



MK233A

Features

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

Technical Data

RATINGS

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

AUXILIARY SUPPLY

Model MK233A-240A (6)	: 198 ~ 265 V AC
Model MK233A-110A (6)	: 94 ~ 127 V AC
Supply frequency	: 50 or 60 Hz
VA rating	: 3 VA typical

SETTING RANGES

Low-set ($I >$)	: 0.5 A to 6.0 A, step 0.05 A / 10% to 120%, step 1%
Low-set time multiplier ($kt >$)	: 0.05 to 1.0, step 0.01
Low-set definite time ($t >$)	: 0.05 to 99 sec, step 0.01 (0.05 to 1.0) / 0.1 (1.1 to 99)
High-set ($I >>$)	: 0.5 A to 99.9 A or disable, step 0.10 A / 10% to 1998%, step 2%
High-set delay time ($t >>$)	: 0.05 sec to 2.5 sec, step 0.01

ACCURACY

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

CONTACTS (R1 & R2)

Contact arrangement	: Change-over
Contact rating	: 5 A, 250 V AC ($\cos\phi = 1$)
Contact material	: Silver alloy
Expected electrical life	: 100,000 operations at rated current
Expected mechanical life	: 5×10^6 operations

INDICATORS

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

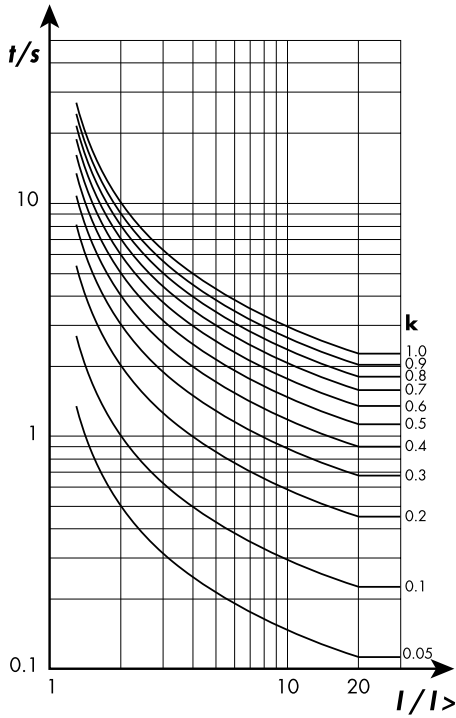
MECHANICAL

Mounting	: Panel mounting
Front panel	: Standard DIN 96 mm x 96 mm
Approximate weight	: 0.7 kg

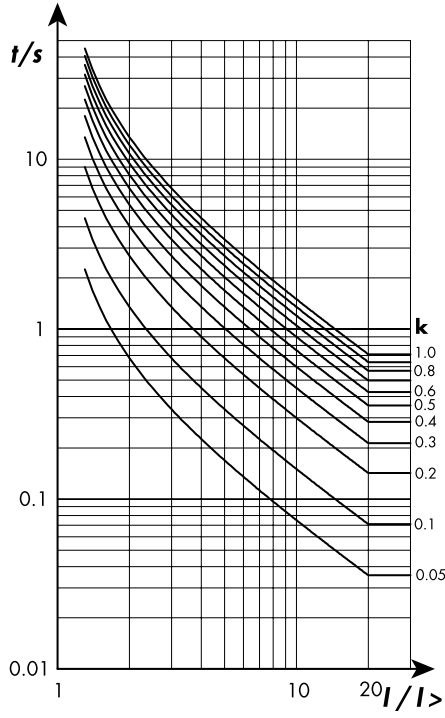
ENVIRONMENTAL CONDITIONS

Temperature	: -5°C to $+55^\circ\text{C}$
Humidity	: 56 days at 93% RH and 40°C non-condensing

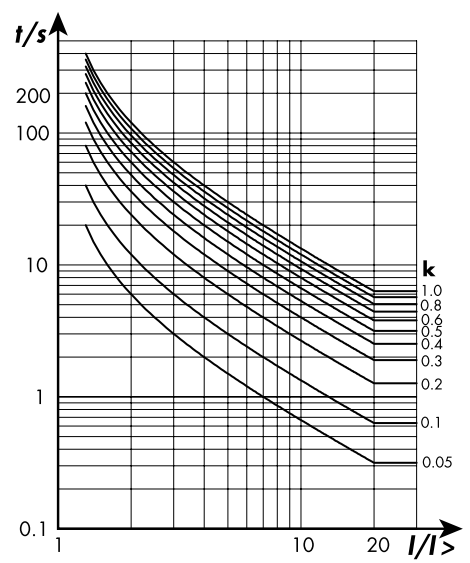
NORMAL INVERSE



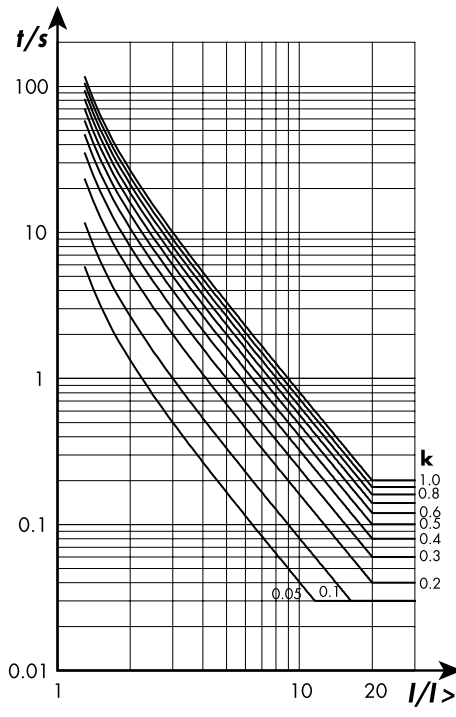
VERY INVERSE



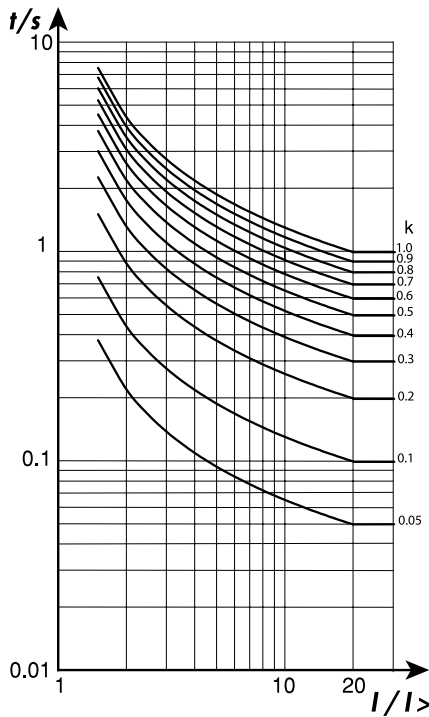
LONG TIME INVERSE



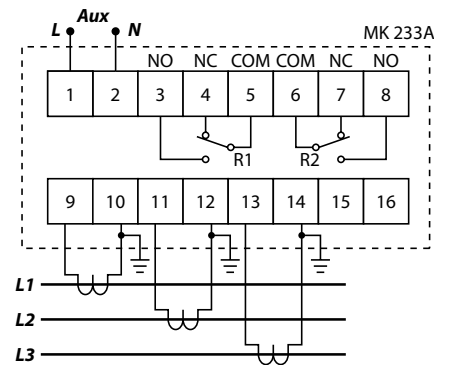
EXTREMELY INVERSE



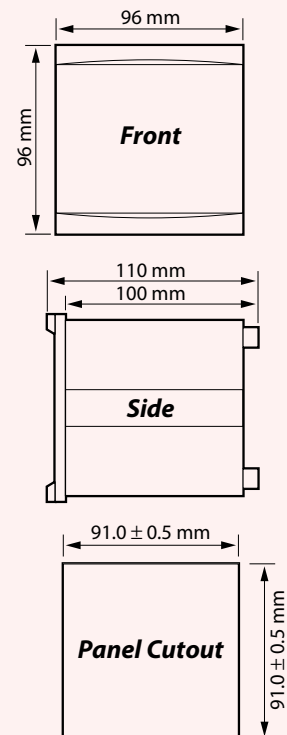
NORMAL INVERSE 1.3/10



TYPICAL APPLICATION DIAGRAM



CASE DIMENSIONS



Ordering Information

MODEL	DESCRIPTION
MK233A - 240A	For 50 Hz system, auxiliary voltage 198 ~ 265 V AC
MK233A - 110A	For 50 Hz system, auxiliary voltage 94 ~ 127 V AC
MK233A - 240A6	For 60 Hz system, auxiliary voltage 198 ~ 265 V AC
MK233A - 110A6	For 60 Hz system, auxiliary voltage 94 ~ 127 V AC