BCMR-SML

Reverse & Overcurrent Protection Relay



Description

The economical BCMR-SML protects rectifiers from reverse or excessive forward current by providing alarm contacts, which can be used to trigger an alarm or automatically take the rectifier off-line. The benefits are minimal rectifier damage costs and downtime.

One BCMR is used on each rectifier bus that feeds a common load. The BCMR consists of an electrically isolated, dual-magnetic field (bus current) sensor assembly that clamps to the bus and a control unit containing all electronics and control relays.

In addition, the BCMR provides an analog output that can be used with a digital panel meter to monitor bus current. The meter can be scaled to display current directly in kA.

The Model BCMR provides instantaneous forward overcurrent and reverse overcurrent current level alarms. In addition, forward trips with adjustable overcurrent magnitude and persistence scales allow the trip points to closely match your rectifier performance.

Operation

In the event of reverse or excessive forward current, the device will trigger. A reverse or forward current relay closes normally open contacts and indicator lamps are lit. The forward and reverse relays are electrically interlocked so they cannot be closed at the same time. All alarm indicators must be manually reset. A test switch allows the unit to be tested without triggering the alarms.

Specifications*

Current Range	***Forward Direction***	***Reverse Direction***
Minimum	400 A to 20 kA	-400 A to -20 kA
Maximum	4 kA to 200 kA	-4 kA to -200 kA

Outputs	
Forward and reverse relays	Two (2) each normally open (N.O.), UL rating 0.5A, 125 Vac, 2A, 30 Vdc (recommended for resistive loads)
Trip Latch Indicator	FWD & REV
Current	0 - 20 mA or 4-20 mA
Voltage	0 - 10 V or 2-10 V
Trip Set	Precision 10 turn, lockable vernier dial, one for forward and one for reverse current
Trip Time Circuits	
Instantaneous	Fixed, response less than 10 msec
Short Delay	Adjustable, to 3 sec
Medium Delay	Adjustable, 2 - 10 sec
Long Delay	Adjustable, 8 - 100 sec
Linearity	± 2%
Calibration	On site
Accuracy	± 3%**
Repeatability	± 0.5% (forward or reverse)
Power Requirements (Customer Specified)	125 Vdc (100 to 140 V dc), 0.3A or 105 to 125 Vac, 0.3 A, or 210 to 250 Vac, 50 to 60 Hz.
Sensors	Mounted on 24" / 610 mm fiberglass channels, clamped around bus with fiberglass rods, 2000 V breakdown isolation from bus; 100 ft / 33 m cable. ***
Ambient Temperature Range:	
Sensor Assembly	-4 to 158º F / -20 to 70º C
Temp. Sensitivity	± 0.27% º F / ±0.15% º C
Control Unit	-4 to 130º F / -20 to 55º C
Storage Temperature	-40 to 158° F -40 to 70° C
Storage Humidity	85%, non-condensing
Physical	
Fiberglass enclosure	17.5 x 13.25 x 8.31" 445 x 337 x 211 mm
Weight:	25 lb. / 12 kg

Specifications subject to change without notice

* All general specification errors are expressed in %F.S.

** When calibrated with a DynAmp Clamp-On Portable Ammeter.

*** Refer to BCMR manual No. 44417 for installation restrictions. Available at www.dynamp.com.

Ordering Information

Please specify:

1. Model: BCMR-SML
2. Mains input voltage and item number as shown
   Universal Power Input Item 44415
3. Requires completed BCMR worksheet BEN062

Outline and Mounting Diagram and Information



