MX300 DIGITAL PANEL METER



96 x 96mm

Features :

- **True RMS measurement**
- **Universal measuring meter - Voltage, Current, Power, Power factor, Frequency**[#1]
- **Touch keys for Robust operation**
- **Universal Auxiliary supply - 85 - 300V AC / DC**
- **Auto Scaling of decimal point**
- **Programmable CT & PT - ensures HT / LT application**
- **Communication and Relay output**[#2]

Certifications : CE

Display Specifications

Display	4 digit 7 segment
Digits	Bright LED display with parameters integrated within display
Digit height	12mm
Colour	Red
Display parameters	Voltage, Current, Power factor, Frequency, Power (Active, Reactive, Apparent)

Input specifications

Rated input voltage	20 - 300V AC (L - N) 34 - 519V AC (L - L)
Rated input current range	40mA - 5A
Frequency	45 - 65 Hz
Power factor	1.00 to -1.00
Current overload	120%
Key specification	
No. of keys	3
Type of keys	Capacitive touch keys
Programmable parameters	
Display parameter selection Through DIP switch	
CT Primary	5A - 9999A
CT Secondary	5A
PT Primary	100V to 500kV AC
PT Secondary	100V to 500V AC
Configuration	
DIP Key configuration	

DIP switch configuration

Key configuration			Parameter
Key - 1	Key - 2	Key - 3	
0	0	0	Normal mode - auto / manual
0	0	1	Voltage
0	1	0	Current
0	1	1	Power factor
1	0	0	Active power
1	0	1	Reactive power
1	1	0	Apperant power
1	1	1	frequency

Accuracy

Voltage	±0.5% of Full scale
Current	±0.5% of Full scale
Frequency	± 1% For L - N voltage : 50V For L - L voltage : 87V
Power factor	± 0.01
Active power	± 1%
Reactive power	± 2%

Auxiliary supply specifications

Input Voltage range	85 - 300V AC / DC
Consumption	8 VA max
Frequency	50 / 60Hz ±10%

Output Specifications[#2]

No of relay	1
Type of relay	SPST
Relay rating	5A@230V AC

Alarm[#2 #3]

Alarm outputs	
Over voltage	60V to 519V
Under voltage	50V to 509V
Over current	1.1A to 6A
Under current	0.1A to 5A
Hysteresis	
Voltage	0.1 to 10V
Current	0.1 to 1A
Trip setting	
Trip time delay	0 to 300sec

Communication

Communication Interface	RS485 2 wire output
Protocol	Modbus RTU
Isolation	4KV Isolated

Environmental Specification

Temperature	Operating : -10 to 55°C Storage : -20 to 75°C
Humidity	85% non-condensing
Usage	Indoor
Altitude	Upto 2000 meter
Pollution	Degree II

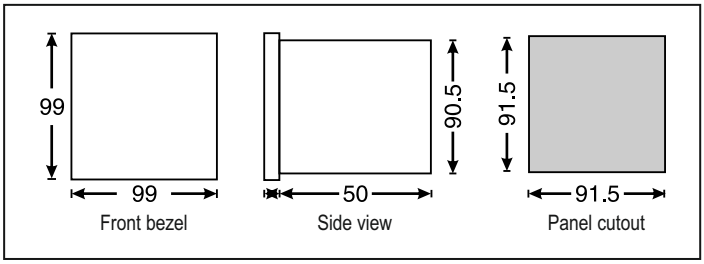
Mechanical Specification

Mounting	Panel
Dimension (mm)	96mm x 96mm
Torque	Terminal : 0.79 N-m (max) Screw clamp : 0.1 N-m (max)
IP rating	Facia : Ip51 Terminal : IP20

Packaging

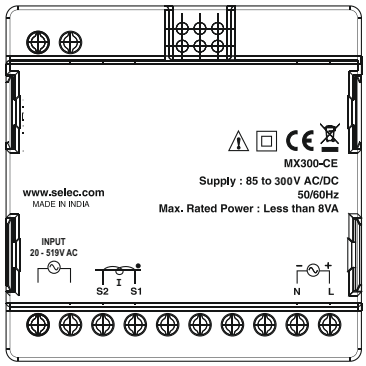
Packing material	Corrugated box
Weight	Unpacked : 192gms Packed : 234gms

Dimensions (All are in mm)

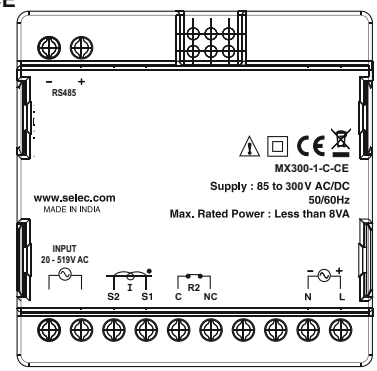


Terminal connection

MX300-CE



MX300-1-C-CE



Compliance

Applicable product standard IEC 61326-1		
Category		**Standards compliance**
Radiated Emission	CISPR 11	For Class A, Group 1 equipment 10m Measuring Distance: 30-230MHz = 40dB (uV/m) 230 – 1000MHz = 47dB (uV/m)
Conducted Emission	CISPR 11	For Class A, Group 1 equipment 0.15 – 0.50MHz Quasi Peak = 79dB (uV), Avg = 66dB (uV) 0.5 – 5.0MHz Quasi Peak = 73dB (uV), Avg = 60dB (uV) 5 – 30MHz Quasi Peak = 73dB (uV), Avg = 60dB (uV)

EMI/EMC test compliance		
Category		**Standards compliance**
Electrostatic discharge test (ESD)	IEC 61000-4-2	8 kV air discharge & Contact Discharge 6kVPerformance Criteria A
Radiated radio-frequency electromagnetic field immunity test (RS)	IEC 61000-4-3	8 kV air discharge & Contact Discharge 6kV Performance Criteria A
Electrical fast transient test (EFT)	IEC 61000-4-4	10 V/m (80 MHz to 2.7 GHz) Performance criteria A
Surge immunity test	IEC 61000-4-5	2kV on auxiliary supply and 2kV on measuring, 5kHz Performance Criteria A
Conducted radio-frequency immunity test (CS)	IEC 61000-4-6	2kV on input Auxiliary Performance Criteria A
Voltage dips &interruptions immunity test (VDI)	IEC 61000-4-11	3Vrms (150 kHz to 80 Mhz) Performance Criteria A **Dips :** 0 % during 1 cycle 40 % during 10/12 cycles 70 % during 25/30 cycles 80 % during 250 cycles **Short interruptions** : 0 % during 250/300 cycles, C

Ordering information

Product code	Description	Certification
MX300-CE	Universal digital panel meter in 96 x 96mm size	CE
MX300-1-C-CE	Universal digital panel meter in 96 x 96mm size. 1 Relay output and modbus communication	CE

Note :

#1 - Only 1 parameter can be selected using DIP switch
#2 - Only available in MX300-1-C-CE model
#3- Applicable along with CT PT ratio