Power Quality Management

Power Factor Correction

Industrial Electrical

Smart Sense Solution



NIPPEN

driven by values

NIPPEN ELECTRICAL INSTRUMENTS CO.

• Digital Panel Meters • Energy Meters (AC/DC) • Multifunction Meters • Demand Controllers
• Advanced/Thyristor Power Factor Controllers • Protection Relays • Shunt Reactors • Thyristor Switch Module
• Current Transformers • Insulation & Earth Testers • IOT Gateways • Power Quality Solutions

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DIGITAL PANEL METERS



Models	DV 1	DA 1	V DC	Hz	A DC (75mV)
	• True RMS • 1Ø-2W	• True RMS • 1Ø-2W	• DC VOLTS • 1Ø-2W	• True RMS • 1Ø-2W	• DC Ammeter • 1Ø-2W
Display	Red 7 Segment LED				
Digits Displayed	1 row of 4 Digits				
Electrical Connection	1Ø-2W Connection				
Input Range	19V-600V AC (L-L)	50mA-5A AC(6A max*)	1V -500V DC	40 to 99 Hz	Selectable current
CT Primary		5A to 5000A AC			5000A -75mV DC
CT Secondary		1A /5A			
Aux. Supply	230V Ac±20% (50/60 Hz), 80V- 270V AC/DC*				
Measuring Parameter	Voltage (L-N or L-L)	Current I1	DC Voltage	Frequency	Mili Volts 4-20mA DC(Selectable)*
Accuracy	Class 1, Class 0.5				

* This indication valid for special model while ordering.



Models	DW 34	DPF 34	DVA1(96x96)	DVA1(72x72)	DVA1(48x48)
Features	Mesurment of Active power	Mesurment of Power factor	• True RMS • 1Ø-2W		
Display	Red 7 segment LED		Red 7 segment LED		
Digit Displayed	1 row of 4 Digits		2 row of 3 Digits		
Electrical Connection	1Ø-2W, 3Ø-4W		1Ø-2Wire		
Input Range	19V-600V AC (L-L), 50 mA - 5A(6A Max)		500V AC (L-L), 1A or 5A		
CT Primary	5A to 5000A AC		5A to 999A AC		
Aux.Supply	230V Ac±20% (50/60 Hz), 80V- 270V AC/DC		230V AC±20% (50/60Hz), 80V-270V AC/DC*		
Measuring Parameter	Active power	Power Factor	Voltage (L-N, L-L), Current I1		
Accuracy	Class 1		Class 1		

Terminal Connections

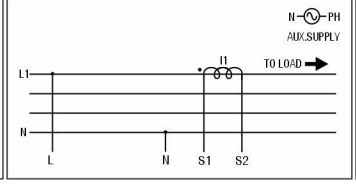
DA1 / DV1 / Hz



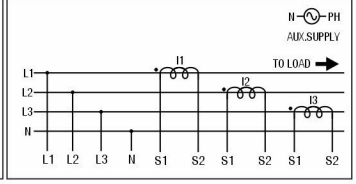
DC / 75 mV



DW 11/DPF 11/ VA-72/VA-48/VA-96 1Ø-2W



DW 34 / DPF 34 3Ø-4W



DIGITAL PANEL METERS

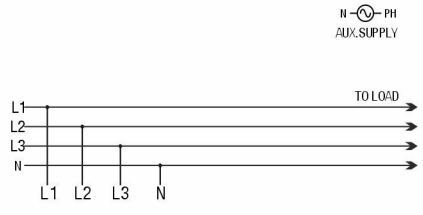


Models	DV3 / DV33	DA3 / DA33
Features	• True RMS • 3Ø-4W • 3 Row Display	• True RMS • 3Ø-4W • 3 Row Display
Display	Red 7 Segment LED	
Digits	1 row of 4 digits, 3 rows of 4 digits*	
Electrical Connection	1Ø-2W, 3Ø-3W, 3Ø-4W	
Input Range	11-300V AC (L-N), 19-520V AC (L-L), 50 Hz	50mA -5A (6A max)
CT Primary		5A to 5000A
CT Secondary		1A or 5A (Factory Set)
PT Primary	100V-500kV (Factory Set)	
PT Secondary	100V-500V L-L (Factory Set)	
Aux.Supply	230V AC±20% (50 - 60Hz), 80 - 270V AC/DC*	
Measuring Parameter	Voltage (L-L,L-N) (Individual / Average)	Current I1,I2,I3 (Individual / Average)
Accuracy	Class 1	

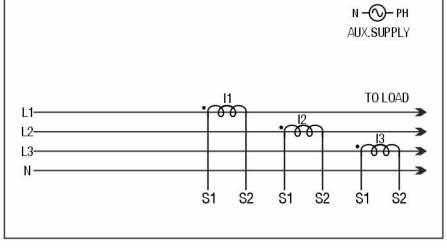
* This indication valid for special model while ordering.

Terminal Connections

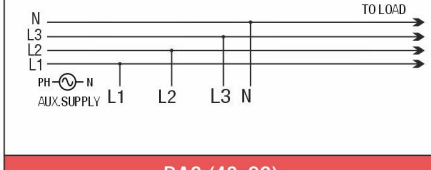
DV3 / DV33 (96x96)



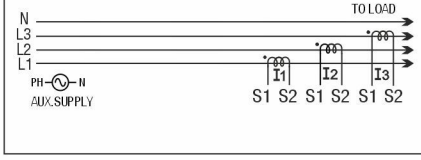
DA3 / DA33 (96x96)



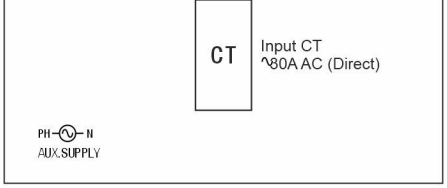
DV 3 (48x96)



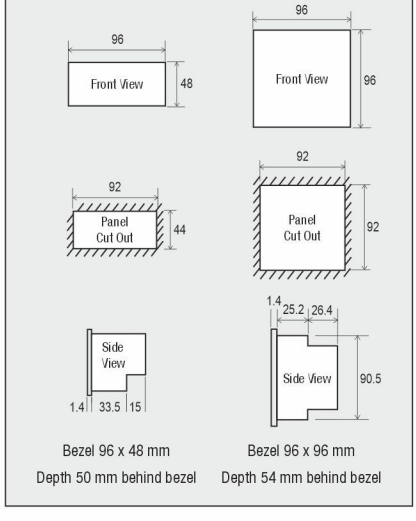
DA3 (48x96)



DIRECT CT UPTO 30A



Mechanical Specifications



Bezel 96 x 48 mm
Depth 50 mm behind bezel

Bezel 96 x 96 mm
Depth 54 mm behind bezel

VAF METERS

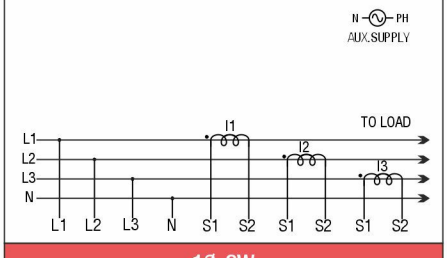


Models	DT-36M	DT-36L	DT-36(48x96)
Features	• Volt / Amps /Hz • True RMS • ON Hour/RPM Display • Auto Scroll	• Volt / Amps / Hz • True RMS • ON Hour/RPM Display	• Volt / Amps /Hz • True RMS • ON Hour/ RPM • Auto Scroll
Display	Red 7 Segment LED		
Digits	3 rows of 4 digits	3 rows of 3 digits	1 row of 4 digits
Electrical Connection	1Ø-2W, 3Ø-4W		
Input Voltage	11-300V AC(L-N), 19-520V AC(L-L), 50 Hz (max 65 Hz)		
Input Current	150mA -5A (6A max)		
CT Primary	5A to 5000A	5A to 5000A	5A to 5000A
CT Secondary	5A	5A	5A
PT Primary	100V-500kV (Factory Set)*		100V-500kV (Factory Set)*
PT Secondary	100V-500VL-L (Factory Set)*		100V-500VL-L*
Aux. Supply	230V Ac±20% (50 - 60 Hz), 80 - 270V AC/DC*		
Measuring Parameter	Voltage (L-L,L-N) (Individual / Average), Current I1,I2,I3 (Individual / Average), Frequency, ON hours, Rpm	Voltage (L-L,L-N) (Individual / Average) Current I1,I2,I3 (Individual / Average), Frequency, ON hours, Rpm	Voltage (L-L, L-N) (Individual / Average), Current I1,I2,I3 (Individual / Average), Frequency, ON hours, Rpm
Accuracy	Class 1		

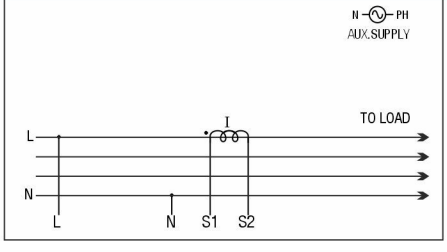
* This indication valid for special model while ordering.

Terminal Connections

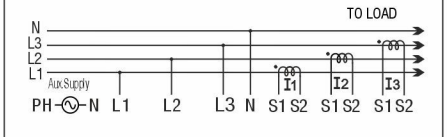
DT-36M / DT-36L 3Ø-4W (96x96)



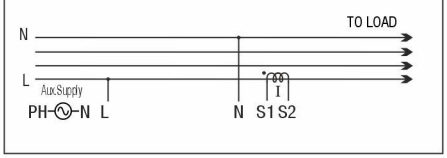
1Ø-2W



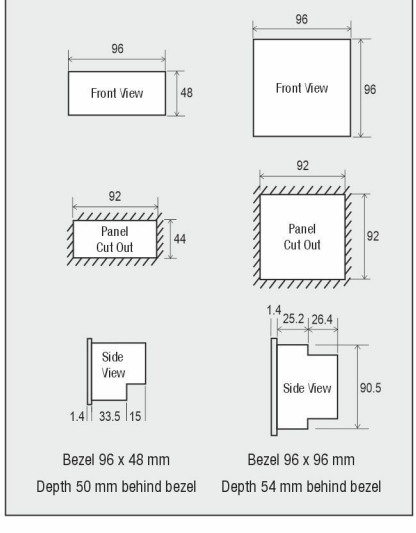
DT-36 3Ø-4W (48x96)



1Ø-2W



Mechanical Specifications



Bezel 96 x 48 mm
Depth 50 mm behind bezel

Bezel 96 x 96 mm
Depth 54 mm behind bezel

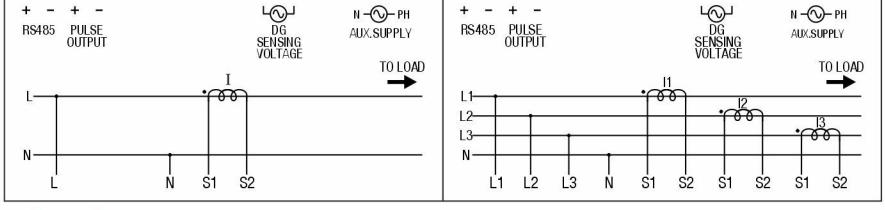


Model (Size)	EM-3010/EM-3010A	EM-3011/EM-3011A	EM-3013/EM-3013A
Features	• 3Ø Energy (Active) • EB or EB/DG (Dual) • Old EB or EB/DG Energy Reading • Pulse output	• 3Ø (Volts, Amps, Hz) • 3Ø Energy (Active) • EB or EB/DG (Dual) • Old EB or EB/DG Energy Reading • Pulse output	• 3Ø (Volts, Amps, Hz, PF) • 3Ø Power (Active, Reactive, Apparent) • 3Ø Energy (Active, Apparent) • EB or EB/DG (Dual) • Old EB or EB/DG Energy Reading • Pulse output
Display	Red 7 segment LED display		
Digits	1 Rows of 6 digits		
Electrical Connection	1Ø-2W, 3Ø-3W, 3Ø-4W		
Input Voltage	11-300V AC(L-N), 19-520V AC(L-L), 50 Hz		
Input Current	20mA -5A (6A max)		
Resolution	0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M (Depending upon CT Ratio x PT Ratio)		
CT primary	5A to 5000A AC		
CT Secondary	1A or 5A		
PT Primary	100V- 500kV AC		
PT Secondary	100V- 500V(L-L) AC		
Aux. Supply	230V AC±20% (50 / 60 Hz), 80 - 270V AC/DC*,20-80V DC*		
Measuring Parameter	Active Energy kWh	Voltage(L-L,L-N) (Individual / Average), Current I1,I2,I3 (Individual / Average), Frequency (Individual / Average), Active Energy KWh (Total)	Voltage(L-L,L-N) (Individual/Average), Current I1,I2,I3 (Individual / Average), Power Factor(Individual / Average) Frequency(Individual / Average), Active, Reactive,Apparent Power(Individual / Total), Active, Apparent, Reactive*, Energy (Total)
Optional	RS485 MODBUS RTU protocol, Pulse output, WIFI*, GPRS*, Ethernet*,Direct inbuilt CT upto 60A*		
Accuracy	EM-3010: 1% EM-3010A: 0.5%	EM-3011: 1% EM-3011A: 0.5%	EM-3013: 1% EM-3013A: 0.5%

Terminal Connections

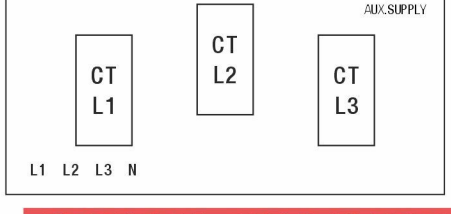
EM-3010/EM-3010A / EM-3011/EM-3011A / EM-3013/EM-3013A

1Ø-2 W (96 x 96) 3Ø-4W



* This indication valid for special model while ordering.

DIRECT TYPE 3CT METER



ENERGY METERS



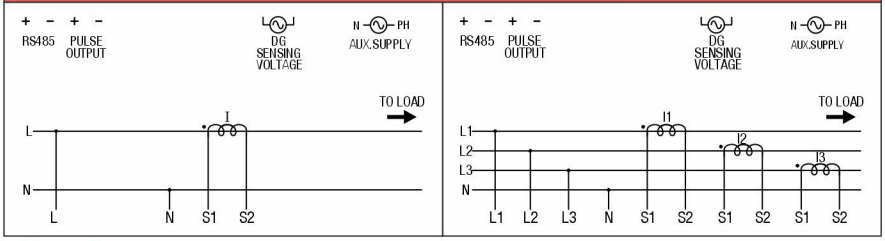
Model (Size)	EM-3060/EM-3060A	EM-3060 VA/EM-3060VAA	EM-3063/EM-3063A
Features	• 3Ø Energy (Active) • Potential Free Pulse Output For Energy • EB or EB/DG (dual) Models • Old EB or EB/DG Energy Reading	• 3Ø (Volts/Amps/Energy)(Active) • Potential Free Pulse Output For Energy EB or EB/DG (dual) Models • Old EB or EB/DG Energy Reading • Auto scroll	• 3Ø (Volts/Amps/Hz) • 3Ø Power (Active/Reactive/Apparent) • 3Ø Energy (Active/Apparent) • Potential Free Pulse Output • EB or EB/DG (Dual) Models • Old EB or EB/DG Energy Reading • Auto scroll
Display	7 Segment LCD display with backlight		
Digits	1 row of 12 digits for energy		
Input Voltage	11-300V AC (L-N),19-520V AC(L-L), 50 Hz (max 65 Hz)		
Electrical Connection	1Ø-2W, 3Ø-3W, 3Ø-4W		
Input Current	50mA - 5A (6A max)		
Resolution	For energy - 0.01k, 0.1k, 0.01M,1M (Depending upon CT Ratio x PT Ratio)		
CT Primary	5A to 5000A		
CT Secondary	1A or 5A		
PT Primary	100V-500kV		
PT Secondary	100V-500VL-L		
Aux. Supply	230V Ac±20% (50 / 60 Hz), 80 - 270V AC/DC*,20-80V DC*		
Measuring Parameter	Active energy (kWh) (Total EB&DG)	Voltage(L-L,L-N) (Individual/ Average) Current I1,I2,I3 (Individual / Average) Active energy (kWh) (Total EB&DG)	Voltage(L-L,L-N) (Individual/ Average) Current I1,I2,I3 (Individual / average), Frequency, Power Factor (Individual / Average), Active, Reactive, Apparent power (Individual / total) Active, Apparent, Reactive*, Energy (Total, EB, DG)
Optional	RS485 MODBUS RTU protocol, Pulse output, WIFI*, GPRS*, Ethernet*, Direct inbuilt CT upto 60A*		
Accuracy	Em3060: 1%, EM3060A: 0.5%	EM3060VA: 1%, EM3060VAA: 0.5%	Em3063: 1%, EM3063A: 0.5%

* This indication valid for special model while ordering.

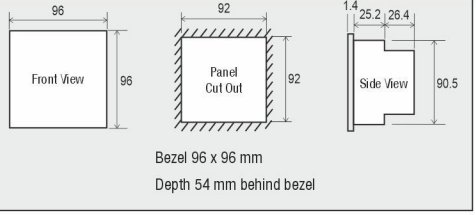
Terminal Connections

EM-3060/EM-3060A / EM-3060VA/EM-3060VAA / EM-3063/EM-3063A

1Ø-2 W (96 x 96) 3Ø-4W



Mechanical Specifications





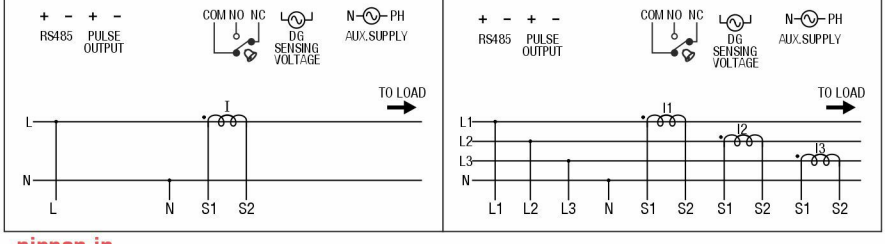
Models	DT-3600	DT-108/ DT-108A	DT-108+/DT-108A+
Features	• 3Ø (Volts/ Amps/ PF / Hz) • 3Ø Power (Active/ Reactive/ Apparent) • ON Hours/ Auxiliary Interrupt/ RPM • Auto Scroll	• 3Ø (Volts / Amps/ PF/Hz) • 3Ø Power (Active/ Reactive/ Apparent) • 3Ø Energy (Active /Apparent) • ON Hours/ Auxiliary Interrupt/ RPM • Auto Scroll	• 3Ø (Volts / Amps / PF / Hz) • 3Ø Power (Active / Reactive /Apparent) • 3Ø Energy (Active / Apparent) • Maximum / Minimum value • Current Demand • ON Hours / Auxiliary Interrupt / RPM • Auto Scroll
Accuracy	Class 1, Class 0.5 (DT108A)		
Display	Red 7 segment LED		
Digits	3 rows of 4 digits and 8 digits for Energy		
Electrical Connection	1Ø-2W, 3Ø-3W, 3Ø-4W		
Input Voltage	11-300V AC (L-N), 19-520V AC, (L-L), 50 Hz (max 65 Hz)		
Input Current	20 mA - 5A (6A max)		
Resolution	For energy: 0.01k, 0.1k, 1k, 0.01M, 0.1M,1 M / 800 pulses per kWh		
CT Primary	5A to 5000A (Programmable for any value)		
CT Secondary	1A or 5A		
PT Primary	100V-500kV (Programmable for any value)		
PT Secondary	100V-500V L-L (Programmable for any value)		
Aux. Supply	230V AC±20% (50 / 60 Hz), 80 - 270V AC/DC*, 20-80V DC*		
Measuring Parameter	Voltage (L-L,L-N) (Individual / Average), Current I1,I2,I3, (Individual /Average), Frequency, On hours, Rpm, Power factor (Individual /Average), Active, Reactive, Apparent power (Individual /total)	Voltage (L-L,L-N) (Individual/ Average), Current I1,I2,I3, (Individual/ Average), Frequency, On hours,Rpm, Power factor(Individual/Average), Active, Reactive, Apparent power (Individual /Total) Active, Apparent, Reactive*, Energy (EB Total)	Voltage (L-L,L-N)Individual / Average), Current I1,I2,I3 (Individual /Average), Frequency, Current demand, On hours, Rpm, Minimum, Maximum Value, PF(Individual /Average), Active, Reactive Apparent power (individual/Total) Active, Apparent, Reactive*,Energy (EB Total)
Optional	Active Energy DG RS485 communication Modbus RTU protocol, Single relay output, WIFI*, GPRS*, Ethernet*, Direct inbuilt CT upto 60A*		

* This indication valid for special model while ordering.

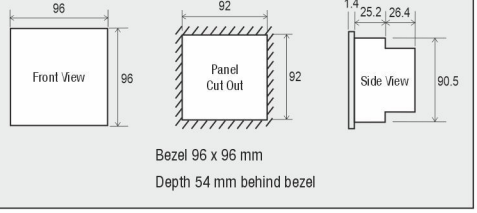
Terminal Connections

DT-3600 / DT-108 / DT-108+ / DT-108A / DT-108A+

1Ø-2 W (96 x 96) 3Ø-4W



Mechanical Specifications



Bezel 96 x 96 mm

Depth 54 mm behind bezel

MULTIFUNCTION METERS



NEW



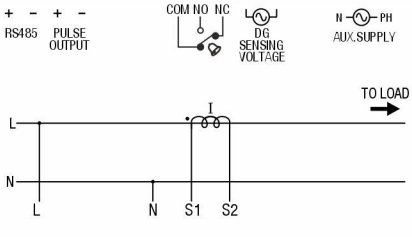
Models	MFM-804	MFM-804A
Features	• 4 Row LCD display • 3Ø (Volts/Amps/PF/Hz) • 3Ø Power (Active, Reactive, Apparent) • 3Ø Energy (Active, Reactive, Apparent) • Pulse output • Maximum /Minimum value, Demand • THD upto 31st Harmonic	• 4 Row LCD display • 3Ø (Volts/Amps/PF/Hz) • 3Ø Power (Active, Reactive, Apparent) • 3Ø Energy (Active, Reactive, Apparent) • Pulse output • Maximum /Minimum value, Demand • THD upto 31st Harmonic
Display	7 segment LCD with backlight	
Digits	3 Rows of 4 Digits, 1 Row of 8 digits for Energy	
Electrical Connection	1Ø-2W, 3Ø-3W, 3Ø-4W	
Input Voltage	11-300V AC (L-N), 19-520V AC (L-L), 50Hz (max 65 Hz)	
Input current	50mA - 5A (6A max)	
Resolution	For Energy- 0.01k, 0.1k, 1k / 800 pulses per kWh	
CT Primary	5A to 5000A	
CT Secondary	1A or 5A	
PT Primary	100V - 22kV	
PT Secondary	100V- 500 V(L-L)	
Aux. Supply	80 - 270V AC/DC (50 / 60 Hz), 20-80V DC*	
Measuring Parameter	Voltage (L-L,L-N) (Individual/Average), Current I1,I2,I3 (Individual/Average), Frequency, Current demand, %THD, Minimum, Maximum value (L-N,L-L,A,Hz), Power factor (Individual/Average), Active, Reactive, Apparent power (Individual /Total), Active, Reactive*, Apparent* Energy (Total) 3Ø Energy (Active for MFM-804) 3Ø Energy (Active, Reactive, Apparent for MFM-804A)	
Optional	RS485 communication Modbus RTU protocol *, Pulse output* Single relay output*, WIFI*, GPRS*, Ethernet*, Direct inbuilt CT upto 60A*	
Accuracy	Class 1	Class 0.5

* This indication valid for special model while ordering.

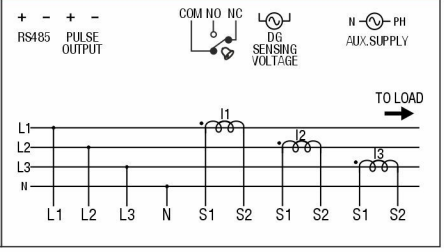
Terminal Connections

MFM-804 / MFM-804A (96 x 96)

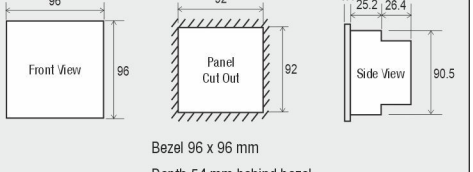
1Ø-2W



3Ø-4W



Mechanical Specifications



Bezel 96 x 96 mm
Depth 54 mm behind bezel

SMART LOAD MANAGERS

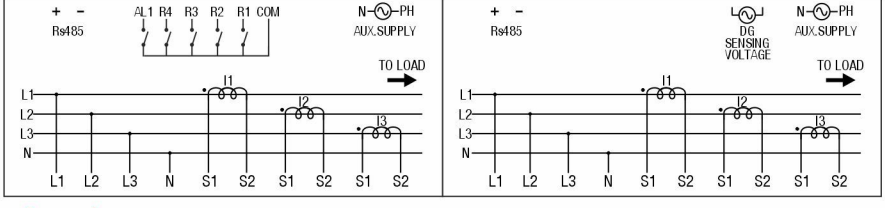


Model (Size)	SL-6300	SL-6300 MDC	SL-6300 DG
Features	• 3Ø (Volts/ Amps / Hz/ PF) • 3Ø Power (Active/ Reactive/ Apparent) • 3Ø Energy (Active/ Reactive/ Apparent) (4 Quadrant) • % THD upto 31st Harmonic • Maximum /Minimum Demand (Power) • Accuracy 0.5%	• 3Ø (Volts/ Amps / Hz / PF) • 3Ø Power (Active/ Reactive/ Apparent) • 3Ø Energy (Active/ Reactive/ Apparent) (4 Quadrant) • Controls Rising Demand (Active/Apparent) • 2 Relay or 4 Relay output • %THD upto 31st Harmonic • Max /Min Demand (Power) • Real Time Clock	• 3Ø (Volts / Amps/ Hz / PF) • 3Ø Power (Active/ Reactive/ Apparent) • 3Ø Energy (Active/ Reactive/ Apparent) (4 Quadrant) • EB or EB/DG (Dual) • %THD upto 31st Harmonic
Display	Red 7 segment LED display		
Digits	3 Rows of 4 digits		
Electrical Connection	1Ø-2W, 3Ø-3W, 3Ø-4W		
Input Voltage	11-300V AC(L-N), 19-520V AC(L-L), 50 Hz		
Input Current	50mA - 5A (6A max)		
Resolution	Power factor: 0.001 lead, lag		
CT Primary	5A to 5000A		
CT Secondary	1A or 5A		
PT Primary	100V- 500kV AC		
PT Secondary	100V- 500V(L-L) AC		
Aux. Supply	80V-270V AC/DC (50/60Hz), 20-80 V DC*		
Measuring Parameter	Voltage (L-L,L-N) (Individual/ Average), Current I1,I2,I3 (Individual/ Average), Frequency, %THD, Demand, Power factor (Individual/ Average), Active, Reactive, Apparent power (Individual /Total), Active, Reactive, Apparent energy EB (DG for SL 6300 MDC) (Total, Export, Import), Min, Max value (L-N, L-L, A, Hz), Phase Sequence Detection, Run Hr., Load Hr.		Voltage(L-L,L-N) (Individual/Average), Current I1,I2,I3 (Individual/Average), Frequency, %THD, Demand, Power Factor (Individual/ Average) Active, Reactive, Apparent power (Individual/Total) Active, Reactive, Apparent energy EB, DG (Total, Exp,Imp) Min, Max value (L-N, L-L, A, Hz) Phase Seq. Detection, Run Hr., Load Hr.
Optional	RS485 communication Modbus RTU Protocol WIFI*, GPRS*, Ethernet*	RS485 communication Modbus RTU Protocol 4Relay output, WIFI*, GPRS*, Ethernet* Direct inbuilt CT upto 60A*	RS485 communication Modbus RTU Protocol WIFI*, GPRS*, Ethernet*
Accuracy	Class 0.5, Class 0.5S*		

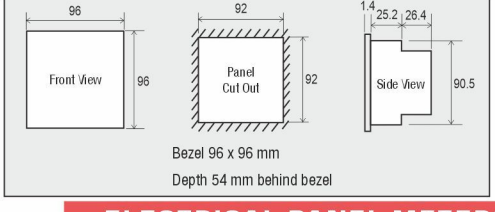
Terminal Connections

* This indication valid for special model while ordering.

SL-6300 / SL-6300MDC 3Ø-4W SL-6300DG



Mechanical Specifications



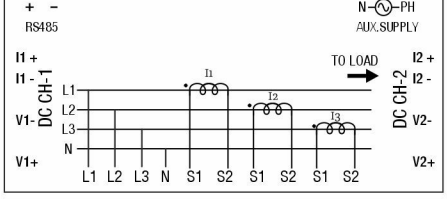
AC/DC ENERGY METERS



Model	ADM-D	ADM-A/ADM-D	EDC 9D
Features	DC 2 Channels(Volts/Amps/Power)	3Ø(Volts/Amps/Hz/PF) 3Ø Power(Active/Reactive/Apparent) 3Ø Energy(Active/Reactive/Apparent) 4 Quadrant %THD upto 31st Harmonics Max/Min Frequency DC Measurements (Voltage,Current ,Power)	
Display	Red 7 Segments LED Display		
Digits	3 Row of 4 digits		1 Row of 6 digits
Input voltage	0-1000V DC	11-300V AC(L-N),19-520V AC(L-L) & 0-1000V DC	
CT Primary		5-5000A(Selectable)	
CT secondary		1A/5A (Selectable)	
PT Primary		100V-500kV AC	
PT Secondary		100V-500V(L-L) AC	
Shunt primary Current(DC)	5-5000A(Selectable)		
Shunt Secondary Current(DC)	75mV (Default)		
Aux. Supply	80-270 V AC/DC, 20-80 V DC*, (50/60Hz)		
Measuring Parameter	DC Channel 1: Voltage,Current,Power(KW), DC Channel 2: Voltage,Current,Power(KW)	Voltage(L-L,L-N) (Individual/Average), Cureent I1,I2,I3 (Individual/Average), Frequency,%THD ,Power Factor (Individual/Average), Active, Reactive, Apparent power (Individual/Total), Active, Reactive, Apparent Energy EB (Total,Export,Import) , Active, Reactive, Apparent Energy DG (Total,Export,Import), Min/Max value Hz, Phase Sequence Detection,Run Hr., Load Hr., DC Ch1: Voltage,Current,Power(KW), DC Ch2: Voltage,Current,Power(KW)	
Optional	RS485 Communication Modbus RTU Protocol, WIFI*, GPRS*, Ethernet*		
Accuracy	Class 0.5%, Class 0.5s		

Terminal Connections

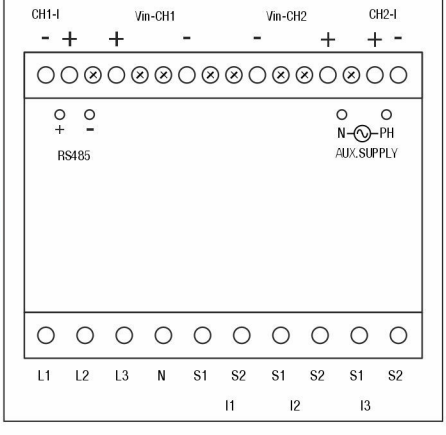
ADM-A/ADM-D



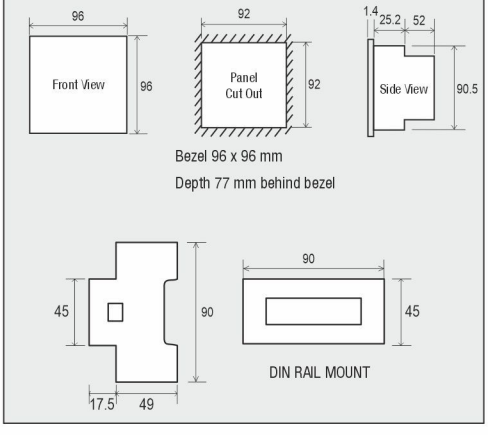
ADM-D



EDC 9D (DIN)



Mechanical Specifications



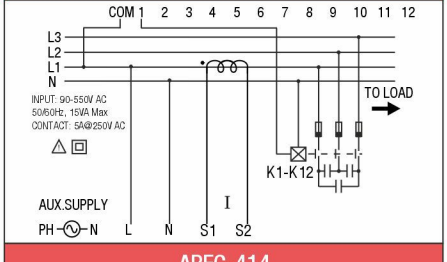
POWER FACTOR CONTROLLERS (SINGLE CT)



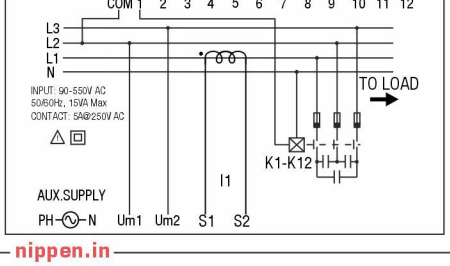
Model (Size)	APFC-414, APFC-414-1p	APFC-414-144, APFC-414-144-1p	APFC - PRO
Features	• Auto Detection of Capacitor values • kVAr sensing with sophisticated algorithm • Compact size upto 12 relay • CT Polarity auto detection • Under-compensation relay output*	• Auto Detection of Capacitor values • kVAr sensing with sophisticated algorithm • Compact size upto 16 relay • CT Polarity auto detection • Under-compensation relay output*	• Auto Detection of Capacitor values • kVAr sensing with sophisticated • No button / No user setting required
Display	Red 7 segment LED		
Digits	1 row of 4 digits		
Electrical Connection	1Ø-2W, 3Ø-4W		
Input Voltage	11-300V AC(L-N), 19-520V AC(L-L), 50 HZ		
Input Current	50mA - 5A(6A max)		
Resolution	For power factor- 0.001 Lead, Lag		
CT Primary	5A to 5000A		
CT Secondary	1A or 5A (Factory Settable)		
PT Primary	100V -500kV		
PT Secondary	100V-500V L-L		
Aux. Supply	80V - 270V AC/DC (50 / 60 Hz)		
Measuring Parameter	Voltage (L-L), Current, Power factor (Average), Reactive Power (Total)		
Relay Stage	8,12 relay and 1 relay for under compensation	8,12,16 relay and 1 relay for under compensation	8 relay output
Accuracy	Class 1		

Terminal Connections

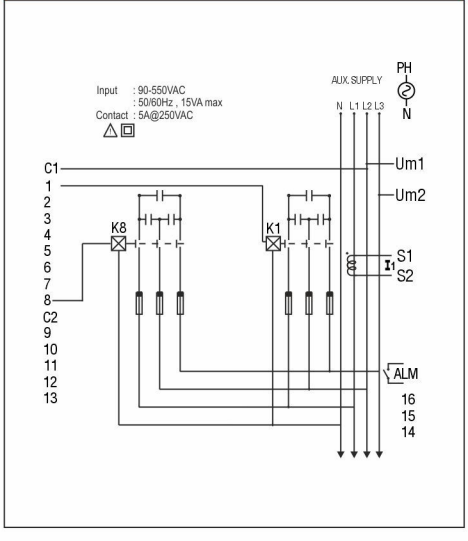
APFC-414-1p



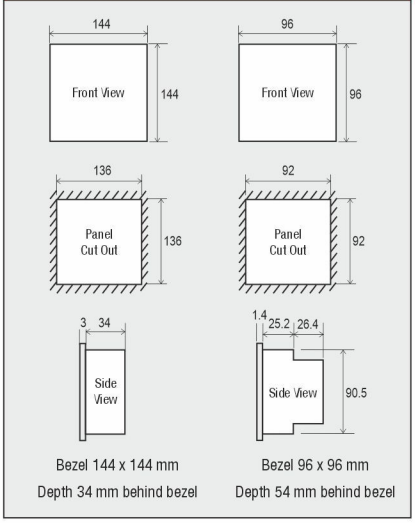
APFC-414



APFC-414-144



Mechanical Specifications



Bezel 144 x 144 mm
Depth 34 mm behind bezel

Bezel 96 x 96 mm
Depth 54 mm behind bezel

ADVANCED/THYRISTOR POWER FACTOR CONTROLLERS (1 CT)

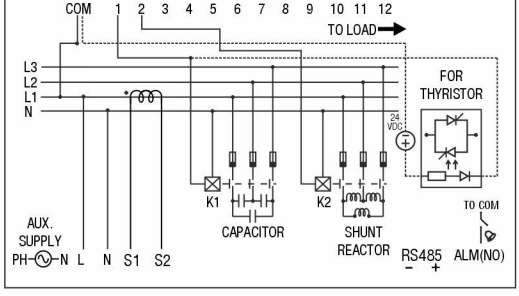


Models	PQ-6A/PQ-9A	PQ-6T/PQ-9T	PQ-6APRO
Features	• Leading PF Compensation using shunt reactor • KVAr sensing with sophisticated algorithm • CT Polarity Auto Correction • High sensitivity to detect small capacitor values • Alarms:Under/Over Compensation, High Voltage • Compact size upto 8,12,16 Relay(18 Relay*) • RS485 Modbus RTU Protocol	• Fast switching with thyristor controlled relays • Switching time setting from >20 msec • KVAr sensing with sophisticated algorithm • CT Polarity Auto Correction • High sensitivity to detect small capacitor values • Alarms:Under/Over Compensation, High Voltage • Compact size upto 8,12,16 Relay(18 Relay*) • RS485 Modbus RTU Protocol	• No Button/No user setting required • Auto detection of capacitor values • KVAr sensing with sophisticated algorithm
Display	Red 7 Segment LED		
Digits	1 Rows of 4 digits		
Electrical Connections	1Ø-2W		
Input Voltage	11-300V AC(L-N)		
Input Current	20mA-5A(6A Max)		
CT Primary	5A to 5000A		
CT Secondary	1A/5A (Selectable)		
PT Primary	100V-500kV		
PT Secondary	100V-500V L-L		
Aux. Supply	80-270V AC/DC(50/60Hz)		
Measuring Parameter	Voltage(L-N),Current, Average PF, Reactive Power (KVAr)		Average PF
Relay Stage	8,12,16 relay and 1 Relay for Under/ Over Compensation, High Voltage, Fan output*,THD-I*,THD-V*		8,12 Relay Output
Optional	Rs485 Communication Modbus RTU Protocol, Wi-Fi*,GPRS*,Ethernet*		
Accuracy	Class 1		

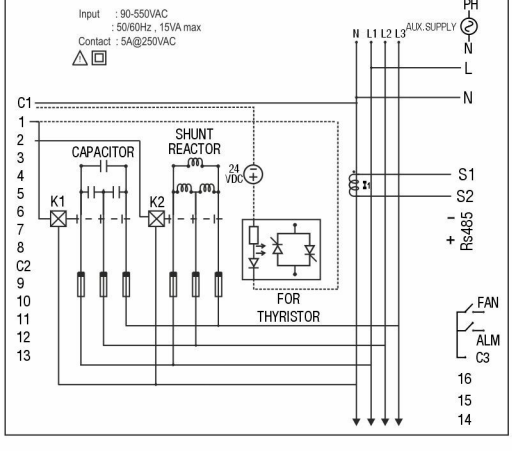
* This indication valid for special model while ordering.
* For 18 Relay models Alarm & Fan not available.

Terminal Connections

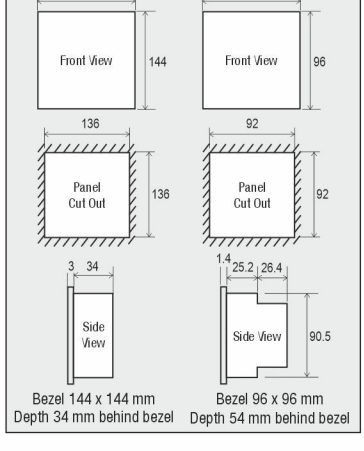
PQ9A / PQ9T / PQ6A PRO



PQ9A / PQ9T



Mechanical Specifications



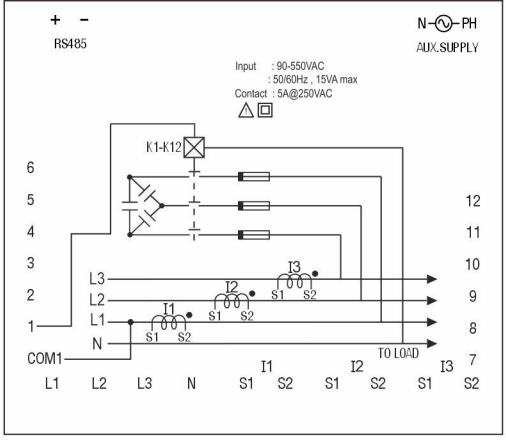
ADVANCED / THYRISTOR POWER FACTOR CONTROLLERS (3 CT)



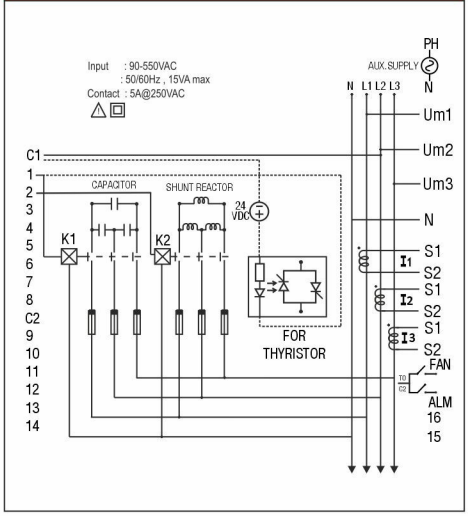
Models	UNO-12R	PQ 903A	PQ 903T
Features	• Built in MFM with PF Controller LED display • Auto detection of capacitor bank values • kVAr sensing with sophisticated algorithm • Compact size upto 12 Relay and 2 Alarm • CT Polarity auto detection	• Built in MFM with PF Controller LCD display • Leading PF Compensation using shunt reactor • KVAr sensing with sophisticated algorithm • CT Polarity Auto Correction • High sensitivity to detect small capacitor values • %THD upto 31st harmonics • Alarms:Under/Over Compensation,High Voltage THD-I, THD-V, Fan output* • Compact size upto 8,12,16 Relay(18 Relay*) • RS485 Modbus RTU Protocol	• Built in MFM with PF Controller LCD display • Fast switching with thyristor controlled relays • Switching time setting from >20 msec • KVAr sensing with sophisticated algorithm • CT Polarity Auto Correction • High sensitivity to detect small capacitor values • Alarms:Under/Over Compensation, High Voltage THD-I, THD-V, Fan output* • Compact size upto 8,12,16 Relay(18 Relay*) • RS485 Modbus RTU Protocol
Display	Red 7 segment LED	7 Segment LCD with backlight	
Digits	3 rows of 3 digits	3 rows of 4 digits, 3 ½ digits for PF	
Electrical Connection	3Ø-4W		
Input Voltage	11-300V AC (L-N), 19-520V AC (L-L), 50Hz		
Input Current	20mA - 5A (6A max)		
Resolution	Power factor: -.01 lead, lag	Power factor: -1.000 lead, lag	
CT Primary	5A to 5000A		
CT Secondary	1A or 5A		
PT Primary	100V-500kV	100V - 22kV	
PT Secondary	100V - 500VL-L		
Aux.Supply	80 - 270V AC/DC (50 / 60 Hz)		
Measuring Parameter	Voltage (L-L, L-N) (Individual / Average), Current I1,I2,I3 (Individual / Average), Frequency, %THD 31st Level, Power factor (Individual /Average), Active, Reactive, Apparent power (Individual /total),Active, Reactive, Apparent energy (Total) (For UNO12R only), MDC (For PQ903A & PQ903T), Load Hour, Run Hour, Min Max value (L-N, L-L, A, Hz)*		
Relay Stage	8,12 relay and 2 alarm output for OV, UV,OA,UA,OHz,UHz	8,12, 16 relay and 1 alarm output for over/under compansation, High Voltage, THD-I, THD-V, Fan output*, Temperature Sensing*	
Optional	Rs485 communication Modbus RTU protocol, WIFI*, GPRS*, Ethernet*		
Accuracy	Class1		

Terminal Connections

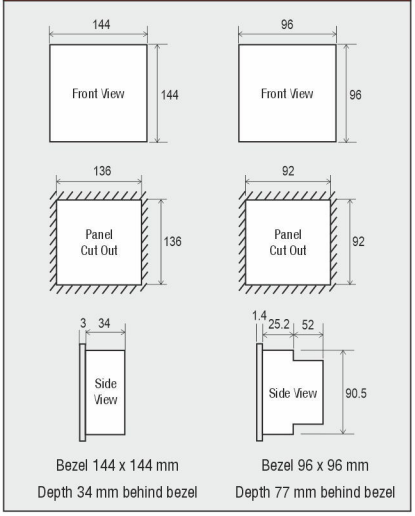
UNO-12R



PQ903A/PQ903T



Mechanical Specifications



Bezel 144 x 144 mm
Depth 34 mm behind bezel

Bezel 96 x 96 mm
Depth 77 mm behind bezel

SHUNT REACTOR/ THYRISTOR SWITCH MODULE

SHUNT REACTOR

NEW



Features

- Single or three-phase, highly conductive design with air gap
- H class insulation material on the windings resistant to 180 Deg C
- High quality copper or aluminum windings
- Vacuum impregnated varnish method that improves efficiency by reducing heat losses, provides protection against humidity
- Thermal protection against overload
- Ranges (kVAr) : 25, 35, 50, 75 & 100

Reference Standards	IS-5553(Part 1-8)/ IEC 60076-6	Ambient Temperature	50˚C Max.
Linearity	135%	Temperature Protection	150˚C Thermal Cutout
Tolerance on Inductance	+/-5%	Dielectric Strength	3KV
Rated Voltage	440V	Lamination/Core	CRNO/CRGO (as required)
Insulation Class	H(180˚C	Winding Material	Aluminium/Copper (as required
Temperature Rise	<110˚C	Connection	Parallel to line
Rated Frequency	50Hz	Cooling method	Forced Air

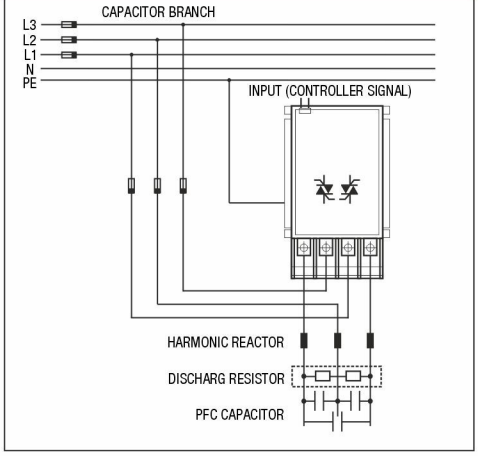
THYRISTOR SWITCH MODULE

NEW

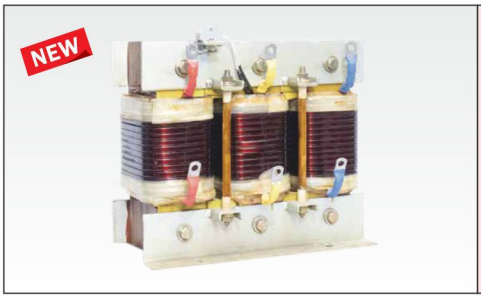


	NP-TSM-15 kVAr	NP-TSM-25 kVAr	NP-TSM-50 kVAr	NP-TSM-100 kVAr
Output In Kvar	15 kVAr	25 kVAr	50 kVAr	100 kVAr
Dimensions (W x H x D)	179 x 167 x 117 mm	188 x 203 x 176 mm		156 x 263 x 202 mm
Mounting Hole (W x H)	170 x 170 mm	175 x 170mm		145 x 170 mm
Mounting Hole Size	5mm			
Weight	4Kg	5Kg		6 Kg
Operating Voltage		100VAC to 500VAC		
Maximum Current	26A AC	40A AC	75A AC	150A AC
Piv Of The Thyristors	2200VDC			
Thyristor Configuration	Thyristor - Thyristor			
Input / Output Connection	Terminal Block	Busbar		
Ambient Temperature	-10 °C to 55 °C			
Power Loss At Rated Current	Pv (W) = 2.0x I (In A)			
Cooling	Naturally Air Cooled			Forced Air Cooled
Di / Dt Protection	0.5% series Choke is must			
Over Current Protection	Through Semiconductor Grade Fuses.			

Terminal Connections



DETUNED REACTOR



FEATURES

- Multiple Conductors for better heat dissipation
- Vacuum Pressure impregnated for better penetration
- Multiple Air Gaps to avoid Flux Fringing
- Mechanically sturdy design to withstand vibrations
- Made from high-grade materials

DESCRIPTION	COPPER MATERIAL								ALUMINIUM MATERIAL							
Reference Standards	IS-5553(Part 1-8)/ IEC 60076-6								IS-5553(Part 1-8)/ IEC 60076-6							
Detuning Factor	5.67%, 7%, 14%								5.67%, 7%, 14%							
Detuning Frequency	50Hz								50Hz							
Linearity	180%								180%							
Tolerance on Inductance	±5%								±5%							
Rated Voltage	440V								440V							
Insulation Class	H								H							
Temperature Rise	MAX 90degC								MAX 90degC							
Rated Frequency	50Hz								50Hz							
Ambient Temperature	50degC MAX								50degC MAX							
Temperature Protection	Thermistor with NO/NC contacts								Thermistor with NO/NC contacts							
Dielectric Strength	3KV for 1min								3KV for 1min							
Lamination/Core	CRNO								CRNO							
Winding Material	COPPER								ALUMINIUM							
Connection	Series with Capacitor bank								Series with Capacitor bank							
Rating (KVAR)	5	10	15	20	25	50	75	100	5	10	15	20	25	50	75	100
Rated Current (A)	6.6	13.2	19.8	26.4	33	66	99	132	6.6	13.2	19.8	26.4	33	66	99	132

EARTH LEAKAGE RELAYS

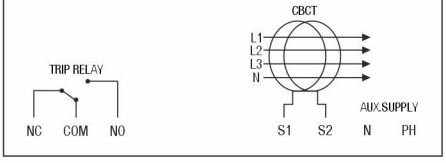




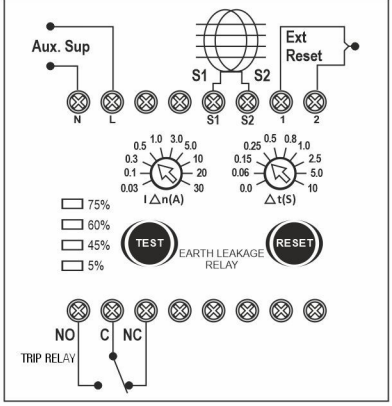
Model (Size)	ELR (96X96)	DIN RAIL (45X90)
Features	• Monitor True RMS Earth Lekage Current (upto 30A) • Test and Reset Function • Leakage Current and CBCT Open Indication • Earth Leakage current in bargraph	• DIN Rail Mountable • Monitor True RMS Earth Leakage Current (upto 30A) • Leakage Current and CBCT Open Circuit Indication • Earth Leakage current in bargraph
Display	Red 7 Segment LED	
Digits	3 digits	
Electrical Connection	CBCT secondary (Ratio 1000:1)	
Trip Relay	>75% of set value	
Relay Rating	8 Amps for trip relay	
Leakage Current range	0.03, 0.1, 0.3, 0.5, 1, 3, 5, 10, 20, 30A	
Time Delay Range	0, 0.06, 0.15, 0.25, 0.5, 0.8, 1, 2.5, 5, 10 seconds	
Measuring Parameter	Leakage current, Bargraph, CBCT open circuit, Trip status	
CBCT	35mm, 70mm, 120mm, 210mm, 310mm*, Rectangular CBCT *	
Aux. Supply	230V Ac±20% (50/60 Hz)	

Terminal Connections

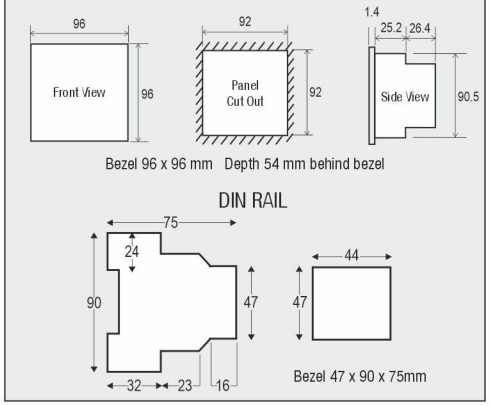
ELR-96



ELR-DIN

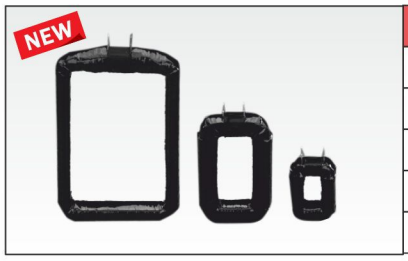


Mechanical Specifications





DESCRIPTION	CBCT
CT Ratio	1000:1
Sizes (inner diameter)	35mm, 70mm, 120mm, 210mm, 310mm



RECTANGLAR CORE CBCT (SIZES)
50 X 40X 20
90 X 85 X 20
125 X 115 X 20
150 X 140 X 20
315 X 335 X 20

MOTOR PROTECTION RELAY EARTH FAULT RELAY

NEW



NEW

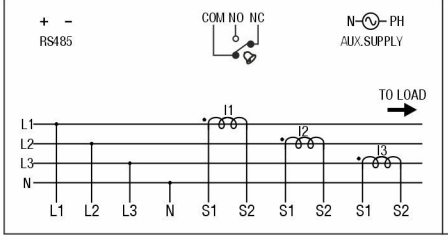


Models	MPR-90	EFR-96
Features	• Monitors Over/Under voltage • Over/Under Current • Over/Under Frequency • Single phase prevention • Short Circuit • Phase Loss • Locked Rotor Point • Phase Asymmetry • Phase sequence • Neutral Loss* • LED Indications: VLN, VLL, AMPS, Hz, Fault (UV,OV,UC) • OC,Pasy., Ploss,Pseq,LRF (Locked rotor fault), • Single Phase Prrevention, Neutral Loss*) Mega,Kilo,Alarm	• Earth Fault Current Monitoring In 1Ø - 2W, 3Ø-3W and 3Ø-4W System • Test Mode Available. • Auto/ Manual Tripping Reset Facility. • LED Indication (Relay) • Test and Reset Function
Display	3 Rows of 4 Digits	3 digits, 7 segments LED display
Mesurments	Over/Under voltage,Over/Under Current,Over/Under Frequency, Single phase prevention, Short Circuit, Phase Loss, Locked Rotor Point, Phase Asymmetry, Phase sequence	Earth fault monitoring
Electrical Connection	3P-4W,3P-3W	(1Ø-2W), (3Ø-3W), (3Ø-4W)
Input Current		5 Amp. AC From CBCT or CT
Trip Settings	Under/Over Voltage:160-280V AC L-N(for 3P-4W) 280-520V AC L-L(for 3P-3W) Under/Over Current:0-999A Under/Over Frequency: 45-65Hz Phase Asymmetry:0-999 Lock Rotor Point: 0.5 to 9.0 scale Short Circuit : 1-9 Scale	Earth Fault Percentage : 10% To 100%, Response time: <100ms, Trip time delay: 0 to 99.9 sec, Recovery time: 0 to 99.9 sec, Power ON delay: 0.5 to 99.9 sec
Time Settings	Power on delay: 1-999 sec, Trip time: 0-999 sec, Recovery time: 1-999 sec, Response time: <120ms, 3 Reset	
Mode	Attempt time: 0-999 min Auto / Manual / Remote*	
Output Contact	1 C/O (SPDT)	NC: 3A@ 250V AC,NO: 5A @250V AC
Output Rating	NC: 3A@ 250V AC,NO: 5A @250V AC	

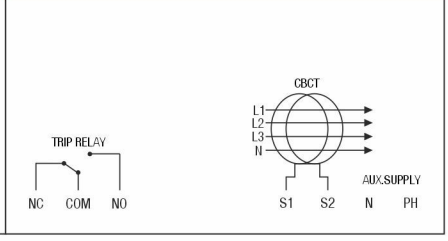
* This indication valid for special model while ordering.

Terminal Connections

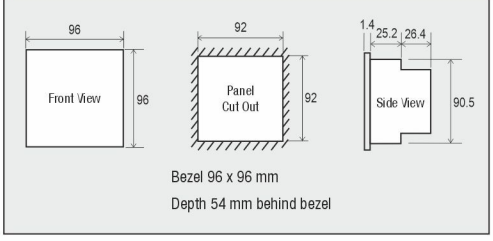
MPR-90



EFR-96

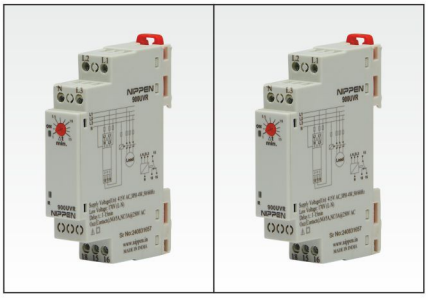


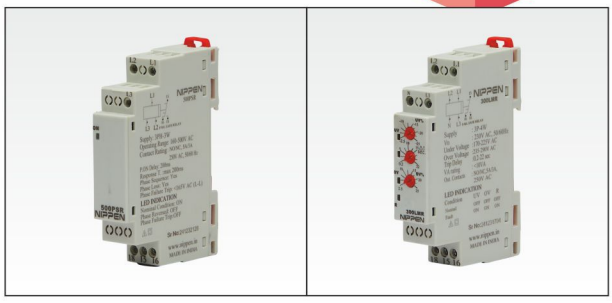
Mechanical Specifications



Bezel 96 x 96 mm
Depth 54 mm behind bezel

LINE MONITORING RELAYS

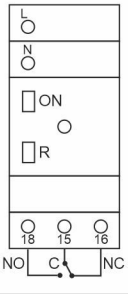
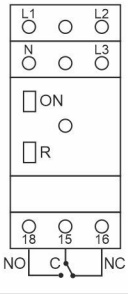
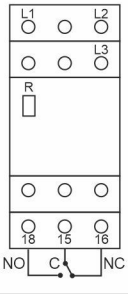
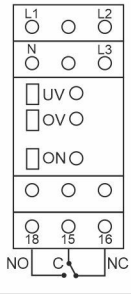




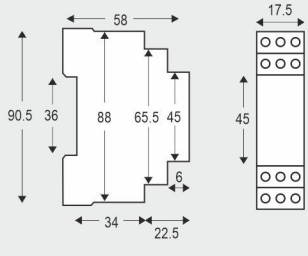
Model (size)	901UVR	900UVR
Features	• Under Voltage protection • ON Delay time settable • LED Indication- Power ON, TRIP	
Measurement	Under Voltage	
Alarm Indication	TRIP	
Electrical Connection	1P-2W	3P-4W
Trip Setting	170V L-N	
Delay Time Setting	1-15min	
Accuracy	±2V	
Output Contact	1 C/O SPDT	
Relay Rating	5A/250V	
Supply Voltage	Self Powered	
Frequency	50-60Hz	
Power Consume	5VA	
Dimensions	90(L) x 17.5(W) x 55(H)mm	

Model (size)	500PSR	300LMR
Features	• Phase Sequence, Phase Loss • LED Indication: Power ON , Trip	• Monitors Under/Over Voltage • Monitors Phase Loss/ • Phase Sequence • LED indication:Power ON, OV Trip,UV Trip • Space saving design
Modes	Phase sequence:Yes Phase Loss:Yes Reset:Auto reset on removal of fault condition	Under Voltage:170-225 V AC Over Voltage:235-290V AC Phase sequence: Yes Phase Loss: Yes
Accuracy	±1 of F.S	Trip Voltage:±2% of F.S.
Time Ranges	Power ON delay-200msec	Trip Time:±5% of F.S. Trip time delay:0.2 to 22 sec Power ON delay:400 msec
Output Contact	1C/O SPDT	1C/O SPDT
Output Rating	NO:5A@250V AC NO:3A@250V AC	NO:5A@250V AC NO:3A@250V AC
Electrical Connection	3P-3W	3P-4W, 3P-3W*
Operating Voltage	160 to 520V AC(L-L)	230V AC ,50/60Hz

Terminal Connections

901UVR	900UVR	500PSR	300LMR
			

Mechanical Specifications



VOLTAGE MONITORING RELAYS

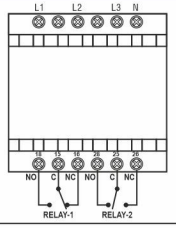




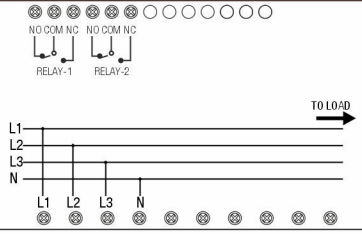
Model	300VPR	600VPR
Features	• Monitors Under voltage, Over Voltage, Under Frequency, Over Frequency, Phase Asy, Phase loss, Phase Sequence, Neutral Loss.* • Two Alarm Output NO/NC • LED Indications:Faults(UV,OV,UF,OF,PAsy,PLoss,PSeq.) , L1,L2.L3,Hz, Asy.	
Display	Red 7 segment LED	
Digit	3 Digit	
Measurements	Under/Over voltage, Under/ Over frequency, Phase asymmetry, Phase Loss Phase sequence, Neutral Loss*	
Electrical Connection	1Ø-2W, 3Ø-3W, 3Ø-4W (Selectable)	
Trip Setting	Under / Over voltage: 280 to 520V AC L-L, 160-280V AC L-N (for 3Ø-4W) Under / Over Frequency: 45/65Hz, Phase Asymmetry:0-999	
Trip Time Setting	Power On Delay: 1 to 999 sec, Trip Time Delay: 0 to 999 sec, Recovery Time delay: 0 to 999 sec, Response Time : <100ms	
Hysteresis	Voltage: 0-99.9%, Frequency: 0.2- 5Hz Asymmetry: 2- 20%	
Resolution	Voltage: 1V, Frequency: 0.1Hz	
Accuracy	Voltage: ±1% of set value, Frequency: ±0.3Hz, Time(Recovery time, Trip delay, Power ON delay): ±5% of setting ±100ms	
Output Contact	1 C/O (SPDT)	
Output Rating	NO: 5A@250V AC, NC: 3A@250V AC	
Supply Voltage	Self Powered (160V to 280V AC)	
Alarm Indication	Trip (UV,OV,UF,OF,PASY,PLoss,PSeq)	

Terminal Connections

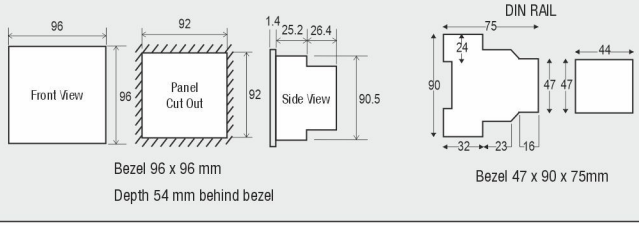
300VPR (DIN)



600VPR (96X96)



Mechanical Specifications



CURRENT MONITORING RELAYS

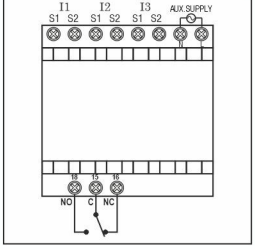




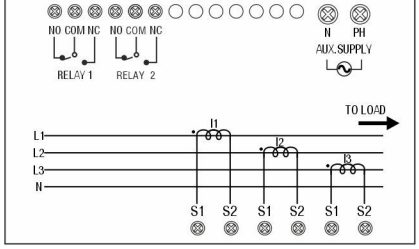
Model	300CPR	600CPR
Features	• Monitors under current & over current, current Asy. • One Alarm(300CPR) &Two Alarm(600CPR) Relay with NC/NO • LED Indications:Faults(UC,OC,CA) , L1,L2.L3,Asy. • Auto / Manual reset function • Selectable individual trip time setting for every fault	
Display	Red 7 Segment LED	
Digit	3 Digit	
Measurements	Under Current, Over Current, Current Asymmetry	
Electrical Connection	1Ø-2W, 3Ø-3W, 3Ø-4W	
CT Setting	CT Primary: 1 to 999A, CT Secondary: 5A (Default)	
Trip Setting	Under Current: 0 to 999A Over current: 0 to 999A Current asy: 0-99.9%	
Trip Time Setting	Power ON Delay: 1-999 sec, Trip time Delay: 0-999 sec, Recovery time Delay: 0-999 sec, Response Time: <100ms	
Hysteresis	Current 0.1 to 99.9%	
Accuracy	Current : ±1%, Time (Recovery time, Trip delay, Power ON Delay): ±2% of setting ± 100ms	
Output Contact	1 C/O (SPDT)	
Output Rating	NO: 5A@250V AC, NC: 3A@250V AC	
Supply Voltage	230V AC (Aux.Supply) (50/60Hz)	
Alarm Indication	Trip (UC, OC, CA)	

Terminal Connections

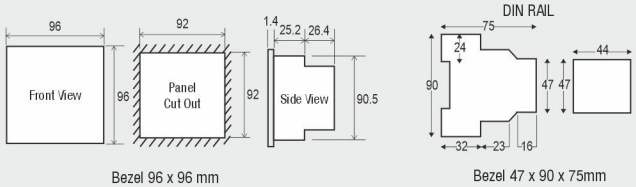
300CPR (DIN)



600CPR (96X96)

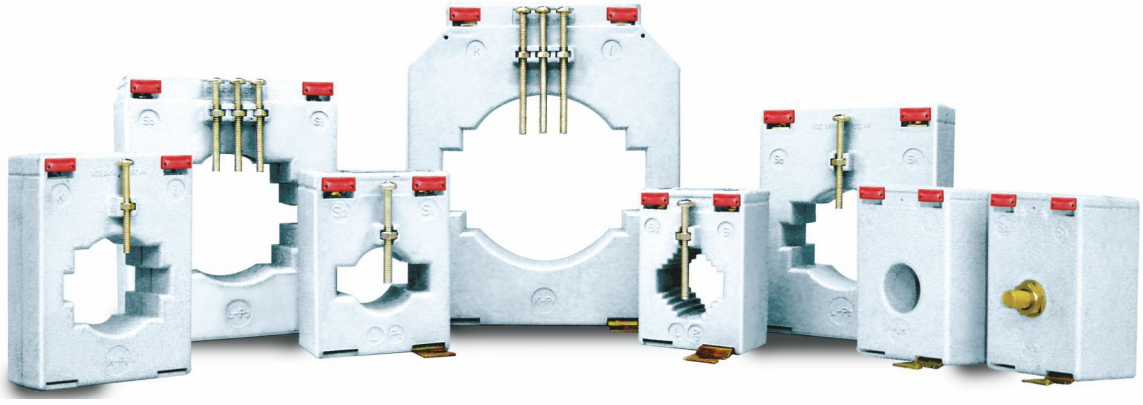


Mechanical Specifications



Bezel 96 x 96 mm
Depth 54 mm behind bezel

Bezel 47 x 90 x 75mm



NE 201

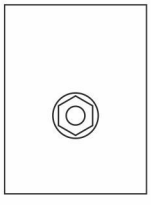


Cable 20.4 mm

ACCURACY CLASS			
PRIMARY CURRENT	1VA	2.5VA	5VA
100	1		
150	1		
200		1	
250		1	
300		1	
400			1
500			1

NE 201

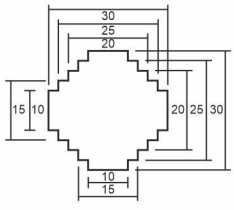
Overall DIM^{N} same as NE 201



WOUND PRIMARY CT
size 78X 55X 40

ACCURACY CLASS		
PRIMARY CURRENT	2.5VA	5VA
20	1	
30	1	
40		1
50		1
60		1
75		1

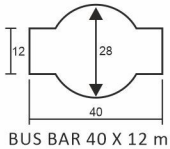
NE 301



BUS BAR 30 X 10 mm

ACCURACY CLASS			
PRIMARY CURRENT	1VA	2.5VA	5VA
75	3		
80	3		
100	1		
125	1		
150	1	3	
200		1	
250		1	
300		1	
400			1

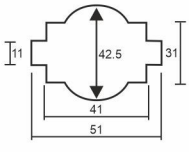
NE 401



BUS BAR 40 X 12 mm

ACCURACY CLASS		
PRIMARY CURRENT	2.5VA	5VA
150	1	
200	1	
250	1	
300	1	
400		1
500		1
600		1

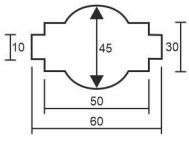
NE 501



BUS BAR 51 X 11 mm

ACCURACY CLASS			
PRIMARY CURRENT	2.5VA	5VA	10VA
300	1.0		
400	1.0		
500	1.0		
600		1.0	
750		1.0	
800		1.0	
1000			1.0
1200			1.0
1250			1.0

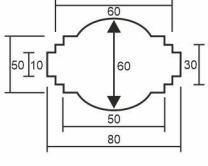
NE 601



BUS BAR 60 X 10 mm

ACCURACY CLASS		
PRIMARY CURRENT	10VA	15VA
400	1	
500	1	
600	0.5	1
800	0.5	1
1000	0.5	1
1200		1
1500		1
1600		1

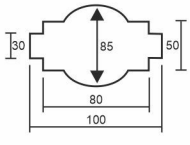
NE 801



BUS BAR 80 X 10 mm

ACCURACY CLASS			
PRIMARY CURRENT	5VA	10VA	15VA
400	1		
500	1		
600	1		
800		0.5	1
1000		0.5	1
1200		0.5	1
1500		0.5	1
1600		0.5	1
2000		0.5	1

NE 1001



BUS BAR 100 X 30 mm

ACCURACY CLASS			
PRIMARY CURRENT	10VA	15VA	30VA
800	0.5	1	
1000		0.5	
1200		0.5	
1500		0.5	
1600		0.5	
2000		0.5	1
2500		0.5	1
3000			0.5
4000			0.5

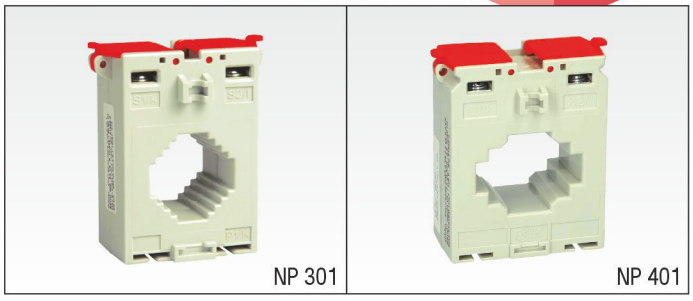
RANGE	RATIO	WINDOW DIMENSIONS FOR BUS BAR (mm)	OVERALL DIMENSIONS H x W x TH (mm)
201	100/5A to 500/5A	20	70 x 55 x 45
301	75/5A to 400/5A	30 x 10	70 x 49 x 32
401	150/5A to 600/5A	40 x 12	78 x 60 x 32
501	300/5A to 1250/5A	51 x 11	92 x 85 x 32
601	400/5A to 1600/5A	60 x 10	108 x 85 x 32
801	400/5A to 2000/5A	80 x 10	122 x 100 x40
1001	800/5A to 3000/5A	100 x 30	160 x 135 x 40

ACCESSORIES:

1. Mounting Brackets
2. Fixing Screw with insulated bush for window type
3. Secondery Terminal Cover
4. DIN Rail adaptor (optional)

CURRENT TRANSFORMERS





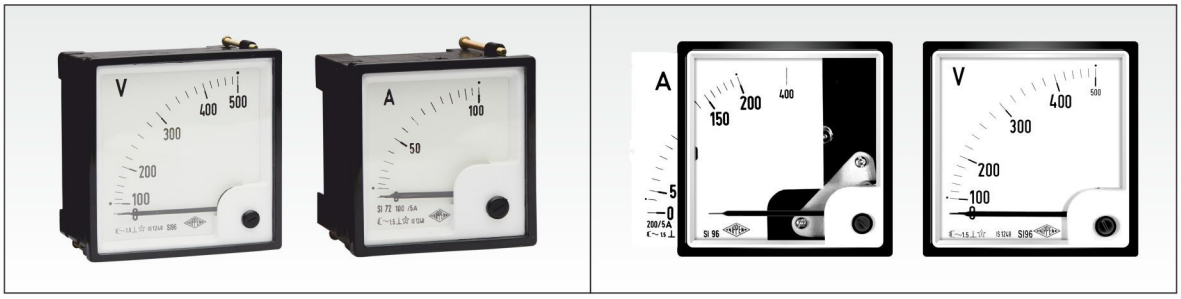
NIPPEN current transformers comply with the highest international quality standard made according to BS 3938, IS-2705 or IEC185. CT's are available in BPCT & WPCT rated Voltage 660V, Secondary Current 5A or 1A in BPCT current range is 100 A - 3000 A, in WPCT below 75A, Rated Burden 1VA -30 VA. Current Transformers Low Tension Bar Primary (Ring type Tape Insulated Ct Are Secondary Coil Wound On Toroidal Core of High Permeability Silicon Steel)

Features	Suitable Terminal/ Wire type output Panel Mount
Rated Primary Rating	30A to 3000A
Rated Secondary output	5A
Rated burden	1VA to 15VA
Accuracy	1% to 5%
Thermal Noise Continous	120 % of In
Thermal Short Circuit current(Icth)	Ith=60 X In for 1sec
Instrument security factor	FS<5
Insulation class	B
Max operating voltage(Um)	720 V max.
Isolation test voltage	3kV AC 1min
Nominal rated frequency	AC 50Hz
Max. lugs size	8mm
Frequency	50/60Hz
Applicable Standard	IEC 61869-2/IS 2705

ABS (RING TYPE)					
RANGE	ID	OD	HT	ACCURACY	VA BURDEN
30/5A	33	66	36	5%	3
50/5A	33	66	36	5%	3
60/5A	33	66	36	5%	3
75/5A	33	66	36	5%	3
100/5A	33	66	36	1.0%	5
150/5A	33	66	36	1.0%	5
200/5A	34	66	36	1.0%	5
250/5A	34	66	36	1.0%	5
200/5A	46	76	36	1.0%	5
250/5A	46	76	36	1.0%	5
300/5A	46	76	36	1.0%	5
400/5A	46	76	36	1.0%	5
300/5A	60	100	36	1.0%	10
400/5A	60	100	36	1.0%	10
500/5A	60	100	36	1.0%	10
600/5A	60	100	36	1.0%	10
800/5	80	100	35	1.0%	10
1000/5	80	100	35	1.0%	15
1200/5	80	100	35	1.0%	15
1500/5	100	135	35	1.0%	15
1600/5	100	135	35	1.0%	15
2000/5	100	135	35	1.0%	15
2500/5	100	135	35	1.0%	15
3000/5	100	135	35	1.0%	15

NP-SERIES			
PRODUCT CODE	CURRENT RATIO	BURDEN IN VA	ACCURACY CLASS
NP-301/30-60/5A	60 / 5	1	5
NP-301/30-75/5A	75 / 5	1	1
NP-301/30-80/5A	80 / 5	1	1
NP-301/30-100/5A	100 / 5	1	1
NP-301/30-125/5A	125 / 5	1.25	1
NP-301/30-160/5A	160 / 5	1.5	1
NP-301/30-200/5A	200 / 5	3	1
NP-301/30-250/5A	250 / 5	3	1
NP-301/30-400/5A	400 / 5	5	1
NP-401/30-30/5A	30/5	1	5
NP-401/30-50/5A	50/5	1	3
NP-401/30-50/5A	50/5	1.5	3
NP-401/30-75/5A	75/5	1	3
NP-401/30-75/5A	75/5	3	3
NP-401/30-100/5A	100/5	1	1
NP-401/30-100/5A	100/5	3	1
NP-401/30-100/5A	100/5	1	1
NP-401/30-125/5A	125/5	1	1
NP-401/30-150/5A	150/5	1.5	1
NP-401/30-150/5A	150/5	3	1
NP-401/30160/5A	160/5	1.5	1
NP-401/30-200/5A	200/5	2.5	0.5
NP-401/30-200/5A	200/5	3	1
NP-401/30-250/5A	250/5	2.5	0.5
NP-401/30-250/5A	250/5	3	1
NP-401/30-300/5A	300/5	3	0.5
NP-401/30-400/5A	400/5	3.75	0.5
NP-401/30-400/5A	400/5	5	1
NP-801/60-500/5A	500/5	5	1
NP-801/60-600/5A	600/5	5	0.5
NP-801/60-600/5A	600/5	7.5	1
NP-801/60-800/5A	800/5	10	0.5
NP-801/60-1000/5A	1000/5	15	0.5
NP-801/60-1200/5A	1200/5	15	0.5
NP-1001/100-800/5A	800/5	15	0.5
NP-1001/100-1000/5A	1000/5	15	0.5
NP-1001/100-1000/5A	1200/5	15	0.5
NP-1001/100-1250/5A	1250/5	15	0.5
NP-1001/100-1500/5A	1500/5	15	0.5
NP-1001/100-1600/5A	1600/5	15	0.5
NP-1001/100-2000/5A	2000/5	15	0.5
NP-1001/100-2500/5A	2500/5	15	0.5
NP-1001/100-2000/5A	3000/5	15	0.5
NP-1001/100-2500/5A	2500/5	15	0.5
NP-1001/100-3000/5A	3000/5	15	0.5
NP-1001/100-3500/5A	3500/5	15	0.5
NP-1001/100-4000/5A	4000/5	15	0.5

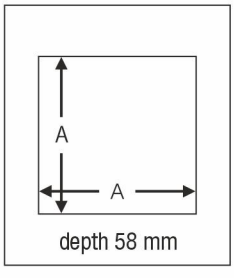
ANALOG METERS (AC & DC)



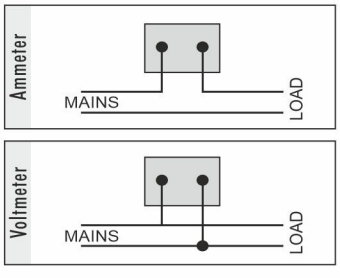
Models	MOVING COIL METERS	MOVING IRON METERS
Features	• High coercive magnetic circuit • Spring back sapphire jewels • High Torque / Weight ratio • Critically damped movement • Highly linear dial pattern • Self shielded movement • Angle of deflection 90^0 and 240^0 • Type-tested at ERTL	• Scale interchangeability • Oil damped movement with recessed jewels • Spring back sapphire jewels to neautralize shock & vibration • Very high torque to weight ratio • Sheilded movement • Totally consistent scale pattern • Type-tested at ERTL
Sizes	48x48mm, 72x72mm, 96x96mm, 144x144mm	
Measuring Votage Range	Upto 500V (AC & DC)	
Measuring Current Range	5A upto 100A direct (AC), C.T. range upto 5000A AC 5A upto 30A direct (DC), Shunt range upto 5000A/75mV DC	
Operating Temperature	-10^0C to + 55^0C RH 90 %	
Storage Temperature	-20^0C to + 70^0C RH 90 %	
Pointers	Construction in accordance with DIN 43802	
Marking	Adheres to IEC- 51	
Front Cover	Interchangeability in Dials help easy inventory	
Bezel	DIN Sized meters capable of mounting in mosaic grid	
Case	Glass, White ring and Black Gasket can be replaced easy.	
Terminal	The fitting is positive and unique.	
	These are made of FR Grade Glass filled poly carbonate with	
Protection	Extra thick walls giving the meter additional mechanical strength Terminal shroud with a special design eliminates the risk of contact with live terminals	

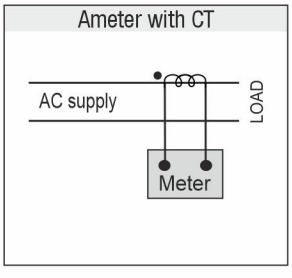
Sizes	Cutout (AXA)
48x48mm	45x45mm
72x72mm	68x68mm
96x96mm	92x92mm
144x144mm	138x138mm

Cutout (AXA)



CONNECTION DIAGRAMS





INSULATION TESTERS



FEATURES

- 4 Digit Large (1'') LCD display with backlight
- Insulation Range upto 2000M Ω & Voltage upto 1000V
- Insulation Range upto 5000M Ω & Voltage upto 2500V*
- Over range Indication
- Battery status & battery charging status
- Auto power OFF
- Rechargeable, Li-ion Battery

Display	4 Digit Large (1''), 9999 Counts LCD display with backlight	
Measurement Ranges	100V/100MΩ, 250V/200MΩ, 500V/1000MΩ, 1000V/2000MΩ	2500V/5000MΩ or 10000MΩ
Measurement Type	Line, Earth & Guard	
Resolution	<1.6mA	
Accuracy	±4% rdg +2 dgt	
Power Supply	1500mAh Li-ion Rechargable battery (3.7V DC)	
Low Battery Indication	(Battery Flashing Symbol appears on Display)	
Auto Shutdown	5 Minutes	
Data Hold Indication	HOLD (Symbol Appears on Display)	
Accessories	Uoholster, Battery Charging Cord, Instruction manual, Test report.	
Environmental Specifications	Operating Temperature: -5^0 to 40^0 Storage temperature: -20^0 to 60^0 Relative humidity: 80% RH	
Physical Specifications	Net Weight: 400gm Gross Weight: 430gm Dimensions (HxWxL): 146mm x 94mm x 48mm	



Test Voltage (V)	Range (Mega Ohms)
100V	20 MΩ
250V	50 MΩ
500V	100 or 1000 MΩ
1000V	200 or 2000 MΩ
2500V	2000 or 5000 MΩ
5000V	10000 or 20000 MΩ

Accuracy	± 5%
Casing	ABS or Metal Body.
Type	Hand cranking
IS Standard	Complies with IS 2992
Size (approx.)	178mm (D) X 122mm (W) X 126mm (H)
Weight (approx.)	2 Kgs.
Accessories (Supplied with instrument)	Instruction manual & Meter carrying case.
Accessories (Supplied optional at extra charge)	A Rexine Kit consisting of hammer, 1 screw driver, 4 spools of wires, 4 M.S Spikes.

EARTH TESTERS



FEATURES

- 4 Digit Large (1'') LCD display with backlight
- Auto ranging upto 2000 Ω
- Battery status & battery charging status
- Auto power OFF
- Rechargable Li-ion Battery
- Data hold Function

Display	4 Digit Large (1''), 9999 Counts LCD display with backlight
Measurement Ranges	Auto ranging from 0- 2000Ω
Measurement Type	4 Wire Method
Resolution	0-20Ω(0.01Ω), 0-200Ω(0.1Ω), 0-2000Ω(1Ω)
Accuracy	±4% rdg. +2 dgt.
Power Supply	1500mAh Li-ion Rechargable battery (3.7V DC)
Low Battery Indication	(Battery Flashing Symbol appears on Display)
Auto Shutdown	5 Minutes
Data Hold Indication	HOLD (Symbol Appears on Display)
Accessories	Upholster, Battery Charging Cord, Instruction manual, Test report
Environmental Specifications	Operating Temperature: -5^0 to 40^0 Storage temperature: -20^0 to 60^0 Relative humidity: 80% RH
Physical Specifications	Net Weight: 380gm Gross Weight: 400gm Dimensions (LxWxH): 146mm x 94mm x 48mm



Earth Resistance testers are used for measuring of earth electrode resistance, soil resistance, earth continuity, neutral & Earth loop resistance, resistance of various components etc. Useful for Railways, Defence, Electricity Boards, Power generating Plants, Geological Surveyors, Industries etc. Four terminal measurement system avoids errors due to spikes and testing wires reistance.

Accuracy	+/- 5%
Terminals	4mm screw type.
Power Source	Models SET/ DET/ TET are provided with hand operated AC generator having delrin moulded gears, self lubricating sintered bearings, stainless steel collapsible handle with handle knob and housed in polycarbonate casing.
IS Standard	Models SET/ DET/ TET confirms to IS-9223 of 1989
Size (approx.)	178mm (D) X 122mm (W) X 126mm (H) for SET/ DET/ TET
Weight (approx.)	2 Kgs. For SET/ DET/ TET
Accessories (Supplied with instrument)	Instruction manual & Meter carrying case
Accessories (Supplied optional at extra charge)	A Rexine Kit consisting of hammer,1 screw driver, 4 spools of wires, 4 M.S. Spikes

MODEL	RANGES (ohms)
SET - 3, 10, 30, 50, 100, 500, 1000	Single Range 0 to 3, 0 to 10, 0 to 30, 0 to 50, 0 to 100, 0 to 500, 0 to 1000
DET - 3, 5, 10, 30, 50, 100	Dual Range 0-3/30, 0-5/50, 0-10/100, 0-30/300, 0-50/500, 0-100/1000
TET - 3, 5, 10	Triple Ranges 0-3/30/300, 0-5/50/500, 0-10/100/1000

POWER QUALITY SOLUTIONS (PQ Max -A Series)



- PFC performance 0.99
- Step-less compensation without over-compensation & under-compensation compensate specific capacity that system need.
- Full PFC process within 15 ms & maintain at PF0.99 no matter how the system reactive power changes.
- Compensation with inductive reactive power & capacitive reactive power.
- The voltage of the grid has little influence on SVG compensation capacity as SVG is like a current source
- Could work under high THDu up to 15% no capacitor explosion risk & no safety accident.
- Minimal loss, maintenance-free & no need to replace cap bank every certain time.
- MTBF (mean time between failures) upto 100,000 hours, helps consumers lower the cost
- Advanced technology & easy to use with HMI monitor
- Minimal footprint to save more than 70% space compared with cap bank.

Item	400V/415V		
	Nippen SVG 030	Nippen SVG 050	Nippen SVG 100
SYSTEM PARAMETERS			
Rated input line voltage	400V/415V L-L		
Input Phase Voltage range	228V ~ 456V L-L		
power grid frequency	50Hz/60Hz (range: 45Hz ~ 62.5Hz)		
Parallel operation	Unlimited		
Overall efficiency	>97%		
power grid structure	3P3L/3P4L		
CT	150/5 ~ 10,000/5		
Circuit topology	3 Level		
PERFORMANCE INDICATORS			
SIngle-Module compensation capacity	30kVar	50kVar	100kVar
Response time	<15ms		
Target power factor	Adjustable from -1 to +1		
cooling mode	Smart air cooling: 220L/sec		Smart air cooling: 405L/sec
nosie level per module	<65dB		
COMMUNICATION & MONITORING CAPABILITIES			
Communications ports	Rs485, CAN (reserved) & Ethernet port (Rj45)		
Communications protocols	Modbus		
Alarm	Available		
Monitoring	4.3 inch touch screen monitor & optional 7 inch touch screen centralized monitor		
Mechanical properties			
Mounting type	Rack mounted, Wall mounted & Cabinet		
Cable entry mode	Rear entry for rack mounted type, top entry for wall mounted type top or bottom entry for cabinet		
Color	RAL7035(gray)		
ENVIRONMENT REQUIREMENT			
Altitude	1500m. Between 1500m & 4000m, according to IEEE519, the power decreases by 1% for every additional 100m		
Ambient temperature	-10°C~40°C (may derate capacity if ambient temperature exceeds 45°C		
Relative humidity	5% ~ 95%, Non-condensing		
Protection grade	IP20 (other IP degrees are customizable)		
RELATED QUALIFICATIONS & STANDARDS			
Qualification	CE		
Standards compliance	IEEE519, ER GS/4		

POWER QUALITY SOLUTIONS (PM Max -P Series)



- PFC Performance 0.99
- Unbalanced and Lead PF correction
- Minimum Loss and Maximum Efficiency
- Long life and Low maintainance
- Online data notification using IOT Gateway

Item	PM Max-P Series	
	Nippen PM 20	Nippen PM 30
SYSTEM PARAMETERS		
Maximum Load	Suitable for 30KW	Suitable for 50KW
Rated Input line Voltage	400/440V L-L	
Input Phase Voltage Range	228-460V L-L	
Power Grid Frequency	50/60Hz (Range-45Hz to 62.5Hz)	
Overall Efficiency	99.8%	
Power Grid Structure	3P-4L	
Number of Relays	16 Relay(18 Relay optional)	
Circuit Topology	Capacitors (1P&3P) with shunt reactors & Contactors	
Compensation Capacity	20KVAr	30KVAr
Target Power Factor	0.999	
Communication Ports	RS485,Ethernet, Modbus	
Monitoring	LCD 3Phase Power Factor Controller with in-built display & Power consumption	
Measuring Parameters	Voltage (L-L,L-N) (Individual/Average), Current I1,I2,I3 (Individual/Average), Frequency, %THD 31st level, Power Factor (Individual/Average), Active, Reactive, Apparent power (Individual/Total),Active, Reactive, Apparent (Total), MDC, Load Hour, Run Hour, Min/Max Values (L-N, L-L, A, Hz)	
Mounting type	Wall Mount	
Cable Entry	Wall mounted type top or bottom entry cabinet	
Correction for Leading PF	Suitable Shunt Reactor to be configured	

SMART NET REAL TIME SYSTEM

Based Energy Management Monitor Energy, any Where, anytime

Smart Net Real Time System is a web based service for monitoring energy consumption, cost, operational efficiency and system status .It provides all the information an organization need to manage its power system and reduce its energy costs. It enables the performance of the energy system to be optimized, through features including consumption monitoring, analysis and alerts issued using mobile technology.

Smart Net Real Time System enables the exchange of data from different utilities, such as electricity, gas heat and water. Live data from energy measuring points can be viewed in real time from any location with internet access

Applications

- Industry, micro, small and medium enterprise (MSMEs)
- Factories, offices, commercial building, hotels and institutions
- Industries and building purchasing power under open access
- Distributed generators and discrete loads
- Sub-tenant billing
- Multi –location retail chains

Features

- Real –time personalized dashboards
- Shift wise energy monitoring and analysis
- Consumption reports for energy groups
- User configurable spreadsheet based reports
- Production data can be entered
- Historical graphs and trends
- "Virtual meter" for in- depth analysis of a group
- Provision to integrate gas, heat and water
- Tariff module for cost calculations
- Target demand and open access schedule monitoring
- Alerts for deviations from targeted consumption
- Downloadable reports via e-mail or spreadsheet
- Choice of package to suit individual need

Mobile Application

- It has a key feature of providing all the monitoring over Mobile application, which is available for Android and IOS Smart phone
- Users download the application and run it with the same login created during service purchase
- User gets instant alerts /event notification over application.
- User can configure new gateway and can view the data anywhere at anytime.

Benefits

- Helps create cost awareness for utility consumption(electricity, Gas, Heat and Water)
- Isolate waste from efficiency
- Set realistic targets for energy consumption
- Verify the effectiveness of operational charge
- Learn where and when energy is consumed
- Carbon emissions through meaningful real -time display
- Monitor the performance of geographically distributed assets as required, even while on the move
- Enables and encourages active participation by mangers and Staff
- Provides accurate information from any location with internet Access
- Helps energy efficiency certification targets to be met
- Affordable licensing arrangement spread the cost and provide lifetime saving

Skyline gateway

- Daisy chain connection for multiple meter
- Gateway collects data from meters
- Direct Ethernet communications also supported
- Gateway sends data to Smart Net System central data centre (CDC) over GPRS/ RF/ETHERNET etc

NIPPEN

MEASURE IT

RECORD

CONTROL IT

OPTIMIZE







STAND ALONE

BASIC ENERGY METER

GPRS

ETHERNET GATEWAY

LOCAL AREA NETWORK

ON PREMISE SERVER

ENERGY & PROCESS METER

RS485

GPRS GATEWAY

GPRS GATEWAY

GPRS GATEWAY

PREPAID POSTAID METER

GAS MODULE

WATER MODULE

SMART NET REAL TIME SYSTEM

(EASSY)

CUSTOMER WEB PORTAL I MOBILE APPLICATION

- Online Customer login portal/ Mobile application login.
- User can get balance credit through any of the interface (Mobile /Web-portal) or through Applications.
- Remote switch ON/OFF through mobile application
- Information through smart mobile application on need of Remote Display.

ALERTS OVER EMAIL/SMS

- Warning SMS at 20% and 10% of kWh threshold level, step tariff crossover.
- Sending SMS to the users during power outage.
- Get alerts for activities like account recharge, Recharge status, Low Credit, Overload, Over voltage, etc.

ENERGY BILLS, CONSUMPTION & PRICING

- Real time data monitoring.
- Recharge Slip, Recharge history for the selected date range.
- Monthly billing with breakup of EB/DG
- Running Hours of DG and Mains Supply is Provided.
- Cheque reconcillation.

DASHBOARD

REAL TIME/LINE DIAGRAM

REPORTS

E-MAIL, SMS, ONLINE REPORTS

ANALYTICS

PERIODIC EXCEL, PDF

HISTORY

BUSINESS INTELLIGENCE
MULTI PARAMETER GRAPH

CONTROL

MANUAL OVERRIDE SCHEDULED

BILLING

AUTOMATIC TARIFF BASED

IOT GATEWAY





Models	GPRS-4G LITE GATEWAY	GPRS-4G STANDARD GATEWAY
Frequency Bands	• LTE FDD: B1/B3/B5/B8 • LTE TDD: B34/B38/B39/B40/B41 • Class 3 (23dBm±2dB) for LTE bands • Class 1 (1W@1800/1900 MHz)	• LTE FDD: B1/B3/B5/B8 • LTE TDD: B34/B38/B39/B40/B41 • Class 3 (23dBm±2dB) for LTE bands • Class 1 (1W@1800/1900 MHz)
GPRS	4G single-slot class 12 mobile station class B	GPRS multi-slot class 12GPRS mobile station class B
SIM Interface	Full size-3.3 V or 1.8V compatible	
Transmit Protocol	TCP,HTTP and MQTT	
OTA	Firmware Updating via 4G	
Antenna	External 3 meter extendable antenna	
Digital Port	RS-232 or RS-485	TTL or RS-232 or RS-485
RS-485 Port	Multiple Modbus Slave Device Connection	
RS-485 Modes	Transparent/Modbus Polling Formatted	Transparent/Modbus Polling Formatted (ASCII/HEX/RawHEX) with configurable Baud Rate
Input Port	2 channels (0-24V) Analog/Digital Input	
Analog Port	1 channel 4 to 20mA (optional with relay output)	
LED Indicator	Power,4G,Modbus Communication Status	Power,GSM,Modbus Communication Status
Connector	5 mm Micro-Fit connectors	
Dimension	100mm X 85mm X 24mm (L X W X H)	
Weight	160gm	
Operating Voltage	10V-24V DC	10V-32V DC
Operating Temperatutre	-10C to +55C	-10C to +55C

IOT GATEWAY



Interface	GPRS-4G+LAN GATEWAY	NG-9W-WF	NG-9W-EN
LAN	RJ 45 Ethernet 10 BASE-T or 100 BASE -TX (Auto)	Single Stream in 2.4 GHz ISM band	RJ45 Ethernet 10BASE-T or 100BASE-TX (Auto)
Connection monitoring	TCP, UDP, ICMP, IPv4, ARP, IGMP, MQTT, HTTP	Periodic Reboot, Power Failure, Input/ Output On/Off, Slave Fail	
DHCP	Static and dynamic IP allocation		
DDNS	Can be configured manually		
Modbus protocol	Modbus RTU Master		
Baud Rate	400, 4800, 9600, 19200, 38400, 57600,115200 bps		
Data Bits	7, 8		
Parity	None, Odd, Even		
Stop Bit	0, 1, 2		
Protocol	Configurable TCP, HTTP, MQTT		Configurable TCP, HTTP, HTTPs, MQTT - SSL Enabled
Index Count			64 Index
Word Count per Index			100
Max Word Count			2400
Gateway configuration			Web Config, Serial Utility, IP Commands
Ethernet	1 x RJ45 port, 10/100 Mbps		RJ45 Ethernet, 10/100 Mbps
I/Os	2 Channel (0 to 24V) Analog/Digital Voltage Input, 2 Channel (0 to 24V) Pure Digital Input,1 Channel (4 to 20mA) Current Input	1 Channel (0 to 24V) Power Supply, 1 Channel (0 to 24V) Modbus RS-485, 2 Channel (0 to 24V) Analog / Digital Input,1 Channel (4 to 20mA) Current Input	1 Channel (0 to 24V) Power Supply, 1 Channel (0 to 24V) Modbus RS-485, 2 Channel (0 to 24V) Analog / Digital Input, 1 Channel (4 to 20mA) Current Input, 1 Channel Relay OUT (5A Rating)
Serial Programming Interface	1x 3 Pin Programming Interface		USB to DB9 Connector / Device Configuration via Utility
Status LEDs	1x Power LED 1 x IP LED 2 x Modbus Communication Status		
Power	12V to 24V DC (Reverse Polarity Protection)	12V - 24V DC	12V to 24V DC (Reverse Polarity Protection)
RS485 Port	upto 32 Modbus Slave Device Connection		upto 64 Modbus Slave Device Connection
Anntena	1 x SMA for LTE	1 x SMA for WiFi Connectivity	
Dimensions (W x H x D	100 x 85 x 24 mm (L x W x H)	100mm x 90mm x 25mm (L x W x H)	115x 112 x 40 mm (L x W x H)
Weight	160 grams		
Mounting options	Wall Mount, Flat surface, Bottom DIN rail		
Operating temperature	-30C to +85C		
Ingress Protection Rating	IP60		

ORDERING INFORMATION

DIGITAL PANEL METERS

PRODUCT NAME	DESCRIPTIONS
DA-1 (96)	DIGITAL AMMETER 1PHASE 96X96
DA-1 (48)	DIGITAL AMMETER 1PHASE 48X96

PRODUCT NAME	DESCRIPTIONS
DA-3 (SINGLE ROW) 96	DIGITAL AMMETER 3PHASE SINGLE ROW 96X96
DA-3 (SINGLE ROW) 48	DIGITAL AMMETER 3PHASE SINGLE ROW 48X96

PRODUCT NAME	DESCRIPTIONS
DA-33 (THREE ROW)	DIGITAL AMMETER 3PHASE THREE ROW

Note: DIRECT BUILT IN CURRENT TRANSFORMER UPTO 30A (MODEL WITH EXTENTION DCT).

PRODUCT NAME	DESCRIPTIONS
DF-1(96)	DIGITAL FREQUENCY METER 96X96
DF-1(48)	DIGITAL FREQUENCY METER 48X96

PRODUCT NAME	DESCRIPTIONS
DM-PF-11	DIGITAL POWER FACTOR 1 PHASE VOLTAGE 1 PHASE CURRENT
DM-PF-31	DIGITAL POWER FACTOR 3 PHASE VOLTAGE 1 PHASE CURRENT
DM-PF-33	DIGITAL POWER FACTOR 3 PHASE VOLTAGE 2 PHASE CURRENT
DM-PF-34	DIGITAL POWER FACTOR 3 PHASE VOLTAGE 3 PHASE CURRENT

PRODUCT NAME	DESCRIPTIONS
DV-1 (96)	DIGITAL VOLTMETER 1PHASE 96X96
DV-1 (48)	DIGITAL VOLTMETER 1PHASE 48X96

PRODUCT NAME	DESCRIPTIONS
DV-3 (SINGLE ROW) 96	DIGITAL VOLTMETER 3PHASE 1ROW 96X96
DV-3 (SINGLE ROW) 48	DIGITAL VOLTMETER 3PHASE 1ROW 48X96

PRODUCT NAME	DESCRIPTIONS
DV-33 (3ROW)	DIGITAL VOLTMETER 3PHASE 3ROW

PRODUCT NAME	DESCRIPTIONS
DM-W-11	DIGITAL WATTMETER 1 PHASE 1 ELEMENT
DM-W-33	DIGITAL WATTMETER 3 PHASE 2 ELEMENT
DM-W-34	DIGITAL WATTMETER 3 PHASE 3 ELEMENT

PRODUCT NAME	DESCRIPTIONS
DT36L	VAF METER DT36L

PRODUCT NAME	DESCRIPTIONS
DT36M-1PH	VAF METER DT36M 1PHASE
DT36M-3PH	VAF METER DT36M 3PHASE

DIGITAL PANEL METERS

PRODUCT NAME	DESCRIPTIONS
EM3010-1PH	ENERGY METER 1 PHASE 96X96
EM3010-1PH-RS	ENERGY METER 1 PHASE 96X96 RS485
EM3010-1PH-DG	ENERGY METER 1 PHASE 96X96 DG
EM3010-1PH-RS-DG	ENERGY METER 1 PHASE 96X96 RS485-DG
EM3010-3PH	ENERGY METER 3 PHASE 96X96
EM3010-3PH-RS	ENERGY METER 3 PHASE 96X96 RS485
EM3010-3PH-DG	ENERGY METER 3 PHASE 96X96 DG
EM3010-3PH-RS-DG	ENERGY METER 3 PHASE 96X96 RS485-DG

PRODUCT NAME	DESCRIPTIONS
EM3060-1PH	ENERGY METER 1 PHASE 96X96
EM3060-1PH-RS	ENERGY METER 1 PHASE 96X96 RS485
EM3060-1PH-DG	ENERGY METER 1 PHASE 96X96 DG
EM3060-1PH-RS-DG	ENERGY METER 1 PHASE 96X96 RS485-DG
EM3060-3PH	ENERGY METER 3 PHASE 96X96
EM3060-3PH-RS	ENERGY METER 3 PHASE 96X96 RS485
EM3060-3PH-DG	ENERGY METER 3 PHASE 96X96 DG
EM3060-3PH-RS-DG	ENERGY METER 3 PHASE 96X96 RS485-DG

PRODUCT NAME	DESCRIPTIONS
EM3010 VA-1PH	ENERGY METER 1 PHASE 96X96
EM3010 VA-1PH-RS	ENERGY METER 1 PHASE 96X96 RS485
EM3010 VA-1PH-DG	ENERGY METER 1 PHASE 96X96 DG
EM3010 VA-1PH-RS-DG	ENERGY METER 1 PHASE 96X96 RS485-DG
EM3010 VA-3PH	ENERGY METER 3 PHASE 96X96
EM3010 VA-3PH-RS	ENERGY METER 3 PHASE 96X96 RS485
EM3010 VA-3PH-DG	ENERGY METER 3 PHASE 96X96 DG
EM3010 VA-3PH-RS-DG	ENERGY METER 3 PHASE 96X96 RS485-DG

PRODUCT NAME	DESCRIPTIONS
EM3060-VA-1PH	EM3060-VA 1 PHASE 96X96
EM3060-VA-1PH-RS	EM3060-VA 1 PHASE 96X96 RS485
EM3060-VA-1PH-DG	EM3060-VA 1 PHASE 96X96 DG
EM3060-VA-1PH-RS-DG	EM3060-VA 1 PHASE 96X96 RS485-DG
EM3060-VA-3PH	EM3060-VA 3 PHASE 96X96
EM3060-VA-3PH-RS	EM3060-VA 3 PHASE 96X96 RS485
EM3060-VA-3PH-DG	EM3060-VA 3 PHASE 96X96 DG
EM3060-VA-3PH-RS-DG	EM3060-VA 3 PHASE 96X96 RS485-DG

PRODUCT NAME	DESCRIPTIONS
EM3013-1PH	ENERGY METER 1 PHASE 96X96
EM3013-1PH-RS	ENERGY METER 1 PHASE 96X96 -RS485
EM3013-1PH-DG	ENERGY METER 1 PHASE 96X96 -DG
EM3013-1PH-RS-DG	ENERGY METER 1 PHASE 96X96- RS485-DG
EM3013-3PH	ENERGY METER 3 PHASE 96X96
EM3013-3PH-RS	ENERGY METER 3 PHASE 96X96 -RS485
EM3013-3PH-DG	ENERGY METER 3 PHASE 96X96- DG
EM3013-3PH-RS-DG	ENERGY METER 3 PHASE 96X96 -RS485-DG

Note: 1) BUILT IN MODEL WITH EXTENSION ETHERNET.
2) DIRECT BUILT IN CURRENT TRANSFORMER UPTO 60A (MODEL WITH EXTENTION DCT).

PRODUCT NAME	DESCRIPTIONS
EM3063-1PH	ENERGY METER 1 PHASE 96X96
EM3063-1PH-RS	ENERGY METER 1 PHASE 96X96 RS485
EM3063-1PH-DG	ENERGY METER 1 PHASE 96X96 DG
EM3063-1PH-RS-DG	ENERGY METER 1 PHASE 96X96 RS485-DG
EM3063-3PH	ENERGY METER 3 PHASE 96X96
EM3063-3PH-RS	ENERGY METER 3 PHASE 96X96 RS485
EM3063-3PH-DG	ENERGY METER 3 PHASE 96X96 DG
EM3063-3PH-RS-DG	ENERGY METER 3 PHASE 96X96 RS485-DG

Note: 1) BUILT IN MODEL WITH EXTENSION ETHERNET.
2) DIRECT BUILT IN CURRENT TRANSFORMER UPTO 60A (MODEL WITH EXTENTION DCT).

ORDERING INFORMATION

DIGITAL PANEL METERS

PRODUCT NAME	DESCRIPTIONS
EM 3010A-1PH (0.5%)	ENERGY METER 1PHASE 96X96 (0.5%)
EM 3010A-1PH (0.5%)-DG	ENERGY METER 1PHASE 96X96(0.5%)-DG
EM 3010A-1PH (0.5%)-RS	ENERGY METER1PHASE 96X96(0.5%) -RS
EM 3010A-1PH (0.5%)-AL	ENERGY METER 1PHASE 96X96(0.5%) -AL
EM 3010A-1PH (0.5)-DG-RS	ENERGY METER 1PHASE 96X96(0.5%) -DG-RS
EM 3010A-1PH (0.5)-DG-RS-AL	ENERGY METER 1PHASE 96X96(0.5%)-DG-RS-AL
EM 3010A-3PH (0.5%)	ENERGY METER 3PHASE 96X96(0.5%)
EM 3010A-3PH (0.5%)-DG	ENERGY METER 3PHASE 96X96(0.5%)-DG
EM 3010A-3PH (0.5%)-RS	ENERGY METER 3PHASE 96X96(0.5%) -RS
EM 3010A-3PH (0.5%)-AL	ENERGY METER 3PHASE 96X96(0.5%) -AL
EM 3010A-3PH (0.5%)-DG-RS	ENERGY METER 3PHASE 96X96(0.5%) -DG-RS
EM 3010A-3PH (0.5%)-DG-RS-AL	ENERGY METER 3PHASE 96X96(0.5%)-DG-RS-AL
PRODUCT NAME	DESCRIPTIONS
EM 3011A-1PH (0.5%)	ENERGY METER 1PHASE 96X96(0.5%)
EM 3011A-1PH (0.5%)-DG	ENERGY METER 1PHASE 96X96(0.5%)-DG
EM 3011A-1PH (0.5%)-RS	ENERGY METER1PHASE 96X96(0.5%) -RS
EM 3011A-1PH (0.5%)-AL	ENERGY METER 1PHASE 96X96(0.5%) -AL
EM 3011A-1PH (0.5)-DG-RS	ENERGY METER 1PHASE 96X96(0.5%) -DG-RS
EM 3011A-1PH (0.5)-DG-RS-AL	ENERGY METER 1PHASE 96X96(0.5%)-DG-RS-AL
EM 3011A-3PH (0.5%)	ENERGY METER 3PHASE 96X96(0.5%)
EM 3011A-3PH (0.5%)-DG	ENERGY METER 3PHASE 96X96(0.5%)-DG
EM 3011A-3PH (0.5%)-RS	ENERGY METER 3PHASE 96X96(0.5%) -RS
EM 3011A-3PH (0.5%)-AL	ENERGY METER 3PHASE 96X96(0.5%) -AL
EM 3011A-3PH (0.5%)-DG-RS	ENERGY METER 3PHASE 96X96(0.5%) -DG-RS
EM 3011A-3PH (0.5%)-DG-RS-AL	ENERGY METER 3PHASE 96X96(0.5%)-DG-RS-AL
PRODUCT NAME	DESCRIPTIONS
EM 3013A-1PH (0.5%)	ENERGY METER 1PHASE 96X96(0.5%)
EM 3013A-1PH (0.5%)-DG	ENERGY METER 1PHASE 96X96(0.5%)-DG
EM 3013A-1PH (0.5%)-RS	ENERGY METER1PHASE 96X96(0.5%) -RS
EM 3013A-1PH (0.5%)-AL	ENERGY METER 1PHASE 96X96(0.5%) -AL
EM 3013A-1PH (0.5)-DG-RS	ENERGY METER 1PHASE 96X96(0.5%) -DG-RS
EM 3013A-1PH (0.5)-DG-RS-AL	ENERGY METER 1PHASE 96X96(0.5%)-DG-RS-AL
EM 3013A-3PH (0.5%)	ENERGY METER 3PHASE 96X96(0.5%)
EM 3013A-3PH (0.5%)-DG	ENERGY METER 3PHASE 96X96(0.5%)-DG
EM 3013A-3PH (0.5%)-RS	ENERGY METER 3PHASE 96X96(0.5%) -RS
EM 3013A-3PH (0.5%)-AL	ENERGY METER 3PHASE 96X96(0.5%) -AL
EM 3013A-3PH (0.5%)-DG-RS	ENERGY METER 3PHASE 96X96(0.5%) -DG-RS
EM 3013A-3PH (0.5%)-DG-RS-AL	ENERGY METER 3PHASE 96X96(0.5%)-DG-RS-AL

PRODUCT NAME	DESCRIPTIONS
EM 3060A-1PH (0.5%)	ENERGY METER 1PHASE 96X96 (0.5%)
EM 3060A-1PH (0.5%)-DG	ENERGY METER 1PHASE 96X96(0.5%)-DG
EM 3060A-1PH (0.5%)-RS	ENERGY METER1PHASE 96X96(0.5%) -RS
EM 3060A-1PH (0.5%)-AL	ENERGY METER 1PHASE 96X96(0.5%) -AL
EM 3060A-1PH (0.5)-DG-RS	ENERGY METER 1PHASE 96X96(0.5%) -DG-RS
EM 3060A-1PH (0.5)-DG-RS-AL	ENERGY METER 1PHASE 96X96(0.5%)-DG-RS-AL
EM 3060A-3PH (0.5%)	ENERGY METER 3PHASE 96X96(0.5%)
EM 3060A-3PH (0.5%)-DG	ENERGY METER 3PHASE 96X96(0.5%)-DG
EM 3060A-3PH (0.5%)-RS	ENERGY METER 3PHASE 96X96(0.5%) -RS
EM 3060A-3PH (0.5%)-AL	ENERGY METER 3PHASE 96X96(0.5%) -AL
EM 3060A-3PH (0.5%)-DG-RS	ENERGY METER 3PHASE 96X96(0.5%) -DG-RS
EM 3060A-3PH (0.5%)-DG-RS-AL	ENERGY METER 3PHASE 96X96(0.5%)-DG-RS-AL
PRODUCT NAME	DESCRIPTIONS
EM 3060VAA-1PH (0.5%)	ENERGY METER 1PHASE 96X96(0.5%)
EM 3060VAA-1PH (0.5%)-DG	ENERGY METER 1PHASE 96X96(0.5%)-DG
EM 3060VAA-1PH (0.5%)-RS	ENERGY METER1PHASE 96X96(0.5%) -RS
EM 3060VAA-1PH (0.5%)-AL	ENERGY METER 1PHASE 96X96(0.5%) -AL
EM 3060VAA-1PH (0.5)-DG-RS	ENERGY METER 1PHASE 96X96(0.5%) -DG-RS
EM 3060VAA-1PH (0.5)-DG-RS-AL	ENERGY METER 1PHASE 96X96(0.5%)-DG-RS-AL
EM 3060VAA-3PH (0.5%)	ENERGY METER 3PHASE 96X96(0.5%)
EM 3060VAA-3PH (0.5%)-DG	ENERGY METER 3PHASE 96X96(0.5%)-DG
EM 3060VAA-3PH (0.5%)-RS	ENERGY METER 3PHASE 96X96(0.5%) -RS
EM 3060VAA-3PH (0.5%)-AL	ENERGY METER 3PHASE 96X96(0.5%) -AL
EM 3060VAA-3PH (0.5%)-DG-RS	ENERGY METER 3PHASE 96X96(0.5%) -DG-RS
EM 3060VAA-3PH (0.5%)-DG-RS-AL	ENERGY METER 3PHASE 96X96(0.5%)-DG-RS-AL
PRODUCT NAME	DESCRIPTIONS
EM 3063A-1PH (0.5%)	ENERGY METER 1PHASE 96X96(0.5%)
EM 3063A-1PH (0.5%)-DG	ENERGY METER 1PHASE 96X96(0.5%)-DG
EM 3063A-1PH (0.5%)-RS	ENERGY METER1PHASE 96X96(0.5%) -RS
EM 3063A-1PH (0.5%)-AL	ENERGY METER 1PHASE 96X96(0.5%) -AL
EM 3063A-1PH (0.5)-DG-RS	ENERGY METER 1PHASE 96X96(0.5%) -DG-RS
EM 3063A-1PH (0.5)-DG-RS-AL	ENERGY METER 1PHASE 96X96(0.5%)-DG-RS-AL
EM 3063A-3PH (0.5%)	ENERGY METER 3PHASE 96X96(0.5%)
EM 3063A-3PH (0.5%)-DG	ENERGY METER 3PHASE 96X96(0.5%)-DG
EM 3063A-3PH (0.5%)-RS	ENERGY METER 3PHASE 96X96(0.5%) -RS
EM 3063A-3PH (0.5%)-AL	ENERGY METER 3PHASE 96X96(0.5%) -AL
EM 3063A-3PH (0.5%)-DG-RS	ENERGY METER 3PHASE 96X96(0.5%) -DG-RS
EM 3063A-3PH (0.5%)-DG-RS-AL	ENERGY METER 3PHASE 96X96(0.5%)-DG-RS-AL

PRODUCT NAME	DESCRIPTIONS
ADM-D	DC ENERGY METER 2 CHANNEL (DIN RAIL) WITH RS
ADM-D	DC ENERGY METER 2 CHANNEL (DIN RAIL) WITHOUT RS
ADM-A/ADM-D(96)	AC/DC COMBINED ENERGY METER(96X96) WITH RS
ADM-A/ADM-D(96)	AC/DC COMBINED ENERGY METER(96X96) WITHOUT RS
EDC 9D (DIN)	AC/DC COMBINED ENERGY METER(DIN) WITH RS
EDC 9D (DIN)	AC/DC COMBINED ENERGY METER(DIN) WITHOUT RS

Note: 1) BUILT IN MODEL WITH EXTENSION ETHERNET.
2) DIRECT BUILT IN CURRENT TRANSFORMER UPTO 60A (MODEL WITH EXTENTION DCT).

ORDERING INFORMATION

MULTIFUNCTION METERS

PRODUCT NAME	DESCRIPTIONS
DT3600-1PH	MFM DT3600-1PHASE
DT3600-1PH-RS	MFM DT3600-1PHASE-RS485
DT3600-1PH-AL	MFM DT3600-1PHASE-ALARM
DT3600-1PH-AL-RS	MFM DT3600-1PHASE-ALARM-RS485
DT3600-3PH	MFM DT3600-3PHASE
DT3600-3PH-RS	MFM DT3600-3PHASE-RS485
DT3600-3PH-AL-RS	MFM DT3600-3PHASE-ALARM
DT3600-3PH-AL	MFM DT3600-3PHASE-ALARM-RS485
DT3600-3PH-RELAY 0/P-AL	MFM DT3600-3PHASE-RELAY 0/P ALARM
DT3600-3PH-RELAY 0/P-AL-RS	MFM DT3600-3PHASE-RELAY 0/P ALARM-RS485

PRODUCT NAME	DESCRIPTIONS
DT3600 KWH-1PH	MFM DT3600 KWH-1PHASE
DT3600 KWH-1PH-RS	MFM DT3600 KWH-1PHASE- Rs485
DT3600 KWH-1PH-AL	MFM DT3600 KWH-1PHASE- ALARM
DT3600 KWH-1PH-AL-RS	MFM DT 3600 KWH-1PHASE- ALARM- Rs485
DT3600 KWH-3PH	MFM DT3600 KWH-3PHASE
DT3600 KWH-3PH-RS	MFM DT3600 KWH-3PHASE- Rs485
DT3600 KWH-3PH-AL	MFM DT3600 KWH-3PHASE- ALARM
DT3600 KWH-3PH-AL-RS	MFM DT 3600 KWH-3PHASE- ALARM- Rs485

PRODUCT NAME	DESCRIPTIONS
DT108-1PH	MFM DT108 1PHASE
DT108-1PH-DG	MFM DT108 1PHASE -DG
DT108-1PH-RS	MFM DT108 1PHASE -Rs485
DT108-1PH-AL	MFM DT108 1PHASE -ALARM
DT108-1PH-DG-RS	MFM DT108 1PHASE -DG- Rs485
DT108-1PH-DG-RS-AL	MFM DT108 1PHASE –DG- RS485 -ALARM
DT108-3PH	MFM DT108 3PHASE
DT108-3PH-DG	MFM DT108 3PHASE- DG
DT108-3PH-RS	MFM DT108 3PHASE -Rs485
DT108-3PH-AL	MFM DT108 3PHASE -ALARM
DT108-3PH-DG-RS	MFM DT108 3PHASE -DG -Rs485
DT108-3PH-DG-RS-AL	MFM DT108 3PHASE –DG- RS485 -ALARM

PRODUCT NAME	DESCRIPTIONS
DT 108+ 1PH	MFM DT108 + 1PH
DT 108+ 1PH-RS	MFM DT108 + 1PH Rs485
DT 108+ 1PH-RS-DG	MFM DT 108 + 1PH RS-DG
DT 108+ 1PH-AL	MFM DT108 + 1PH ALARM
DT 108+ 1PH –DG	MFM DT108 + 1PH DG
DT 108+ 1PH-DG-AL-RS	MFM DT108 + 1PH -DG-ALARM-RS485

PRODUCT NAME	DESCRIPTIONS
DT 108+ 3PH	MFM DT108 + 3PH
DT 108+ 3PH-RS	MFM DT108 + 3PH -Rs485
DT 108+ 3PH-RS-DG	MFM DT 108 + 3PH RS485-DG
DT 108+ 3PH-AL	MFM DT108 + 3PH -ALARM
DT 108+ 3PH –DG	MFM DT108 + 3PH -DG
DT 108+ 3PH-DG-AL-RS	MFM DT108 + 3PH -DG-ALARM-RS485

PRODUCT NAME	DESCRIPTIONS
DT108A-1PH (0.5%)	MFM DT108A 1PHASE(0.5%)
DT108A-1PH (0.5%)-DG	MFM DT108A 1PHASE(0.5%)-DG
DT108A-1PH (0.5%)-RS	MFM DT108A 1PHASE(0.5%) -RS
DT108A-1PH (0.5%)-AL	MFM DT108A 1PHASE(0.5%) -AL
DT108A-1PH (0.5)-DG-RS	MFM DT108A 1PHASE(0.5%) -DG-RS
DT108A-1PH (0.5)-DG-RS-AL	MFM DT108A 1PHASE(0.5%)-DG-RS-AL
DT108A-3PH (0.5%)	MFM DT108A 3PHASE(0.5%)
DT108A-3PH (0.5%)-DG	MFM DT108A 3PHASE(0.5%)-DG
DT108A-3PH (0.5%)-RS	MFM DT108A 3PHASE(0.5%) -RS
DT108A-3PH (0.5%)-AL	MFM DT108A 3PHASE(0.5%) -AL
DT108A-3PH (0.5%)-DG-RS	MFM DT108A 3PHASE(0.5%) -DG-RS
DT108PRO-3PH (0.5%)-DG-RS-AL	MFM DT108A 3PHASE(0.5%)-DG-RS-AL

PRODUCT NAME	DESCRIPTIONS
DMFM804A-1PH (0.5%)	MFM804A 1PHASE(0.5%)
MFM804A-1PH (0.5%)-DG	MFM804A 1PHASE(0.5%)-DG
MFM804A-1PH (0.5%)-RS	MFM804A1PHASE(0.5%) -RS
MFM804A-1PH (0.5%)-AL	MFM804A 1PHASE(0.5%) -AL
MFM804A-1PH (0.5)-DG-RS	MFM804A 1PHASE(0.5%) -DG-RS
MFM804A-1PH (0.5)-DG-RS-AL	MFM804A 1PHASE(0.5%)-DG-RS-AL
MFM804A-3PH (0.5%)	MFM804A3PHASE(0.5%)
MFM804A-3PH (0.5%)-DG	MFM804A 3PHASE(0.5%)-DG
MFM804A-3PH (0.5%)-RS	MFM804A3PHASE(0.5%) -RS
MFM804A-3PH (0.5%)-AL	MFM804A 3PHASE(0.5%) -AL
MFM804A-3PH (0.5%)-DG-RS	MFM804A3PHASE(0.5%) -DG-RS
MFM804A-3PH (0.5%)-DG-RS-AL	MFM804A 3PHASE(0.5%)-DG-RS-AL

Note: 1) Built in Model with extension Ethernet.
2) Direct built in Current Transformer upto 60A (Model with Extention DCT).

PRODUCT NAME	DESCRIPTIONS
MFM804-3PH	MFM804 3 PHASE 96X96
MFM804-3PH-RS	MFM804 3 PHASE 96X96 -Rs485

DIGITAL PANEL METERS

PRODUCT NAME	DESCRIPTIONS
DA-1(72)	DIGITAL AMMETER 1PHASE 72X72
DV-1(72)	DIGITAL VOLTMETER 1PHASE 72X72
DVA (72)	DIGITAL AMMETER VOLTMETER 1PHASE 72X72

PRODUCT NAME	DESCRIPTIONS
DVA(48)	DIGITAL AMMETER VOLTMETER 1PHASE 48X48
DVA(96)	DIGITAL AMMETER VOLTMETER 1PHASE 96X96

ORDERING INFORMATION

SMART LOAD MANAGER

PRODUCT NAME	DESCRIPTIONS
SL6300-3PH	SMART LOAD MANAGER 3 PHASE 96X96
SL6300-3PH-RS	SMART LOAD MANAGER 3 PHASE 96X96 -Rs485
SL6300-3PH-DG	SMART LOAD MANAGER 3 PHASE 96X96- DG
SL6300-3PH-DG-RS	SMART LOAD MANAGER 3 PHASE 96X96 –DG- Rs485
SL6300-3PH-AL	SMART LOAD MANAGER 3 PHASE 96X96 -ALARM
SL6300-3PH-AL-RS	SMART LOAD MANAGER 3 PHASE 96X96- ALARM -Rs485
SL6300-3PH-RS-DG-AL	SMART LOAD MANAGER 3 PHASE 96X96 Rs485-DG-ALARM
SL6300MDC-2RELAY-AL	SMART LOAD MANAGER MDC 96X96 2RELAY WITH ALARM
SL6300MDC-2RELAY-RS485-AL	SMART LOAD MANAGER MDC 96X96 2RELAY WITH ALARM Rs485

PRODUCT NAME	DESCRIPTIONS
SL6300MDC-4RELAY-AL	SMART LOAD MANAGER MDC 96X96 4RELAY WITH ALARM
SL6300MDC-4RELAY-RS485-AL	SMART LOAD MANAGER MDC 96X96 4RELAY WITH ALARM -Rs485
SL6300MDC-2RELAY-AL (0.5S)	SMART LOAD MANAGER MDC 96X96 2RELAY WITH ALARM(0.5S)
SL6300MDC-2RELAY-RS-AL(0.5S)	SMART LOAD MANAGER MDC 96X96 2RELAY WITH ALARM RS485(0.5S)
SL6300MDC-4RELAY-AL(0.5S)	SMART LOAD MANAGER MDC 96X96 4RELAY WITH ALARM(0.5S)
SL6300MDC-4RELAY-RS-AL(0.5S)	SMART LOAD MANAGER MDC 96X96 4RELAY WITH ALARM RS485(0.5S)

Note: 1) Built in Model with Extension Ethernet. 2) Direct built in Current Transformer upto 60A (Model with extention DCT).

AUTOMATIC POWER FACTOR CONTROLLER

PRODUCT NAME	DESCRIPTIONS
APFC414-1CT-1PH-4R	APFC 414-96X96 1CT 1PH 4 STAGE-230V
APFC414-1CT-1PH-6R	APFC 414-96X96 1CT 1PH 6 STAGE-230V
APFC414-1CT-1PH-8R	APFC 414-96X96 1CT 1PH 8 STAGE-230V
APFC414-1CT-1PH-12R	APFC 414-96X96 1CT 1PH 12 STAGE-230V
APFC414-1CT-1PH-4R-AL	APFC 414-96X96 3CT 1PH 4 STAGE-230V ALARM
APFC414-1CT-1PH-6R-AL	APFC 414-96X96 3CT 1PH 6 STAGE-230V ALARM
APFC414-1CT-1PH-8R-AL	APFC 414-96X96 3CT 1PH 8 STAGE-230V ALARM
APFC414-1CT-1PH-12R-AL	APFC 414-96X96 3CT 1PH 12 STAGE-230V ALARM

PRODUCT NAME	DESCRIPTIONS
APFC414-3CT-3PH-4R	APFC 414-96X96 1CT 3PH 4 STAGE-415V
APFC414-3CT-3PH-6R	APFC 414-96X96 1CT 3PH 6 STAGE-415V
APFC414-3CT-3PH-8R	APFC 414-96X96 1CT 3PH 8 STAGE-415V
APFC414-3CT-3PH-12R	APFC 414-96X96 1CT 3PH 12 STAGE-415V
APFC414-3CT-3PH-4R-AL	APFC 414-96X96 3CT 3PH 4 STAGE-415V ALARM
APFC414-3CT-3PH-6R-AL	APFC 414-96X96 3CT 3PH 6 STAGE-415V ALARM
APFC414-3CT-3PH-8R-AL	APFC 414-96X96 3CT 3PH 8 STAGE-415V ALARM
APFC414-3CT-3PH-12R-AL	APFC 414-96X96 3CT 3PH 12 STAGE-415V ALARM

PRODUCT NAME	DESCRIPTIONS
APFC414-144-1PH-6R	APFC 414-144X144 1CT 1PH 6 STAGE-230V
APFC414-144-1PH-8R	APFC 414-144X144 1CT 1PH 8 STAGE-230V
APFC414-144-1PH-12R	APFC 414-144X144 1CT 1PH 12 STAGE-230V
APFC414-144-1PH-6R-AL	APFC 414-144X144 1CT 1PH 6 STAGE-230V ALARM
APFC414-144-1PH-8R-AL	APFC 414-144X144 1CT 1PH 8 STAGE-230V ALARM
APFC414-144-1PH-12R-AL	APFC 414-144X144 1CT 1PH 12 STAGE-230V ALARM

PRODUCT NAME	DESCRIPTIONS
APFC414-144-3PH-6R	APFC 414-144X144 1CT 3PH 6 STAGE-415V
APFC414-144-3PH-8R	APFC 414-144X144 1CT 3PH 8 STAGE-415V
APFC414-144-3PH-12R	APFC 414-144X144 1CT 3PH 12 STAGE-415V
APFC414-144-3PH-16R	APFC 414-144X144 1CT 3PH 16 STAGE-415V
APFC414-144-3PH-6R-AL	APFC 414-144X144 1CT 3PH 6 STAGE-415V-ALARM
APFC414-144-3PH-8R-AL	APFC 414-144X144 1CT 3PH 8 STAGE-415V-ALARM
APFC414-144-3PH-12R-AL	APFC 414-144X144 1CT 3PH 12 STAGE-415V-ALARM
APFC414-144-3PH-16R-AL	APFC 414-144X144 1CT 3PH 16 STAGE-415V-ALARM

PRODUCT NAME	DESCRIPTIONS
APFC-PRO-3CT-3PH-4R	APFC PRO-96X96 1CT 3PH 4 STAGE-415V
APFC-PRO-3CT-3PH-6R	APFC PRO-96X96 1CT 3PH 6 STAGE-415V
APFC-PRO-3CT-3PH-8R	APFC PRO-96X96 1CT 3PH 8 STAGE-415V
APFC-PRO-3CT-3PH-12R	APFC PRO-96X96 1CT 3PH 12 STAGE-415V

PRODUCT NAME	DESCRIPTIONS
APFC UNO-6R	APFC UNO 6 RELAY
APFC UNO-8R	APFC UNO 8 RELAY
APFC UNO-12R	APFC UNO 12 RELAY
APFC UNO-6R-EN	APFC UNO 6 RELAY ENERGY
APFC UNO-8R-EN	APFC UNO 8 RELAY ENERGY
APFC UNO-12R-EN	APFC UNO 12 RELAY ENERGY
APFC UNO-6R-RS	APFC UNO 6 RELAY Rs485
APFC UNO-8R-RS	APFC UNO 8 RELAY Rs485
APFC UNO-12R-RS	APFC UNO 12 RELAY Rs485
APFC UNO-6R-EN-RS	APFC UNO 6 RELAY ENERGY Rs485
APFC UNO-8R-EN-RS	APFC UNO 8 RELAY ENERGY Rs485
APFC UNO-12R-EN-RS	APFC UNO 12 RELAY ENERGY Rs485

6 Relay- 1 Alarm Output Std

8 Relay & 12 Relay- 2 Alarm Output Std

PRODUCT NAME	DESCRIPTIONS
APFC36L-144-6R	APFC 3CT-144X144 LCD 6 STAGE
APFC36L-144-8R	APFC 3CT-144X144 LCD 8 STAGE
APFC36L-144-12R	APFC 3CT-144X144 LCD 12 STAGE
APFC36L-144-16R	APFC 3CT-144X144 LCD 16 STAGE
APFC36L-144-6R-RS	APFC 3CT-144X144 LCD 6 STAGE- Rs485
APFC36L-144-8R-RS	APFC 3CT-144X144 LCD 8 STAGE- Rs485
APFC36L-144-12R-RS	APFC 3CT-144X144 LCD 12 STAGE- Rs485
APFC36L-144-16R-RS	APFC 3CT-144X144 LCD 16 STAGE- Rs485

ORDERING INFORMATION

PRODUCT NAME	DESCRIPTIONS
PQ-6A(1PH-1CT) 6R	PQ-6A(96X96) 1PH-1CT 6 STAGE-230V
PQ-6A(1PH-1CT) 8R	PQ-6A(96X96) 1PH-1CT 8 STAGE-230V
PQ-6A(1PH-1CT) 12R	PQ-6A(96X96) 1PH-1CT 12 STAGE-230V
PQ-6A(1PH-1CT) 6R-AL-RS	PQ-6A(96X96) 1PH-1CT 6 STAGE-230V ALARM-RS485
PQ-6A(1PH-1CT) 8R-AL-RS	PQ-6A(96X96) 1PH-1CT 8 STAGE-230V ALARM-RS485
PQ-6A(1PH-1CT) 12R-AL-RS	PQ-6A(96X96) 1PH-1CT 12 STAGE-230V ALARM-RS485
PQ-6T(1PH-1CT) 6R	PQ-6T(96X96) 1PH-1CT 6 STAGE-230V
	(THYRISTOR CONTROLLED)
PQ-6T(1PH-1CT) 8R	PQ-6T(96X96) 1PH-1CT 8 STAGE-230V
	(THYRISTOR CONTROLLED)
PQ-6T(1PH-1CT) 12R	PQ-6T(96X96) 1PH-1CT 12 STAGE-230V
	(THYRISTOR CONTROLLED)
PQ-6T(1PH-1CT) 6R-AL-RS	PQ-6T(96X96) 1PH-1CT 6 STAGE-230V
	(THYRISTOR CONTROLLED) ALARM-RS485
PQ-6T(1PH-1CT) 8R-AL-RS	PQ-6T(96X96) 1PH-1CT 8 STAGE-230V
	(THYRISTOR CONTROLLED) ALARM-RS485
PQ-6T(1PH-1CT) 12R-AL-RS	PQ-6T(96X96) 1PH-1CT 12 STAGE-230V
	(THYRISTOR CONTROLLED) ALARM-RS485

PRODUCT NAME	DESCRIPTIONS
PQ-9A(1PH-1CT) 6R	PQ-9A(96X96) 1PH-1CT 6 STAGE-230V
PQ-9A(1PH-1CT) 8R	PQ-9A(96X96) 1PH-1CT 8 STAGE-230V
PQ-9A(1PH-1CT) 12R	PQ-9A(96X96) 1PH-1CT 12 STAGE-230V
PQ-9A(1PH-1CT) 6R-AL-RS	PQ-9A(96X96) 1PH-1CT 6 STAGE-230V ALARM-RS485
PQ-9A(1PH-1CT) 8R-AL-RS	PQ-9A(96X96) 1PH-1CT 8 STAGE-230V ALARM-RS485
PQ-9A(1PH-1CT) 12R-AL-RS	PQ-9A(96X96) 1PH-1CT 12 STAGE-230V ALARM-RS485
PQ-9T(1PH-1CT) 6R	PQ-9T(96X96) 1PH-1CT 6 STAGE-230V
	(THYRISTOR CONTROLLED)
PQ-9T(1PH-1CT) 8R	PQ-9T(96X96) 1PH-1CT 8 STAGE-230V
	(THYRISTOR CONTROLLED)
PQ-9T(1PH-1CT) 12R	PQ-9T(96X96) 1PH-1CT 12 STAGE-230V
	(THYRISTOR CONTROLLED)
PQ-9T(1PH-1CT) 6R-AL-RS	PQ-9T(96X96) 1PH-1CT 6 STAGE-230V
	(THYRISTOR CONTROLLED) ALARM-RS485
PQ-9T(1PH-1CT) 8R-AL-RS	PQ-9T(96X96) 1PH-1CT 8 STAGE-230V
	(THYRISTOR CONTROLLED) ALARM-RS485
PQ-9T(1PH-1CT) 12R-AL-RS	PQ-9T(96X96) 1PH-1CT 12 STAGE-230V
	(THYRISTOR CONTROLLED) ALARM-RS485

PRODUCT NAME	DESCRIPTIONS
PQ-903A(3PH-3CT) 8R	PQ-903A(144X144) 3PH-3CT 8 STAGE-415V
PQ-903A(3PH-3CT) 12R	PQ-903A(144X144) 3PH-3CT 12 STAGE-415V
PQ-903A(3PH-3CT) 16R	PQ-903A(144X144) 3PH-3CT 16 STAGE-415V
PQ-903A(3PH-3CT) 8R-AL-RS	PQ-903A(144X144) 3PH-3CT 8 STAGE-415V ALARM-RS
PQ-903A(3PH-3CT) 12R-AL-RS	PQ-903A(144X144) 3PH-3CT 12 STAGE-415V ALARM-RS
PQ-903A(3PH-3CT) 16R-AL-RS	PQ-903A(144X144) 3PH-3CT 16 STAGE-415V ALARM-RS
PQ-903T(3PH-3CT) 8R	PQ-903T(144X144) 3PH-3CT 8 STAGE-415V (THYRISTOR CONTROLLED)
PQ-903T(3PH-3CT) 12R	PQ-903T(144X144) 3PH-3CT 12 STAGE-415V (THYRISTOR CONTROLLED)

PRODUCT NAME	DESCRIPTIONS
PQ-903T(3PH-3CT) 16R	PQ-903T(144X144) 3PH-3CT 16 STAGE-415V (THYRISTOR CONTROLLED)
PQ-903T(3PH-3CT) 8R-AL	PQ-903T(144X144) 3PH-3CT 8 STAGE-415V ALARM-RS (THYRISTOR CONTROLLED)
PQ-903T(3PH-3CT) 12R-AL	PQ-903T(144X144) 3PH-3CT 12 STAGE-415V ALARM-RS (THYRISTOR CONTROLLED)
PQ-903T(3PH-3CT) 16R-AL	PQ-903T(144X144) 3PH-3CT 16 STAGE-415V ALARM-RS (THYRISTOR CONTROLLED)

PROTECTION RELAYS

LINE MONITORING RELAY

PRODUCT NAME	SUPPLY VOLTAGE
900UVR	415V AC
901UVR	230V AC
300LMR	160V–280V AC (L-N)
500PSR	160V-500V AC (L-L)

EARTH LEAKAGE RELAY

PRODUCT NAME	SUPPLY VOLTAGE
ELR-96	230V AC +/-20% (50/60 Hz)
ELR DIN	230V AC +/-20% (50/60 Hz)

CURRENT MONITORING RELAY

PRODUCT NAME	SUPPLY VOLTAGE
300CPR	Auxiliary Powered 230V AC (50/60Hz)
600CPR	Auxiliary Powered 230V AC (50/60Hz)

VOLTAGE MONITORING RELAY

PRODUCT NAME	SUPPLY VOLTAGE
300VPR	Self powered (160V-280V AC 50/60Hz)
600VPR	Self powered (160V-280V AC 50/60Hz) Aux. Powered*

SHUNT REACTORS

Model No	Srating of Shunt Reactor
NP-415-SR-25KVAR	25kVAr
NP-415-SR-35KVAR	35kVAr
NP-415-SR-50KVAR	50kVAr
NP-415-SR-75KVAR	75kVAr
NP-415-SR-100KVAR	100kVAr

THYRISTOR SWITCH MODULE

Ordering Code	Rating of Thyristor Switch Module
NP-TSM-15 kVAr	15 kVAr
NP-TSM-25 kVAr	25 kVAr
NP-TSM-50 kVAr	50 kVAr
NP-TSM-100 kVAr	100 kVAr

ORDERING INFORMATION

IOT GATEWAYS	
PRODUCT NAME	**DESCRIPTIONS**
GPRS-4G Lite Gateway	4G GPRS Gateway Lite
GPRS-4G Standard Gateway	4G GPRS Gateway Standard
GPRS-4G+LAN GATEWAY	4G GPRS+Ethernet Gateway
NG-9W-WF	Wi-Fi Gateway
NG-9W-EN	Ethernet Gateway

DETUNED REACTORS						
Rating	**5.67%**		**7%**		**14%**	
	Cu (P2P01CD56)		**Al (P2P01AD56)**	**Al (P2P01AD07)**	**Cu (P2P01AD14)**	**Al (P2P01CD14)**
5kVAr	NP01CD5605K440	NP01AD5605K440	NP01CD0705K440	NP01AD0705K440	NP01CD1405K440	NP01AD1405K440
10kVAr	NP01CD5610K440	NP01AD5610K440	NP01CD0710K440	NP01AD0710K440	NP01CD1410K440	NP01AD1410K440
12.5kVAr	NP01CD5612K440	NP01AD5612K440	NP01CD0712K440	NP01AD0712K440	NP01CD1412K440	NP01AD1412K440
15kVAr	NP01CD5615K440	NP01AD5615K440	NP01CD0715K440	NP01AD0715K440	NP01CD1415K440	NP01AD1415K440
20kVAr	NP01CD5620K440	NP01AD5620K440	NP01CD0720K440	NP01AD0720K440	NP01CD1420K440	NP01AD1420K440
25kVAr	NP01CD5625K440	NP01AD5625K440	NP01CD0725K440	NP01AD0725K440	NP01CD1420K440	NP01AD1425K440
35kVAr	NP01CD5635K440	NP01AD5635K440	NP01CD0735K440	NP01AD0735K440	P2P01CD1435K440	NP01AD1435K440
50kVAr	NP01CD5650K440	NP01AD5650K440	NP01CD0750K440	P2P01AD0750K440	NP01CD1450K440	NP01AD1450K440

CBCT	
Inner Diameter	Order Code
35mm	CBCT-35-1
70mm	CBCT-70-1
120mm	CBCT-120-1
210mm	CBCT-210-1
310mm	CBCT-310-1

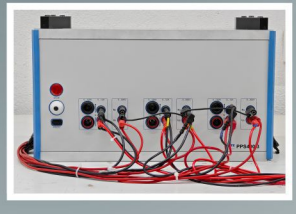
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