

PRODUCT SELECTION GUIDE

selec[®]
Creating Best Value



- Meters • CTs • Protection Relays • Power Factor Controllers
- Time Switches • Timers • Counters • Temperature Controllers
- Process Indicators • PLCs • HMI • Aluminium Enclosures

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MFM384
96(H) x 96(W)mm



MFM284
72(H) x 72(W)mm



MFM383A
96(H) x 96(W)mm



MFM376
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • Bar graph representation for current • Single pulse output • %THD up to 31st level • Demand measurement 	<ul style="list-style-type: none"> • Compact size • Single pulse output • %THD up to 31st level • Demand measurement 	<ul style="list-style-type: none"> • Single pulse output • Energy (Active / Reactive / Apparent) 	<ul style="list-style-type: none"> • Single pulse output • Max / Min demand (Power) • Run hour • Auxiliary interrupts • Phase angle detection
DISPLAY	LCD with backlight			7 segment LED
DIGITS	4 rows of 4 digits, Bargraph representation for current, 1 row of 8 digits for energy display	3 rows of 4 digits, 7½ digits for energy display		3 rows of 4 digits
ELECTRICAL CONNECTION	1Ø - 2W, 2Ø - 3W, 3Ø - 3W, 3Ø - 4W			
RATED INPUT VOLTAGE	11 to 300V AC (L - N), 19 to 519V AC (L - L)			
RATED INPUT CURRENT	Nominal 5A AC (Min - 11mA; Max - 6A)			Nominal 5A AC (Min - 14mA; Max - 6A) (Isolation CTs mandatory)
RESOLUTION	For energy: 0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M (Depending upon CT ratio x PT ratio), For Power, Voltage & Current: Auto resolution, For Power factor: 0.001	For energy: 0.1k, 1k (Depending upon CT ratio x PT ratio) For Power, Voltage & Current: Auto resolution, For Power factor: 0.001	For energy: 0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M (Depending upon CT ratio x PT ratio), For Current, Voltage, Power: Auto resolution, For Power factor: 0.001	
CT PRIMARY	1 / 5A to 10kA (Programmable for any value)			
CT SECONDARY	1 / 5A (Programmable)			
PT PRIMARY	100V to 500kV (Programmable for any value)	100V to 10kV (Programmable for any value)	100V to 500kV (Programmable for any value)	
PT SECONDARY	100 to 500V AC (L - L) (Programmable for any value)			
COMMUNICATION	RS485 MODBUS RTU protocol (Optional)			
MEASURING PARAMETER	Voltage (L - L / L - N) (Individual / Average), Current (Individual / Average), Frequency, Power factor (Individual / Total), Active, Reactive & Apparent Power (Individual / Total), Active, Reactive & Apparent Energy (Total)			
ADDITIONAL FUNCTIONS	Phase sequence detection, Neutral current measurement	---	Max instantaneous (Current / Voltage), (Import / Export) Energy, %THD up to 31 st level (For MFM376-C)	
SUPPLY VOLTAGE	100 to 240V AC, -15% to +12%, 50 / 60Hz (Power consumption : Less than 8VA)			240V AC, ±20% (For MFM376-230VAC), 50 / 60Hz, 85V to 270V AC 50 / 60Hz & 40 to 270V DC, (For MFM376-C)

Din Rail Multifunction Meter



MFM384-R-C
90(H) x 70(W)mm

Din Rail Energy Meter



EM2M
90(H) x 35(W)mm

FEATURES	<ul style="list-style-type: none"> • Energy (Active, Reactive, Apparent) • RS485 MODBUS RTU protocol • Import / Export energy • Demand measurement 	<ul style="list-style-type: none"> • Self powered, 100A direct connection • 1Ø - 2 wire network • Bi- directional import & export • Demand measurement
DISPLAY	LCD with backlight	
DIGITS	1 row of 4 digits, 2 rows of 7 digits	1 row of 7 digits
ELECTRICAL CONNECTION	1Ø - 2W, 2Ø - 3W, 3Ø - 3W, 3Ø - 4W	1Ø - 2W
RATED INPUT VOLTAGE	11 to 300V AC (L - N), 19 to 519V AC (L - L)	176 to 276V AC (L - N)
RATED INPUT CURRENT	Nominal 5A AC (Min - 11mA; Max - 6A)	Base current 10A (Min - 0.5A; Max - 100A)
FREQUENCY	45Hz to 65Hz	
RESOLUTION	For Energy: 0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M (Depending upon CT ratio x PT ratio), For Power, Voltage, Current: Auto resolution, For Power factor: 0.01, Frequency: 0.1Hz	For Energy: 0.01k, For Power, Voltage, Current: Auto resolution, For Power factor: 0.01
ACCURACY CLASS	Voltage (L - L / L - N), Current : ±0.5% of F.S., Power factor : ±0.01, Frequency : ±0.1% of F.S., Power (kW, kVA, kVA): 1% of F.S. Energy (Active, Reactive, Apparent) : 1% of F.S.	Voltage (L - N), Current: ±0.5% of F.S. Power factor: ±0.01, Frequency: ±0.1% of F.S. Power (kW, kVA, kVA): 1% of F.S. Active energy: Class 1, Reactive energy: Class 2
CT PRIMARY	1 / 5A to 10kA (Programmable for any value)	---
CT SECONDARY	1 / 5A (Programmable)	---

Din Rail Multifunction Meter

Din Rail Energy Meter

PT PRIMARY	100V to 500kV (Programmable for any value)	---
PT SECONDARY	100V to 500V AC (L - L) (Programmable for any value)	---
MEMORY RETENTION FOR ENERGY	10 years	
COMMUNICATION	RS485 MODBUS RTU protocol	
INDICATIONS	LCD: Max demand of power, Communication in progress; LED: Integration of energy	LCD: Integration of energy; LED: 2 Pulse outputs
MEASURING PARAMETER	Voltage (L - L / L - N) (Individual / Average), Current (Individual / Average), Frequency, Power factor (Individual / Total), Active, Reactive & Apparent power (Individual / Total), Active, Reactive & Apparent energy (Import / Export), Demand (Min / Max Active & Reactive Power, Max apparent power)	Voltage, Current, Frequency, Power factor, Import / Export, Max demand for power
SUPPLY VOLTAGE	85 to 270V AC, 50 / 60Hz	176 to 276V AC (L-N), Self powered

Plug-n-Wire Multifunction Meters



MRJ4M
90(H) x 70(W)mm



MRJ4M-SL
90(H) x 70(W)mm



MRJ385
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> Energy (Active, Reactive) RJ45 connector current input Single pulse output Max demand of power Self powered 	<ul style="list-style-type: none"> Energy (Active, Reactive) RJ45 connector current input 2 pulse outputs Max demand of power Self powered 	<ul style="list-style-type: none"> Energy (Active, Reactive, Apparent) Split load, RJ45 connector current input Single pulse output Demand measurement Self powered %THD up to 31st level
DISPLAY	LCD with backlight		
DIGITS	2 rows of 4 digits, 1 row of 7 digits to show electrical parameters		4 rows of 4 digits, Bar graph representation for current, 1 row of 8 digits for energy display
ELECTRICAL CONNECTION	1Ø - 2W, 3Ø - 4W		
RATED INPUT VOLTAGE	60 to 300V AC (L - N), 104 to 520V AC (L - L)		100 to 240V AC (L - N), 173 to 415V AC (L - L)
RESOLUTION	For Energy : 0.01K, 0.1K, 1K, 0.01M, 0.1M, 1M (Depending upon CT ratio x PT ratio), For Power, Voltage, Current : Auto resolution For Power factor : 0.01		
CT PRIMARY	5A to 10kA (Programmable for any value)		
CT SECONDARY	330mV		
PT PRIMARY	100V to 10kV (Programmable for any value)		100V to 500kV (Programmable for any value)
PT SECONDARY	100 to 500V AC (L - L) (Programmable for any value)		173 to 415V AC (L - L) (Programmable for any value)
COMMUNICATION	RS485 MODBUS RTU protocol		
INDICATIONS	LCD : Max demand of power, communication in progress ; LED : Integration of energy		LCD : Max / Min demand of power, communication in progress ; Integration of energy, Unit in configuration menu
MEASURING PARAMETER	Voltage (L - L / L - N) (Individual / Average), Current (Individual / Average), Frequency, Power factor (Individual / Average), Active, Reactive & Apparent power (Individual / Total), Active, Reactive energy, Demand (Max active power, Max apparent power)	Voltage (L - L / L - N) (Individual / Average), Current (Individual), Frequency, Power factor (Individual / Average), Active, Reactive, Apparent power (Individual / Total), Active & Reactive energy, Total, Active & Reactive energy (Current input-1 plus current Input-2), Demand (Max active power, Max apparent power)	Voltage (L - L / L - N) (Individual / Average), Current (Individual / Average), Frequency, Power factor (Individual / Average), Active, Reactive, Apparent power (Individual / Total), Active, Reactive, Apparent energy (Phase wise (Import / Export) & Total (Import / Export)), Demand (Min / Max active power, Min / Max reactive power, Max apparent power), Harmonics individual for voltage & Current upto 31st level.
SUPPLY VOLTAGE	60 to 300V AC 50 / 60Hz, Self powered (V1, N)		

Plug-n-Wire Current Transformers



PWCT

DESCRIPTION	PWCT
CURRENT INPUT	60A, 100A, 125A, 150A, 160A, 200A, 250A, 300A, 400A, 500A, 600A, 630A, 800A, 1000A, 1250A, 1600A
APERTURE SIZES	15.5 x 25mm, 16 x 20mm, 21 x 25mm, 31 x 31mm, 54 x 50mm



EM306A
96(H) x 96(W)mm



EM368
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> Pulse output for energy Active energy 	<ul style="list-style-type: none"> Pulse output for energy Power (Active / Reactive) Energy (Active / Reactive / Apparent)
DISPLAY	7 segment LED	LCD with backlight
DIGITS	6 digits	8 digits
ELECTRICAL CONNECTION	1Ø - 2W, 2Ø - 3W, 3Ø - 3W, 3Ø - 4W	
RATED INPUT VOLTAGE	11 to 300V AC (L - N), 19 to 519V AC (L - L)	
RATED INPUT CURRENT	Nominal 5AAC (Min - 11mA; Max - 6A)	
RESOLUTION	0.01K, 0.1K, 1K & 10K (Depending on CT ratio)	For energy: 0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M, 10M (Depending upon CT ratio x PT ratio) For Power: Auto resolution, For Power factor : 0.01
ACCURACY	Class 1	Active Energy: Class 1, Reactive / Apparent Energy: ±1% Active / Reactive power: ±1%, PF & Avg. PF: ±1%
POWER CONSUMPTION	8VA max	
CT PRIMARY	1 / 5A to 10kA (Programmable for any value)	
CT SECONDARY	1 / 5A (Programmable)	
PT PRIMARY	---	100V to 500kV (Programmable for any value)
PT SECONDARY	---	100V to 500V AC (L - L) (Programmable for any value)
COMMUNICATION	Rs485 MODBUS RTU protocol (For EM306A-C)	RS485 MODBUS RTU protocol (For EM368-C)
MEASURING PARAMETER	Active energy (kWh) resettable	Power (Total Active / Reactive), Energy (Total Active / Reactive / Apparent), Power factor (Individual & Average)
LED INDICATIONS	Integration of energy, Resolution is 10, Reverse connected CT warning	Integration of energy, Resolution is 10, Reverse connected CT warning, Communication in progress, pulse output (All Indications on LCD)
SUPPLY VOLTAGE	230V AC ±20% (50 / 60Hz) For EM306A 100V to 240V AC, -15% to +12% (50 / 60Hz) For EM306A-C	100 to 240V AC, -15% to +12%, 50 / 60Hz

Digital VAF Meters



VAF36A
96(H) x 96(W)mm



VAF39A-1
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> 3Ø (True RMS) Voltage 3Ø (True RMS) Current Frequency RUN hour / RPM measurement Bar graph for current representation 	<ul style="list-style-type: none"> 3Ø (True RMS) Voltage 3Ø (True RMS) Current Frequency RUN hour / RPM measurement
DISPLAY	LCD with backlight	7 segment LED
DIGITS	3 rows of 3 digits	
ELECTRICAL CONNECTION	1Ø - 2W, 2Ø - 3W, 3Ø - 3W, 3Ø - 4W	
RATED INPUT VOLTAGE	11 to 300V AC (L - N), 19 to 519V AC (L - L)	
RATED INPUT CURRENT	Nominal 5A (Min - 20mA; Max - 6A)	Nominal 5A (Min - 30mA; Max - 6A)
RESOLUTION	Current & Voltage: Depending on CT & PT primary setting, RPM : 0.1, Run hour : 0.1hr	
ACCURACY	Voltage(L - N / L - L / Average): ± 0.5% of F.S. ± 2 digits, Current & Average Current: ± 1% of F.S. ± 2 digits, Run hour: ± 1%, RPM: ± 0.5%, Frequency: ± 0.1 Hz ± 1 digit	
CT PRIMARY	5A to 10kA (Programmable for any value)	
CT SECONDARY	5A fixed	
PT PRIMARY	100V to 500kV (Programmable for any value)	
PT SECONDARY	100 to 500V AC (L - L) (Programmable for any value)	
MEASURING PARAMETER	3Ø Voltage (L-N, L-L, avg.), 3Ø Current (I1, I2, I3, avg.), Frequency, RPM, RUN hour	
SUPPLY VOLTAGE	230V AC ±20% (50 / 60 Hz)	

Digital Voltmeters



MV15
48(H) x 96(W)mm



MV205
72(H) x 72(W)mm



MV305
96(H) x 96(W)mm



MV334-230V
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • True RMS measurement • For 1Ø - 2 wire electrical network 	<ul style="list-style-type: none"> • True RMS measurement • For 1Ø - 2 wire, 3Ø - 3 wire, 3Ø - 4 wire electrical network • Programmable PT primary & secondary
	DISPLAY 7 segment LED	
DIGITS	3 digits	4 digits
ELECTRICAL CONNECTION	1Ø - 2W	1Ø - 2W, 3Ø - 3W, 3Ø - 4W
RATED INPUT VOLTAGE	50 to 480V AC (516V max)	11 to 300V AC (L - N) 19 to 516V AC (L - L)
RESOLUTION	1V	Auto resolution
ACCURACY	± 0.5% of F.S.	± 0.5% of F. S.
PT PRIMARY	---	100V - 999kV
PT SECONDARY	---	100V - 500V
SUPPLY VOLTAGE	240V AC ±20% (50 / 60Hz)	230V AC ±20% (50 / 60Hz)

Digital Ammeters



MA12
48(H) x 96(W)mm



MA202
72(H) x 72(W)mm



MA302
96(H) x 96(W)mm



MA12-75mV-DC
48(H) x 96(W)mm



MA12-20A-AC
48(H) x 96(W)mm



MA335-230V AC
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • True RMS measurement • For 1Ø - 2 wire electrical network • CT primary programmable up to 4000A 	<ul style="list-style-type: none"> • True RMS measurement • For 1Ø - 2 wire electrical network • Programmable shunt up to 4000A 	<ul style="list-style-type: none"> • True RMS measurement • For 1Ø - 2 wire, 3Ø - 3 wire, 3Ø - 4 wire electrical network • Programmable CT primary & secondary
	DISPLAY 7 segment LED		
DIGITS	4 digits		
ELECTRICAL CONNECTION	1Ø - 2W		1Ø - 2W, 3Ø - 3W, 3Ø - 4W
INPUT TYPE	CT	Shunt	Direct
RATED INPUT CURRENT	5A AC (Min - 50mA ; Max - 6.2A)	0 to 75mV DC	20A Direct
RESOLUTION	0.001, 0.01, 0.1, 1A (Depending upon CT primary settings)	0.001, 0.01, 0.1, 1A (Depending upon shunt settings)	0.001, 0.01, 0.1, 1A
ACCURACY	± 0.5% of F.S.		
CT PRIMARY / SHUNT SETTING	5 to 4000A (Programmable in steps)	---	1 to 999.0kA (Programmable for any value)
CT SECONDARY	5A fixed	---	1 / 5A (Programmable)
SUPPLY VOLTAGE	240V AC ±20% (50 / 60Hz)		230V AC ±20% (50 / 60Hz)

Digital Ammeters

Digital Voltmeters



MA501
48(H) x 48(W)mm



MA2301
72(H) x 72(W)mm



MV507
48(H) x 48(W)mm



MV2307
72(H) x 72(W)mm

FEATURES	<ul style="list-style-type: none"> • True RMS measurement • Bar graph representation for current • CT primary programmable up to 5000A 	<ul style="list-style-type: none"> • True RMS measurement • Bar graph representation for current • CT primary programmable up to 5000A • Selector switch for page selection 	<ul style="list-style-type: none"> • True RMS measurement • Bar graph representation for voltage 	<ul style="list-style-type: none"> • True RMS measurement • Bar graph representation for voltage • Selector switch for page selection
	DISPLAY	LCD with backlight		
DIGITS	4 digits		3 digits	
ELECTRICAL CONNECTION	1Ø - 2W	3Ø - 4W	1Ø - 2W	3Ø - 3W, 3Ø - 4W
RATED INPUT VOLTAGE	---		50 to 480V AC (Max: 516V)	
RATED INPUT CURRENT	5A AC (Min - 50mA; Max - 6.2A)		---	
RESOLUTION	0.001, 0.01, 0.1, 1A (Depending on CT primary settings)		1V	
ACCURACY	± 0.5% of F.S.			
CT PRIMARY	5 to 5000A (Programmable in steps)		---	
CT SECONDARY	5A fixed		---	
SUPPLY VOLTAGE	240V AC ±20% (50 / 60Hz)			

Frequency Meters



MF 16
48(H) x 96(W)mm

MF 216
72(H) x 72(W)mm

MF 316
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • 4 digits 7 segment LED display • 0.01 Resolution
DISPLAY	7 segment LED
DIGITS	4 digits
ELECTRICAL CONNECTION	1Ø - 2W
RESOLUTION	0.01 Hz
ACCURACY	± 0.05 Hz
MEASUREMENT RANGE	45 to 65 Hz
SUPPLY VOLTAGE	240V AC ±20% (45 / 65Hz)

Analog Meters



AM - V
72(H) x 72(W)mm /
96(H) x 96(W)mm



AM - I
72(H) x 72(W)mm /
96(H) x 96(W)mm



AM - Direct Type Ammeter
72(H) x 72(W)mm /
96(H) x 96(W)mm



AM - Power Factor
72(H) x 72(W)mm /
96(H) x 96(W)mm



AM - Frequency
72(H) x 72(W)mm /
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • True RMS (Voltage) measurement • Scale inter changeability • Non linear scale • Easy installation / termination 	<ul style="list-style-type: none"> • True RMS (Current) measurement • Scale inter changeability • Non linear scale • Easy installation / termination 	<ul style="list-style-type: none"> • True RMS (Current) measurement • Non linear scale • Easy installation / termination 	<ul style="list-style-type: none"> • Non linear scale • Easy installation / termination 	<ul style="list-style-type: none"> • Linear scale • Easy installation / termination
MEASURING PARAMETER	AC Voltage	AC Current	Direct meter	Power factor	Frequency
POINTER DEFLECTION	0 to 90°				
SCALE CHARACTERISTICS	Non linear				Linear
SCALE LENGTH	72 x 72mm: 63 mm / 96 x 96mm: 97 mm				
MEASURING RANGE	0 to 300V / 500V	0 to 5A (CT Secondary), Suppress scale: 0 to 5 / 30A (CT Secondary)	10A to 100A	0.5CAP - 1 - 0.5IND	45 - 65Hz
ACCURACY	Class 1.5				Class 1.0
FREQUENCY	50 / 60Hz				---

Current Transformers



SPCT



RCT



TWCT

FEATURES	<ul style="list-style-type: none"> Use with different bus bar size Panel mount / DIN rail mount (Require optional accessory) Accuracy: Class 0.5 to 5 	<ul style="list-style-type: none"> Selable terminal / Wire type output Panel mount Accuracy: Class 1 to 5 	<ul style="list-style-type: none"> Terminal output Accuracy: Class 0.5 to 5
RATED PRIMARY RATING	30 to 4000A	30 to 600A	30 to 1600A
RATED SECONDARY OUTPUT	5A		
RATED BURDEN (VA)	1,1.25, 1.5, 2.5, 3, 3.75, 5, 7.5, 10, 15	1.5, 5	1.5, 5, 10
ACCURACY	0.5,1, 3, 5	1, 5	0.5, 1, 5
OPERATING FREQUENCY	AC 50 / 60Hz		
SYSTEM VOLTAGE	720V max		
APPLICABLE STANDARD	IEC 61869-2	---	

Power Factor Controllers



APFC148 : With 3 CT sensing
144(H) x 144(W)mm



APFC147 : With 1 CT sensing
144(H) x 144(W)mm



APFC347 : With 1 CT sensing
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> Inbuilt VAF meter 3 CT sensing Automatic sensing of capacitor bank values Configurable up to 12/14* stages Configurable alarm settings RS485 MODBUS RTU protocol 	<ul style="list-style-type: none"> Single CT sensing Automatic sensing of capacitor bank values
DISPLAY	LCD with dual colour backlight	7 segment LED
DIGITS	3 rows, 4 digits to show electrical parameters	1 row, 4 digits to show power factor
ELECTRICAL CONNECTION	1Ø - 2W, 2Ø - 2W, 3Ø - 3W, 3Ø - 4W	1Ø - 2W, 2Ø - 2W
RATED INPUT VOLTAGE	11 to 300V AC (L - N), 50 to 520V AC (L - L)	40 to 300V AC (L - N), 50 to 520V AC (L - L)
RATED INPUT CURRENT	Nominal 5A AC (Min - 11mA; Max - 6A)	Nominal 5A AC (Min - 50mA; Max - 6A)
POWER CONSUMPTION	15VA max	
FREQUENCY	45 to 65Hz	
MEASUREMENT RANGE	Power factor : 0.8 lag to 0.8 lead	
ALARM SETTINGS	Over / Under Voltage, Over / Under Compensation, CT polarity error, Over temperature, Fan setting, No voltage, THDI.	Over / Under Voltage, Over / Under Compensation, CT Polarity Error, Current Absent Indication, No Volt
PHASE COMPENSATION	0°, 90°, 120°, 210°, 240°, 330°	
ACCURACY	Power factor: ± 0.01, Voltage (L - N / L - L), Current: ±0.5% of F.S., Frequency: For L - N >20V, For L - L >35V : ±0.1% of F.S., Power (kW, kVA, kVAh): 1%, Energy (kWh, kVAh, kVAh): Class 1 Temperature: ±3°C of F.S.	Power factor: ±0.01
CT PRIMARY	5A to 9999A (Programmable for any value)	5A fixed
CT SECONDARY	5A fixed	
PT PRIMARY	100V to 500kV (Programmable for any value)	---
PT SECONDARY	100 to 500V (Programmable for any value)	---
STEPS	1 to 12 / 14* *(FAN & ALARM output can be used as 13° & 14° step)	1 to 12
RELAY CONTACT	5A @ 250V AC	
SWITCHING PROGRAM	Automatic	
STEP TIME	5 to 999s	
DISCHARGE TIME	5 to 9999s	
CONTROL MODE	Automatic / Manual	
CONTROL SENSITIVITY	60%	
AUTO INITIALIZATION	Yes / No	
COMMUNICATION	RS485 MODBUS RTU protocol *(Only for 12 stage variant)	---
SUPPLY VOLTAGE	90 to 550V AC, 50 / 60Hz	85 to 270V AC, 50 / 60Hz

Ordering information

Multifunction Meters

PRODUCT CODE	SUPPLY VOLTAGE	OUTPUT		CERTIFICATION
		PULSE OUTPUT	COMMN. (RS485)	
MFM384-C-CU-G	100V to 240V AC, -15% to ±12%	YES	YES	CE
MFM384-C-CE	100V to 240V AC, -15% to ±12%	YES	YES	CE
MFM284-C-CE	85 to 270V AC	YES	YES	CE
MFM383A	100V to 240V AC, -15% to ±12%	YES	---	---
MFM383A-C-CE	100V to 240V AC, -15% to ±12%	YES	YES	CE
MFM376-230VAC	240V AC ± 20%	YES	---	---
MFM376-C-CE	85 to 270V AC, 40 to 270V DC	YES	YES	CE

Energy Meters

PRODUCT CODE	SUPPLY VOLTAGE	OUTPUT		CERTIFICATION
		PULSE OUTPUT	COMMN. (RS485)	
EM368-C-CU	100 to 240V AC, -15% to +12%	YES	YES	CE
EM306A	230V AC, ±20%	YES	---	---
EM306A-C	100V to 240V AC, -15% to +12%	YES	YES	---
EM2M-1P-C-100A	176V to 276V AC (Self powered)	YES	YES	CE

LED (Voltmeters)

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
MV15	230V AC	---
MV15-CE	230V AC	CE
MV205	230V AC	---
MV205-CE	230V AC	CE
MV305	230V AC	---
MV305-CE	230V AC	CE
MV334-230V	230V AC	---
MV334-230V-CE	230V AC	CE

LCD (Ammeters / Voltmeters)

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
MA501-230V-CE	230V AC	CE
MA501-CU	230V AC	CE
MA2301-230V-CE	230V AC	CE
MV507-230V-CE	230V AC	CE
MV2307-230V-CE	230V AC	CE

Frequency Meters

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
MF16	240V AC	---
MF216	240V AC	---
MF316	240V AC	---

Analog Voltmeters

PRODUCT CODE	CERTIFICATION	AM - V - 2 - N
AM-V-2-N-CE-RoHS	CE	
AM-V-3-N-CE-RoHS	CE	
AM-V-2-L-CE-RoHS	CE	
AM-V-3-L-CE-RoHS	CE	
AM-V-2-N	---	
AM-V-3-N	---	
AM-V-2-L	---	
AM-V-3-L	---	---

Analog Direct Type Ammeters

PRODUCT CODE	CERTIFICATION	AM - I - D - 2 - X
AM-I-D-2-X-CE-RoHS	CE	
AM-I-D-3-X-CE-RoHS	CE	
AM-I-D-2-X	---	
AM-I-D-3-X	---	

Din Rail Multifunction Meters

PRODUCT CODE	SUPPLY VOLTAGE	COMMN. (RS485)	CERTIFICATION
MFM384-R-C-CE	85 to 270V AC	YES	CE

Plug-n-wire Multifunction Meter

PRODUCT CODE	OUTPUT		CERTIFICATION
	PULSE OUTPUT	COMMN. (RS485)	
MRJ4M	YES	YES	CE
MRJ4M-SL	YES	YES	CE
MRJ385-G-PNW	YES	YES	CE

Voltage Ampere Frequency Meters

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
VAF36A-230-CE	230V AC	CE
VAF39A-1-230V	230V AC	---
VAF39A-1-230V-CE	230V AC	CE
VAF39A-1-60V DC	20-60V DC	---

LED (Ammeters)

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
MA12	230V AC	---
MA12-CE	230V AC	CE
MA12-20A-AC	230V AC	---
MA12-75mV-DC	230V AC	---
MA202	230V AC	---
MA202-CE	230V AC	CE
MA302	230V AC	---
MA302-CE	230V AC	CE
MA335-230VAC	230V AC	---
MA335-230VAC-CE	230V AC	CE

Power Factor Controllers

PRODUCT CODE	SUPPLY VOLTAGE	OUTPUT		CERTIFICATION
		STEPS	COMMN. (RS485)	
APFC148-312-90/550V	90 to 550V AC, 50 / 60Hz	12	YES	---
APFC147-108-90/550V	90 to 550V AC, 50 / 60Hz	8	---	---
APFC147-112-90/550V	90 to 550V AC, 50 / 60Hz	12	---	---
APFC347-108-230V	85 to 270V AC, 50 / 60Hz	8	---	---
APFC148-312-90/550V-CE	90 to 550V AC, 50 / 60Hz	12	YES	CE
APFC147-108-90/550V-CE	90 to 550V AC, 50 / 60Hz	8	---	CE
APFC347-108-230V-CE	85 to 270V AC, 50 / 60Hz	8	---	CE

Analog Ammeters

PRODUCT CODE	CERTIFICATION	AM - I - 2 - 5A - 6S - WD
(Meters Without Dial Plates)		
AM-I-2-5A-WD-CE-RoHS	CE	
AM-I-2-5A-6S-WD-CE-RoHS	CE	
AM-I-3-5A-WD-CE-RoHS	CE	
AM-I-3-5A-6S-WD-CE-RoHS	CE	
AM-I-2-5A-WD	---	
AM-I-2-5A-6S-WD	---	
AM-I-3-5A-WD	---	
AM-I-3-5A-6S-WD	---	
AM-I-3-5A-6S-WD	---	
PRODUCT CODE	CERTIFICATION	SCL - AM - I - 2 - X / 5A - 6S
(Only Scale Dial Plates)		
SCL-AM-I-2-X/5A	---	
SCL-AM-I-3-X/5A	---	
SCL-AM-I-2-X/5A-6S	---	
SCL-AM-I-3-X/5A-6S	---	

Ordering information

Analog Power Factor Meters

PRODUCT CODE	CERTIFICATION
AM-PF-3-3P1E-0.5CAP-1-0.5IND-X-5A-CE-RoHS	CE
AM-PF-2-3P1E-0.5CAP-1-0.5IND-X-5A-CE-RoHS	CE
AM-PF-3-3P1E-0.5CAP-1-0.5IND-X-5A	---
AM-PF-2-3P1E-0.5CAP-1-0.5IND-X-5A	---

Analog Frequency Meters

PRODUCT CODE	CERTIFICATION
AM-Hz-3-A-B-CE-RoHS	CE
AM-Hz-2-A-B-CE-RoHS	CE
AM-Hz-3-A-B	---
AM-Hz-2-A-B	---

SPCT

PRODUCT CODE	WIRE APERTURE In mm	CURRENT RATIO	BURDEN IN VA	ACCURACY CLASS
SPCT 50/30 60/5 A VA 1 CL 5	30x10	60 / 5	1	5
SPCT 50/30 75/5 A VA 1 CL 1	30x10	75 / 5	1	1
SPCT 50/30 80/5 A VA 1 CL 1	30x10	80 / 5	1	1
SPCT 50/30 100/5 A VA 1 CL 1	30x10	100 / 5	1	1
SPCT 50/30 125/5 A VA 1.25 CL 1	30x10	125 / 5	1.25	1
SPCT 50/30 160/5 A VA 1.5 CL 1	30x10	160 / 5	1.5	1
SPCT 50/30 200/5 A VA 3 CL 1	30x10	200 / 5	3	1
SPCT 50/30 250/5 A VA 3 CL 1	30x10	250 / 5	3	1
SPCT 50/30 400/5 A VA 5 CL 1	30x10	400 / 5	5	1
SPCT 62/22 30/5 A VA 1 CL 5	DIA 22	30/5	1	5
SPCT 62/30 50/5 A VA 1 CL 3	30x10	50/5	1	3
SPCT 62/30 50/5 A VA 1.5 CL 3	30x10	50/5	1.5	3
SPCT 62/30 75/5 A VA 1 CL 3	30x10	75/5	1	3
SPCT 62/30 75/5 A VA 3 CL 3	30x10	75/5	3	3
SPCT 62/30 100/5 A VA 1 CL 1	30x10	100/5	1	1
SPCT 62/30 100/5 A VA 3 CL 1	30x10	100/5	3	1
SPCT 62/40 100/5 A VA 1 CL 1	40x10	100/5	1	1
SPCT 62/40 125/5 A VA 1 CL 1	40x10	125/5	1	1
SPCT 62/40 150/5 A VA 1.5 CL 1	40x10	150/5	1.5	1
SPCT 62/40 150/5 A VA 3 CL 1	40x10	150/5	3	1
SPCT 62/40 160/5 A VA 1.5 CL 1	40x10	160/5	1.5	1
SPCT 62/40 200/5 A VA 2.5 CL 0.5	40x10	200/5	2.5	0.5
SPCT 62/40 200/5 A VA 3 CL 1	40x10	200/5	3	1
SPCT 62/40 250/5 A VA 2.5 CL 0.5	40x10	250/5	2.5	0.5
SPCT 62/40 250/5 A VA 3 CL 1	40x10	250/5	3	1
SPCT 62/40 300/5 A VA 3 CL 0.5	40x10	300/5	3	0.5
SPCT 62/40 400/5 A VA 3.75 CL 0.5	40x10	400/5	3.75	0.5
SPCT 62/40 400/5 A VA 5 CL 1	40x10	400/5	5	1
SPCT 100/60 500/5 A VA 5 CL 1	60x12	500/5	5	1
SPCT 100/60 600/5 A VA 5 CL 0.5	60x12	600/5	5	0.5
SPCT 100/60 600/5 A VA 7.5 CL 1	60x12	600/5	7.5	1
SPCT 100/60 800/5 A VA 10 CL 0.5	60x12	800/5	10	0.5
SPCT 100/60 1000/5 A VA 15 CL 0.5	60x12	1000/5	15	0.5
SPCT 100/60 1200/5 A VA 15 CL 0.5	60x12	1200/5	15	0.5
SPCT 140/100 800/5 A VA 15 CL 0.5	100x30	800/5	15	0.5
SPCT 140/100 1000/5 A VA 15 CL 0.5	100x30	1000/5	15	0.5
SPCT 140/100 1200/5 A VA 15 CL 0.5	100x30	1200/5	15	0.5
SPCT 140/100 1250/5 A VA 15 CL 0.5	100x30	1250/5	15	0.5
SPCT 140/100 1500/5 A VA 15 CL 0.5	100x30	1500/5	15	0.5
SPCT 140/100 1600/5 A VA 15 CL 0.5	100x30	1600/5	15	0.5
SPCT 140/100 2000/5 A VA 15 CL 0.5	100x30	2000/5	15	0.5
SPCT 140/100 2500/5 A VA 15 CL 0.5	100x30	2500/5	15	0.5
SPCT 140/100 3000/5 A VA 15 CL 0.5	100x30	3000/5	15	0.5
SPCT 140/100 3500/5 A VA 15 CL 0.5	100x30	3500/5	15	0.5
SPCT 140/100 4000/5 A VA 15 CL 0.5	100x30	4000/5	15	0.5

RCT

PRODUCT CODE	WIRE APERTURE In mm	CURRENT RATIO	BURDEN IN VA	ACCURACY CLASS	NO OF PRIMARY TURNS
RCT-T-D30-30/5 A VA 1.5 CL 5	DIA 30	30/5	1.5	5	---
RCT-T-D30-30/5 A VA 5 (2T) CL 5	DIA 30	30/5	5	5	2
RCT-T-D30-50/5 A VA 5 CL 5	DIA 30	50/5	5	5	---
RCT-T-D30-75/5 A VA 5 CL 5	DIA 30	75/5	5	5	---
RCT-T-D30-100/5 A VA 5 CL 1	DIA 30	100/5	5	1	---
RCT-T-D30-150/5 A VA 5 CL 1	DIA 30	150/5	5	1	---
RCT-T-D50-200/5 A VA 5 CL 1	DIA 50	200/5	5	1	---
RCT-T-D50-250/5 A VA 5 CL 1	DIA 50	250/5	5	1	---
RCT-T-D50-300/5 A VA 5 CL 1	DIA 50	300/5	5	1	---
RCT-T-D50-400/5 A VA 5 CL 1	DIA 50	400/5	5	1	---
RCT-T-D50-500/5 A VA 5 CL 1	DIA 50	500/5	5	1	---
RCT-T-D50-600/5 A VA 5 CL 1	DIA 50	600/5	5	1	---
RCT-W-D30-30/5 A VA 1.5 CL 5	DIA 30	30/5	1.5	5	---
RCT-W-D30-30/5 A VA 5 (2T) CL 5	DIA 30	30/5	5	5	2
RCT-W-D30-50/5 A VA 5 CL 5	DIA 30	50/5	5	5	---
RCT-W-D30-75/5 A VA 5 CL 5	DIA 30	75/5	5	5	---
RCT-W-D30-100/5 A VA 5 CL 1	DIA 30	100/5	5	1	---
RCT-W-D30-150/5 A VA 5 CL 1	DIA 30	150/5	5	1	---
RCT-W-D50-200/5 A VA 5 CL 1	DIA 50	200/5	5	1	---
RCT-W-D50-250/5 A VA 5 CL 1	DIA 50	250/5	5	1	---
RCT-W-D50-300/5 A VA 5 CL 1	DIA 50	300/5	5	1	---
RCT-W-D50-400/5 A VA 5 CL 1	DIA 50	400/5	5	1	---
RCT-W-D50-500/5 A VA 5 CL 1	DIA 50	500/5	5	1	---
RCT-W-D50-600/5 A VA 5 CL 1	DIA 50	600/5	5	1	---

TWCT

PRODUCT CODE	WIRE APERTURE In mm	CURRENT RATIO	BURDEN IN VA	ACCURACY CLASS
TWCT-T-D35 30/5 A VA 1.5 CL 5	DIA 35	30/5	1.5	5
TWCT-T-D35 50/5 A VA 5 CL 5	DIA 35	50/5	5	5
TWCT-T-D35 75/5 A VA 5 CL 5	DIA 35	75/5	5	5
TWCT-T-D35 100/5 A VA 5 CL 1	DIA 35	100/5	5	1
TWCT-T-D35 150/5 A VA 5 CL 1	DIA 35	150/5	5	1
TWCT-T-D55 150/5 A VA 5 CL 1	DIA 55	150/5	5	1
TWCT-T-D55 200/5 A VA 5 CL 1	DIA 55	200/5	5	1
TWCT-T-D55 250/5 A VA 5 CL 1	DIA 55	250/5	5	1
TWCT-T-D55 300/5 A VA 5 CL 1	DIA 55	300/5	5	1
TWCT-T-D55 400/5 A VA 5 CL 1	DIA 55	400/5	5	1
TWCT-T-D65 500/5 A VA 5 CL 1	DIA 65	500/5	5	1
TWCT-T-D65 600/5 A VA 5 CL 1	DIA 65	600/5	5	1
TWCT-T-D110 800/5 A VA 10 CL 0.5	DIA 110	800/5	10	0.5
TWCT-T-D110 1000/5 A VA 10 CL 0.5	DIA 110	1000/5	10	0.5
TWCT-T-D120 1000/5 A VA 10 CL 0.5	DIA 120	1000/5	10	0.5
TWCT-T-D120 1200/5 A VA 10 CL 0.5	DIA 120	1200/5	10	0.5
TWCT-T-D120 1600/5 A VA 10 CL 0.5	DIA 120	1600/5	10	0.5

Line Monitoring Relays



600PSR
90(H) x 17.5(W)mm



800PSR
76.85(H) x 22.5(W)mm



642PSR
90(H) x 17.5(W)mm



SPPA2M2
90(H) x 35(W)mm



600SPP
90(H) x 17.5(W)mm

FEATURES	<ul style="list-style-type: none"> Monitor phase failure, Phase sequence & Phase asymmetry LED indication : Relay ON Slim space saving design 	<ul style="list-style-type: none"> Monitor phase failure, Phase sequence & Phase asymmetry LED indication : Relay ON 	<ul style="list-style-type: none"> Monitor phase failure, Phase sequence & Phase asymmetry LED indication : Power ON & Trip DIN rail & Wall mount 	<ul style="list-style-type: none"> Monitor phase failure, Phase asymmetry, Over voltage & Under voltage LED indication : Power ON & Trip 	<ul style="list-style-type: none"> Monitor phase failure & Phase asymmetry LED indication : Relay ON Slim space saving design
MODES	Phase asymmetry : Yes Phase failure trip : 3 Phase voltage <154V AC (L - L) Phase asymmetry : 30V fixed Reset : Auto reset on removal of fault condition		Phase asymmetry : Yes Phase failure trip : 3 Phase voltage <280V AC (L - L) Phase asymmetry : 30V fixed Reset : Auto reset on removal of fault condition		Phase asymmetry : Yes Phase failure trip : 3 Phase voltage <154V AC (L - L) Phase asymmetry : 30V fixed Reset : Auto reset on removal of fault condition
TIME RANGES	Power ON delay : 200msec		Power ON delay : <50msec	Power ON delay : 3sec	
ACCURACY	±3% of F.S.		±1% of F.S.		
OUTPUT CONTACT	1 C/O (SPDT)			2 C/O (SPDT)	1 C/O (SPDT)
OUTPUT RATING	NC : 3A@250V AC, NO : 5A@250V AC				
ELECTRICAL CONNECTION	3Ø - 3W				
OPERATING VOLTAGE	154 to 500V AC (L - L)		280 to 520V AC (L - L)		154 to 520V AC (L - L)

Voltage Monitoring Relays



600VPR-310/520V
90(H) x 17.5(W)mm

600VPR-170/290V
90(H) x 17.5(W)mm



800VPR-3
76.85(H) x 22.5(W)mm

FEATURES	<ul style="list-style-type: none"> Monitors under & over voltage Monitors phase sequence & failure LED indication : Power ON, Fault condition Space saving design 		<ul style="list-style-type: none"> Monitor under & over voltage Monitor phase sequence & failure LED indication : Power ON, Fault condition 		
MODES	Under voltage : 310 to 405V AC Over voltage : 425 to 520V AC Phase sequence : YES Phase failure : YES Reset : Auto reset on removal of fault condition	Under voltage : 170 to 224V AC Over voltage : 236 to 290V AC Phase sequence : YES Phase failure : YES Reset : Auto reset on removal of fault condition	Under voltage : 310 to 405V AC Over voltage : 425 to 520V AC Phase sequence : YES Phase failure : YES Reset : Auto reset on removal of fault condition		
TIME RANGES	Trip time delay : 0.2 to 10sec Power On delay : 400msec		Trip Delay : 0 to 10s (For under voltage and over voltage) : Instantaneous (For phase failure & phase sequence)		
ACCURACY	Trip Voltage : ±0.5% of F.S, Trip Time : ±5% of F.S				
OUTPUT CONTACT	1 C/O (SPDT)				
OUTPUT RATING	NC : 3A@250V AC, NO : 5A@250V AC				
ELECTRICAL CONNECTION	3Ø - 3W				
OPERATING VOLTAGE	310 to 520V AC (L - L)	170 to 290V AC (L - L)	310 to 520V AC (L - L)		

Voltage Monitoring Relays



900VPR-2
90(H) x 35(W)mm



900VPR-BL-U
90(H) x 35(W)mm

FEATURES	<ul style="list-style-type: none"> Monitors under voltage, Over voltage, Under frequency, Over frequency, Phase asymmetry, Phase failure and Phase sequence Two separate alarm relays LED indication : Power ON, Fault condition 	<ul style="list-style-type: none"> Monitors under voltage, Over voltage, Under frequency, Over frequency, Phase asymmetry, Phase failure, Phase sequence and Neutral loss Two alarm relays with NO or NC operation selectable LED indication : Fault condition
MEASUREMENTS	Under / Over voltage, Under / Over frequency, Phase asymmetry, Phase failure, Phase sequence, (Neutral failure applicable only for 900VPR-BL-U)	
DISPLAY	3 digit LCD	3 digit LCD with backlight
ALARM INDICATIONS	Trip	
ELECTRICAL CONNECTION	3Ø - 3W, 3Ø - 4W	
TRIP SETTING	Under / Over voltage : 280 to 520V AC L-L (for 3Ø - 3W), 160 to 300V AC L-N (for 3Ø - 4W) Under / Over frequency : 45 / 65Hz, Voltage asymmetry : 5.0 to 99.9%	Under / Over voltage : 85 to 500V AC L - L (for 3Ø - 3W), 50 to 288V AC L - N (for 3Ø - 4W) Under / Over frequency : 45 / 65Hz, Phase asymmetry : 5.0 to 30.0%
TRIP TIME SETTING	Power ON Delay : 2 to 99.9sec, Trip Time Delay : 0 to 99.9sec Recovery Time Delay : 0 to 99.9sec, Response Time : <200ms	Power ON delay : 0.5 to 300sec, Trip time delay : 0 to 300sec Recovery time delay : 0 to 300sec (In Auto Reset Mode), Response time : <120ms
HYSTERESIS	Voltage : 1.0 to 99.9V, Frequency : 0.2 to 2Hz, Asymmetry: 2 to 20%	Voltage : 1.0 to 40V, Frequency : 0.1 to 2Hz, Asymmetry : 2 to 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 +200ms	Voltage : ±1% of set value ±2 digits, Frequency : ±0.5% ± 1 digits, Time (Recovery Time, Trip delay, Power on delay) : ±5% of setting ±120ms
OUTPUT CONTACT	2 x 1 C/O (SPDT)	
OUTPUT RATING	NO : 5A@250V AC, NC : 3A@250V AC	
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	Self powered, Operating voltage : 280 to 520V AC (L - L), 160 to 300V AC (L - N)	85 to 270V AC / DC

Voltage Monitoring Relays



VPRA2M
90(H) x 35(W)mm



VPRD2M
90(H) x 35(W)mm

FEATURES	<ul style="list-style-type: none"> Monitors under voltage, Over voltage Monitors phase asymmetry, Phase failure, Phase sequence Adjustable over and under voltage trip level Adjustable trip time delay 	<ul style="list-style-type: none"> Monitors under voltage, Over voltage Monitors phase asymmetry, Phase failure, Phase sequence Adjustable switching hysteresis One relay with two change over alarm relay operation
MEASUREMENT	Under voltage, Over voltage, Phase failure, Phase sequence, Phase asymmetry	
DISPLAY	Separate LED indications for Power ON, Phase failure, Under voltage, Over voltage, Phase sequence, Phase asymmetry	3 digits LCD
ELECTRICAL CONNECTION	1Ø - 2W, 3Ø - 4W	
TRIP SETTING	Under voltage : 55 to 95% of Un [127 to 219V AC (L - N)] Over voltage : 105 to 125% of Un [242 to 288V AC (L - N)], Phase asymmetry : > 10%	Under voltage : 127 to 219V AC (L - N) Over voltage : 242 to 288V AC (L - N), Phase asymmetry : 5 - 30 %
TRIP TIME SETTING	Power ON delay : 0 to 15sec, Trip time delay : 0 to 15sec Recovery time delay : 5sec ± 200ms, Phase sequence trip delay <250msec	Power ON delay : 0.5 to 300sec, Trip time delay : 0 to 300sec Recovery time delay : 0 to 300sec, Phase sequence trip delay <150msec
HYSTERESIS	Voltage : 7V (±2V) of trip voltage	Voltage : 1.0V - 99.9V, Asymmetry : 2 to 20%
ACCURACY	Trip setting : ±5% of F. S., Time setting : ±10% of F. S.	Voltage : ±1% ±2 digits, Time setting : ±5% of settings ± 150ms
OUTPUT CONTACT	2 C/O (DPDT)	
OUTPUT RATING	NC : 5A@250V AC, NO : 5A@250V AC	
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	Self powered, Nominal input voltage (Un) : 230V AC (L - N), Operating voltage : 127 to 288V AC (L - N)	

Current Monitoring Relays



900CPR-1-BL-U
90(H) x 35(W)mm



900CPR-3-1-BL
90(H) x 35(W)mm



900CPR-1
90(H) x 35(W)mm



900CPR-3
90(H) x 35(W)mm

FEATURES	<ul style="list-style-type: none"> Monitors under current & over current Two alarm relay with NC or NO operation selectable LED indication: Fault condition 	<ul style="list-style-type: none"> Monitors under current, over current & current asymmetry One alarm relay with NC or NO operation selectable LED indication: Fault condition 	<ul style="list-style-type: none"> Under current & over current protection for 1Ø system True RMS measurement One alarm relay with NC or NO operation 	<ul style="list-style-type: none"> Under current & over current protection for 1Ø system & 3Ø system True RMS measurement One alarm relay with NC or NO operation
MEASUREMENTS	Under current, Over current (Current asymmetry applicable only for 900CPR-3)			
DISPLAY	3 digit LCD with backlight		3 digits LCD	
ELECTRICAL CONNECTION	1Ø - 2W	1Ø - 2W, 3Ø - 3W, 3Ø - 4W	1Ø - 2W	1Ø - 2W, 3Ø - 3W, 3Ø - 4W
CT SETTING	CT Primary: 1A / 5A - 999A, CT Secondary: 1A / 5A (Selectable)			
TRIP SETTING	Under current: 0-999A, Over current: 0.5 - 1.19kA, (Current asymmetry: 5.0 - 99.9% applicable only for 900CPR-3)			
TRIP TIME SETTING	Power ON delay: 0.5 - 99.9sec, Trip time delay: 0 - 99.9sec, Recovery time delay: 0 - 99.9sec, Response time: < 200ms			
HYSTERESIS	Current: 0.1 to 99.9A			
ACCURACY	Current: ±1% of setting ± 2 digits, Time (Recovery time, Trip delay, Power ON delay): ±5% of setting ±200ms			
OUTPUT CONTACT	2 x 1 C/O (SPDT)	1C/O SPDT		
OUTPUT RATING	NO: 5A @ 250V AC; NC: 3A @ 250V AC			
SUPPLY VOLTAGE	85 to 270V AC / DC	230V AC (±15%)		

Earth Leakage Relays



900ELR-2
90(H) x 35(W)mm



ELRA2M
90(H) x 35(W)mm



ELCTR35
105(H) x 74(W)mm

FEATURES	<ul style="list-style-type: none"> Monitor true RMS earth leakage current up to 30A in 1Ø & 3Ø system CBCT connection monitoring Test and reset via Front / Remote Two separate alarms relays with NO or NC operation selectable 	<ul style="list-style-type: none"> Monitor true RMS earth leakage current up to 30A in 1Ø & 3Ø system CBCT Open or short circuit detection Sensitivity and time delay adjustable Test and reset function via Front / Remote 	<ul style="list-style-type: none"> Monitors True RMS earth leakage current in 1Ø & 3Ø system Inbuilt CBCT Test and reset function
MEASUREMENT	Earth leakage current (Via external CBCT)		Earth leakage-current (Internal CBCT)
DISPLAY	3 digit LCD with backlight, 2 LED for trip indication	5 LED indication	2 LED indication
ELECTRICAL CONNECTION	1Ø - 2W, 3Ø - 3W, 3Ø - 4W	1Ø - 2W, 3Ø - 4W	1Ø - 2W, 3Ø - 3W, 3Ø - 4W
TRIP SETTING	30mA to 30A	30mA to 30A	75% of 30mA or 300mA
TIME RANGES	Power ON delay : 0.5 to 99.9 sec, Trip time delay : 0 to 99.9 sec, Delay On release : 0 to 99.9 sec	Trip time delay : 0 to 9 sec (NA when In=0.03A)	Reset time : Instantaneous
ACCURACY	Current: ±5% of setting, Time (Recovery time, Trip delay, Power on delay) : ±5% of setting ±200ms	Current : ± 5% of Set Trip current Time : ± 5% of set Time + Response time	Current: ± 5% of Input current Time: ± 5% of Response time
OUTPUT CONTACT	2 x 1 C/O (SPDT)	1 C/O SPDT	
OUTPUT RATING	NC : 3A@250V AC, NO : 5A@250V AC	NO : 10A@277V AC / 28DC	NC : 5A@250V AC, NO : 5A@30V AC
SUPPLY VOLTAGE	230V AC (± 15%)		

Core Balance Current Transformers



DESCRIPTION	CBCT for ELRA2M	CBCT for 900ELR-2
Operating Current Range	30mA - 30A	
Sizes (inner diameter)	35 mm, 70 mm, 120 mm, 210mm, 310mm	



900EFR-BL-U
90(H) x 35(W)mm

FEATURES	<ul style="list-style-type: none"> • Earth fault current monitoring • Two alarm relays with NO and NC operation selectable • Test and reset via Front / Remote • LED indication : Fault condition
MEASUREMENT	Earth fault monitoring
DISPLAY	3 Digit liquid crystal display with backlight
ELECTRICAL CONNECTION	1Ø - 2W, 3Ø - 3W, 3Ø - 4W
FRAME RATING (CT PRIMARY)	160A, 250A, 630A
TRIP SETTING	10% to 80% of selectable MCCB frame rating
TIME RANGES	Response time: <100ms, Trip time delay: 0 to 99.9sec, Recovery time: 0 to 99.9sec, Power ON delay: 0.5 to 99.9sec
ACCURACY	Current: ±5% of the settings ±2digit, Time : ±5% of the settings ±100ms
OUTPUT CONTACT	2 x 1 C/O (SPDT)
OUTPUT RATING	NC: 3A@250V AC, NO: 5A@250V AC
SUPPLY VOLTAGE	85 to 270V AC / DC

Earth Fault Current Transformer



DESCRIPTION	EFCT
CURRENT RATIO	160/1A, 250/1A, 630/1A
RATED BURDEN	1 VA
SIZES (mm)	100 x 25, 140 x 35, 180 x 35, 220 x 50

Water Level Controllers



WLCA2M1
90(H) x 35(W)mm



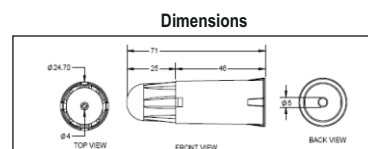
WLCA-2M-U-CE
90(H) x 35(W)mm

FEATURES	<ul style="list-style-type: none"> • Used for drain & fill control • 3 No's stainless steel prods • 10A SPDT output (Resistive) 	<ul style="list-style-type: none"> • Selectable suction and delivery mode in single tank operation • Used for two tank monitoring, Single tank water level monitoring • Manual start switch facility • Trip relay & alarm relay indication
DISPLAY	2 LED indication	4 LED indication
AUXILLARY SUPPLY	85 to 270V AC / DC	
TRIP SETTING	According to the levels of sensor placed in the water tank	
SENSITIVITY	1 Kohms to 200Kohms	Auto
TRIP TIME	0.5sec (approx)	2sec
MODE	Auto	Auto / Manual
ACCURACY	NA	±5% + 100msec
OUTPUT CONTACT	1 C/O (SPDT)	1 N /O (Resitive)
OUTPUT RATING	10A@250V AC / 28V DC	5A@ 250 V AC /28V DC

Water Level Sensor



- Stainless steel
- Suitable for conductive liquids



Motor Protection Relays



MPR-3M
90(H) x 52.5(W)mm



MPR-341-2
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • Single phasing, Phase asymmetry, Phase sequence • Under current, Overload trip current • Test and reset function via Front / Remote 	<ul style="list-style-type: none"> • Monitors Over load (As per NEMA Curve), Over current, Under current, Current asymmetry • Lock current, Earth fault, • Phase loss, Phase sequence. • LED indication: Power ON, Trip relay • Test & reset function via Front / Remote
DISPLAY	3 LED indication	7 segment, 4 digits LED
AUXILLARY SUPPLY	230 / 415V AC $\pm 15\%$	90V to 270V AC / DC
ELECTRICAL CONNECTION	3 \emptyset - 3W	
TRIP SETTING	Phase asymmetry: 50% of motor current (Fixed) T(sec) setting: To select 2, 4, 6, 8, 10 sec trip time curve in overload trip curve graph. Under current: 50% of Motor current, X Imax: To select motor current rating	Over load: Class 5, 10, 15, 20, 30, Over current: 4A to 480A, Under Current: 1A to 79A, Current asymmetry: 1A to 79A, Lock current: 4A to 480A, Earth fault: 1A to 160A
TIME SETTINGS	Single phase trip: 5 sec, Phase asymmetry: 5 sec, Phase sequence: 5 sec Over load trip: As per (IDMT Curve), Under current trip: 5 Sec	Power On delay: 1-999 sec, Trip Time: 0-999 sec, Recovery time: 1-999 sec, Response Time: <120ms, 3 Reset Attempt Time: 0-999 min
MODE	Auto / Manual / Remote	
ACCURACY	Time: $\pm 5\%$ of setting ± 100 ms, Current: $\pm 5\%$ of set value	Current: $\pm 5\%$ of Ir ± 1 digit, Timing: $\pm 5\% + 100$ msec
OUTPUT CONTACT	2 C/O (DPDT)	2 x 1 C/O (SPDT)
OUTPUT RATING	NC: 5A@ 240V AC NO: 5A@240V AC	5A@250V AC/28VDC

Pump Protection Relays



PPRD-4M-3-415V
90(H) x 70(W)mm



PPRA-4M-3-415V
90(H) x 70(W)mm

FEATURES	<ul style="list-style-type: none"> • Monitors Over load (As per NEMA Curve), Over current, Under current, Current asymmetry, Lock current • Over voltage, Under voltage • Phase loss, Phase sequence, Phase asymmetry • LED indication: Power ON, Trip relay • Test & reset function via Front / Remote 	<ul style="list-style-type: none"> • Monitors over load (As per NEMA Curve), Over current, Under current, Current asymmetry, Lock current, • Over voltage, Under voltage • Phase loss, Phase sequence, Phase asymmetry • LED indication: Power ON, Trip relay • Test & reset function via Front / Remote
DISPLAY	7 segment, 3 digits LED	4 LED & 4 knob for variable setting
AUXILLARY SUPPLY	280V-500V (L-L)	
ELECTRICAL CONNECTION	3 \emptyset - 3W	
CT SETTING	10A, 40A, 80A	
TRIP SETTING	Over load: Class 5, 10, 15, 20, 30, Over current: 4A to 480A, Under current: 1A to 79A, Current asymmetry: 1A to 79A, Lock current: 4A to 480A, Over voltage: 280V-500V Under voltage: 280V-500V, Voltage asymmetry: 5V TO 50V	Over load: Class 5, 10, 15, 20, 30, Over current: 10%-70% of Ir(Rated current) Under current: 20%-80% of Ir(Rated current), Current asymmetry: Fixed: 50% of Ir (Rated current) Lock current: Fixed 300% of Ir(Rated current), Over voltage: Fixed (480V), Under voltage: Fixed (350V), Voltage asymmetry: Fixed (30V)
TIME SETTINGS	Power On delay: 1 sec, Trip time : 0-999 sec, Recovery time: 1-999 sec , Response time: <120ms, 3 Reset attempt time: 0-999 min	Power ON delay: 1 sec (Fixed), Trip Time (sec): 0, 2, 4, 6, 8 & 10, Recovery time :15min, Response time: <240ms, 3 Reset attempt time: 60min (Fixed)
HYSTERESIS	Voltage: 0 to 10 V	Voltage: 6V (Fixed)
ACCURACY	Current: $\pm 5\%$ of Ir ± 1 digit, Timing: $\pm 5\% \pm 100$ msec, Voltage: $\pm 1\%$ of 500V ± 1 digit	
OUTPUT CONTACT	1 C/O (SPDT)	
OUTPUT RATING	5A@250V AC/28VDC	

Motor Protection Current Transformer



73(H) x 100(W) x 60(D)mm

DESCRIPTION	MPCT
CURRENT RANGE	10A, 40A, 80A



TPRA2M1-1-U-CE
90(H) x 35(W)mm

FEATURES	<ul style="list-style-type: none"> • PTC input • LED indication: Power ON, Trip, Open, Short • DTD relay output 		
LED INDICATION	Green: Power ON indication, Yellow : Sensor Indication, Red: Relay status		
INPUT TYPE	PTC sensor		
SENSOR SPECIFICATIONS	Sensor short : <40 (±1Ω), Sensor healthy : 44Ω (±3Ω) to <3.8KΩ (±150Ω)	Sensor trip : ≥3.8KΩ (±150Ω) to <5.5KΩ (±150Ω) Sensor open : ≥5.5KΩ (±150Ω) & above	Sensor cut-in : ≤1.5KΩ (±60Ω)
FUNCTIONAL SPECIFICATIONS	Relay operating mode : Failsafe mode & Non-failsafe mode, Reset: Auto / Manual		
OUTPUT CONTACT	2 C/O (DPDT)		
OUTPUT RATING	8A@250V AC		
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC		

Ordering information

Line Monitoring Relay

PRODUCT CODE	OPERATING RANGE	CERTIFICATION
600PSR-CE	154 to 500V AC	CE
800PSR	154 to 500V AC	---
642PSR	280 to 520V AC	---
600SPP	154 to 500V AC	---
SPPA2M2	280 to 520V AC	---

Voltage Monitoring Relay

PRODUCT CODE	OPERATING RANGE	CERTIFICATION
600VPR-170/290-CU	170 to 290V AC	CE
600VPR-310/520-CE	310 to 520V AC	CE
800VPR-3	310 to 520V AC	---
900VPR-2-280/520V-CE	280 to 520V AC	CE
900VPR-2-280/520V-CU-RoHS	280 to 520V AC	CE
900VPR-BL-U-CE	85 to 270V AC / DC	CE
VPRA2M-CE	127 to 288V AC	CE
VPRD2M	127 to 288V AC	---

Current Monitoring Relay

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
900CPR-1-BL-U-CE	85 to 270V AC / DC	CE
900CPR-3-1-BL-230V-CE	230V AC (±15%)	CE
900CPR-1-230V	230V AC (±15%)	---
900CPR-3-230V	230V AC (±15%)	---

Earth Leakage Relay

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
900ELR-2-230V-CE	230V AC (±15%)	CE
ELRA2M2-1-230V-CE	230V AC (±15%)	CE
ELCTR35-1-30mA-230V-CE	230V AC (±15%)	CE
ELCTR35-1A-30mA-230V	230V AC (±15%)	---
ELCTR35-1-300mA-230V-CE	230V AC (±15%)	CE
ELCTR35-1A-300mA-230V	230V AC (±15%)	---

Motor Protection Relay

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
MPR-3M-2-230V	230V AC (± 15%)	---
MPR-3M-2-415V	415V AC (± 15%)	---
MPR-341-2	90 to 270V AC / DC	---

Motor Protection Current Transformer

PRODUCT CODE	INPUT CURRENT	CERTIFICATION
MPCT D15 10 A	10 A	---
MPCT D15 40 A	40 A	---
MPCT D15 80 A	80 A	---

Earth Fault Relay

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
900EFR-BL-U-CE	85 to 270V AC / DC	CE

Earth Fault Current Transformer

PRODUCT CODE	DIMENSION IN MM	CURRENT TRANSFORMER RATIO
EFCT 100/25 160/1A VAL CL1	100x25	160/1A
EFCT 140/35 160/1A VAL CL1	140x35	160/1A
EFCT 140/35 250/1A VAL CL1	140x35	250/1A
EFCT 180/35 250/1A VAL CL1	180x35	250/1A
EFCT 180/35 630/1A VAL CL1	180x35	630/1A
EFCT 220/50 630/1A VAL CL1	220x50	630/1A

Core Balance Current Transformer

PRODUCT CODE	INNER DIAMETER (IN MM)	CERTIFICATION
CBCT-35-1-CE	35	CE
CBCT-70-1-CE	70	CE
CBCT-120-1-CE	120	CE
CBCT-210-1-CE	210	CE
CBCT-310-1-CE	310	CE

Water Level Controller

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
WLCA2M1-CE-RoHS	85 to 270V AC / DC	CE
WLCA-2M-U-CE	85 to 270V AC / DC	CE

Accessories

PRODUCT CODE	Description
WLC SENSOR	Set of 3 Numbers

Pump Protection Relay

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
PPRD-4M-3-415V	415V AC (± 15%)	---
PPRA-4M-3-415V	415V AC (± 15%)	---

Thermistor Protection Relay

PRODUCT CODE	OUTPUT	SUPPLY VOLTAGE	CERTIFICATION
TPRA2M1-1-U-CE	RELAY	90 to 270V AC / DC	CE

Daily / Weekly Time Switches

Astronomical Time Switch



TS2M1-1-16A
90(H) x 35(W)mm



TS1W1-1-20A
60(H) x 60(W)mm



ATS2M1-1-16A
90(H) x 35(W)mm

FEATURES	<ul style="list-style-type: none"> • 1 sec least count • 50 ON - 50 OFF steps per day • 1 channel • Permanent over ride mode • 10 years power reserve (replaceable battery) 		<ul style="list-style-type: none"> • Latitude / Longitude precise to the minute with time zone • Automatic calculation of sunrise & sunset times • DST offset / power saving mode • 1 channel • 10 years power reserve (replaceable battery) 	
DISPLAY	Text LCD (Without backlight)			
RTC SHIFT	15 minutes a year @ 25°C			
OUTPUT CONTACT	1 C/O SPDT	1 NO & Neutral	1 C/O SPDT	
CONTACT RATING	16A @ 250V AC	20A @ 250V AC	16A @ 250V AC	
WEEKLY PROGRAM	Total 50 ON steps and 50 OFF steps 2 programs x 25 steps, 3 programs x 16 steps, 4 programs x 12 steps, 5 programs x 10 steps 6 programs x 08 steps, programs x 07 steps, 8 programs x 06 steps		---	
MINIMUM SETTING UNIT	1 second			
HOLIDAY SETTINGS	16 dates		---	
CLOCK	12hr (AM / PM) and 24hr selection			
RELAY OPERATING MODE	Auto / Permanent override ON / Permanent override OFF			
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	230V AC ±10%			

Analog Timers



600ST
90(H) x 17.5(W)mm



600XU
90(H) x 17.5(W)mm



600SD
90(H) x 17.5(W)mm



642SQ-A
90(H) x 17.5(W)mm



642XA
90(H) x 17.5(W)mm

FEATURES	<ul style="list-style-type: none"> • Single function - ON delay • 10 Time ranges 	<ul style="list-style-type: none"> • Multi function (13 Functions) • Precise analog time setting • Universal supply voltage 	<ul style="list-style-type: none"> • Star Delta • 1 NO for Star & 1 NO for Delta 	<ul style="list-style-type: none"> • 2 Functions • 8 Time ranges 		
MODES	ON delay	A, B, C, Ci, D, E, F, H, I, J, K, Ai, Bi	Star - Delta	ON delay / Interval		
TIME RANGES	0.1 - 1sec, 0.3 - 3sec, 1 - 10sec, 3 - 30sec, 0.1 - 1min, 0.3 - 3min, 1 - 10min, 3 - 30min, 0.1 - 1hr, 0.3 - 3hr		Run up time : 3 - 30sec, 6 - 60sec Change over : 50/100ms	0 - 3sec / min, 0 - 10sec / min, 0 - 30sec / min, 0 - 60sec / min		
RESOLUTION	0.1sec	0.1sec	---	0.3sec		
ACCURACY	Setting : ±5% of F.S Repeat : ±0.5% (F.S. = Full Scale) Pause time accuracy : ±5% ±5ms					
OUTPUT CONTACT	1 C/O SPDT	1 C/O SPDT	1 C/O Relay each for Star & Delta	1 C/O SPDT		
CONTACT RATING	5A @ 250V AC or 24V DC					
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	240V AC	20 to 240V AC, 12 to 240V DC	230V AC	230V AC, 24V AC / DC 20 to 240V AC, 12 to 240V DC		
Modes	<table border="1"> <tr> <td>600XU</td> <td>A - ON delay, B - Interval, C - Repeat cycle equal OFF first, Ci - Repeat cycle equal ON first, D - Pulse output 500ms fixed, E - Delay on break, F - Delay on make / Delay on break, H - Interval after break, I - Single shot, J - Retriggerable single shot, K - Latching relay, Ai - Delay on break with Totalise, Bi - Interval with Totalise</td> </tr> </table>				600XU	A - ON delay, B - Interval, C - Repeat cycle equal OFF first, Ci - Repeat cycle equal ON first, D - Pulse output 500ms fixed, E - Delay on break, F - Delay on make / Delay on break, H - Interval after break, I - Single shot, J - Retriggerable single shot, K - Latching relay, Ai - Delay on break with Totalise, Bi - Interval with Totalise
600XU	A - ON delay, B - Interval, C - Repeat cycle equal OFF first, Ci - Repeat cycle equal ON first, D - Pulse output 500ms fixed, E - Delay on break, F - Delay on make / Delay on break, H - Interval after break, I - Single shot, J - Retriggerable single shot, K - Latching relay, Ai - Delay on break with Totalise, Bi - Interval with Totalise					



800XU
75(H) x 22.5(W)mm



800XA
75(H) x 22.5(W)mm



800SQ-A
75(H) x 22.5(W)mm



800S
75(H) x 22.5(W)mm

FEATURES	<ul style="list-style-type: none"> • 2 Functions • 12 Time ranges • Universal supply voltage 	<ul style="list-style-type: none"> • 2 Functions • 8 Time ranges • Universal supply voltage 	<ul style="list-style-type: none"> • 2 Functions • 8 Time ranges 	<ul style="list-style-type: none"> • Single function • Fixed time range (60sec)
MODES	ON delay / Interval			ON delay
TIME RANGES	1 / 3 / 10 / 30sec / min / hr	3 / 10 / 30 / 60sec / min	3 / 10 / 30 / 60sec / min	60sec
RESOLUTION	0.1sec	0.3sec	0.3sec	6sec
ACCURACY	Setting : ±5% of F.S. Repeat : ±0.5% or 50ms (Whichever is greater)			
OUTPUT CONTACT	2 C/O DPDT	2 C/O DPDT	1 C/O SPDT	1 C/O SPDT
CONTACT RATING	5A @ 250V AC or 24V DC			
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	20 to 240V AC, 12 to 240V DC		230V AC & 24V AC / DC	



800SD-2
75(H) x 22.5(W)mm



800XC
75(H) x 22.5(W)mm



800XMR
75(H) x 22.5(W)mm



800POD
75(H) x 22.5(W)mm

FEATURES	<ul style="list-style-type: none"> • Star Delta • 1 C/O Relay each for Star & Delta 	<ul style="list-style-type: none"> • Asymmetrical Cyclic • 6 Time ranges 	<ul style="list-style-type: none"> • Forward Pause Reverse • 1 C/O Relay each for Forward & Reverse 	<ul style="list-style-type: none"> • True Power OFF Delay • Fixed time range (180sec)
MODES	Star - Delta	Asymmetrical Cyclic ON first or OFF first	Forward - Pause - Reverse	True Power OFF Delay
TIME RANGES	Run up time : 30 / 60sec Change over : 50 / 100msec	1 / 10sec / min / hr for both ON & OFF time	ON time : 1 / 2 / 4 / 8min Pause time : 10 / 20 / 40 / 80s	180sec
RESOLUTION	---	0.1sec	ON time : 6s Pause time : 0.1s	7.5sec
ACCURACY	Setting : ±0.5% or 50ms, Repeat : ±5% of F.S.			Setting : ±10% of F.S. Repeat : ±2% or 100ms
OUTPUT CONTACT	1 C/O Relay each for Star & Delta	2 C/O DPDT	1 C/O Relay each for Forward & Reverse	2 C/O DPDT
CONTACT RATING	5A @ 250V AC or 24V DC			
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	110V AC, 230V AC 230 to 415V AC	20 to 240V AC, 12 to 240V DC		110 to 240V AC / DC



55XU
48(H) x 48(W)mm



55XC
48(H) x 48(W)mm



55ES
48(H) x 48(W)mm

FEATURES	<ul style="list-style-type: none"> • Plug / Panel mount • ON delay / Interval • 12 Time ranges 	<ul style="list-style-type: none"> • Plug / Panel mount • Asymmetrical Cyclic ON - OFF • 6 Time ranges 	<ul style="list-style-type: none"> • Plug / Panel mount • ON delay / Interval • 8 Time ranges
BASE TYPE	P8 - 8 Pin plug, T8 - Screw terminal		
MODES	ON delay / Interval	Asymmetrical Cyclic ON first or OFF first	ON delay / Interval
TIME RANGE	1 / 3 / 10 / 30sec / min / hr	1 / 10sec / min / hr for both ON & OFF time	3 / 10 / 30 / 60sec / min
RESOLUTION	0.1sec		0.3sec
ACCURACY	Setting : ± 5% of F.S., Repeat : ± 0.5% or 50 ms		
OUTPUT CONTACT	2 C/O DPDT		1 C/O SPDT
CONTACT RATING	5A @ 250V AC or 24V DC		
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	20 to 240V AC, 12 to 240V DC		230V AC, 24V AC / DC



600DT
90(H) x 17.5(W)mm



XT543
48(H) x 48(W)mm



XT56
48(H) x 48(W)mm



XT264
72(H) x 72(W)mm



XT364
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> Multi function (15 Functions) Wide time range (0.1sec to 999hr) Universal supply voltage 	<ul style="list-style-type: none"> Multi function (4 Functions) 9 Time ranges Single set point 	<ul style="list-style-type: none"> Thumbwheel setting 6 Time ranges Single set point 		
DISPLAY	3 + 3 digits		3 digits		
SET POINT	Single set point				
MODES	A, B, C, D, E, F, H, J, K, L, P, Q, R, T, U	ON delay / Interval / Cyclic ON first / Cyclic OFF first	ON delay / Interval		
TIME RANGES	9.99 / 99.9 / 999sec, 9 : 59min : sec, 99.9 / 999min, 9 : 59hr : min, 99.9 / 999hr		9.99 / 99.9 / 999sec, 99.9 / 999min, 99.9hr		
RESOLUTION	0.01sec				
TIME SETTING	Front keypad		Thumbwheel		
RESET / START INPUT	Start: Gate/Pulse start (Depending on modes)	Start : Gate / Pulse start (Programmable)	Start : Pulse start		
	Reset : Front panel, On power interruption	Reset : Front panel, Remote reset, On power interruption			
ACCURACY	Setting: ± 0.1% of F.S. or ±50ms For Y contact operation: +100ms, Repeat: ± 0.1 %		±0.5% of F.S. or 50ms		
OUTPUT CONTACT	1 C/O SPDT		2 C/O DPDT		
CONTACT RATING	8A @ 250V AC		5A @ 250V AC or 24V AC / DC		
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	20 to 240V AC / DC		90 to 270V AC / DC		
Modes	<table border="1"> <tr> <td>600DT</td> <td>A - ON delay, B - Interval, C - Asymmetrical cyclic OFF first, D - Asymmetrical cyclic ON first, E - Repeat cycle equal OFF first, F - Repeat cycle equal ON first, H - Pulse output, J - Delay on break, K - Delay on make/Delay on break, L - Interval after break, P - single shot, Q - Retriggerable single shot, R - Latching relay, T - Delay on break with Totalise, U - Interval with Totalise</td> </tr> </table>			600DT	A - ON delay, B - Interval, C - Asymmetrical cyclic OFF first, D - Asymmetrical cyclic ON first, E - Repeat cycle equal OFF first, F - Repeat cycle equal ON first, H - Pulse output, J - Delay on break, K - Delay on make/Delay on break, L - Interval after break, P - single shot, Q - Retriggerable single shot, R - Latching relay, T - Delay on break with Totalise, U - Interval with Totalise
600DT	A - ON delay, B - Interval, C - Asymmetrical cyclic OFF first, D - Asymmetrical cyclic ON first, E - Repeat cycle equal OFF first, F - Repeat cycle equal ON first, H - Pulse output, J - Delay on break, K - Delay on make/Delay on break, L - Interval after break, P - single shot, Q - Retriggerable single shot, R - Latching relay, T - Delay on break with Totalise, U - Interval with Totalise				



XT546BX
48(H) x 48(W)mm



XT546
48(H) x 48(W)mm



XT246
72(H) x 72(W)mm



XT346
96(H) x 96(W)mm



XT5042
48(H) x 48(W)mm



PT380
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> Short depth Multi function (4 Functions) 9 Time ranges Single set point 	<ul style="list-style-type: none"> Multi function (4 Functions) 9 Time ranges Single set point 	<ul style="list-style-type: none"> Multi function (7 Functions) Pulse start (Input through PNP / NPN sensor) Dual set point Individual time setting for relays 	<ul style="list-style-type: none"> 8 Channels 4 Functions Parallel / Sequential operation Cascade output for channel expansion
DISPLAY	3 + 3 digits		4 + 4 digits	2 + 4 digits
SET POINT	Single set point		Dual set point	Single set point
MODES	ON delay / Interval / Cyclic ON first / Cyclic OFF first		ON delay / Interval / Cyclic ON first / Cyclic OFF first / Forward-Pause-Reverse / Instantaneous + Delayed / Timer / Batch	ON delay / Interval / Cyclic ON first / Cyclic OFF first (Start up delay & no. of cycles programmable for cyclic mode)
TIME RANGES	9.99 / 99.9 / 999sec, 9.59min : sec, 99.9 / 999min, 9.59hr : min, 99.9 / 999hr		99.99 / 999.9 / 9999sec, 99.59min : sec, 999.9 / 9999min, 99.59hr : min, 999.9 / 9999hr	99.99sec, 999.9sec, 99.59min : sec, 99.59hr : min, 999.9hr
RESOLUTION	0.01sec			
DIRECTION	Up / Down	Down	Up / Down	Up
TIME SETTING	Front keypad			
NO. OF CHANNELS	—			8 Channels
RESET/START INPUT	Start : Gate / Pulse start (Programmable) Reset : Front panel, Remote reset, On power interruption			
ACCURACY	±0.05% of F.S. or 50ms			±0.5% of F.S. or 50ms
OUTPUT CONTACT	2 C/O SPDT		2 C/O SPST	8 NOs with 1 Com
CONTACT RATING	5A @ 250V AC or 24V DC			
MEMORY RETENTION	10 years (User selectable)			
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	85 to 270V AC		90 to 270V AC / DC	85 to 270V AC / DC



TI103
48(H) x 96(W)mm



TT412
36(H) x 72(W)mm



LT920A
24(H) x 48(W)mm



LT945A
24(H) x 48(W)mm

FEATURES	<ul style="list-style-type: none"> Time Interval Meter Range : Auto ranging, Fixed ranges 	<ul style="list-style-type: none"> LED Hour Meter Selectable least count 	<ul style="list-style-type: none"> LCD Hour Meters Battery powered Contact / Voltage input
DISPLAY	4 digits	6 digits	7 ^{1/2} digits
TIME RANGES	a) Auto ranging : .0001 to 9999sec b) Fixed ranges : .9999, 9.999, 99.99, 999.9, 9999sec	99999.9 / 999999sec / min / hr	a) 1999.59.59hr:min:sec b) 199999.99hr
ACCURACY	±0.05% + 1 count		
INPUT	Potential free contact & 3 to 30V DC from solid state devices	Mains, Potential free contact, PNP sensor	a) 24 to 260V AC / DC b) Contact input
RESET	Front, Remote (Reset time : 20ms), Auto	Remote (Reset time : 20ms)	Front, Remote Remote
MEMORY	---	10 years	5 years
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC		Battery powered

Ordering information

Digital Time Switches

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
TS2M1-1-16A-230V V2	230V AC	---
TS2M1-1-16A-230V-CE	230V AC	CE
TS1W1-1-20A-230V	230V AC	---
TS1W1-1-20A-230V-CE	230V AC	CE
ATS2M1-1-16A-230V-CE	230V AC	CE

Analog Timers

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
600XU-A-1-CU	20 to 240V AC, 12 to 240V DC	CE
600SD-2-230	230V AC	CE
600ST	240V AC	CE
600ST-CU	240V AC	CE
642SQ-A	230VAC, 24V AC / DC	---
642XA	20 to 240V AC, 12 to 240V DC	---
800XU-CU	20 to 240V AC, 12 to 240V DC	CE
800XA	20 to 240V AC, 12 to 240V DC	---
800XA-CE	20 to 240V AC, 12 to 240V DC	CE
800SQ-A	230V AC, 24V AC/DC	---
800S-1-ON-60S-230	230V AC	---
800S-1-ON-60S-415	415V AC	---
800SD-2-230	230V AC	---
800SD-2-230-CE	230V AC	CE
800SD-2-110	110V AC	---
800SD-2-415	230 to 415V AC	---
800XC	20 to 240V AC, 12 to 240V DC	---
800XC-CE	20 to 240V AC, 12 to 240V DC	CE
800XMR	20 to 240V AC, 12 to 240V DC	---
800POD-180S	110 to 240V AC / DC	---
55XU-P	20 to 240V AC, 12 to 240V DC	---
55XU-T	20 to 240V AC, 12 to 240V DC	---
55XC-P8	20 to 240V AC, 12 to 240V DC	---
55XC-P8-CU	20 to 240V AC, 12 to 240V DC	CE
55XC-T8	20 to 240V AC, 12 to 240V DC	---
55XC-T8-CU	20 to 240V AC, 12 to 240V DC	CE
55ES-P8-230	230V AC, 24V AC / DC	---
55ES-T-230	230V AC, 24V AC / DC	---

Digital Timers

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
600DT	20 to 240V AC / DC	CE
600DT-CU	20 to 240V AC / DC	CE
XT543-N	90 to 270V AC / DC	---
XT56-N	90 to 270V AC / DC	---
XT56-N-CE	90 to 270V AC / DC	CE
XT264-3	90 to 270V AC / DC	---
XT364-3	90 to 270V AC / DC	---
XT546BX	85 to 270V AC	---
XT546	85 to 270V AC	---
XT546-CE	85 to 270V AC	CE
XT246	85 to 270V AC	---
XT346	85 to 270V AC	---
XT5042	90 to 270V AC / DC	---
XT5042-CU	90 to 270V AC / DC	CE
PT380	85 to 270V AC / DC	---

Time Interval Meter / Hour Meters

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
TI103C	90 to 270V AC / DC	---
TT412	90 to 270V AC / DC	---

PRODUCT CODE	INPUT TYPE		CERTIFICATION
	CONTACT	VOLTAGE	
LT920A-C	YES	---	---
LT920A-V	---	YES	---
LT945A-C	YES	---	---
LT945A-V	---	YES	---
LT920A-C-CE	YES	---	CE
LT920A-V-CE	---	YES	CE
LT945A-C-CE	YES	---	CE
LT945A-V-CE	---	YES	CE



XC22B
72(H) x 72(W)mm



XC1200
48(H) x 96(W)mm



XC3200
96(H) x 96(W)mm



XC2200
72(H) x 72(W)mm

FEATURES	<ul style="list-style-type: none"> • Thumbwheel setting • Auto reset • Battery backup 	<ul style="list-style-type: none"> • Counter with rate indicators • Programmable input scaling • Up, Down, Quadrature & Bi-directional modes • Dual set point 	<ul style="list-style-type: none"> • Counter with rate indicator • Programmable input scaling • Unidirectional, Bi-directional & Quadrature modes • Batch counter
DISPLAY	4 digits	6 digits	6 + 4 digits
MODES	ON delay / Interval / Auto reset	ON delay / Interval / Auto reset / Time pulse repeat	
RANGES	9999 counts	Selectable least count : 0.0001, 0.001, 0.01, 0.1 & 1 Rate : 4.00 to 99999 RPM / RPH	-999 to 999999 counts
RESET	Front, Remote, Auto (Optional)	Front (user selectable), Remote	Front, Remote, Power interruption
MEMORY	Yes (Optional)	Yes	
DIRECTION	Up	Up, Down, Bi-directional, Quadrature	Up / Down
SET POINT	Single set point	Dual set point	
INPUT SPEED	30Hz, 5kHz (Selectable via dip switch)	30Hz, 2.5kHz, 5kHz (Programmable)	30Hz, 5kHz (Programmable)
SCALE FACTOR	---	0.00001 to 9.99999 x 10 ⁿ , n = -5, -4, -3, -2, -1, 0, 1, 2	
OUTPUT CONTACT	2 C/O DPDT	2 C/O DPDT	
CONTACT RATING	5A @ 250V AC or 24V DC	5A @ 250V AC or 24V DC	
INPUT	NPN, PNP sensor, Potential free contacts	NPN / PNP sensor, Potential free contacts, Encoder	
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	230V AC	90 to 270V AC / DC	

LCD / LED Counters

Digital Timer - Counter



LXC900A
24(H) x 48(W)mm



XC410A
36(H) x 72(W)mm



XC10D
48(H) x 96(W)mm



XTC5400
48(H) x 48(W)mm

FEATURES	<ul style="list-style-type: none"> • LCD counter • Battery powered • Contact / Voltage input 	<ul style="list-style-type: none"> • LED counter • Inbuilt sensor supply • Compact size 	<ul style="list-style-type: none"> • Multi function - Timer / Counter (programmable) • Batch counter • Up / Down counting for counter • Dual set point
DISPLAY	7 ^{1/2} digits	6 digits	4 + 4 digits
MODES	---	---	Timer : ON delay / Interval / Cyclic ON first / Cyclic OFF first / Batch. Counter : ON delay / Interval / Auto reset / Time pulse repeat / Batch
RANGES	19999999 counts	999999 counts	Timer : 99.99/999.9/9999sec, 99:59min:sec, 999.9/9999min, 99:59hr:min, 999.9/9999hr, Counter : -999 to 9999 counts
RESET	Front, Remote	Front, Remote	Front, Remote, Power interruption
MEMORY	5 years	Yes	Yes
DIRECTION	Up	Up	Timer : Down, Counter : Up / Down
SET POINT	---	---	Dual set point
INPUT SPEED	14Hz, 100Hz (Selectable via jumper)	20Hz, 1kHz (Selectable via jumper)	3Hz, 30Hz, 5kHz (Programmable)
SCALE FACTOR	---	---	0.001 to 9.999 x 10 ⁿ n = -3, -2, -1, 0, 1, 2
OUTPUT CONTACT	---	---	2 C/O SPST
CONTACT RATING	---	---	5A @ 250V AC or 24V DC
INPUT	a) 24 to 260V AC / DC b) Contact input	NPN, PNP sensor, Potential free contacts	NPN, PNP sensor, Potential free contacts
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	Battery powered	230V AC (Only for XC410A), 90 to 270V AC / DC	90 to 270V AC / DC

Rate Indicator

Speed Monitoring Relay



RC5100
48(H) x 48(W) x 100(D)mm



SMRD4M1
90(H) x 70(W) x 62(D)mm

FEATURES	<ul style="list-style-type: none"> Measures up to 9999 RPM Inbuilt sensor supply 	<ul style="list-style-type: none"> Under, Over, Dual speed modes Dual set point RPH, RPM, RPS ranges Scalable input, Auto ranging
DISPLAY	4 digits	
RANGE	4.00 to 9999 RPM	Auto ranging, RPH, RPM or RPS
INPUT SPEED	4 to 9999 pulses per minute	
SCALE FACTOR	---	0.001 to 9.999 x 10 ⁿ (n= -3, -2, -1, 0, 1, 2)
SENSOR SUPPLY	Inbuilt, 12V DC, ±10%, 30mA	
COUNTING DIRECTION	Up	
INPUT	PNP sensors, Encoders, Potential free contact	
SUPPLY VOLTAGE (AC : 50 / 60Hz)	90 to 270V AC / DC	

Ordering information

Digital Counters

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
XC22B-4-230	230V AC	---
XC22B-4-AR-M1-230 (With Memory & Auto Reset)	230V AC	---
XC1200	90 to 270V AC / DC	CE
XC3200	90 to 270V AC / DC	---
XC3200-CE	90 to 270V AC / DC	CE
XC2200	90 to 270V AC / DC	---
XC2200-CE	90 to 270V AC / DC	CE

LCD / LED Counters

PRODUCT CODE	SUPPLY VOLTAGE		CERTIFICATION
	Contact	Voltage	
LXC900A-C	YES	---	---
LXC900A-V	---	YES	---
LXC900A-C-CE	YES	---	CE
LXC900A-V-CE	---	YES	CE
PRODUCT CODE	SUPPLY VOLTAGE		CERTIFICATION
XC410A-1-230	230V AC		---
XC10D	90 to 270V AC / DC		---

Digital Timer-Counter

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
XTC5400	90 to 270V AC / DC	CE
XTC5400-CU	90 to 270V AC / DC	CE

Speed Monitoring Relay

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
SMRD4M1-2-U-CE	90 to 270V AC / DC	CE

Rate Indicators

PRODUCT CODE	SUPPLY VOLTAGE	CERTIFICATION
RC5100A	90 to 270V AC / DC	---



TC544C

48(H) x 48(W)mm



TC544B



TC513BX

48(H) x 48(W)mm



TC533BX

48(H) x 48(W)mm



TC538BX

48(H) x 48(W)mm

FEATURES	<ul style="list-style-type: none"> • TC / RTD input • ON-OFF / PID control (Auto tune / self tune) • Dual set point • Selectable control output: Relay / SSR • Auxiliary output: Relay 	<ul style="list-style-type: none"> • Single display, Single set point • Short depth TC • TC / RTD input • Control output : Relay or SSR 	<ul style="list-style-type: none"> • Dual display, Single set point • Short depth TC • TC / RTD input • Control output : Relay or SSR 	<ul style="list-style-type: none"> • Dual display, Single set point • Short depth TC • TC / RTD input • Control output : Relay or SSR
DISPLAY	4 + 4 digits, 7 segment LED dual display	3 digits, 7 segment LED single display	3 + 3 digits, 7 segment LED dual display	4 + 4 digits, 7 segment LED dual display
INPUT TYPE	Thermocouple (J, K, T, R, S) / RTD (PT100)			
RESOLUTION	0.1/1° for TC / RTD inputs (fixed 1° for R & S type TC input)	Fixed 1° resolution		
ACCURACY	For TC input: 0.25% of F.S ±1° ; For R & S inputs: 0.5% of F.S. ±2° (20 min of warm up time for TC inputs); For RTD input: 0.1% of F.S ±1°			
SETPOINT	Dual set point	Single set point		
CONTROL MODE	Auto tune / Self tune PID or ON-OFF			
CONTROL OUTPUT	Relay: SPST: 5A resistive @ 230V AC / 30V DC or SSR: 12V DC, 30mA	Relay: SPDT: 10A resistive @ 230V AC / 30V DC or SSR: 12V DC, 50mA		
AUXILIARY OUTPUT	Relay: 5A resistive @ 230V AC / 30V DC	---		
SPECIAL FUNCTIONS	Heat cool PID, Dwell timer	---		
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC			



TC544A

48(H) x 48(W)mm

TC244AX

72(H) x 72(W)mm

TC344AX

96(H) x 96(W)mm



TC513AX

48(H) x 48(W)mm

TC203AX

72(H) x 72(W)mm

TC303AX

96(H) x 96(W)mm



TC533AX

48(H) x 48(W)mm

TC233AX

72(H) x 72(W)mm

TC333AX

96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • Dual display, Dual set point • TC / RTD input • Control output : Relay or SSR • Auxiliary output : Relay • Dwell timer, Heat cool PID 	<ul style="list-style-type: none"> • Single display, Single set point • TC / RTD input • Control output: Relay or SSR 	<ul style="list-style-type: none"> • Dual display, Single set point • TC / RTD input • Control output: Relay or SSR
DISPLAY	4 + 4 digits, 7 segment LED dual display	3 digits, 7 segment LED single display	3 + 3 digits, 7 segment LED dual display
INPUT TYPE	Thermocouple (J, K, T, R, S) / RTD (PT100)		
RESOLUTION	0.1/1° for TC / RTD (fixed 1° for R & S TC)	Fixed 1° resolution	
ACCURACY	For TC inputs : 0.25% of F.S. ±1° ; For R & S inputs : 0.5% of F.S. ±2° (20 min of warm up time); For RTD input: 0.1% of F.S. ±1°		
SETPOINT	Dual set point	Single set point	
CONTROL MODE	Autotune PID or ON - OFF		
CONTROL OUTPUT	Relay: SPDT (SPST for TC544A): 5A resistive @ 230V AC / 30V DC or SSR (Field Selectable): 12V DC, 50mA	Relay: SPDT (SPST for TC303A): 10A resistive @ 230V AC / 30V DC or SSR: 12V DC, 50mA	
AUXILIARY OUTPUT	Relay: SPDT (SPST for TC544A): 5A resistive @ 230V AC / 30V DC	---	
SPECIAL FUNCTIONS	Heat cool PID, Dwell timer	---	
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC, 24V DC (Optional for TC544 Only)	90 to 270V AC / DC	



PID500-T
48(H) x 48(W)mm
PID500
48(H) x 48(W)mm
PID110
96(H) x 48(W)mm
PID330
96(H) x 96(W)mm
PR502
48(H) x 48(W)mm

FEATURES	<ul style="list-style-type: none"> • TC / RTD input • Single step ramp soak • Max 3 outputs • Retransmission (Optional) 	<ul style="list-style-type: none"> • Advanced PID control • Universal input • Single step ramp soak • Max 3 outputs • Retransmission (Optional) • RS485 MODBUS RTU protocol (Optional) 	<ul style="list-style-type: none"> • Ramp soak control • 10 Programs, 16 Steps each • Alarm at each stage • Memory retention
DISPLAY	4 + 4 digits, 7 segment LED dual display		
INPUT TYPE	Thermocouple: J, K, T, R, S, C, E, B, N, L, U, W, Platine II RTD: PT100	Thermocouple: J, K, T, R, S, C, E, B, N, L, U, W, Platine II RTD: PT100 Signal inputs (DC): -5 to 56 mV, 0 to 10 V DC, 0 to 20 mA DC	
RESOLUTION	TC / RTD: 1 / 0.1°	TC / RTD: 1 / 0.1°; Analog input: 1 / 0.1 / 0.01 / 0.001	
ACCURACY	For TC input: 0.25% of F.S. ±1°; For R & S inputs: 0.5% of F.S. ±2° (20 min of warm up time); For RTD input: 0.1% of F.S. ±1°; Signal input: ±0.5%, ±1 digit (except PID500-T)		
SET POINT	Maximum 3		
CONTROL MODE	Autotune PID or ON - OFF		
CONTROL OUTPUT	Relay : SPST : 5A @ 230V AC / 30V DC or SSR : 18V DC, 20mA or Current : 4 to 20 mA DC (max load 500E) or Voltage : 0 to 10V DC (min load 10K) (Depends on product code selection)		
AUXILIARY OUTPUT	(Maximum 2) Relay or SSR (Mode : Setpoint or Alarm mode) Relay : SPST : 5A @ 230V AC / 30V DC; SSR : 12V DC, 20mA		
OPTIONAL FEATURES	Extra alarm output, RS485 communication MODBUS RTU protocol (except PID500-T), Retransmission analog output		No. of profiles : 10 (16 steps each), Ramp / Soak Time range : 0.01 to 99.99 Hrs, Other profile parameters : Link profiles, Programmable repeat cycle, Power down resume, Reset option, Deviation hold, Alarm at each step with settable alarm duration, Retransmission analog output
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC		



DTC503
48(H) x 48(W)mm
DTC231
72(H) x 72(W)mm
DTC331
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • 3 Digit single display • J, K TC input • ON-OFF / PID control 	<ul style="list-style-type: none"> • 3 Digit single display • J, K TC input • ON-OFF / Proportional control 	
DISPLAY	3 digits, 7 segment LED single display		
INPUT TYPE	Thermocouple (J, K)		
RESOLUTION	Fixed 1° resolution		
ACCURACY	For J, K inputs: 0.25% of F.S. ±1°C	0.25% of F.S. ±1° (20 min warm up time)	
SETPOINT	Single set point		
CONTROL MODE	ON-OFF / PID	ON-OFF / Proportional	
CONTROL OUTPUT	Relay: SPDT: 10A resistive @ 230V AC / 30V DC	Relay: SPST: 10A resistive @ 230V AC / 30V DC	
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC		



PID528
48(H) x 48(W)mm
DTC204A-2
72(H) x 72(W)mm
DTC324A-2
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • Dual display, Dual set point • TC / RTD input • Control output : Relay • Auxiliary output : Relay 	<ul style="list-style-type: none"> • Single display, Dual set point • TC / RTD input • Control output : Relay or SSR • Auxiliary output : Relay 	
DISPLAY	4 + 4 digits, 7 segment LED dual display	4 digits, 7 segment LED single display	
INPUT TYPE	Thermocouple (J, K, T, R, S) / RTD (PT100)		
RESOLUTION	0.1 / 1° for TC / RTD inputs (fixed 1° for R & S type TC input)		
ACCURACY	For TC inputs: 0.25% of F.S. ±1°; For R & S inputs: 0.5% of F.S. ±2° (20 min of warm up time); For RTD input: 0.1% of F.S. ±1°		
SETPOINT	Dual set point		
CONTROL MODE	Autotune PID or ON - OFF		
CONTROL OUTPUT	Relay : SPST : 5A resistive @ 230V AC / 30V DC	Relay : SPDT : 10A resistive @ 230V AC / 30V DC or SSR: 12V DC, 30mA	
AUXILIARY OUTPUT	Relay : SPDT (SPST for PID528) : 5A resistive @ 230V AC / 30V DC		
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC		



CH403A
36(H) x 72(W)mm



CH403
36(H) x 72(W)mm

FEATURES	<ul style="list-style-type: none"> • 2½ Digits single display • NTC input type • Restart time delay • Auto / Manual defrost selection • Door open mode • Cyclic timer application for auxiliary output 	<ul style="list-style-type: none"> • 3 Digits single display • Auto / Manual defrost management • High / Low temperature alarms • Control output: Relay • Auxiliary output: Relay & SSR
	DISPLAY	2½ digits, 7 segment display
INPUT TYPE	NTC type sensor	
RESOLUTION	1 / 0.1°	
ACCURACY	0.25% of F. S., ±1°	±1% of F.S.
SETPOINT	Single set point	
CONTROL MODE	ON - OFF	
CONTROL OUTPUT	SPDT: 10A @ 230V AC / 30V DC or SPST: 20A @ 230V AC / 30V DC (Depends on product code selection)	
AUXILIARY OUTPUT	SSR: 12V DC, 10mA or Relay: SPST: 5A @ 230V AC / 30V DC (Depends on product code selection)	
HYSTERESIS	0.1 to 9.9°	
DISPLAY OFFSET	-19.9° to 19.9°	-19.9° to 20.0°
RESTART TIME DELAY	Adjustable from 0 to 19.9 min	
RELAY ACTION	Heat & Cool mode	
DEFROST TIME	Programmable from 0 to 99 min	
DEFROST FREQUENCY	Programmable from 0 to 99 (hr / min / sec)	
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	230V AC or 90 to 270 V AC / DC	90 to 270V AC / DC

Process Indicators



PIC152A-VI
48(H) x 96(W)mm



PIC101N
48(H) x 96(W)mm



PIC101A-T-230
48(H) x 96(W)mm



PIC101A-VI-230
48(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • User programmable universal input • Retransmission output • LED status indicator : Alarm ON • 2 Alarm indication • Inbuilt 24V DC sensor supply 	<ul style="list-style-type: none"> • 4 digits, Single display • User programmable universal input • Scalable voltage / current input 	<ul style="list-style-type: none"> • Simple temperature indicator • TC / RTD input type 	<ul style="list-style-type: none"> • 4 Digits single display • User programmable voltage & current input
	DISPLAY	4 digits, 7 segment LED single display		
INPUT TYPE	Thermocouple: J, K, T, R, S, RTD: PT100 Signal inputs (DC): -5 to 56mV, 0 to 10V, 0/4 to 20mA	Thermocouple: J, K, T, R, S, RTD: PT100 Signal inputs (DC): 0 to 56mV, 0 to 10V, 0/4 to 20mA	Thermocouple: J, K, T, R, S RTD: PT100	Signal inputs (DC): 0 to 10V, 0/4 to 20mA
RESOLUTION	TC / RTD: 1 / 0.1, Analog input: 1 / 0.1 / 0.01 / 0.001		1 / 0.1° (Fix 1° resolution for R & S type TC)	Decimal point position selectable: 1 / 0.1 / 0.01 / 0.001
ACCURACY	For TC inputs: 0.25% of F.S. ±1°; For R & S inputs: 0.5% of F.S. ±2° (20 min of warm up time); For RTD input: 0.1% of F.S. ±1°; Cold junction accuracy ± 5°C ; Signal input: ±0.5% of F.S., ± 1 digit		For TC inputs: 0.25% of F.S. ±1°; For R & S input: 0.5% of F.S. ±2° (20 min of warm up time); RTD input: 0.1% of F.S. ±1°	Signal input: ±0.5% of F.S. ± 1 digit
OUTPUT	2 Alarms: SPDT: 5A @ 230V AC / 24V DC Alarm modes: High, Low, Band, Fail output & fault diagnosis. Hysteresis, Annunciator: Programmable, Reset action: Automatic or latched		--	
SPECIAL FEATURES	Retransmission output: 0 / 4 to 20mA DC, 0 to 5V DC, 0 to 5 / 10V DC, (Software selectable) RS485 MODBUS RTU protocol (Optional)		--	
SENSOR SUPPLY	24V DC, 30mA (Output to power the sensor)			
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	90 to 270V AC / DC, 24V DC (Optional)		230V AC, ±20%	

Analog Temperature Controller



TC52
48(W) x 48(H)mm

FEATURES	<ul style="list-style-type: none"> • Dial setting • TC input • Single relay output • Easy to use
DISPLAY	Dial setting
INPUT TYPE	Thermocouple (J)
RESOLUTION	Fixed 1° resolution

ACCURACY	Setting : ± 3% of F.S., ±0.5% of F.S.
SETPOINT	Single set point
CONTROL MODE	Time proportional & ON-OFF
CONTROL OUTPUT	SPST : 7A resistive @ 230V AC
SUPPLY VOLTAGE (AC : 50 / 60 Hz)	230V AC

Ordering information

PRODUCT CODE	OUTPUT 1		OUTPUT 2	SUPPLY VOLTAGE	CERTIFICATION
	RELAY	SSR			
TC544C	RELAY	SSR	RELAY	90 to 270V AC / DC	CE
TC513BX-CE	RELAY	SSR	---	90 to 270V AC / DC	CE
TC533BX-CE	RELAY	SSR	---	90 to 270V AC / DC	CE
TC544B-CE	RELAY	SSR	RELAY	90 to 270V AC / DC	CE
TC538BX	RELAY	SSR	---	90 to 270V AC / DC	---
TC544A	RELAY	SSR	RELAY	90 to 270V AC / DC	CE
TC544A-24V	RELAY	SSR	RELAY	24V DC	CE
TC544A-CU	RELAY	SSR	RELAY	90 to 270V AC / DC	CE,
TC244AX	RELAY	SSR	RELAY	90 to 270V AC / DC	CE
TC344AX	RELAY	SSR	RELAY	90 to 270V AC / DC	CE
TC513AX	RELAY	SSR	---	90 to 270V AC / DC	CE
TC513AX-CU	RELAY	SSR	---	90 to 270V AC / DC	CE,
TC513AX-24V	RELAY	SSR	---	24V DC	CE
TC533AX	RELAY	SSR	---	90 to 270V AC / DC	CE
TC233AX	RELAY	SSR	---	90 to 270V AC / DC	CE
TC333AX	RELAY	SSR	---	90 to 270V AC / DC	CE
TC203AX	RELAY	SSR	---	90 to 270V AC / DC	CE
TC303AX	RELAY	SSR	---	90 to 270V AC / DC	CE
TC303A	RELAY	SSR	---	90 to 270V AC / DC	CE

PRODUCT CODE	OUTPUT 1	OUTPUT 2	OUTPUT 3	COMMUNICATION (RS485)	SUPPLY VOLTAGE	CERTIFICATION
PID500-T-0-0-01	RELAY	RELAY	RELAY	---	90 to 270V AC / DC	---
PID500-T-1-0-01	SSR	RELAY	RELAY	---	90 to 270V AC / DC	---
PID500-T-2-0-00	4-20mA	RELAY	---	---	90 to 270V AC / DC	---
PID500-1-0-00	SSR	RELAY	---	---	90 to 270V AC / DC	---
PID500-1-0-00 V2-CE	SSR	RELAY	---	---	90 to 270V AC / DC	CE
PID500-2-0-04	4-20mA	RELAY	RELAY	YES	90 to 270V AC / DC	---
PID500-2-0-04 V2-CE	4-20mA	RELAY	RELAY	YES	90 to 270V AC / DC	CE
PID500-3-0-00	0 - 10V	RELAY	---	---	90 to 270V AC / DC	---
PID500-3-0-00 V2-CE	0 - 10V	RELAY	---	---	90 to 270V AC / DC	CE
PID500-0-0-01 V2-CE	RELAY	RELAY	RELAY	---	90 to 270V AC / DC	CE
PID500-0-0-01 V2	RELAY	RELAY	RELAY	---	90 to 270V AC / DC	---
PID500-0-0-04	RELAY	RELAY	RELAY	YES	90 to 270V AC / DC	---
PID500-0-0-04 V2-CE	RELAY	RELAY	RELAY	YES	90 to 270V AC / DC	CE
PID500-2-0-01	4-20mA	RELAY	RELAY	---	90 to 270V AC / DC	---
PID500-2-0-01 V2-CE	4-20mA	RELAY	RELAY	---	90 to 270V AC / DC	CE
PID500-1-0-01	SSR	RELAY	RELAY	---	90 to 270V AC / DC	---
PID500-1-0-01 V2-CE	SSR	RELAY	RELAY	---	90 to 270V AC / DC	CE
PID500-1-1-05-CU	SSR	SSR	SSR	YES	90 to 270V AC / DC	CE,
PID330-2-0-04	4-20mA	RELAY	RELAY	YES	90 to 270V AC / DC	---
PID330-0-0-01	RELAY	RELAY	RELAY	---	90 to 270V AC / DC	---
PID110-2-0-04	4-20mA	RELAY	RELAY	YES	90 to 270V AC / DC	---
PID110-0-0-01	RELAY	RELAY	RELAY	---	90 to 270V AC / DC	---
PR502-0-0-1	RELAY	RELAY	---	YES	90 to 270V AC / DC	CE
PR502-2-0-0	4-20mA	RELAY	---	---	90 to 270V AC / DC	CE

PRODUCT CODE	OUTPUT 1		OUTPUT 2	SUPPLY VOLTAGE	CERTIFICATION
	RELAY	SSR			
DTC503	RELAY	---	---	90 to 270V AC / DC	---
DTC231	RELAY	---	---	90 to 270V AC / DC	---
DTC331	RELAY	---	---	90 to 270V AC / DC	---
PID528-1	RELAY	---	RELAY	90 to 270V AC / DC	---
PID528-1 V2-CE	RELAY	---	RELAY	90 to 270V AC / DC	CE
DTC204A-2	RELAY	SSR	RELAY	90 to 270V AC / DC	---
DTC324A-2	RELAY	SSR	RELAY	90 to 270V AC / DC	---
TC52-400-J-230	RELAY	---	---	230V AC	---

Cooling Controllers

PRODUCT CODE	OUTPUT		SUPPLY VOLTAGE	CERTIFICATION
	CONTROL OUTPUT	ALARM OUTPUT		
CH403A-1-NTC-CE	RELAY (10A)	SSR (12V DC)	230V AC	CE
CH403A-2-NTC-CE	RELAY (20A)	---	90 to 270V AC / DC	CE
CH403A-3-NTC-CE	RELAY (10A)	RELAY (5A)	230V AC	CE
CH403-1-NTC	RELAY (10A)	SSR (12V DC)	90 to 270V AC / DC	CE
CH403-1-NTC-CU	RELAY (10A)	SSR (12V DC)	90 to 270V AC / DC	CE,
CH403-2-NTC	RELAY (20A)	---	90 to 270V AC / DC	CE
CH403-3-NTC	RELAY (10A)	RELAY (5A)	90 to 270V AC / DC	CE

Process Indicators

PRODUCT CODE	RETRANSMISSION	COMM. (RS485)	SUPPLY VOLTAGE	CERTIFICATION
PIC101-N	---	---	90 to 270V AC / DC	CE
PIC101N-24V	---	---	24V DC	CE
PIC101N-CU	---	---	90 to 270V AC / DC	CE,
PIC152A-VI	Universal	---	90 to 270V AC / DC	---
PIC152A-VI-CE	Universal	---	90 to 270V AC / DC	CE
PIC152A-VI-C-24V	Universal	YES	24V DC	---
PIC101A-T-230	---	---	230V AC	---
PIC101A-VI-230	---	---	230V AC	---



FLEXYS GT35
99(H) x 95.6(W)mm



FLEXYS PANEL TX4
99(H) x 95.6(W)mm



FLEXYS RAIL
93.4(H) x 140(W)mm

FEATURES	<ul style="list-style-type: none"> • 3.5" LCD with touch screen • Flexible I/O card selection • Real time clock • Expandable 	<ul style="list-style-type: none"> • PLC with built in HMI • Flexible I/O card selection • Real time clock • Expandable 	<ul style="list-style-type: none"> • PLC with flexible I/O card selection • Real time clock • Expandable
DISPLAY	TFT 3.5" diagonal touch screen, Resolution 320x240	LCD with backlight, 4x16 character display, Font size 5x7mm	7 segment display for slot number & card status. Multipurpose LED bank
NO. OF KEYS	5 function keys +1 system key	18 keys (14 user configurable)	One key to scroll through different slots
I/Os	3 I/O slots (Please refer I/O card for flexys series)	4 I/O slots (Please refer I/O card for flexys series)	
DIGITAL INPUTS	4 / 10 /14 per card, PNP (6 - 30V DC)		
MAXIMUM COUNTING FREQUENCY	FC0 (I0 & I1) & FC1 (I2 & I3) - 5KHz (on power supply card only), Normal digital inputs - 30Hz		
ANALOG INPUTS	3 / 4 / 6 Channels per card (TC, RTD, 0-10V, 0 - 20mA, NTC)		
RESOLUTION	12 Bits		
RELAY OUTPUTS	4 / 8 per card, NO type 5A @ 230V AC / 30V DC (Resistive)		
TRANSISTOR OUTPUTS	8 per card, Source type 100mA @ 24V DC		
ANALOG OUTPUTS	2 / 4 Channels per card (0 - 10V, 0 - 20mA)		
RESOLUTION	14 Bits (0.0 to 100.0% = 0 to 10.000V, 0.0 to 100.0% = 0 to 20.000mA)		
PROGRAM MEMORY	221KB	351KB	
EXPANSION	Yes		
COMMUNICATION INTERFACE	RS485 MODBUS RTU protocol	RS485 MODBUS RTU, Proprietary protocol	
RTC	Yes		
SUPPLY VOLTAGE	18 - 30V DC, 100 - 240V AC 50 / 60Hz		

PLC - Flexible Expansion Module



EXP FLEX 2M
90(H) x 35(W)mm

FEATURES	<ul style="list-style-type: none"> • Any flexys card can be configured • Selectable baudrate and slave ID
DISPLAY	LED indication for power ON & communication status
DIGITAL INPUTS	4 / 10 /14 per card, PNP (6 - 30V DC)
ANALOG INPUTS	3 / 4 / 6 Channels per card (TC, RTD, 0-10V, 0 - 20mA, NTC)
RESOLUTION	12 Bits
RELAY OUTPUTS	4 / 8 per card, NO type 5A @ 230V AC / 30V DC (Resistive)
TRANSISTOR OUTPUTS	8 per card, Source type 100mA @ 24V DC
ANALOG OUTPUTS	2 / 4 Channels per card (0 - 10V, 0 - 20mA)
RESOLUTION	14 Bits (0.0 to 100.0% = 0 to 10.000V, 0.0 to 100.0% = 0 to 20.000mA)
COMMUNICATION INTERFACE	RS485 MODBUS RTU, Proprietary protocol
BAUDRATE	19200/115200 bps (Selectable)
RESPONSE TIME	100 msec to 2 sec + IO card Response
SUPPLY VOLTAGE	18 - 30V DC

Compact Series - UNIX & TWIX



UNIX-1
72(H) x 72(W)mm



TWIX-1 **TWIX-2**
48(H) x 96(W)mm



TWIX-3
48(H) x 96(W)mm



MM1015
48(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> Compact PLC with built in HMI RS485 MODBUS RTU protocol 		<ul style="list-style-type: none"> Compact PLC with built in HMI Configurable LED display RS485 MODBUS RTU protocol 		<ul style="list-style-type: none"> Compact PLC with built in HMI RS485 MODBUS RTU protocol 	
DISPLAY	6 digits red & 4 green digits 7 segment LED		4 + 4 digits red & 6 green digits 7 segment LED		3 + 4 digits red & 4 green digits 7 segment LED	
NO. OF KEYS	3 keys (2 - User configurable)		5 keys (4 - User configurable)			
DIGITAL INPUTS	3 + 1*		6	6 + 2*	8	10
INPUT TYPE	PNP (5 - 30V DC)		PNP (6 - 30V DC)			PNP (11 - 30V DC)
MAXIMUM COUNTING FREQUENCY	FC0 (I0 & I1) - 5KHz, Normal digital input: 30Hz					Normal digital input: 30Hz
ANALOG INPUTS	3 Channels, 1 (TC / RTD), 1 (0-10V), 1(0-20mA)		1 Channel (TC / RTD)	6 Channels 2 (TC / RTD), 2 (0-10V), 2(0-20mA)	1 Channel (TC / RTD)	---
RESOLUTION	12 Bits					---
DIGITAL OUTPUTS	2 Relay, 2 Transistor		4 Relay	5 Relay	6 Transistor	6 Relay
TYPE & RATING	For Relay O/P : 5A NO type @230V AC / 30V DC (Resistive), For Transistor O/P : Source Type 100mA@24V DC					
PROGRAM MEMORY	240KB		112KB	240KB	112KB	224KB
COMMUNICATION INTERFACE	RS485 MODBUS RTU protocol					
SUPPLY VOLTAGE	90 - 270V AC, 50/60Hz.		90 - 270V AC, 50/60Hz / 18-28 V DC		18 - 30V DC	
					100 - 270V AC 50 / 60Hz without retention 180 - 270V AC, 50 / 60Hz with retention	

Compact Series - DIGIX



DIGIX-1 **DIGIX-1-1-230V**
90(H) x 70(W)mm



DIGIX-1-B
90(H) x 70(W)mm



DIGIX-2-1-0-24V
90(H) x 70(W)mm



DIGIX-4
90(H) x 70(W)mm

FEATURES	<ul style="list-style-type: none"> Compact PLC with built in HMI 2 Line 8 character LCD Real time clock** RS485 MODBUS RTU protocol 		<ul style="list-style-type: none"> LED indications for input & output RS485 MODBUS RTU protocol 		<ul style="list-style-type: none"> Compact PLC with built in HMI 2 Line 8 character LCD Real time clock** RS485 MODBUS RTU protocol 	
DISPLAY	2 X 8 Character LCD		LED indication for input, Output & communication status		2 X 8 Character LCD	
NO. OF KEYS	5 keys (4 - User configurable)		---		5 keys (4 - User configurable)	
DIGITAL INPUTS	8				10 + 2*	10
INPUT TYPE	PNP (6 - 30V DC)					
MAXIMUM COUNTING FREQUENCY	FC0 (I0 & I1) - 5KHz, Normal digital input: 30Hz					
ANALOG INPUTS	---	Through expansion	---	2 Channels (0-10V)		Through expansion
RESOLUTION					12 Bits	
DIGITAL OUTPUTS	5 Relay				8 Relay	6 Transistor
TYPE & RATING	5A NO type @230V AC / 30V DC (Resistive)					
ANALOG OUTPUTS	---	Through expansion			Through expansion	
RESOLUTION	As per expansion modules				As per expansion modules	
RTC	NO	YES	NO		NO	YES
EXPANSION	NO	YES	NO		YES	YES
PROGRAM MEMORY	112KB			240KB		
COMMUNICATION INTERFACE	RS485 Modbus RTU protocol					---
SUPPLY VOLTAGE	18 - 30V DC**	100 - 270V AC / 50/60Hz			18 - 30VDC	
	100 - 270V AC/DC 50/60Hz					

*Voltage Analog Inputs can be configured as Digital Inputs **Please refer Datasheet for exact Order code



MM3030-2
96(H) x 96(W)mm

MM3030-4
96(H) x 96(W)mm



MM3032-2-0-0-230V
96(H) x 96(W)mm

MM3032-2-0-0-24V
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • Low cost • Panel / DIN rail mounting • Fast inputs / outputs • Windows based user friendly software for ladder programming and HMI configuration 	<ul style="list-style-type: none"> • Compact PLC with built-in HMI • Panel / DIN rail mounting • Windows based user friendly software for ladder programming and HMI configuration 	
DISPLAY	4x16 Character LCD	2x16 Character LCD	
NO. OF KEYS	15 keys (12 User configurable)	8 keys (6 User configurable)	
DIGITAL INPUTS	10 PNP (11 - 30V DC)	8 PNP (6 - 30V DC)	
COUNTING FREQUENCY	FC0 (I0 & I1) – 12KHz, FC1 (I2 & I3) & FC2 (I4 & I5) – 7.5KHz Normal input – 30Hz.	FC0 (I0 & I1) – 5KHz, Normal input – 30Hz.	
ANALOG INPUTS	2 Channel (0 - 10V or 0 to 20mA) selectable via jumpers	2 Channels (0 - 20mA) 2 Channels (0 - 20mA, NTC)	
RESOLUTION	10 Bits	12 Bits	
DIGITAL OUTPUTS	8 Transistor	6 Relay	
TYPE AND RATING	O0-O1 Sink 50mA @ 24V DC (Fast Outputs 50KHz), O2-O7- Source 100mA @ 24V DC	5A NO type @ 230V AC / 30V DC (Resistive)	
ANALOG OUTPUTS	Through expansion	1 Channel, (0 - 10V)	
RESOLUTION	As per expansion modules	14 Bits (0.0% to 100.0% = 0 – 10.000V)	
RTC	YES	NO	
EXPANSION	YES	NO	
PROGRAM MEMORY	351KB	240KB	
COMMUNICATION INTERFACE SLAVE	RS485 MODBUS RTU protocol		
COMMUNICATION INTERFACE MASTER	Proprietary protocol & RS485 MODBUS RTU protocol	RS485 MODBUS RTU protocol	---
SUPPLY VOLTAGE	18 - 30V DC	100-270V AC 50/60Hz without retention 180-270V AC, 50/60Hz with retention	18 – 30V DC

Human Machine Interface



SP112-GT70
149(H) x 203(W)mm



SP3-GT35
96(H) x 96(W)mm

FEATURES	<ul style="list-style-type: none"> • 7" Touch screen • Ethernet / Serial communication • User management • Recipe management • Data logging functionality • Update program by USB flash • Multiple communication protocols • In-Built symbol library 	<ul style="list-style-type: none"> • 10 Password levels • Serial printing • Data logging • Built in buzzer • Recipe management
DISPLAY	7" Diagonal resistive touch screen	3.5" Diagonal resistive touch screen
RESOLUTION	800 x 480	320 x 240 pixels
USER MEMORY	128M Flash + 64M DRAM	16 MB
DATA LOGGING	Yes	2 GB (External SD card)
COMM. PORT 1	RS485 MODBUS RTU protocol	Master port - RS485 MODBUS RTU protocol
COMM. PORT 2	RS232 MODBUS RTU protocol, Multiple communication protocols	Slave port - RS232 MODBUS RTU protocol
COMM. PORT 3	10M / 100M Self adaptation	Serial printer ESC / PAUSE protocol
USB SLAVE	USB 2.0	---
KEYS	---	5 Function keys + 1 System key
RTC	Yes	Yes
BACKUP BATTERY	---	3V CR2032
OPERATING TEMPERATURE	0° - 50° C	0° - 55° C
SUPPLY VOLTAGE	24V DC	18 - 30V DC



AN-8-0-0-230V
147(H) x 76(W)mm

FEATURES	<ul style="list-style-type: none"> • 8 Programmable windows • 6 Colour selection • RS485 MODBUS RTU protocol
DISPLAY	Multicolour LED's - Fault annunciation
NO. OF KEYS	4
DIGITAL INPUTS	13
OPERATING RANGE	5 - 30V DC
INPUT CURRENT	3mA @ 12V
DIGITAL OUTPUTS	2
OUTPUTS TYPE	NO contact type - Relay
OUTPUT CURRENT	7A @ 30VDC (Resistive), 7A @ 250VAC (Resistive)
COMMUNICATION PROTOCOL	RS485 MODBUS RTU protocol
MOUNTING	Panel mount
SUPPLY VOLTAGE	90 - 270V AC
SENSOR SUPPLY	12V, 50mA (for looping)

Accessories - SMPS



RP-2M-1.1A-24VDC
90(H) X 35(W)mm



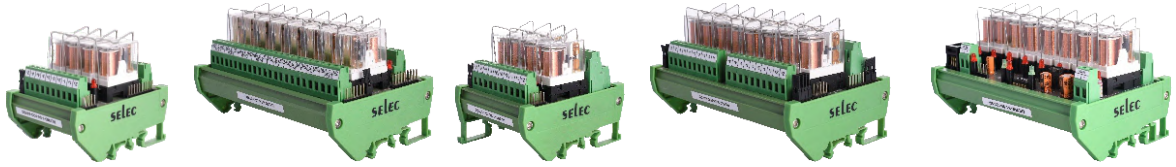
RP-3M-2.5A-24VDC
105(H) X 55(W)mm



RP-3M-5A-24VDC
105(H) X 55(W)mm

FEATURES	<ul style="list-style-type: none"> • Protection: Overload / Over voltage • IEC 61010-1 safety standards • DIN rail mount • Power OK indication • Cooling by free air convection 		
DISPLAY	LED indication for DC OK		
VOLTAGE RANGE	100 ~ 270VAC / VDC		
FREQUENCY RANGE	50 / 60 Hz		
AC CURRENT	100V - 0.6 A, 270V - 0.3A	100V - 1.40A, 270V - 0.55A	100V - 2.55A, 270V - 1.15A
EFFICIENCY	70% to 85%		
INRUSH CURRENT	30A	53A	
DC VOLTAGE	24V DC		
RATED CURRENT	1.1A	2.5A	5A
RATED POWER	26.4W	60W	120W
RIPPLE & NOISE MAX (mVp.p)	200mV	220mV	
WEIGHT	140 g	490 g	

Accessories - Relay Modules



RLYMD-1-S4-1CO-24VDC
87(H) x 69(W)mm

RLYMD-2-S8-1CO-24VDC
87(H) x 138(W)mm

RLYMD-1-S4-2CO-24VDC
87(H) x 69(W)mm

RLYMD-2-S8-2CO-24VDC
87(H) x 138(W)mm

ERLYMD-2-1-S8-1CO-24V
87(H) x 138(W)mm

FEATURES	<ul style="list-style-type: none"> LED and freewheeling diode across coils Reverse polarity protection Jumpers for coil looping Pluggable relays 				<ul style="list-style-type: none"> RS485 Comm. over MODBUS-RTU Selectable baudrate and slave ID Pluggable relays 	
CONTACTS	1 C / O		2 C / O		1 C / O	
NO. OF CHANNELS	4	8	4	8	8	
CONTACT RATING	10A @ 277V AC / 30V DC (Resistive)					
NOMINAL VOLTAGE	24V DC					
MUST VOLTAGE	18V DC					
MAX VOLTAGE	33V DC					
OPERATE TIME	15 msec					
RESET TIME	5 msec					
COMMUNICATION PROTOCOL	---				RS485 MODBUS RTU protocol	
STATUS DISPLAY	LED indication for relay ON status				LED indication for relay ON status, Power ON & communication status	
SUPPLY VOLTAGE	---				24V DC	

Accessories - Data Converters



AC-RS485-RS232-ISO



AC-USB-RS232-01



AC-USB-RS485-02



AC-USB-RS485-03



AC-S2E-01

FEATURES	<ul style="list-style-type: none"> LED indication for communication status Interface converter 		<ul style="list-style-type: none"> Port powered Communication status available on LED Indication 		<ul style="list-style-type: none"> Web configuration telnet protocol TCP / IP protocol 	
DISPLAY	LED indication for power on, Tx & Rx		LED indication for Tx & Rx		LED indication for power ON, Tx and Rx, & Ethernet communication	
INTERFACE 1	Serial (RS485 MODBUS RTU protocol)		USB 2.0 compliance		Serial (RS485 MODBUS RTU protocol)	
CONNECTOR	2 wire		USB type A		DB9	
INTERFACE 2	Serial (RS232 MODBUS RTU protocol)		Serial (RS485 MODBUS RTU protocol)		Ethernet (TCP / IP, Telnet)	
CONNECTOR	DB9		2 wire open	RJ 25 (6 Pin)	RJ 45 (8 Pin)	
TRANSMISSION SPEED	2400 to 115200 bps		2400 to 115200 bps		RS485 : 300 to 115000 bps Ethernet : 10 / 100 Mbps	
CABLE LENGTH	NA		1 meter		---	
POWER CONSUMPTION	0.5 W		75mA @ 5V		0.5 W	
SUPPLY VOLTAGE	90 - 270V AC		Port powered		12 - 30V DC	

Accessories - Communication Adapters & Cables



AC-IOEXP-01



AC-IOEXP-03



ACH-002



ACH-003



ACH-004

DESCRIPTION	Expansion adapter for MM303X PLCs	Adapter for directing RJ25 to open terminal and also for network looping	DB9 to RJ25 cable	Both Side RJ45 type connector	Both Side RJ25 Type Connector
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Ordering Information

Flexible IO Solution

PRODUCT CODE	CERTIFICATION
FL-GT35-DI04-PS-230V	CE
FL-GT35-DI04-PS-24V	CE in process
FL-GT35-DSP	CE
FL-GT35-LG-1-0-1	CE
FL-TX4-DI04-PS-230V	CE
FL-TX4-DI04-PS-24V	CE
FL-TX4-LG-1-1-1	CE
FL-RL-DI04-PS-24V	CE
FL-RL-BS-6	CE
FL-RL-LG-1-1-1	CE
FL-RL-PS-230V	CE in process

Fixed IO Configuration

PRODUCT CODE	CERTIFICATION
MM3030-2	CE in process
MM3030-4	CE in process
MM3032-2-0-0-230V-V2	CE in process
MM3032-2-0-0-24V	CE in process

Compact Series

PRODUCT CODE	CERTIFICATION
DIGIX-1-0-0-24VDC-B	CE in process
DIGIX-1-230V	CE
DIGIX-1-0-0-24VDC	CE in process
DIGIX-1-1-1-230V	CE
DIGIX-2-1-0-24VDC	CE in process
DIGIX-4-1-1-24VDC	CE in process
UNIX-1-230V	CE in process
TWIX-1-230V	CE in process
TWIX-1-24VDC	CE in process
TWIX-2-230V	CE in process
TWIX-2-24V	CE in process
TWIX-3-24VDC	CE in process
MM1015-230V	CE in process

Human Machine Interface

PRODUCT CODE	CERTIFICATION
SP112-GT70-ET-CE	CE in process
SP112-GT70-S-CE	CE in process
SP3-GT35	CE in process

Add ons - PLC IO's

ORDER CODE	DESCRIPTION	CERTIFICATION
EXP-FLEX 2M	Expansion slot - Flexys IO cards	CE
FL-SC-DI10	10 Digital inputs card	CE
FL-SC-DI14	14 Digital inputs card	CE
FL-SC-RO08	8 Channel relay output card	CE
FL-SC-TO08	8 Channel transistor output card	CE
FL-SC-TO08-1A	8 Channel transistor output card - 1A	CE in process
FL-SC-DI04-RO04	4 Digital input, 4 Relay output card	CE
FL-SC-AI04-U	4 Channel analog input card - Universal	CE in process
FL-SC-AI04-RTD	4 Channel analog input card - RTD (PT-100)	CE
FL-SC-AI04-TC	4 Channel analog input card - Thermocouple	CE in process
FL-SC-AIDF04-TC	4 Channel differential analog input card - Thermocouple	CE
FL-SC-AI06-V	6 Channel analog input card - Voltage	CE
FL-SC-AI06-I	6 Channel analog input card - Current	CE
FL-SC-AI03-NTC-AI03-I	3 Channel analog input - NTC, 3 channel analog input - Current card	CE in process
FL-SC-AO04-V	4 Channel analog output card - Voltage	CE
FL-SC-AO04-I	4 Channel analog output card - Current	CE
FL-SC-AI03-U-AO02-U	3 Channel analog input - Universal, 2 Channel analog output - Universal card	CE in process
FL-SC-LC04	4 Channel loadcell input card	CE in process

Power Supply

PRODUCT CODE	CERTIFICATION
RP-2M-1.1A-24VDC	CE in process
RP-3M-2.5A-24VDC	CE in process
RP-3M-5A-24VDC	CE in process

Annunciator

PRODUCT CODE	CERTIFICATION
AN-8-0-0-230V	---

Relay Module

PRODUCT CODE	CERTIFICATION
RLYMD-1-S4-1CO-24VDC	CE
RLYMD-1-S4-2CO-24VDC	CE
RLYMD-2-S8-1CO-24VDC	CE
RLYMD-2-S8-2CO-24VDC	CE
ERLYMD-2-1-S8-1CO-24V	CE

Data Converters / Accessories

PRODUCT CODE	CERTIFICATION
AC-USB-RS232-01	CE in process
AC-USB-RS485-02	CE
AC-USB-RS485-03	CE
AC-S2E-01	CE in process
AC-IOEXP-01	CE
AC-IOEXP-03	CE
ACH-001	CE
ACH-002	CE
ACH-003	CE
ACH-004	CE
AC-RS485-RS232-ISO	CE



Features:

Compared to conventional enclosures, these enclosures offer special characteristics for highest demands under extreme conditions.

Ingress Protection class: IP68 BIS/IEC 60529:2001 – DIN & EN 6059.

Shock Resistance: 7 joule according to EN 60079 without impairment of ingress protection.

Application: Indoor and outdoor.

Wall thickness: 4-5 mm

Easy wall mount installation inner design. External wall mount kit available.

High level of anti-corrosion, water and water-salt protection.

Ordering information - Enclosures

Code	A / mm	B / mm	C / mm	Finish
ENC1-455030-CE	45	50	30	RAL7001
ENC1-645834-CE	64	58	34	RAL7001
ENC1-758057-CE	75	80	57	RAL7001
ENC1-1258057-CE	125	80	57	RAL7001
ENC1-1758057-CE	175	80	57	RAL7001
ENC1-2508057-CE	250	80	57	RAL7001
ENC1-10010081-CE	100	100	81	RAL7001
ENC1-12012281-CE	120	122	81	RAL7001
ENC1-12012291-CE	120	122	91	RAL7001
ENC1-14014091-CE	140	140	91	RAL7001
ENC1-22012081-CE	220	120	81	RAL7001
ENC1-22012091-CE	220	120	91	RAL7001
ENC1-26016091-CE	260	160	91	RAL7001
ENC1-400230180-CE	400	230	180	RAL7001
ENC1-758057-1-CE	75	80	57	RAL 1 Way
ENC1-758057-1-YB-CE	75	80	57	Yel. Blk. 1 Way
ENC1-1258057-2-CE	125	80	57	RAL 2 Way
ENC1-1758057-3-CE	175	80	57	RAL 3 Way
ENC1-2508057-4-CE	250	80	57	RAL 4 Way

Enclosure Material: Aluminium alloy ENAC-GdAlSi12(Fe) DIN1706 High quality corrosion resistant aluminium die cast alloy for high stability and long life.

Gasket Material: Compression moulded neoprene (-40°C up to 130°C) for high degree of protection. Also, silicon rubber gasket (-60°C up to 200°C) on request.

Surface finish: Powder coated Grey RAL7001 as standard.

Optional finish: Natural aluminium, Black RAL9005, Silver grey RAL7032 and other colours, Hybrid powder (epoxy & polyester) and CMD-KTL black coatings on request.

Fasteners: Stainless steel.

Standard unit includes: Base, Cover, Neoprene gasket and Fasteners

temperature resistance up to 260 °C (natural finish enclosure).

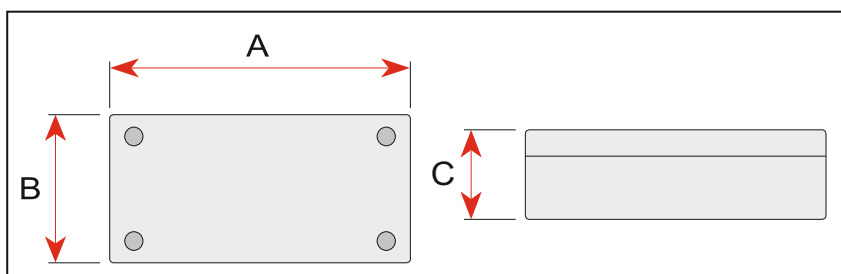
Accessories Mounting Plate

- Manufactured in galvanized steel.
- Allows the assembly hardware & components without drilling the enclosure ensuring the IP68 rating.
- Direct and easy assembly inside the Base of enclosure.
- Mounting hardware included.
- Not available for enclosure dimensions 45x30x30.

Note:

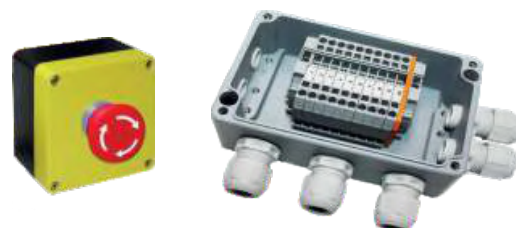
External hinges, din rails and wall mount brackets available on special request.

Mounting Plates (Galvanized Steel)			
ENMP-645834	64	58	34
ENMP-758057	75	80	57
ENMP-1258057	125	80	57
ENMP-10010081	100	100	81
ENMP-2508057	250	80	57
ENMP-12012281	120	122	81
ENMP-12012291	120	122	91
ENMP-14014091	140	140	91
ENMP-22012081	220	120	81
ENMP-22012091	220	120	91
ENMP-26016091	260	160	91

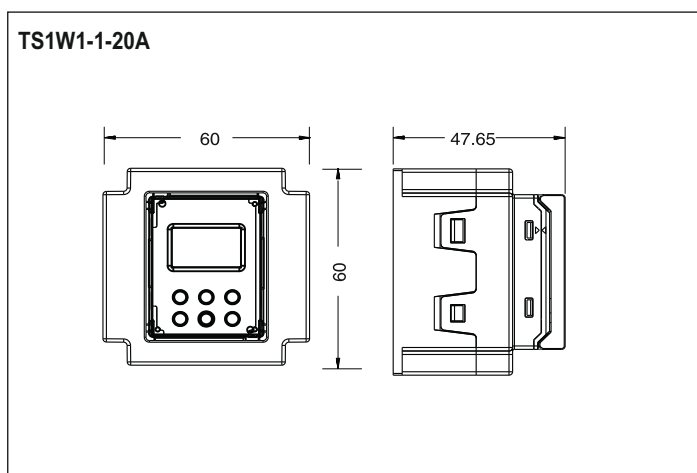
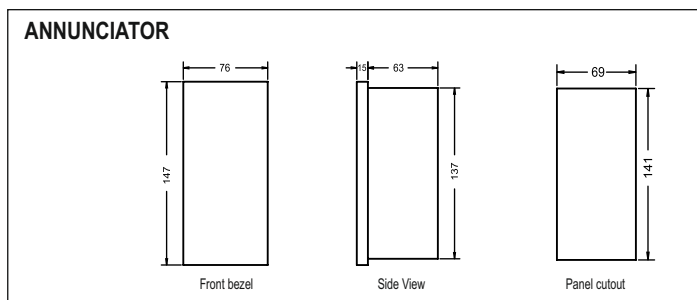
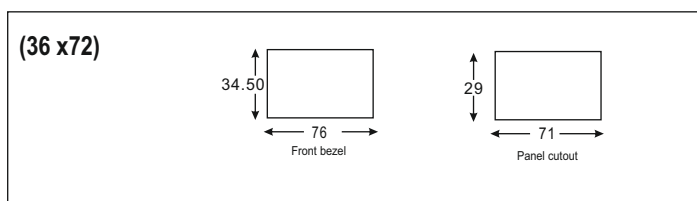
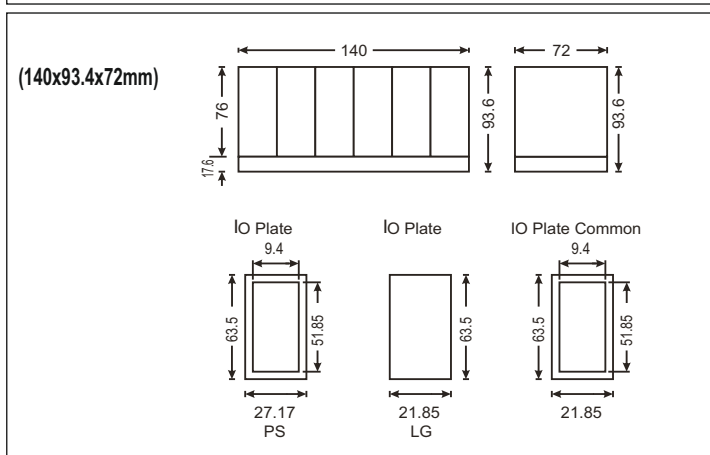
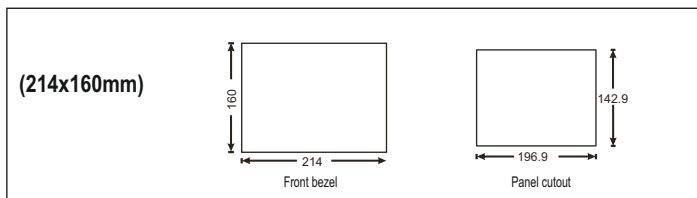
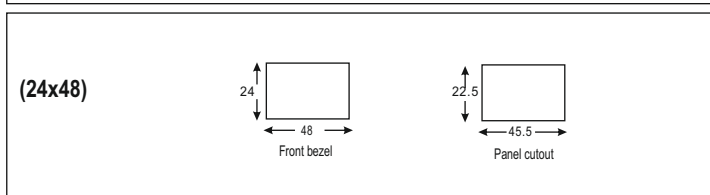
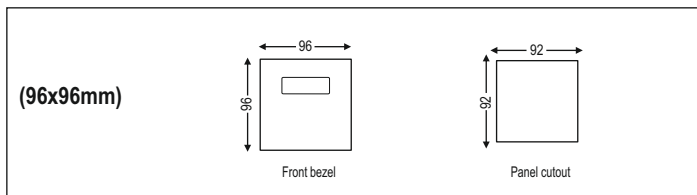
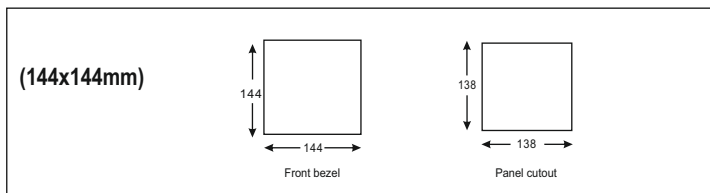
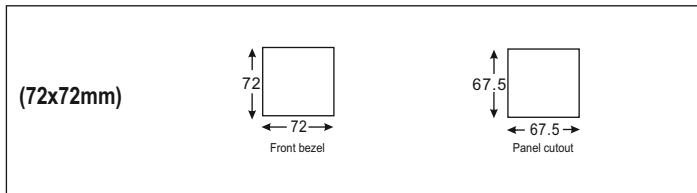
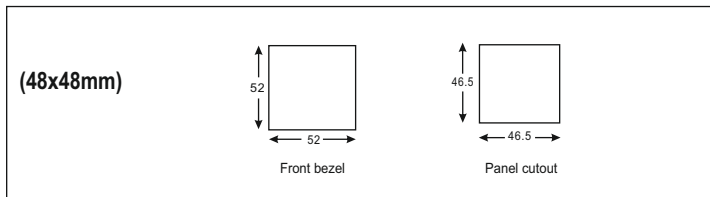
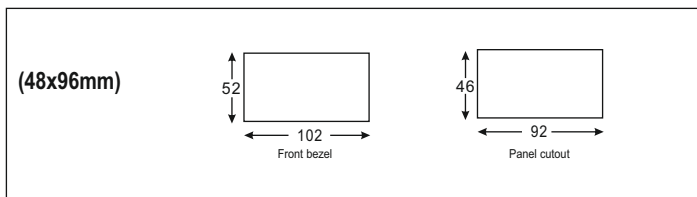


Applications:

CCTV, Solar, Control Stations, Street Lights, Junction Box, Electrical Connection Box and PCB Enclosures etc.



Panel Cutout Dimensions (All are in mm)



ANALOG METERS
(AM - I / AM - V / AM - DIRECT TYPE AMMETER / AM - PF / AM - HZ)

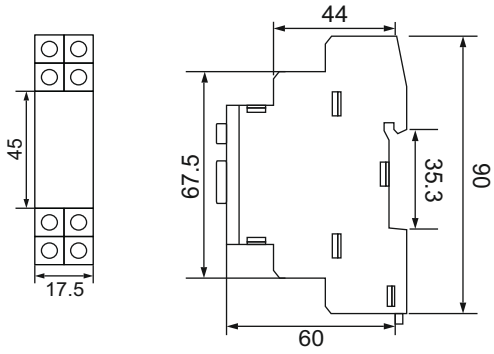
(72x72mm, 96x96mm)

Optional parts : 1. Back cover

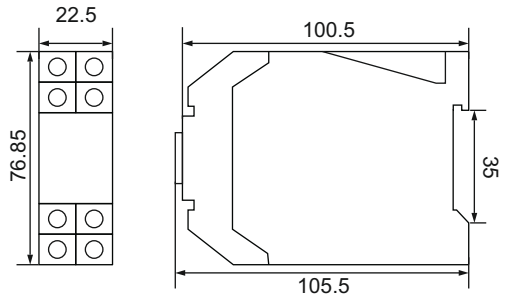
Product	72x72	96x96
Dimensions (in mm)		
a	72	96
b	74.50	98.50
c	67	90.50
d	50	50
e	60	60
f	5.50	5.50
g	8	8
h	68	92

Panel Cutout Dimensions (All are in mm)

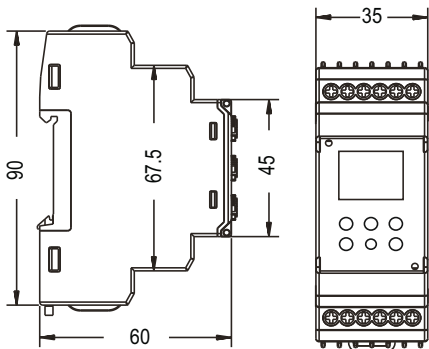
600 SERIES



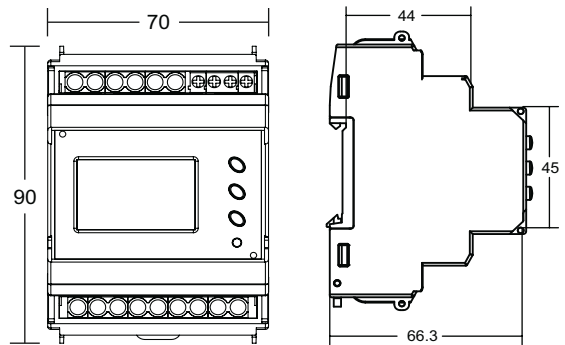
800 SERIES



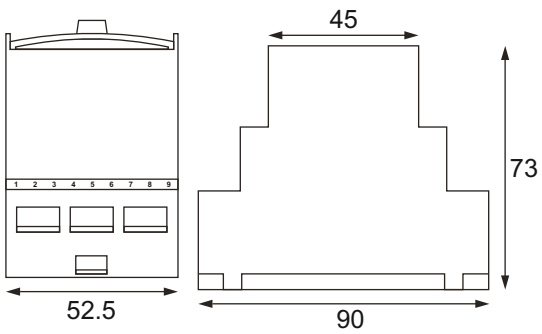
900 SERIES / TS2M1-1-16A / ATS2M1-1-16A / TPRA2M1



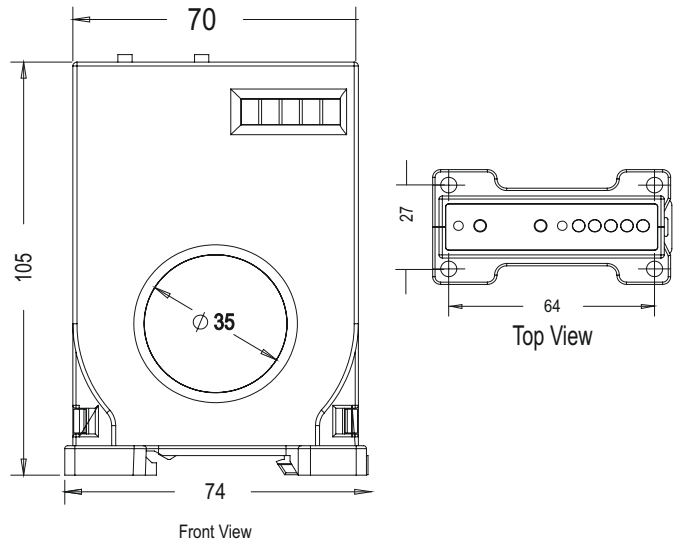
MRJ4M / SMRD4M1



MPR-3M



ELCTR35



Subsidiaries : [Selec GmbH](#) | [Selec USA](#) | [Selec Australia](#)

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