

# OVERCURRENT RELAY

# R204



## FEATURES

- Three-phase, three-stage setting for phase overcurrent
- 5 selectable IDMT and definite times
- Thermal overload protection
- Cold load pickup protection
- Circuit breaker failure protection
- Selectable fundamental or true RMS measurement
- Selectable 50 or 60 Hz frequency
- Programmable output contacts
- Non-volatile fault values recording up to 3 records
- Complies with IEC 60255 standard
- ANSI code: 50P, 51P, CLP, 50BF, 49RMS

OVERCURRENT RELAY

R204

## SPECIFICATIONS

### RATING

|                   |                     |
|-------------------|---------------------|
| 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 | : $\pm 3\%$ or $\pm 20\text{mA}$<br>whichever is greater |
| Time Delay            | : $\pm 3\%$ or $\pm 40\text{ms}$<br>whichever is greater |

### SETTING RANGES

#### (i) Overcurrent Setting

|               |                                                      |
|---------------|------------------------------------------------------|
| 3I>           | : 0.5A -12.5A(10% -250%),<br>*(Variable steps 1)     |
| ktI>          | : 0.01 -1.00, *(Variable steps 2)                    |
| tl>           | : 0.03 -100s, *(Variable steps 2)                    |
| 3I>Delay Type | : DT, NI3/10, NI1.3/10, VI, LI, EI                   |
| 3I>>          | : OFF/0.5 -100A (10% -2000%),<br>*(Variable steps 1) |
| tl>>          | : 0.03 -100s, *(Variable steps 2)                    |
| 3I>>>         | : OFF/0.5 -100A (10% -2000%),<br>*(Variable steps 1) |
| tl>>>         | : 0.03 -100s, *(Variable steps 2)                    |

#### (ii) Thermal Overload Setting

|                |                                                |
|----------------|------------------------------------------------|
| $\theta>$      | : OFF/0.5A -10.0A (10% -200%),<br>(step 0.05A) |
| T $\theta$     | : 1 to 200 minutes, (step 1min)                |
| ktI $\theta>$  | : 1.00 -1.50, (step 0.01)                      |
| $\theta$ Trip  | : 50 to 200%, (step 1%)                        |
| $\theta$ Alarm | : 50 to 200%, (step 1%)                        |

### OUTPUT CONTACTS

|                          |                              |
|--------------------------|------------------------------|
| Rated Voltage            | : 250VAC                     |
| Continuous Carry         | : 5A (Cos $\phi$ =1.0)       |
| Expected Electrical Life | : $10^5$ operations          |
| Expected Mechanical Life | : $5 \times 10^6$ operations |
| No of Output Contact     | : 2                          |

### ENVIRONMENTAL CONDITIONS

|                       |                                |
|-----------------------|--------------------------------|
| Operating Temperature | : -10°C to 55°C                |
| Humidity              | : 5% to 95%,<br>non-condensing |

### MECHANICAL

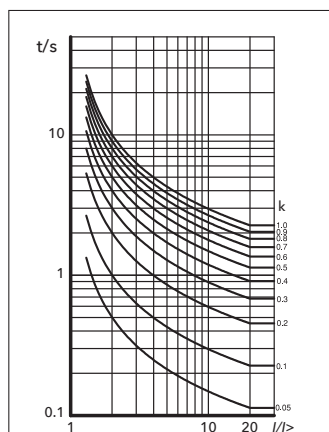
|                      |                                         |
|----------------------|-----------------------------------------|
| Mounting             | : Panel mounting                        |
| Dimension (mm)       | : 96(w) x 96(h) x 90(d)                 |
| Enclosure protection | : IP54 at the panel<br>IP20 at the body |
| Approximate weight   | : 0.80kg                                |

\*Variable Steps 1: step 0.05 (<10), step 0.1 (<100)

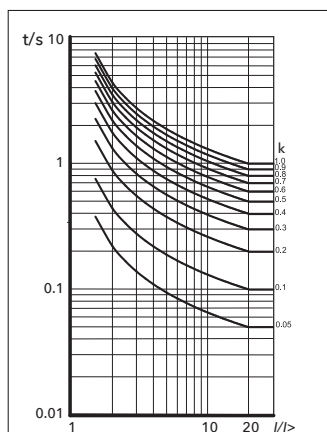
\*Variable Steps 2: step 0.01 (<1), step 0.1 (<10), step 0.5 (<100)

## IDMT CURVE

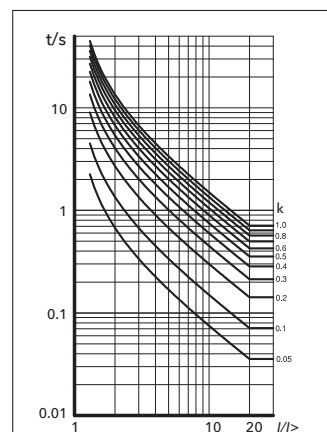
**NORMAL INVERSE 3/10**



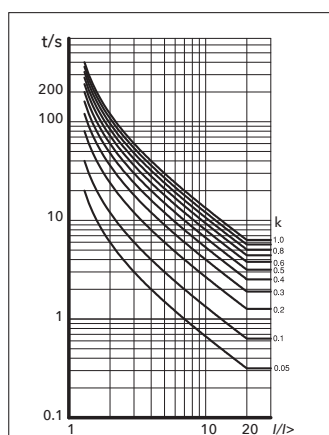
**NORMAL INVERSE 1.3/10**



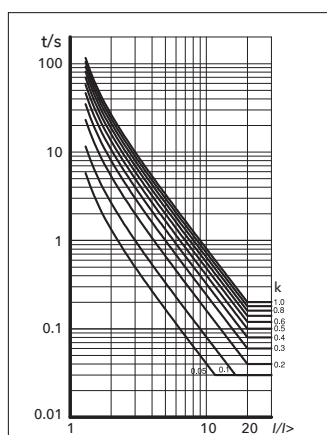
**VERY INVERSE**



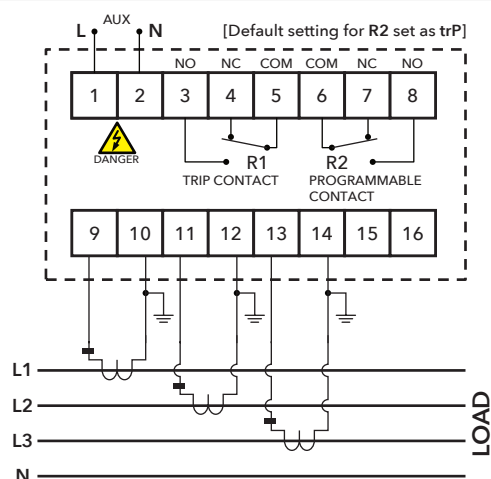
**LONG-TIME INVERSE**



**EXTREMELY INVERSE**



## TYPICAL APPLICATION DIAGRAM



## ORDERING INFORMATION

| MODEL     | DESCRIPTION                                          |
|-----------|------------------------------------------------------|
| R204-230A | Auxiliary Voltage 198~265 V AC, frequency 50 or 60Hz |

## CASE DIMENSION

