

CONCORD

The Vanguard of Motor Intelligence



Electronic overload
Relays COCR
2025-26

Pioneering Protection.
Powering Progress.
Since 1997.

Our Legacy

Founded in 1997, **CONCORD** emerged as a pioneer in the Indian industrial landscape, introducing advanced Electronic Motor Protection technology at a time when the industry needed it most. For nearly three decades, we have been the silent guardians of industrial uptime, designing and building relays that survive the toughest Indian operating conditions.

Our Evolution

We don't just build hardware; we engineer confidence. Our journey from 1997 to today has been defined by a relentless pursuit of innovation.

- **Design Excellence:** Custom-engineered Electronic Protection Relays.
- **Industry Trust:** A proven track record with India's leading industrial sectors.
- **Adaptive Tech:** Products that evolve alongside the shift toward automation and Industry 4.0.

The Vision

Motor Management for a New Era

Our goal is clear: **To be India's premier partner for Motor Protection and Management.** We are moving beyond simple "trip-and-protect" functions toward holistic **Motor Management.** By integrating smart diagnostics and real-time data, we help our customers transition from reactive maintenance to predictive excellence, ensuring that their motors—the heart of their industry—never skip a beat.

Why Partners Choose CONCORD?

Feature	The CONCORD Advantage
Experience	29+ years of specialized focus on the Indian market.
Innovation	In-house R&D that anticipates industrial electrical challenges.
Reliability	Built to handle the specific voltage and thermal fluctuations of Indian power grids.
Vision	A roadmap focused on total Motor Management and IoT integration.



Salient Features

- Compact Design
- Ammeter Function
- Test Function
- 2/3 Integral Current Transformers
- Trip Indication/Fault Diagnosis
- Suitable for use with External CT's upto 600A
- Multiple Protection Features
- Highly Accurate
- Ambient Insensitive
- Wide Current Adjustment Range
- Looping Options
- Low Energy Consumption
- Solid State/MCU Based Circuits
- Manual/Electrical Remote Reset

Know your Relay

D-TIME (starting Delay Time)

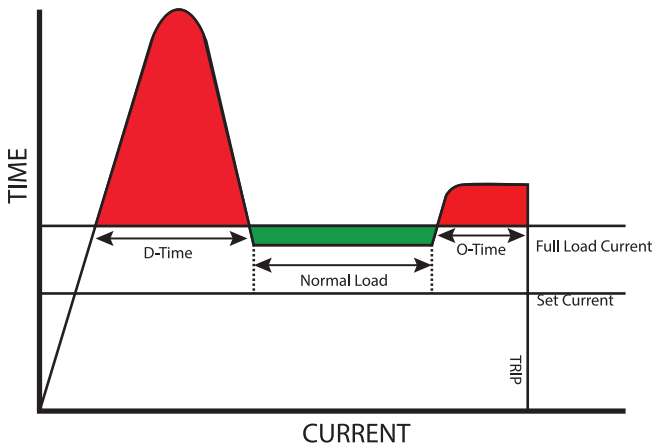
The D-Time is the time taken by the motor before it reaches its normal running current. During start the motor draws much higher levels of current and D-Time setting is to ensure that the EOCR does not cause any nuisance tripping's before this set time has elapsed.

O-TIME (Operating Time on Overload)

O-Time is the operating time in the event of Overload. When motor current exceeds the desired set current value, the EOCR detects the increase and trips the motor within the set O-Time preventing excess heating and long periods of Overload.

TEST FUNCTION

The TEST function facility on the front face of the relay is provided to check the health status of the relay without electrically energizing the relay. On pressing the TEST button the internal relay will trip after the D-Time + O-Time setting have elapsed. After using this test facility, the RESET button has to be pressed to operate the relay.



RESET FUNCTION

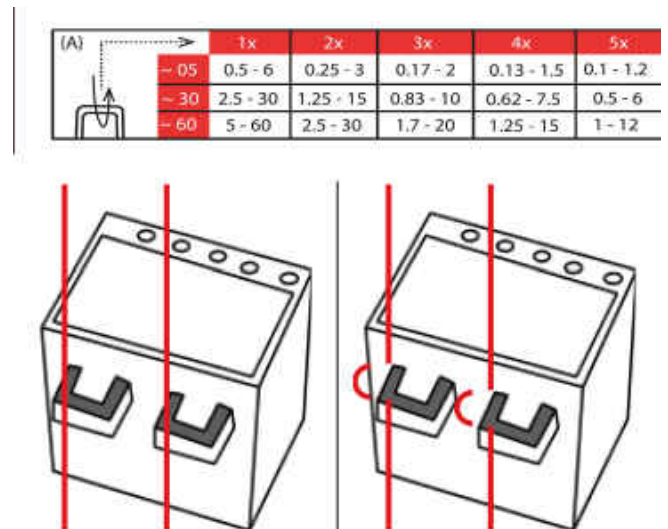
By pressing the RESET button or disconnecting the electrical supply will trip the relay immediately. Once the relay has tripped due to any Over Load or any fault, the relay has to be reset to start the motor again.

Looping Option

Looping option is required in case the amount of current measurement is desired to be more accurate and precise. The wire from the main line when passing through the internal EOCR CT is looped one or more times depending upon the current range of the relay to suit the application.

EXTERNAL CT OPTION

By using External CT's with Secondary rating of 5A the EOCR can be used to monitor and protect motors with normal running currents of upto 600A. This is used with an 05 Type relay with current setting range of 0.5-6A. In digital models the display current values are selectable as desired.



EOCR SS – Solid State Protection Relay Analog Type

Features

- Space-Efficient Form Factor (Micro-Compact Design)
- Protection against over current/phase loss/locked rotor
- (phase loss/locked rotor operates within Sum of D-Time + O-Time)
- Resistant to Shock, Vibration and Dust



- Universal Power Supply Mode for AC/DC (24-240V)
- Operation Status Display and Active current checking through LED's
- Manual/Electrical remote Reset provision
- NVR (No volt Release) Function/ Fail Safe
- Low Energy Consumption and Strong resistance to harsh environments

Specifications

Current Setting	Type	Range
	05	0.5-6A
	30	3-30A
	60	5-60A
	60A and above With External CT	
Time Setting	Start(D-Time)	0.2-30sec
	Trip(O-Time)	0.2-10sec
Control Voltage	220	24-240V AC/DC
Contact Rating	Mode	2SPST 3A/250VAC
	Rating	3A 250VAC
	Contact	Fail Safe/Non Fail Safe User selectable
Time current Characteristic	Definite	
Operating (Trip Indication)	2 LED	
Mounting	35mm DIN Rail/Base	

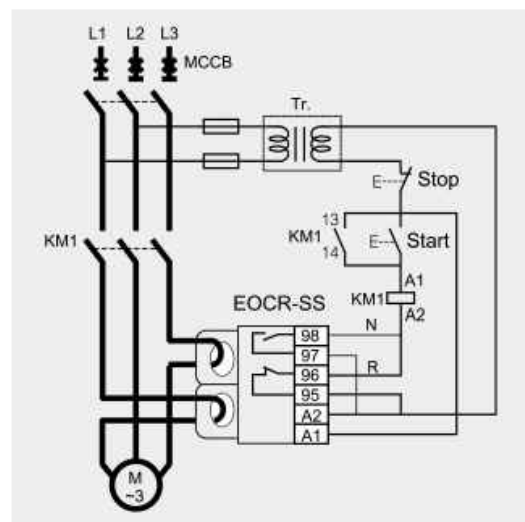
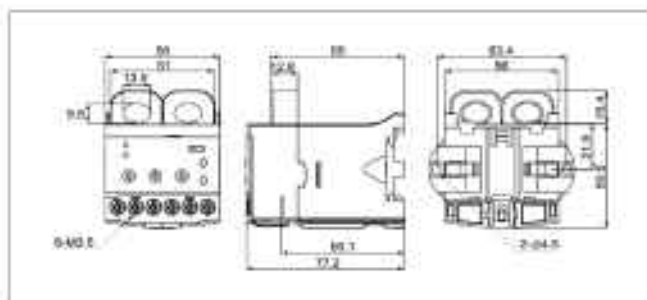
Protection Function

Protected Items	Operation Time
Over Current	O-TIME
Phase Loss	O-TIME
Locked Rotor	O-TIME + D-TIME

Operation Display

Condition		PROG LED	TRIP LED
Power Supply	Power		Light-out
In Operation	Power		Light-out
Normal operation	Light-on		Light-out
In Overload	Light-on		Light-on
Upon operation trip	Light-out		Light-on

Dimension



× "N"(Fail safe)Type converts 95 → 96 to open and 95 → 98 to close when operating power is supplied to A1 and A2 (or L1 and L2).

EOCR SSD – Solid State Protection Relay Analog Type With Digital Display



Features

- 2 CT based Digital Protection Relay – Directly replaces the SS model
- Current Display of max. current in any Phase
- 7 Segment LED Diagnostic Display
- Highly accurate protection for Phase Loss and Locked Rotor

- Space-Efficient Form Factor (Micro-Compact Design)
- Independent settings for D-Time, O-Time and Current
- Suitable for 1 Phase or 3 Phase motors
- Universal Power Supply Mode for AC/DC (24-240V)

Specifications

Current Setting	Type	Range
	05	0.5-6A
	30	3-30A
	60	10-60A
Starting Delay Time (D-Time)	1-30 sec	
Operating Time (O-Time)	1-10 sec	
Reset	Manual/Remote	
Overcurrent Trip	Definite	
Control Voltage	24-240V AC/DC	
Contact Rating	2 SPST 3A/250VAC	
Fault Diagnosis	7 segment LED Display	
Mounting	35mm DIN Rail/Base	

Over Current Operation Time Characteristic Curve

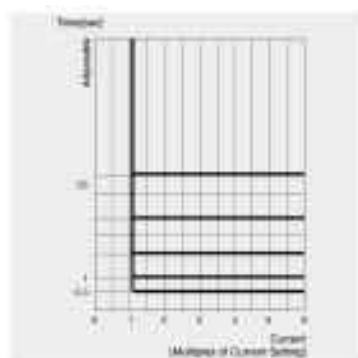
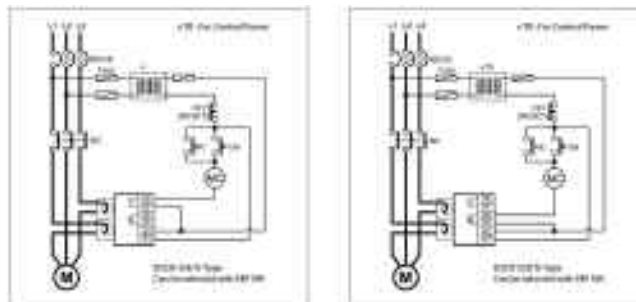


Table 1. Over Current Protection Definite Operation:

Protection Function

Protection Function	Operation Time
Over Current	Operates after O-Time
Phase Loss	Operates within 3 sec
Locked Rotor	Immediately operates if 200% or more of the set current continues after D-Time

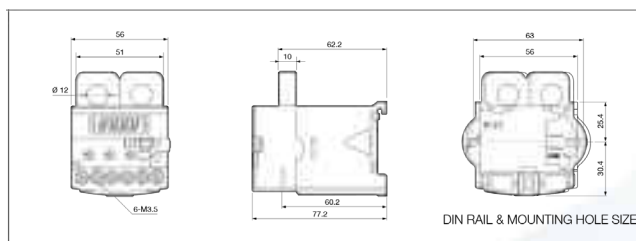
Example Wiring Diagram



Trip Cause Display and Check Method

Operation Display (Trip Indication)		
Trip Cause	Trip Cause Display	Description
Over Current	10.0	Trip after detecting the over current of 100% during operation
Phase Loss	PL-1	Trip by L1 (R) phase loss
	PL-2	Trip by L2 (S) phase loss
	PL-3	Trip by L3 (T) phase loss
Locked Rotor	LL	Trip when rotor is locked

Dimension



EOCR DS – MCU Based Solid State Protection Relay

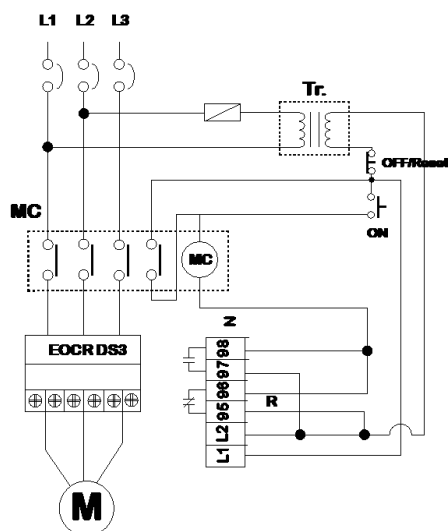
Features

- 3 Integral Current Transformer's
- Independently Adjustable D-Time and O-Time
- Independent Mounting
- Run Monitor and Fault Diagnosis with 2 LED's
- Highly accurate protection for Phase Loss and Locked Rotor
- Space-Efficient Form Factor (Micro-Compact Design)

Specifications

Current Setting	Type	Range
	05	0.5-6A
	30	3-30A
	60	10-60A
	100A and above With External CT	
Time Setting	Start(D-Time)	0.2-30sec
	Trip(O-Time)	0.2-10sec
Control Voltage	220	180-260VAC
Contact Rating	Mode	1SPDT(1C)
	Rating	3A 250VAC
	Status	Normally Energized
Time current Characteristic	Definite	
Operating (Trip Indication)	2 LED with Fault Diagnosis	
Mounting	35mm DIN Rail/Base	

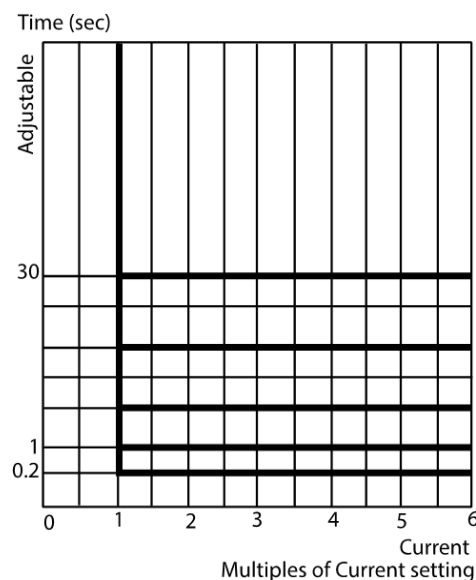
Example Wiring Diagram



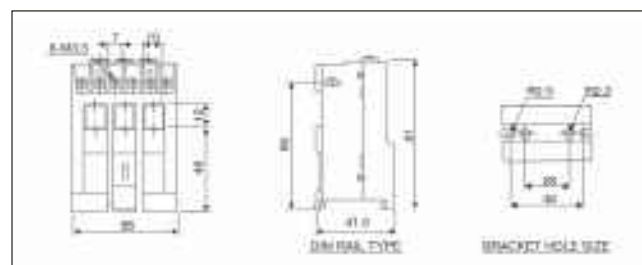
Protection Function

Protected Item	Operation Time
Over Current	O-TIME
Phase Loss	Within 4sec
Locked Rotor	Within D-Time
Phase Reverse	Within 0.1sec

Time Trip Characteristic – Definite (Inverse available on Request)



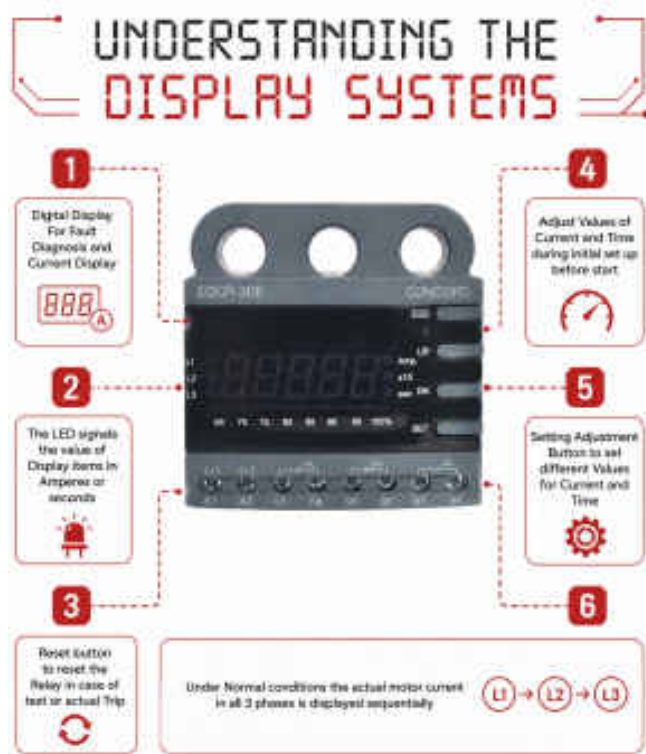
Dimension



EOCR 3DE/3EZ – MCU Based Digital Motor Protection Relay

Introduction

The complete range of Digital Motor Protection relays from CONCORD are designed for use with 3 Phase motors. The inherent design features are built to make Motor protection far easier and more accurate. The digital Display works as an Ammeter displaying the actual motor current and also acts as Diagnostic Display highlighting the various causes of motor tripping to assist the user in trouble shooting and drastic reduction in downtime whenever an Electrical fault occurs in the system.



Electronic Protection Relays With Digital Display And Fault Diagnosis

These relays are built using a MCU – Microprocessor Control Unit and are suitable for use a very wide range of applications and motor sizes. The Test function button enables the user to use the same model for motor sizes ranging from 0.5A-600A. There by resulting in drastic reduction of inventories.

PROTECTION FUNCTIONS OF EOCR 3DE/3EZ

Overcurrent detected in L3



Phase Loss Trip caused by Phase L1 failure



Phase Unbalance caused by Unbalance in L3 phase



Reverse Phase detected



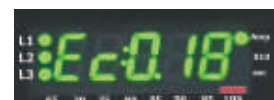
Rotor Jam trip



Locked Rotor/Stalled



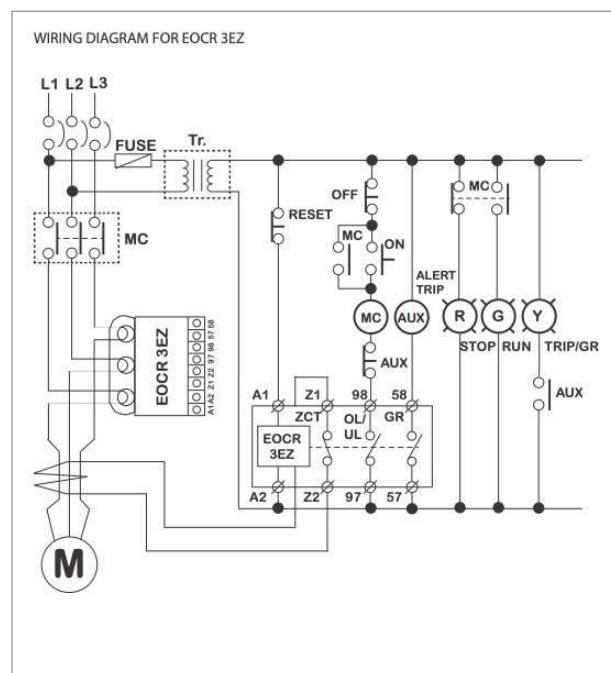
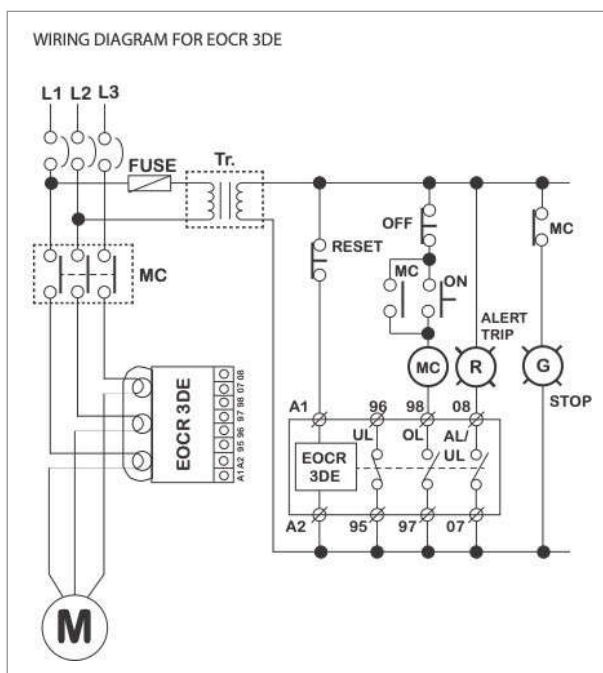
Ground Fault Trip detected



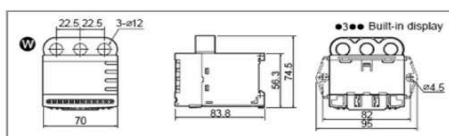
Rating Specifications

Functions and Properties		Rating Details
Overcurrent	Recommended current range (A)	Definite-time 0.5~80A, Above 80A use external CT Inverse time: 0.5A~32A, For 32A and above use external CT
Low current	Recommended current range (A)	0.5 ~ overcurrent setting or below, or OFF (in which case not applicable)
Operational time characteristics		Definite/Thermal Inverse
Time settings	Manoeuvre delay time	0~200 seconds
	Overcurrent/ definite time operation time	0.2~30 seconds
	Inverse time/ characteristic curve	1~30 Class
	Undercurrent / operation time	0.5~30 seconds
	Automatic reset time	0.5 seconds~20 minutes
Power supply control	Voltage	100~ 240VAC/DC(85%~110%, Free Voltage), 24VAC/DC
	Frequency	50/60 Hz
	Power consumption	7VA
Output contact	Capacity	3A/250VAC Resistive load
	Configuration	Overcurrent: 1a1b, warning and undercurrent
Display function	7 Segment LED	3-phase current display, trip cause indicator, settings display
	Bar graph	Load factor display, 65%~100%

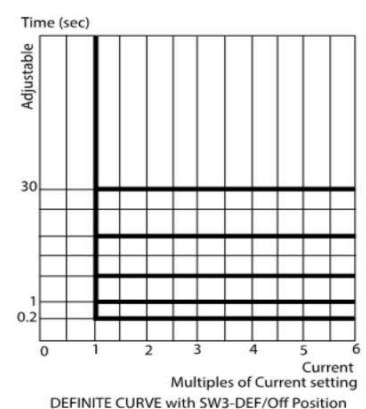
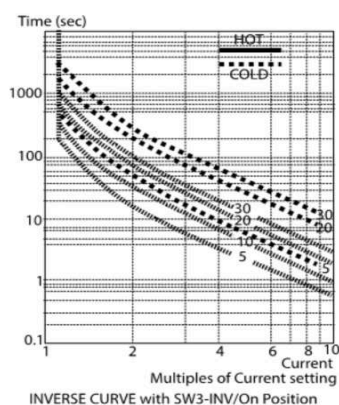
Wiring Diagram



Overall Dimensions



Time trip Characteristic Curve



Current Transformers and CBCT (ZCT)

2 HOLE COMBINED CT FOR EOCR ONLY

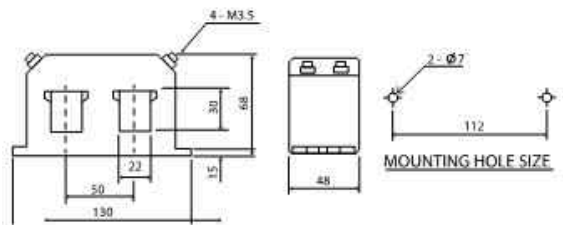
FEATURES:

- * For use with EOCR SS only for Large Ampere motors
- * Measuring Classs 1.0

SPECIFICATIONS:

Model	2CT 100	2CT 200	2CT 300	2CT 400
Current Ratio	100:5	200:5	300:5	400:5
Class	1.0	1.0	1.0	1.0
Burden	5VA	5VA	5VA	5VA
Insulation Voltage	600V AC			
Dielectric Strength	2KV			
Insulation	10M Ohm (500V DC Meggar)			
Mounting	Base Mounting Inside Panel			

OVERALL DIMENSIONS:



3 HOLE COMBINED CT FOR EOCR ONLY

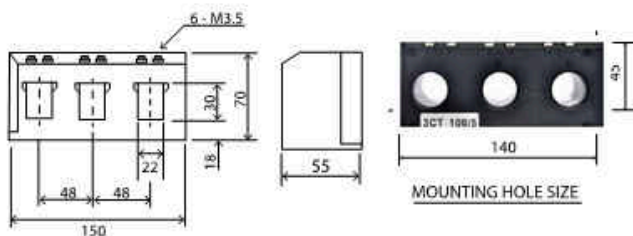
FEATURES:

- * For use with EOCR DS/3DE/EZ only for Large Ampere motors
- * Measuring Classs 1.0

SPECIFICATIONS:

Model	3CT 100	3CT 200	3CT 300	3CT 400
Current Ratio	100:5	200:5	300:5	400:5
Class	1.0	1.0	1.0	1.0
Burden	5VA	5VA	5VA	5VA
Insulation Voltage	600V AC			
Dielectric Strength	2KV			
Insulation	10M Ohm (500V DC Meggar)			
Mounting	Base Mounting Inside Panel			

OVERALL DIMENSIONS:



CBCT (ZCT) for EOCR 3EZ only

Features

* For use with EOCR 3EZ only for measuring Leakage current/ Ground Fault



For Dimensions
please email to us
for details

Specifications

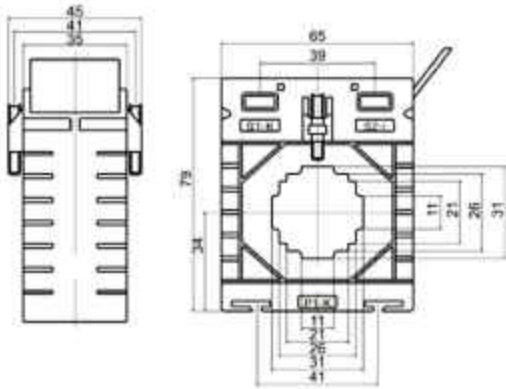
Hole Dimension	Type	Hole
	ZCT - 35	45 mm
	ZCT - 80	80 mm
	ZCT - 120	120 mm
Primary GF Current		200 mA
Secondary GF Current		1.5 mA
Tolerance		+/- 10%
Burden		10 VA
Rated Voltage		600 V AC
Dielectric Strength		2 KV
Insulation		10 M Ohms (500 V AC Meggar)
Mounting		Base Mounting Inside Panel

Current Transformer – Single Hole Type



Model: SCR - CT 100

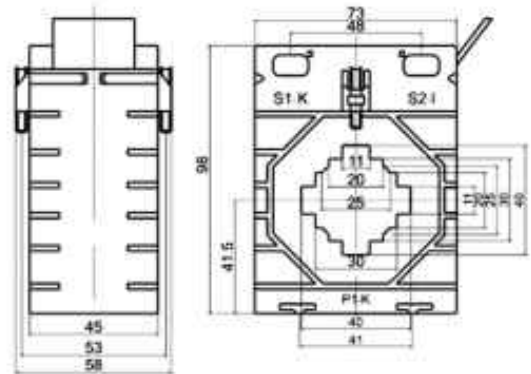
Specification	Details
CT Range	100:5
Rated Frequency	50/60 Hz
Accuracy	Class 1
VA	2.5
Secondary Current	5A
Dielectric Strength	3KV AC
Insulation Voltage	600V AC
Rated Short Term Thermal Current (Ith)	60 In
Operating Temp (Ambient)	-10 Deg C to +60 Deg C
Adjustable Current for EOCR Display	10 - 120 A
Internal Diameter	30 mm
Mounting	DIN RAIL/ Base
Inbuilt Terminal with Hinge Cover suitable for 2.5 Sq mm	





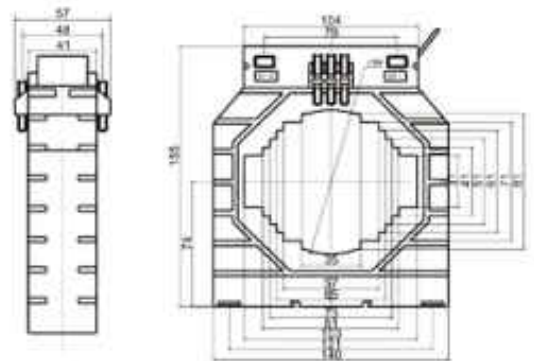
Model: SCR - CT 200

Specification	Details
CT Range	200:5
Rated Frequency	50/60 Hz
Accuracy	Class 1
Secondary Current	5A
VA	5
Dielectric Strength	3KV AC
Insulation Voltage	600V AC
Rated Short Term Thermal Current (Ith)	60 In
Operating Temp (Ambient)	-10 Deg C to +60 Deg C
Adjustable Current for EOCR Display	20 - 240 A
Internal Diameter	40 mm
Mounting	DIN RAIL/ Base
Inbuilt Terminal with Hinge Cover suitable for 2.5 Sq mm	



Model: SCR - CT 600

Specification	Details
CT Range	600:5
Rated Frequency	50/60 Hz
Accuracy	Class 1
VA	10
Secondary Current	5A
Dielectric Strength	3KV AC
Insulation Voltage	600V AC
Rated Short Term Thermal Current (Ith)	60 In
Operating Temp (Ambient)	-10 Deg C to +60 Deg C
Adjustable Current for EOCR Display	60 - 720 A
Internal Diameter	86 mm
Mounting	DIN RAIL/ Base
Inbuilt Terminal with Hinge Cover suitable for 2.5 Sq mm	



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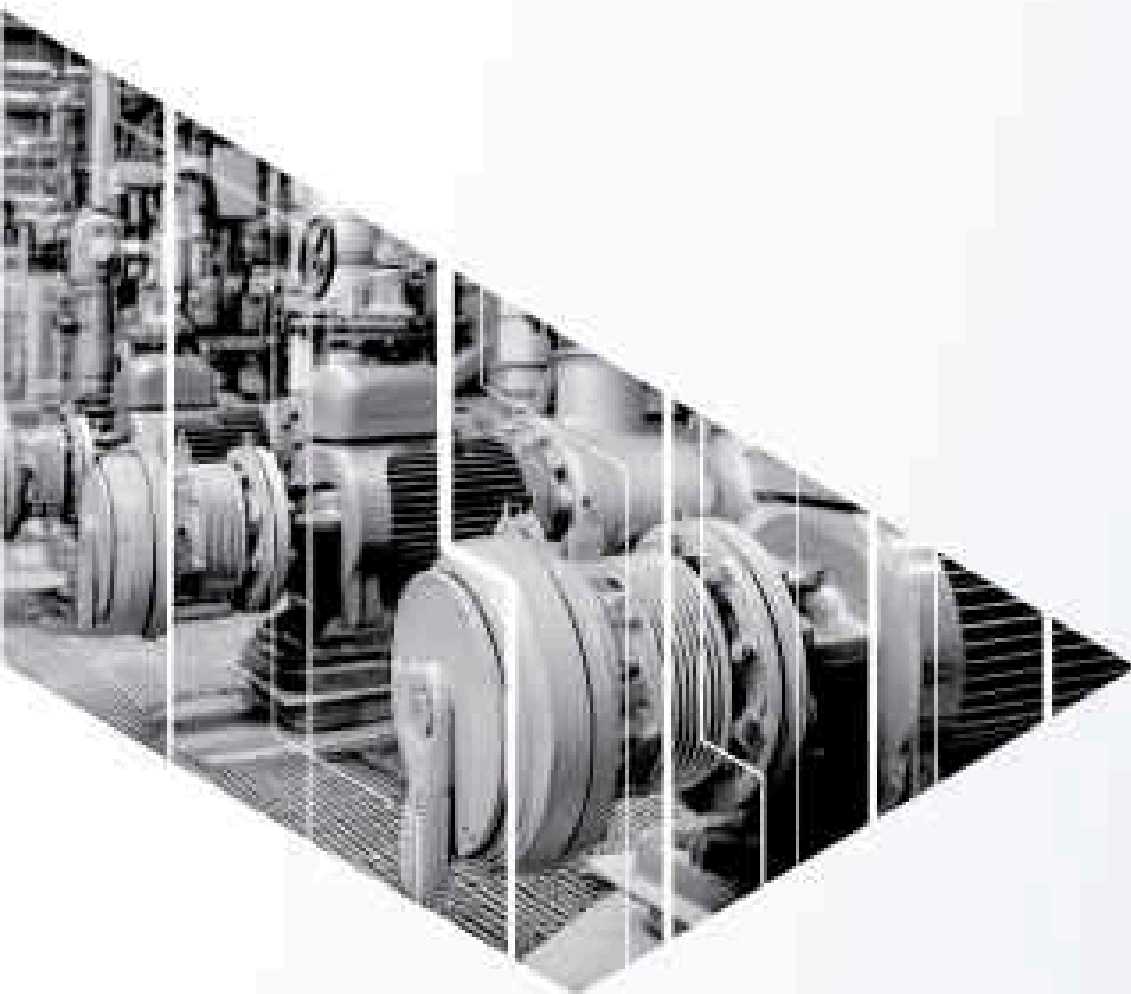
Plot No. 384, Sector 8, IMT Manesar,
Dist. Gurugram 122052, Haryana

PH: 0124 - 4775956, 57

M: +91 9657040511

E: info@cacindia.net

W: www.cacindia.net



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