

EUCR-3C Under Current Relay

Samwha



Applications

- Pumping cavitation or loss of prime
- Detect malfunction of fans
- Broken belt or coupling failure
- Shut down motors when unloaded

Features

- Adjustable underload protection
- Phase loss protection
- Trip delay adjustment
- Wide current adjustment range
- Trip indication LED
- Remote electrical reset
- Low energy consumption /compact design
- Operates in wide ambient temperature range

Benefits

- Simple to commission
- Reduce spares inventory
- Assists in fault finding
- Safe remote reset
- Less cubical space required
- Consistent accuracy

The Samwha EUCR-3C under current relay has been designed to suit 3 phase motor and other under current applications. Current ranges from 0.5 amps to 60 amps are achieved by just three relays reducing the need for large numbers of spares. Fail safe operation ensures reliability when it counts. Three phase motor or load cables are fed through the integral current transformers mounted on the body of the relay. Circuits up to 600 amps capacity can be protected by using the EUCR-3C-05 relay in conjunction with standard metering class current transformers (5 amp secondary). The secondary of the external current transformers feeds through the integral current transformers. For single phase applications, one external CT feeds through all three integral current transformers. The relay can be reset either manually or electrically allowing remote reset as standard. It is simple to install being DIN rail or surface mounting and offers very good value for money.

Ordering Information

EUCR-3C - N -
 Control Voltage 24, 110, 220, 440
 Fail Safe
 Current range 05,30,60 or 100-600 amp
 with external current transformers

For further details please contact your Samwha distributor.

Specifications

TRIP TIMES

Under current	Definite time 0.2 - 30 seconds
Phase loss	0.2 - 30 seconds

CURRENT SETTING RANGE

05 type	0.5- 5 amps
30 type	3.0-30 amps
60 type	5.0-60 amps
100-600	With external current transformers

CURRENT SENSING 3 CT

CONTROL VOLTAGES

24	24V ac/dc
110	85 - 150 Vac
220	180 - 260 Vac
440	320 - 480 Vac
Other voltages available on request	

FREQUENCY 50/60 Hz

OUTPUT RELAY

Independent volt free contact
3A / 250 Vac resistive

OPERATING CHARACTERISTIC

Definite time

TRIP INDICATION Red LED

TOLERANCE

Current	+/- 10%
Time	+/- 15%

AMBIENT TEMPERATURE

Storage	-30 - 80°C
Operation	-25 - 70°C
Humidity	45 - 85% without condensation

INSULATION

Between casing and circuits
Over 10MΩ @ 500 Vdc

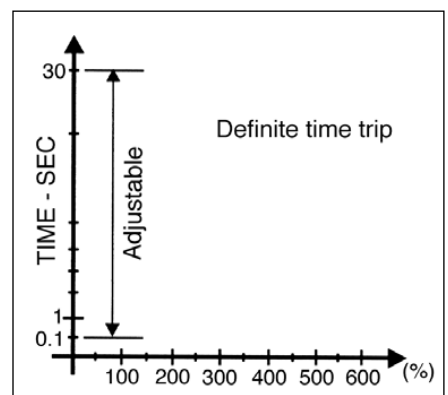
DIELECTRIC STRENGTH

Casing & circuit	2kV
Between contacts	1kV
Between circuits	2kV

POWER CONSUMPTION Less than 2 VA

MOUNTING

35mm DIN rail/surface



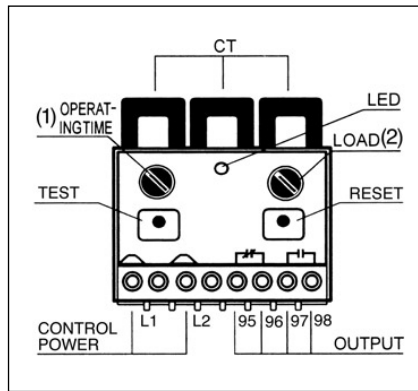
Time current characteristics

Adjustments

The relay fascia has two adjustments:

- 1) Trip time adjustment
- 2) Current adjustment

Each adjustment is calibrated so the relay can be accurately set with no control power applied.



Indication

The EUCR-3C provides undercurrent/trip indication via a red LED mounted on the front fascia.

Motor Underload Application

- Set the trip time adjustment (1) to the required trip time.
- Set the current adjustment (2) to the desired trip current.
- Once all the connections to the relay have been made in accordance with the typical wiring diagram control power can be applied (Red LED off).

Note: the output contacts will change state (95/96 open), (97/98 closed) fail safe operation

- Press and hold down test button (Red LED on). The relay will trip instantaneously. The EUCR-3C can be reset manually via the reset button on relay fascia or remote electrical reset by interrupting the control supply.

The red LED can also be used to determine actual load current being drawn from the supply without the need for an ammeter. By turning the current adjustment (2) clockwise from the fully anti-clockwise position, the LED will begin to flash when the load current is reached. The current can be determined by reading the calibrated scale and is an advantage where high accuracy is required.

Fine Underload Adjustment

- Set the trip time adjustment (1) to the required trip time.
- Follow the above procedure to obtain the actual load current
- Set the current adjustment (2) to just below the actual load current.

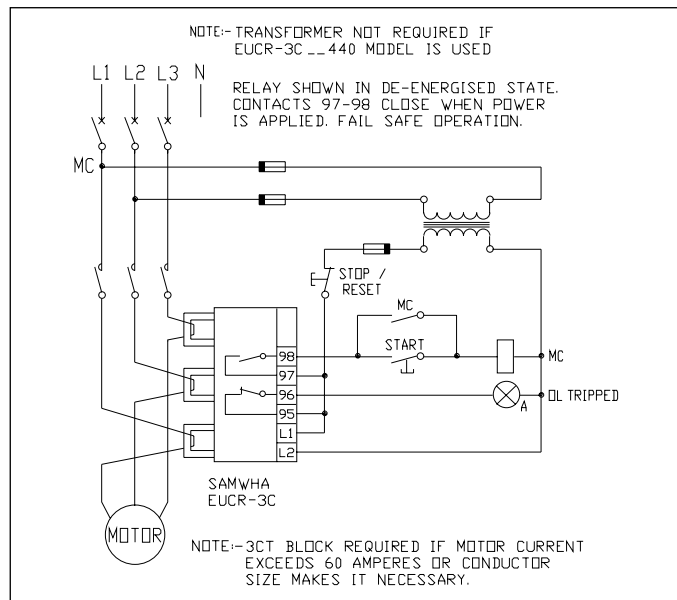
Any load current below the preset level will cause the EUCR-3C to trip after the trip time adjustment has elapsed.

Test and Reset

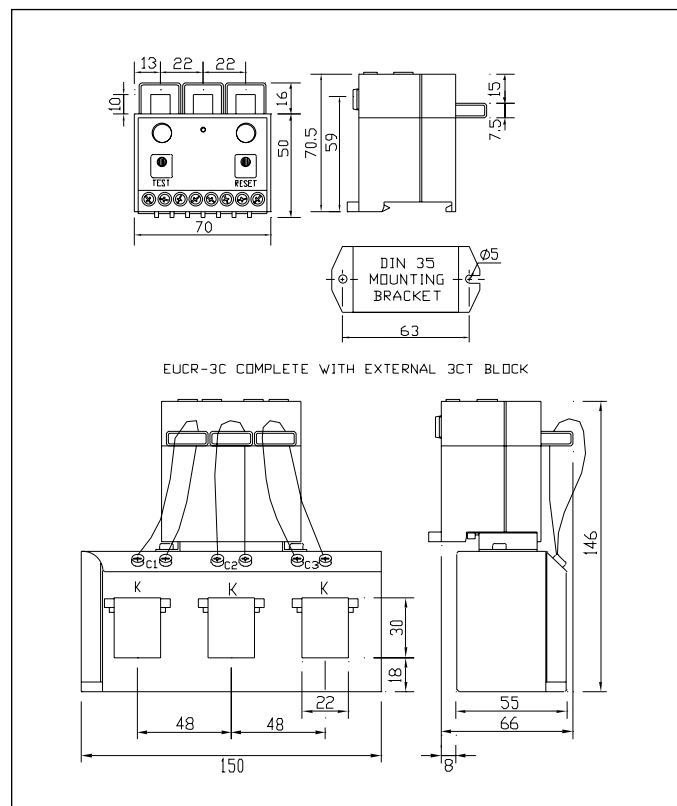
Via two push buttons on the front fascia. The test button allows the operator to test the functionality of the relay when control power is applied and the motor is running. The reset button allows the relay to be reset instantaneously. Remote electrical reset is also possible by interrupting the control power supplied to L1, L2.

Mounting

The EUCR-3C is 35mm DIN rail mounting and is supplied with a bracket for surface mounting if required. It can be mounted in any orientation without affecting performance.



Typical wiring diagram



Dimensions

Details may be subject to change without notice.

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