

Electrical Characteristics

(TVM, Multifunction Meter, Energy Meter & Demand Controller)

Electrical Characteristics			
Type of measurement	True RMS up to the 22nd harmonic 50 samples per cycle at 50 Hz		
Measurement	Current and voltage	Class - 1.0 / Class - 0.5 accuracy	
Accuracy*	Power	Active	Class - 1.0 / Class - 0.5 accuracy
		Reactive	Class - 2.0 / Class - 1.0 accuracy
		Apparent	Class - 1.0 / Class - 0.5 accuracy
Frequency		Class - 0.1 / Class - 0.05 accuracy	
Power factor		Class - 1.0 / Class - 0.5 accuracy	
Energy	Energy	Active	Class - 1.0 / Class - 0.5 accuracy
		Reactive	Class - 2.0 / Class - 1.0 accuracy
		Apparent	Class - 1.0 / Class - 0.5 accuracy
		Demand	With 15 / 30 / 60 Min. Integration period
* Additional error of 0.05% of full scale, for meter input current below 100 mA			
Data update rate		1 sec	
Input-voltage characteristics	Inputs	V1, V2, V3, Vn	
	Measured voltage	80 - 480 V AC L-L without PTs Up to 999 kV with external PTs	
	Permissible overload	1.10 Un (480 V L-L)	
	Burden	0.2 VA per phase max.	
	Impedance	VLL - 4 Mohms, VLN - 2 Mohms	
	Frequency range	45 - 65 Hz	
Input-current characteristics	CT ratings	Primary	1 A - 99.0 kA
		Secondary	1 A - 5 A
Measurement range		40 mA - 6 A (5 mA is the starting)	
Permissible overload		10 A continuous	
Burden		0.2 VA per phase max.	
Impedance		< 0.1 ohm	
Power supply	AC	44 - 277 V AC at 50 Hz/60 Hz	
	DC	44 - 277 V DC	
	Ride-through time	100 ms at 50V	
	Burden	3 VA max.	
Mechanical Characteristics			
Weight		0.500 kg (shipping), 0.400 kg (unpacked)	
IP degree of protection		Front: IP 51; Back: IP 40	
Dimensions		Bezel: 96 x 96 mm Depth: 65 mm behind bezel Panel cutout: 92 x 92 mm	
Environmental Conditions			
Operating temperature		-10°C to +60°C	
Storage temperature		-25°C to +70°C	
Humidity rating		5 to 95 % RH non-condensing	
Electromagnetic Compatibility			
Electrostatic discharge		IEC 61000-4-2	
Immunity to electromagnetic RF fields		IEC 61000-4-3	
Immunity to electrical fast transients		IEC 61000-4-4	
Immunity to surge waves		IEC 61000-4-5	
Impulse voltage withstand capability		6kV for 1.2/50 μS per IS : 13779	
Communication			
RS-485 port		2 terminals only Baud rate : Min. 9600bps Protocols: Modbus RTU	
Display Characteristics			
Integrated LED display		View 3 parameters together on 3 line, 4 digits per line display. Auto-scaling capability for Kilo, Mega values User-selectable default display page. Password protection for setup parameters.	