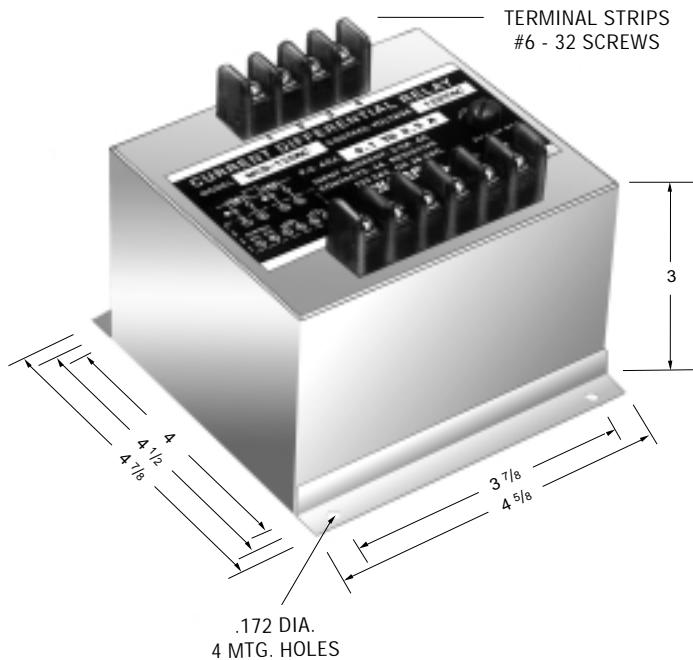


WILMAR™ Protective Relays – WCD Series

Function: 87

- ANSI/IEEE C37.90-1978



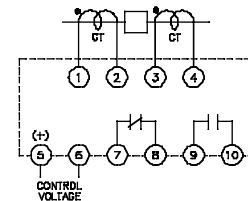
Note: Dimensions in inches. Multiply values by 25.4 for dimensions in mm.

Current Differential Relays are used for the protection of transformers, motors and generators, by comparing the magnitude of the current entering and leaving the protected circuit. On a given phase winding, any difference between the two currents will indicate an internal fault; the relay will sense the vectorial difference between the two currents of the protected section and will initiate a quick disconnection of the unit, to prevent disastrous consequences.

The relay may also be used to protect internal faults on transformers, such as: ground faults, shorted winding, leakage between primary and secondary, etc. It will sense and compare primary vs. secondary currents, once the turns ratio has been taken into consideration.

Operation:

With control voltage applied, the output contacts (shown in the de-energized position) will remain de-energized as long as the difference between the two input currents remains below the preset trip value. The contact will transfer to the energized position when the current difference exceeds the trip value.



PART NUMBER SELECTION

Sample Part No. WCD-230AC-1-A

Type: _____

WCD - Close Differential

Control Voltage VAC & VDC _____

- | | |
|-------|-------|
| 120AC | 25DC |
| 208AC | 48DC |
| 230AC | 125DC |
| 380AC | |
| 416AC | |
| 460AC | |
| 525AC | |
| 575AC | |

Trip Adjustment Range _____

- .5 = 0.1 amp to 0.5 amp
- 1 = 0.2 amp to 1.0 amp
- 2 = 0.4 amp to 2.0 amp

Options _____

- A = Two normally open contacts
- B = Two normally closed contacts
- H = Contacts rated 3 amp at 125 VDC
- P = Transient protection is provided in compliance with ANSI/IEEE C37.90-1978

Consult factory for additional models.

PRODUCT SPECIFICATIONS	
Part Number	WCD Series
Line Current	Single Phase, AC current, 50-400 Hz Direct or from CT 5 amp continuously 20 amp 30 seconds 200 amp, 0.10 seconds
Control Voltage	See Part Number Selection
Differential Trip Point	Screwdriver adjustable. See Part Number Selection
Operating Temperature	-40°C to +75°C
Burden	Current input: 2.5 VA max. Control voltage DC: 2 W max. AC: 2 VA max.
Output Contacts	One set, N.O., One set N.C.
Contact Ratings	5 amp resistive at 120 VAC or 28 VDC

Notes:

1. Remove black screws for access to the trip adjustments.
2. Clockwise rotation of the adjustment potentiometer will raise the current differential trip point.
3. The output contacts are shown de-energized.