



MK1000A

Features

- Microprocessor based numerical relay
- Current measurement based on fundamental frequency
- Three-phase, low-set overcurrent
- Three-phase, high-set overcurrent
- Low-set earth-fault
- High-set earth-fault
- Definite time for low-set and high-set
- Five selectable IDMT characteristic curves
- Local display of measured and set values
- Programmable relay outputs
- Non-volatile fault values recording
- Complies with IEC 60255-26 standard

SETTING RANGES

i) Overcurrent elements

Low-set ($I >$)	: 0.5 A to 10.0 A, step 0.05 A
	: 10% to 200%, step 1%
Low-set time multiplier ($t >$)	: 0.05 to 1.0, step 0.01
Low-set definite time ($t >$)	: 0.05 to 99s
High-set ($I >>$)	: 0.5 A to 99.9 A, step 0.10 A or disable
	: 10% to 1998%, step 2%
High-set delay time ($t >>$)	: 0.05 sec to 2.5 sec, step 0.01

ii) Earth-fault element

Low-set ($I_0 >$)	: 0.10 A to 5.0 A, step 0.05 A
	: 2% to 100%
Low-set time multiplier($t_0 >$)	: 0.05 to 1.0, step 0.01
Low-set definite time ($t_0 >$)	: 0.05 to 99s
High-set ($I_0 >>$)	: 0.10 A to 50 A, step 0.10 A or disable
	: 2% to 1000%, step 2%
High-set delay time ($t_0 >>$)	: 0.05 sec to 2.5 sec, step 0.01

Technical Data

RATINGS

Rated current (I_n)	: 5 A
Rated frequency	: 50 or 60 Hz
Burden	: < 0.3 VA at I_n
Thermal withstand	: 4 x I_n continuous

AUXILIARY SUPPLY

Model MK1000A-240A(6)	: 198 ~ 265 V AC
Model MK1000A-240AD(6)	: 85 ~ 265 V AC 110 V DC ~ 370 V DC
Model MK1000A-24D	: 18 ~ 72 V DC
Supply frequency	: 50 or 60 Hz
V A rating	: 3 VA typical

ACCURACY

Protection thresholds	: $\pm 5\%$
Time delay	: $\pm 5\%$ with a minimum of 50 ms

CONTACTS

Trip Contacts ($R1$ & $R2$)	
Rated voltage	: 250V AC/DC
Contacts arrangement	: Change-over
Contact rating	: 5 A
Contact material	: Silver alloy
Expected electrical life	: 100,000 operations at rated current
Expected mechanical life	: 5 x 10 ⁶ operations

INDICATORS

Auxiliary supply	: Green indicator
Pick-up	: Red indicator
Trip	: 7-segment display and red indicators

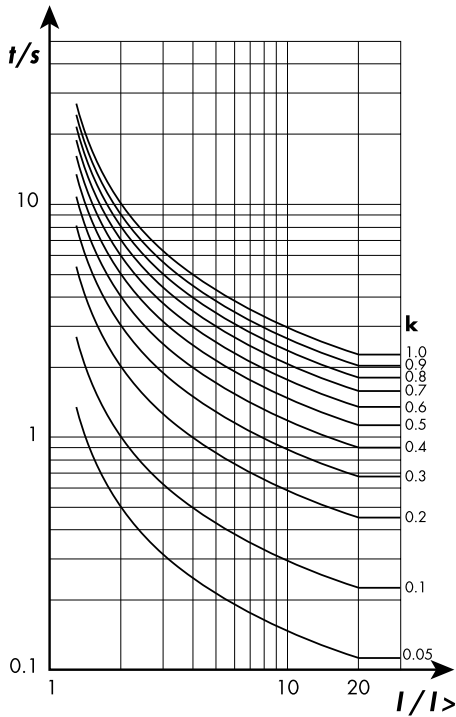
MECHANICAL

Mounting	: Panel mounting
Front panel	: Standard DIN 96 mm x 96 mm
Approximate weight	: 0.75 kg

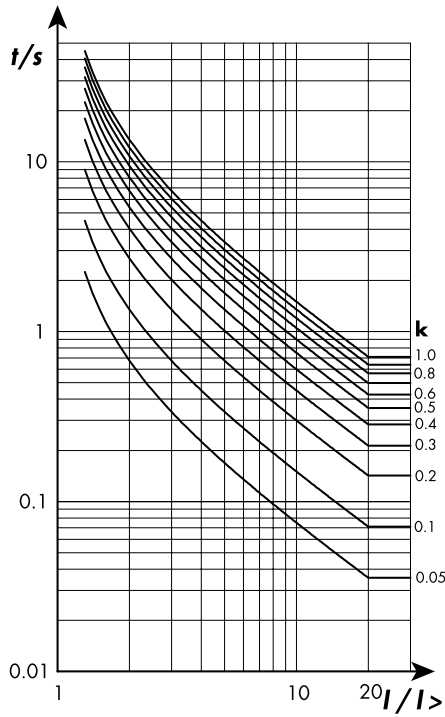
ENVIRONMENTAL CONDITIONS

Temperature	: -5°C to +55°C
Humidity	: 56 days at 93% RH and 40°C non-condensing

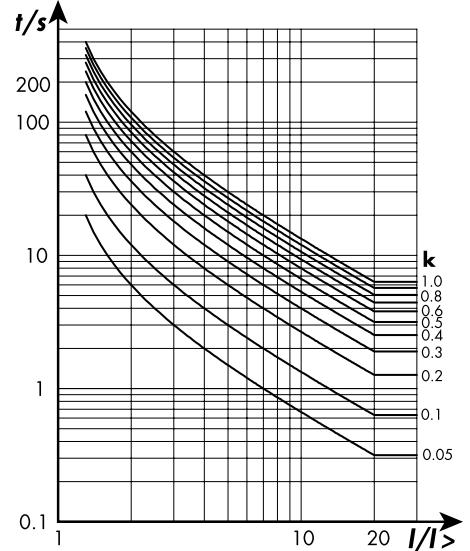
NORMAL INVERSE



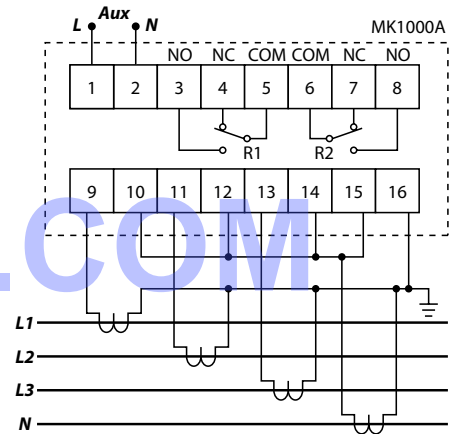
VERY INVERSE



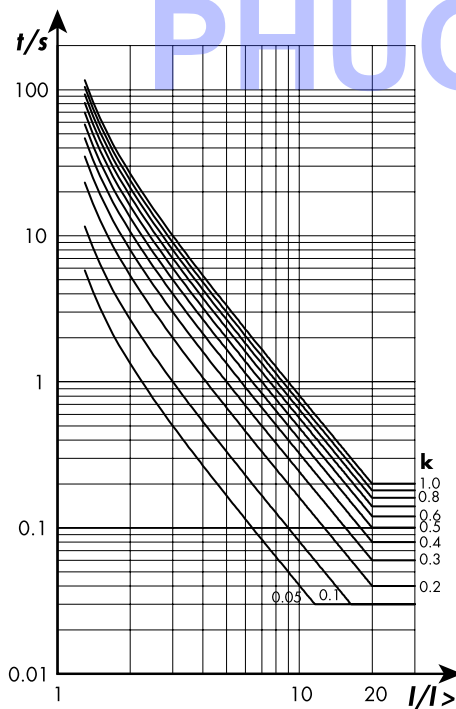
LONG TIME INVERSE



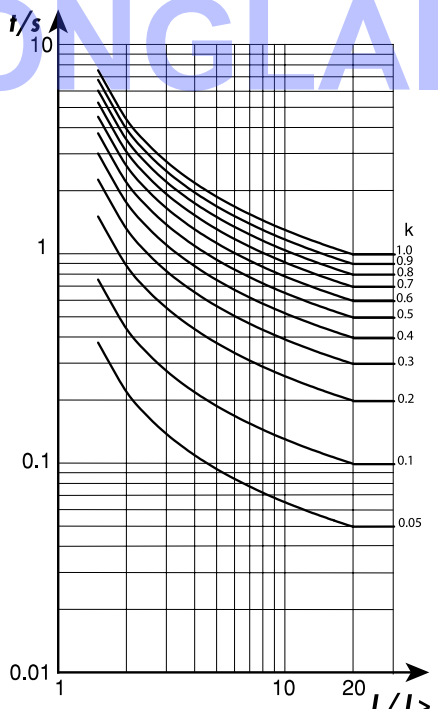
TYPICAL APPLICATION DIAGRAM



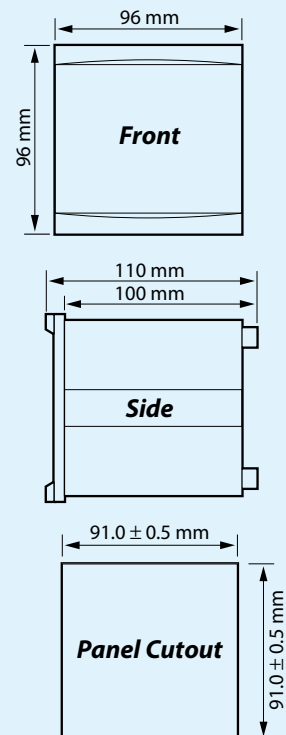
EXTREMELY INVERSE



NORMAL INVERSE 1.3/10



CASE DIMENSIONS



Ordering Information

MODEL

DESCRIPTION

MK1000A-240A	For 50Hz system, auxiliary voltage 198 ~ 265 V AC
MK1000A-240AD	For 50Hz system, auxiliary voltage 85 ~ 265 V AC or 110~370 V DC
MK1000A-24D	For 50Hz system, auxiliary voltage 18 ~ 72 V DC
MK1000A-240AD6	For 60Hz system, auxiliary voltage 85 ~ 265 V AC or 110~370 V DC
MK1000A-24D6	For 60Hz system, auxiliary voltage 18 ~ 72 V DC