

5mA to 100A MULTI-FUNCTION AC CURRENT RELAY WITH INTERNAL CT

Type: IMAA

FEATURES

- Applications includes differential current (earth leakage) measurement with manual 30mA fault test
- 12 programmable input ranges for over or under current
- Adjustable differential and upper or lower limit
- 20mA output signal at max. range for current monitoring
- Separate adjustable ON and OFF delay
- 4 programmable time ranges for ON and OFF delay
- 4 programmable Power Up delays
- Relay function can be inverted
- Relay can be set to latch IN or latch OUT.
- Electrical and manual reset of latch
- LEDs indicate the state of input, timing and relay

Description:

The current relay is designed to cover all possible AC current monitoring and control applications - including differential current measuring (earth leakage) - in the range from 5mA to 100A. Higher sensitivity can be achieved by pulling the current carrying wire multiple times through the relay. The wide range, 4 decades, are divided into 12 sub ranges for easy adjusting. For an external monitoring of the actual input, there is a 20mA output signal related to the max. of the set range.

The differential is adjustable from 1 to 50% of the set tripping current. By means of DIP switches, the actual relay function can be set to detect over or under current with fail safe relay function. The relay function can be inverted and set to latch in or out with manual or electrical reset. Furthermore several ranges of Power Up delay, as well as adjustable ON and OFF delay makes this relay the ultimate choice for AC current measuring.

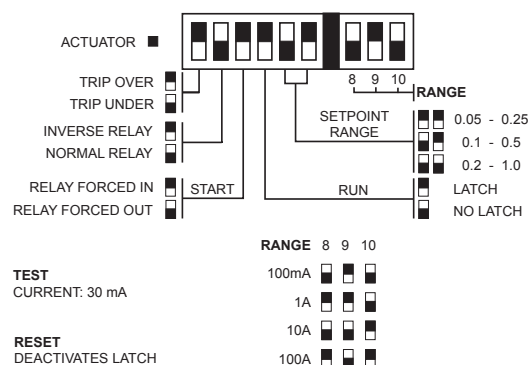
Used as an earth leakage relay - with up to 2 wires of 6mm² (63A) through the relay - the setting of a 30mA limit can simply be done by pressing the test button - for a 30mA fault current through the CT - and adjusting the trip point to drop out.

Application:

Differential (earth leakage) AC current monitoring. Level comparator used with transducers and transmitters. Over- or undercurrent surveillance of all kinds of loads, heaters, motors, generators, mains current etc.

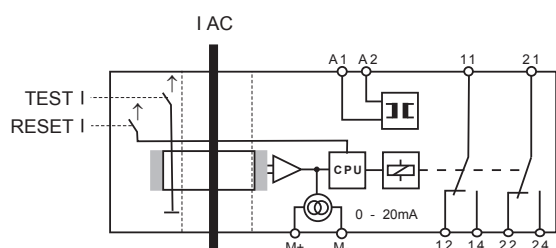
PROGRAMMABLE FEATURES

Range and relay function

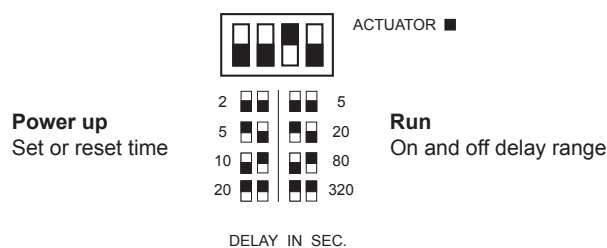


CONNECTION DIAGRAM

Rail mounting



Time function



SPECIFICATIONS

INPUT	AC current from 5mA to 100A
Input Range: 5 to 100 mA	Setpoint Range 5 - 25 mA 10 - 50 mA 20 - 100 mA
50 to 1000 mA	50 - 250 mA 100 - 500 mA 200 - 1000 mA
0,5 to 10 A	0,5 - 2,5 A 1 - 5 A 2 - 10 A
5,0 to 100 A	5.0 - 25 A 10 - 50 A 20 - 100 A
AC frequency range	45 to 440 Hz
Max. continuous input	Limited by square of current carrying wire.
Input resistance	Resistance of wire through the unit
Power up, set or reset	Dip switch settings. Fixed 2 sec. 5 sec. 10 sec. 20 sec.
Time range during run	Dip switch settings. Adjustable 0 - 5 sec. 0 - 20 sec. 0 - 80 sec. 0 - 320 sec.
Differential	Adjustable from 1 to 50 % of setting
PERFORMANCE PARAMETERS	
TIMING	
Response time	Approx. 100 msec.
ELECTRICAL	
Temp. dependence	Typ. $\pm 0.02\%$ / °C
Supply dependence	Typ. $\pm 0.01\%$ / % DU
OUTPUT	
Contact rating	Relay, 2 C/O
Mechanical life	6 A, 250 VAC, 1500 W
DC output	30 Million operations 0 to 20 mA at max. setpoint range
SUPPLY	
DC supply range	AC or DC voltage 24 V (From 20 to 32 V)
AC supply range with transformer	24 V (From 20 to 28 V) 110 V (From 85 to 121 V) 230 V (From 187 to 264 V) 400 V (From 323 to 484 V) 460 V (From 374 to 506 V)
AC frequency range	45 to 440 Hz
Power consumption	4 VA, 2 W
GENERAL	
Temperature range	- 25 °C to + 55 °C ambient
Humidity	Up to 90 % RH non-condensing
Dielectric test voltage	Input to supply 4000 VAC Coil to relay contacts 4000 VAC Pole to pole 2500 VAC
Weight	0.19 kg in 35 mm. housing



EMC directive 89/336:

International Standards

EN50081 - Emission

EN50082 - Immunity

Low voltage directive 73/23:

EN60255 - Electrical Relays

ORDERING INFORMATION

EXAMPLE:

TYPE
Multifunction current relay

SUPPLY VOLTAGE

20 - 32 VDC
20 - 28 VAC
85 - 127 VAC
187 - 264 VAC
323 - 457 VAC
374 - 506 VAC

ADJUSTMENT

Trimpot and dipswitch adj.

HOUSING

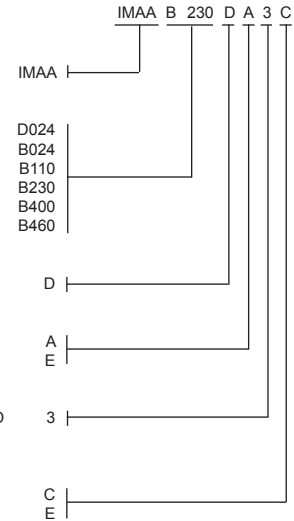
Rail mounting (internal transformer)
Socket, 11 Pin

SIZE

35 mm.

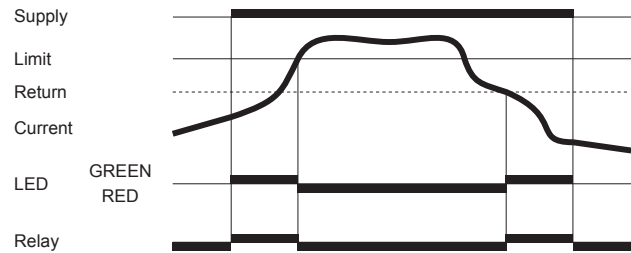
CODE

Code end
Extended code



FUNCTION DIAGRAM

Overcurrent sensing



Undercurrent sensing

