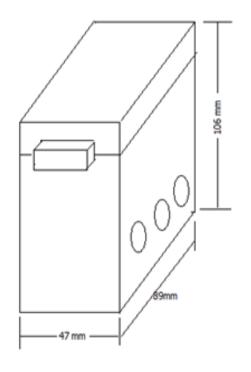
# **OPERATING MANUAL FOR MPD MODEL: S-DXC / 4 TO 61 A**

# <u>Dimension for Controller cum CT Unit</u> <u>Dimension for Display cum Keypad Unit</u>





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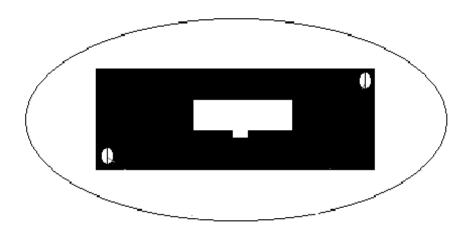
Note: Length of FRC Available is 1 meter OR 2 meter.

## **Functions of Keys**:

VALUE TEST	To reduce values during setting of parameters & to TEST the RELAY contact when no current is passing through device.	
VALUE 🛦	To increase values during setting of parameter.	
SETTINGS	SETTINGS To enter in setting of paramters	
RESET	To reset the device after trip during falult occur.	

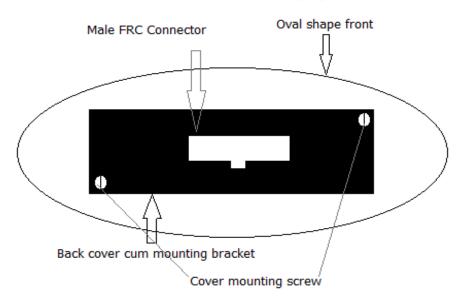
# **Mounting of Display on Panel Door (Door Cutout: 70 X 30 mm)**

Step:1



Step: 2

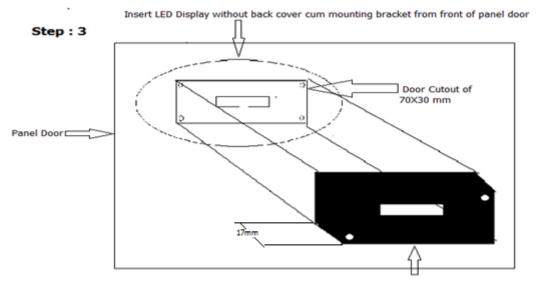
# Rear view of LED Display



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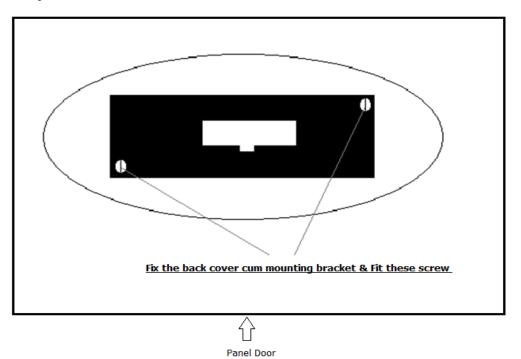
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Back cover cum mounting bracket

Step: 4 Mounting of Display on door





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## <u>List of Parameter for MPD Model: S-DXC / 4 – 61 Amp</u>

Sr. No.	Parameter Name/Meaning	Settable Value	Password
01.	Set Current [5] / FLC of Motor	4 TO 61 Amp	Fact / Engg
02.	Under Current [L]/ No Load Current of Motor	0 TO 55 Amp	Fact / Engg
03.	Set Earth Fault Current [E]	0.1 TO 25.0 Amp	Fact / Engg
04.	Over Load Curve [c] *	0/5/10/15/20/2 Sec	Engineering
05.	SPP Trip Time [P]	3 TO 20 Sec.	Engineering
06.	Under Load Trip Time [L]	6 TO 30 Sec,	Engineering
07.	Calibration [[•] / OFFSET of R Phase	±1.0 Amp	Fact / Engg
08.	Calibration [[•] / OFFSET of Y Phase	±1.0 Amp	Fact / Engg
09.	Calibration [[•] / OFFSET of B Phase	±1.0 Amp	Fact / Engg
10.	Scrolling Time [L] / Time interval for scrolling	0 To 10 Second (1)	Fact / Engg
11.	Phase Reversal [Ph-E] [Ph-d] (2)	Enable/Disable	Fact / Engg
12.	Auto Reset [Ar-E] [Ar-d](3)	Enable/Disable	Fact / Engg
13.	Lock Rotor Value [r]	3 TO 20 Times	Engineering
14.	Definite Time [d]	2 TO 900 Sec	Engineering

- (1) Scroll Time 0 : Only one Phase Current indication & Selected Phase by [VALUE ^] Key
- (2) If Ph-r fault is present & if Phase Reversal is Enable (Ph-E) then MPD trip on Ph-r automatically. If it is disable (Ph-d) then MPD will not trip on Ph-r.
- (3) If Auto Reset is 'Enable' [Rr-E] then MPD Reset automatically after 10 minutes. If it is disable [Rr-d] then MPD Reset manually by pressing **RESET** key.
- (4) \* When Parameter [c] set to 0, motor trips at Overload condition as per Setting of Definite Time [d] & IT Curve will be disable

#### Password:

There are two PASSWORDS to protect parameters from authorized changes.

- A) Factory Password Set P 106 & then Press PARA key
- B) Engineering. Password Set P 147 & then Press PARA key

### **Setting of Parameter:**

Step: 1

Press **SETTING** button on Keypad, Display will show P 100

Step: 2

Press **VALUE**  $\wedge$  till P 105

Step: 3

Press **SETTING** button, then display will show Parameter as per above Table.

Step 4:

Change required value for particular para by Key **VALUE**  $\wedge$  OR **VALUE**  $\vee$  till desire value.

Step 5:

Press **SETTING** button to go to next para OR leave the key pad. Last data changed will save automatically.

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# **RUN Display**

In Normal Running condition Display will show Three Phase Current in Scrolling manner as Scroll Time has been set.

Display	Meaning
<u>نا</u> ۲	Current in R Phase: 41.5 Amp
·40.5	Current in Y Phase: 40.5 Amp
•42.3	Current in B Phase: 42.3 Amp

## TRIPPING & FAULT MESSAGE

#### **OVERLOAD:**

If any phase current (R, Y, B) > Set Current [5] then MPD will trip on Over Load & indicates [a] with indication of the phase which draws highest current & that current value. Trip time will be according to settable O/L Curve (See page- IT CHARECTERISTICS) OR Settable Definite time (See page-Definite Time).

#### **UNBALANCE:**

If difference between <u>any</u> two phase current > (Set Current/ 3) then MPD will trip on Unbalance & display show [b] with indication of two phase which are unbalance with value of unbalance current.

### **SINGLE PHASE PROTECTION:**

If anyone phase, out of R, Y, B is absent <u>or</u> OFF then MPD will trip on Single Phase according to SPP Trip time [P] & display will shows [SPP] with indication of phase which sense '0' current.

#### **PHASE REVERSE:**

If any two phase (R, Y & B) are interchanged then MPD will trip on phase reversal and display will show [Ph-r]

#### **UNDERLOAD:**

If all 3 phases values (R, Y, B) are < Under load Current then MPD will trip on under load according to Under Load Trip Time [L] and display will show [u] with indication of the phase which draws highest current out of three phase but lower than value of Under load set point & that current value.

#### LOCK ROTOR:

If anyone phase current (R, Y, B) > SET O/L CUR x Lock Rotor Value [r], then MPD will trip on Lock Rotor. Display will show [L] & shows maximum current and the phase in which maximum current flows also <u>indicate with the help of `LED indication'</u>.

#### **SHORT CKT:**

If anyone phase current (R, Y, B) > SET OL CUR x Lock Rotor Value + 1 count [r]+1, then MPD will trip on Short Ckt. & Display will show [ $\frac{5}{2}$ ] & shows maximum current and the phase in which maximum current flows also indicate with the help of 'LED indication'.

#### **EARTH FAULT:**

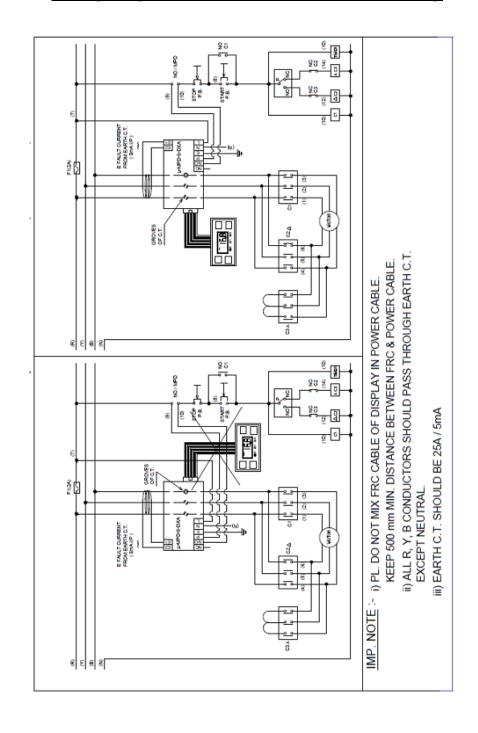
If Earth current [2] > SET EARTH CURRENT [5] then MPD will trip on Earth Fault & display will show [5] & shows recent earth leakage current.



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## Wiring Diagram of MPD Model: S-DXA/4-61 Amp

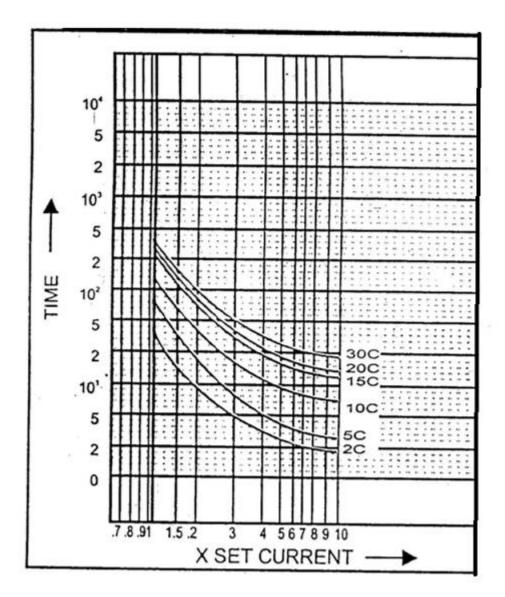


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# **IT Characteristics for Over Load Trip Time**



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