

DG2200A Combined Overcurrent&Earth Fault Relay

Features

- Multifunction numerical relay
- Three-phase, low-set and high-set phase overcurrent
- Two sets of low-set and high-set setting for phase overcurrent
- Low-set and high-set earth fault
- Two sets of low-set and high-set setting
- for earth fault
- Four selectable IDMT characteristic curves
- Definite time for low-set and high-set
- Numeric display of phase and earth fault currents
- Display of relay settings
- 9 non-volatile records of previous trip-ping currents
- Recording of relay start time
- Highly flexible programmable relay outputs
- Multifunction external digital input
- Isolated RS485 Modbus RTU communication
- Selectable 50 Hz / 60 Hz

Technical Specifications

Inputs

Measuring input:

- •Rated current I n : 1 A or 5 A
- •Rated frequency : 50 or 60 Hz
- •Thermal withstand : 4 x I n continuous
- 25 x I n for less than 10 sec
- 100 x I n for less than 1 sec
- •Burden : < 0.3VA at I n

Rated auxiliary voltage:

- •Model MK2200-150D : 24~150 V DC
- •Model MK2200-240A : 198~265 V AC
- •Model MK2200-240AD : 85~265 V AC
- 110~340 V DC

Power consumption:

- •AC auxiliary voltage: 6 ~ 10 VA typical
- •DC auxiliary voltage: 5 ~ 9 W typical

Binary Input:

- •External binary input : 18 ~ 265 V DC
- 85 ~ 265 V AC

Earth-fault Elements

•Low-set setting I o> : 0.05 ~ 1.0 x I n , step 0.01 •High-set setting I o>> : 0.05 ~ 10.0 x I n , step 0.05 •Time multiplier kt o> : 0.02 ~ 1.0 , step 0.01 •Low set definite time t o> : 0 ~ 300 s • High set definite time t o>> : 0 ~ 300 s 0 ~ 10.0s : step 0.01 10.0 ~ 100s : step 0.1 100 ~ 300s : step 1 **Overcurrent Elements** •Low-set setting I > : 0.10 ~ 2.50 x I n , step 0.01 •High-set setting I >> : 0.10 ~ 40 x l n , step 0.05 (0.1 ~ 10 l n), step 0.1 (10 ~ 40 I n) •Time multiplier kt > $: 0.02 \sim 1.0$, step 0.01 •Low set definite time t > : 0 ~ 300 s • High set definite time t >> : 0 ~ 300 s 0 ~ 10.0s : step 0.01 10.0 ~ 100s : step 0.1 100 ~ 300s : step 1 Communication •RS485 Modbus - RTU Outputs 5 programmable contacts +1 IRF contact: •Rated voltage: 250 V AC/DC •Continuous carry: 5 A • Make and carry for 0.2 s: 30 A **Contact specification:** •Expected electrical life : 10^5 operations •Expected mechanical life: 5 x 10⁶ operations

Accuracy

- Protection thresholds : ± 3%
- •Time delay : ± 2% with a minimum of 30 ms
- •Measurements: ± 3%
- •Reset ratio: 95% typical
- Overshoot time: less than 30 ms typical

Environment Conditions

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

Normal Inverse

Vary Inverse





Extremly Inverse

Long-Time Inverse





Typical Application Diagram 1

Typical Application Diagram 2



Product Dimensions

