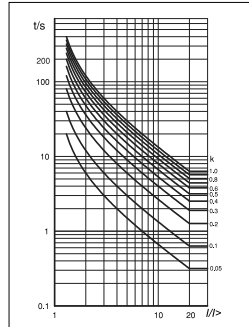
Normal Inverse 1.3/10 (NI1.3/10)



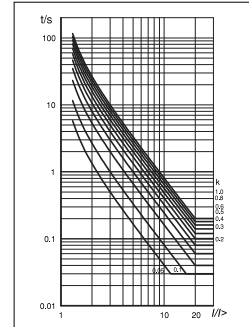
Very Inverse (VI)



Long-time Inverse (LI)



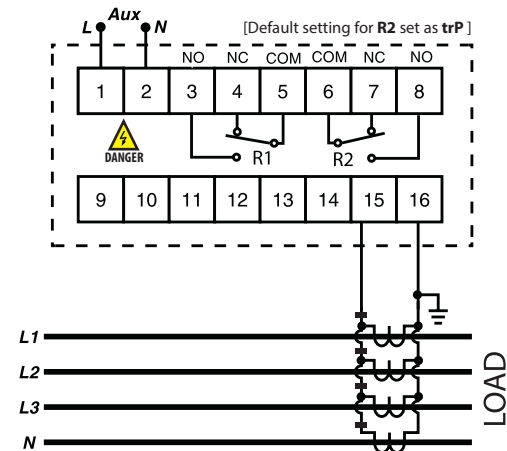
Extremely Inverse (EI)



Features

- Two stages setting for earth fault
- IDMT and definite time
- Circuit breaker failure protection
- Selectable fundamental or true RMS
- Selectable 50 or 60 Hz frequency
- Programmable output contacts
- Complies with IEC 60255 standard
- ANSI code: 50G, 50N, 51G, 51N, 50BF

Typical Application Diagram



Technical Data

Ratings

Rate Current In	5A
Frequency	50 or 60Hz
Burden	<0.3VA at In
Thermal Withstand	4 x In Continuous

Auxiliary Supply

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

Accuracy

Protection Thresholds	±3% or ±20mA whichever is greater
Time Delay	±3% or ±40ms whichever is greater

Setting Ranges

(i) Earth-fault Setting	
Low-set Setting I0>	0.1A - 10.0A(2% - 200%)
Low-set time Multiplier ktlo>	0.01 - 1.00
Low-set Definite Time tlo>	0.03 - 100s
Delay Type	*DT, NI3/10, NI1.3/10, VI, LI, EI
High-set Setting I0>>	OFF/0.1 - 50A (2% - 1000%)
High-set Definite Time tlo>>	0.03 - 100s

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

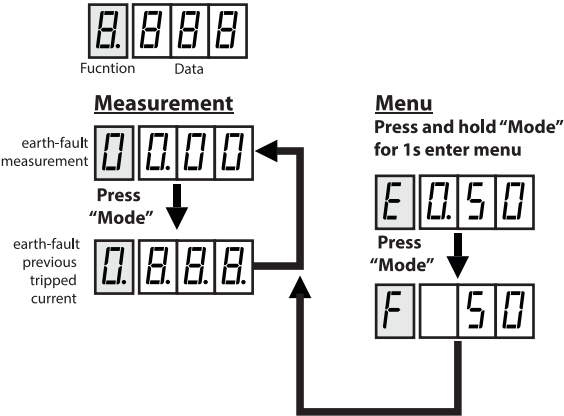
Enviromental Conditions

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

Mechanical

Mounting	Panel mounting
Dimension (mm)	96(w) x 96(h) x 90(d)
Enclosure Protection	IP54 at the panel IP20 at the body
Approximate Weight	0.65kg

*DT = Definite time



Parameter Settings

E	Earth-Fault Setting
1	Io> Protection (A) [DEF=0.5]
2	Io> Delay type [DEF=NI]
3	tIo> (Seconds)/ktIo> [DEF=0.1]
4	Io>> Protection (A) [DEF=10.0]
5	tIo>> (Seconds) [DEF=0.05]

F	Functions Setting
1	Frequency [50Hz/60Hz] [DEF=50Hz]
2	Measurement display [Fn= Fundametal, RnS= RMS] [DEF=Fn]
3	Output R1 reset type [n-A= Manual, AUt= Auto] [DEF=n-A]
4	Output R2 reset type [n-A= Manual, AUt= Auto] [DEF=AUt]
5	Output R2 function [DEF=trP] [Str= Start, trP= Trip, cbF=Circuit breaker failure]
6	Output R1 link element [Refer figure 1] [DEF=3h]
7	Output R2 link element [Refer figure 1] [DEF=3h]
8	CBFP Delay [0.05s - 10.0s] [DEF=0.1]

[DEF=Default setting]

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 1second
Set/Save Setting	Press "UP" and "DOWN" button simultaneously
Adjust Setting	Press "UP" or "DOWN" button
Clear Thermal %	Press and hold "UP" and "DOWN" button simultaneously for 1.5 seconds on Thermal page
Display Off Mode	Press "RESET" button for 10 seconds to toggle display off mode. The display will switch off after 6 minutes if no key is pressed.

LED Indicator

LED Indicator			Status
AUX	I>	I>>	
0	0	0	No Auxiliary power supply
1	0	0	Normal condition, no tripping
1	1	0	Low-set pickup
1	0	1	High-set pickup
1	B	0	Low-set tripped
1	X	B	High-set tripped

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



Digit1		
HEX	Io>>	Io>
0	0	0
1	0	1
2	1	0
3	1	1

Figure 1:
Link element in
Hexadecimal
value

0= Off,
1= On

Digit1	
User's setting	
User's setting hexadecimal value	

* Not applicable when output R2 function set as cbF