



MK2200L

Features

- Multifunction numerical relay
- Three-phase, three stages setting for phase overcurrent
- Two stages setting for earth fault
- IDMT and definite time
- Thermal overload protection
- Two groups of protection settings
- Trip circuit supervision
- Circuit breaker failure protection
- RS232 and RS485 MODBUS-RTU communication
- Fault, alarm and tripping records with timestamp
- Multifunction programmable outputs
- Multifunction digital inputs
- Complies with IEC 60255-26 standard
- ANSI code : 49RMS, 50P, 50G, 51P, 51G, CLP, 50BF, 74TC

Technical Data

RATINGS

Auxiliary Supply

Model MK2200L-150D

Rated voltage : 30 ~ 120 V DC
Operating voltage : 24 ~ 150 V DC

Model MK2200L-240AD

Rated voltage : 100 ~ 240 V AC or
140 ~ 340 V DC
Operating voltage : 85 ~ 265 V AC or
110 ~ 370 V DC
Rated frequency : 50 or 60 Hz
Operating frequency: 45 ~ 65 Hz
Power consumption : 8 VA max

Current Inputs

Rated current, I_n , I_{on} : 1 or 5 A by connection
Frequency : 50 or 60 Hz nominal
Burden : < 0.025 VA (1 A)
: < 0.3 VA (5 A)
Thermal withstand : 4 x I_n continuous
: 40 x I_n for 2s
: 100 x I_n for 1s

Digital Inputs

Input type : Optically isolated
Rated voltage : 20 ~ 380 V DC
: 50 ~ 270 V AC

Output Contacts

Trip Contact Relay R1, R2, R3, R4, IRF Relay

Rated voltage : 250 V AC / DC
Continuous carry : 5 A
Expected electrical life : 100,000 operations at
rated load
Expected mechanical life : 5 x 10⁶ operations

RECORDS

Fault Record : Up to 50 records
Event Record : Up to 250 records
Alarm Record : Up to 30 records

SETTING RANGES

General

Line CT primary : 1 to 10,000 A
Earth CT primary : 1 to 10,000 A
Frequency : 50 or 60 Hz

Phase Overcurrent

$I_{>}$: 0.1 to 25 x I_n (Recommended up to
2 x I_n for IDMT delay)
 $I_{>}$ Delay type : IDMT or definite time
 $t_{I>}$: 0 to 100 s
 $I_{>}$ IDMT curve: NI, VI, EI, LTI, NI 1.3/10
 $kt_{I>}$: 0.01 to 1.00
 $I_{>>}$: 0.5 to 40 x I_n
 $t_{I>>}$: 0 to 100 s
 $I_{>>>}$: 0.5 to 40 x I_n
 $I_{>>>}$ Sample : Yes or No
 $t_{I>>>}$: 0 to 100 s

Earth Fault

$I_{o>}$: 0.02 to 2 x I_{on} (Recommended up
to 0.5 x I_{on} for IDMT delay)
 $I_{o>}$ Delay type : IDMT or definite time
 $t_{I_{o>}}$: 0 to 100 s
 $I_{o>}$ IDMT curve: NI, VI, EI, LTI, NI 1.3/10
 $kt_{I_{o>}}$: 0.01 to 1.00
 $I_{o>>}$: 0.1 to 10 x I_{on}
 $t_{I_{o>>}}$: 0 to 100 s

Thermal Overload

$I_{\theta >}$: 0.1 to 3 x I_n
 T_{θ} : 1 to 200 minutes
 k : 1 to 1.5
 θ Trip : 50 to 200%
 θ Alarm : 50 to 200%

MEASUREMENT RANGES

Phase Current Secondary:
5 A input : 0 to 200 A
1 A input : 0 to 40 A

Earth Current Secondary:

5 A input : 0 to 50 A
1 A input : 0 to 10 A

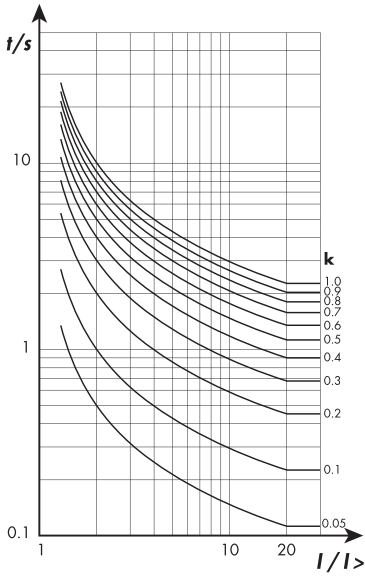
ENVIRONMENTAL CONDITIONS

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

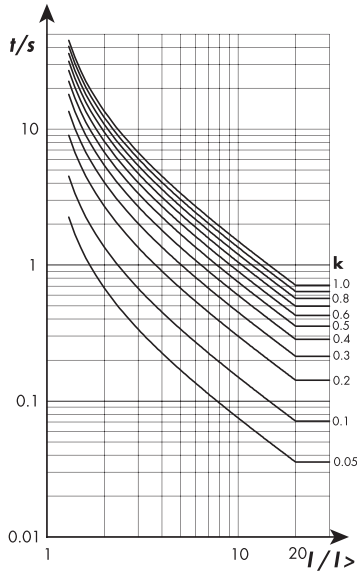
MECHANICAL

Mounting : Panel mounting
Dimension (mm) : 142(w) x 165(h) x 198(d)
Enclosure protection : IP54 at the panel
Approximate weight : 2.9 kg

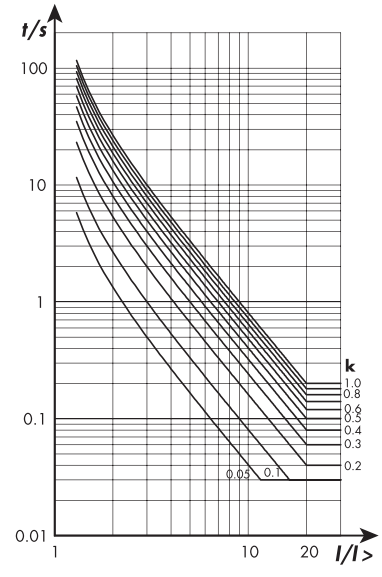
Normal Inverse



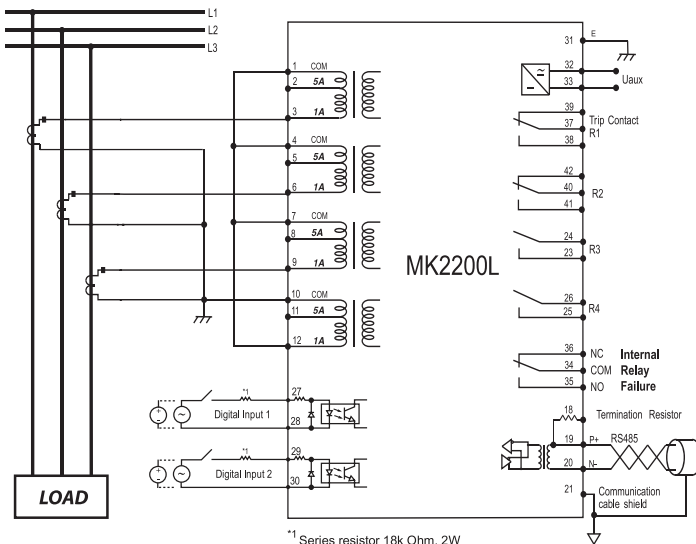
Very Inverse



Extremely Inverse

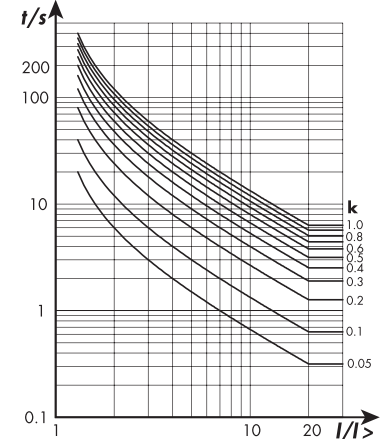


Typical Application Diagram 1

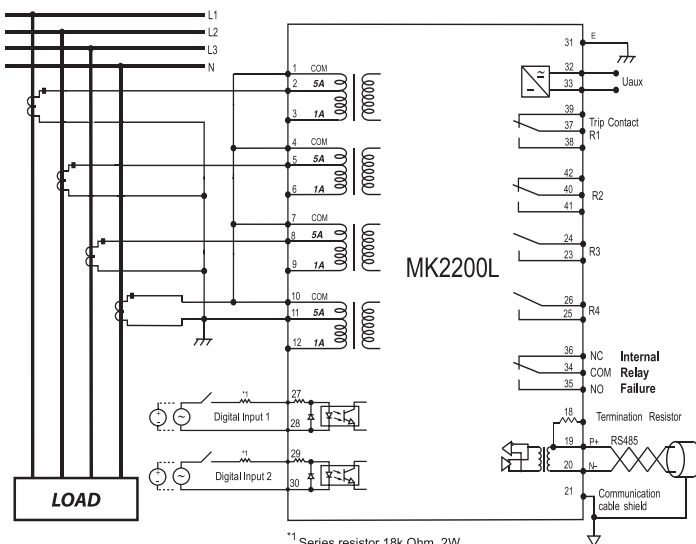


*1 Series resistor 18k Ohm, 2W required for >170 Vac / 240 Vdc to 270Vac / 380Vdc

Long Time Inverse

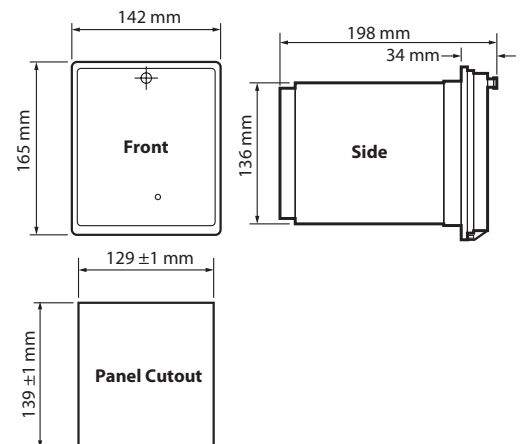


Typical Application Diagram 2



*1 Series resistor 18k Ohm, 2W required for >170 Vac / 240 Vdc to 270Vac / 380Vdc

Case Dimensions



Ordering Information

MODEL

MK2200L - 150D
MK2200L - 240AD

DESCRIPTION

For 50/60 Hz, auxiliary voltage 24 ~ 150 V DC
For 50/60 Hz, auxiliary voltage 85 ~ 265 V AC or 110 ~ 370 V DC