



DIRECT CONNECT 45A SINGLE PHASE ENERGY METER - DRS-45-1P CROMPTON INSTRUMENTS

KEY FEATURES

- MID D certified
- Class B (kWh) to EC 2004/22/EC
- Direct connect to 45A
- DIN-rail enclosure DIN 43880
- Import / export kWh
- Modbus™ RTU protocol
- Two pulsed output

TE Connectivity's (TE) Crompton Instruments DRS range of MID APPROVED, direct connected energy meters represents a multi-function range of energy meters in the Crompton Instruments portfolio.

The DRS-45-1P, energy meter is an accurate and cost effective solution for measurement and display of importing and exporting energy parameters for single phase networks. Its easy programming, mounting and user-friendly navigation make the DRS-45-1P an ideal choice for customers who require reliable energy measurement.

The product features a DIN-rail enclosure and backlit LCD display.

The DRS-45-1P has two communication interfaces

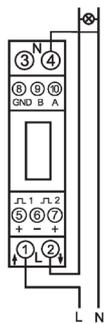
Modbus™ RTU protocol

Two pulsed outputs

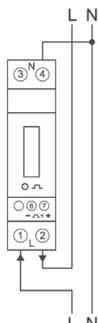
Customers can count on consistent, high quality products, driven by TE's proven innovation and backed by our extraordinary customer support.

Energy Meter - Single Phase

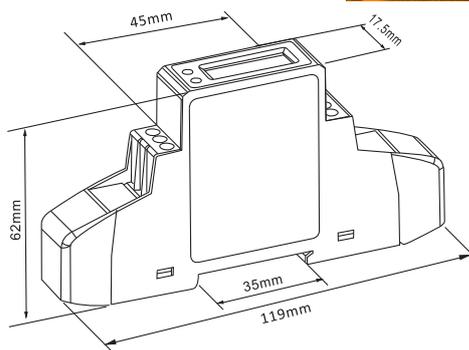
Wiring Diagrams



DRS-45-1P-MOD



DRS-45-1P-PLS



The DRS-45-1P-PLS Energy Meter is an accurate and cost effective solution for the measurement of Importing Active Energy (kWh) for a single phase network, directly connected upto 45A.

SPECIFICATION

Input	
Nominal input voltage	63.5-276V AC L-N (173-500V L-L) 600V MAX
Max. continuous input overload voltage	120% of nominal
Max. short duration input voltage	2 x nominal voltage for 1 second
Nominal input voltage burden	< 0.2VA per phase
Nominal input current	0.25-5 (45A)
Nom. Input current burden	< 0.5 VA
Max. continuous input overload current	120% of nominal
Max. short duration input current	20 x nominal current for (10 msec)
Accuracy	
Voltage (V)	+/- 0.5% of range maximum
Current (A)	+/- 0.5% of range maximum
Frequency (Hz)	+/- 0.2% of mid-frequency
Power factor (PF)	+/- 1% of unity (0.01)
Active power (W)	+/- 1.0% of range maximum
Reactive power (VAR)	+/- 1.0% of range maximum
Apparent power (VA)	+/- 1.0% of range maximum
Active energy (kWh)	+/- 1.0% of range maximum to IEC 62053-21
Reactive energy (kVArh)	+/- 1.0% of range maximum to IEC 62053-24
Response Time	1 sec, typical, to >99% of final reading at 50Hz
Measured Range	
Voltage (V)	5 - 120% of nominal (Min 100V - self powered)
Current (A)	5 - 120% of nominal
Frequency (Hz)	44 - 66 Hz +/- 2%
Power (W, VAR, VA)	5 - 144% of nominal (bi-directional)
Energy	7 digit, upto 999999.9 kWh / kVArh
Power factor	4 quadrant
Input Waveform	Sinusoidal (distortion factor < 0.05)

Description	Part number
MID energy meter Single phase DIN-rail mounted 45A direct connect Modbus + 2 pulsed outputs	DRS-45-1P-MOD-01

SPECIFICATION

Auxiliary	
Operating range	Self powered
Supply burden	< 10 VA
Environment	
Operating temperature	-25°C to +55°C
Storage temperature	-40°C to +70°C
Relative humidity	0 to 95%, non-condensing
Shock	30g in 3 planes
Vibration	10Hz to 50Hz, IEC 60068-2-6, 2g
Dielectric voltage	4kV
Impulse voltage	6 kV
Altitude	3000m
Warm-up	1 minute
Magnetic field of external origin	Terrestrial flux
Outputs	
Pulsed output relay (configurable)	Opto- coupled, potential-free SPST-NO oncontact
Contact rating current	2-27mA at 27V DC
Contact rating voltage	5-27V DC
Pulse width	60 / 100 / 200 ms
Pulse rate	0.01 / 0.1 / 1 / 10 / 100 kWh / kVArh Default: 1 pulse per Wh/VArh
Pulsed output relay (non-configurable)	1000 IMP/kWh
Communications	Modbus RTU (RS485)
Type	2-wire half duplex
Baud rate	4800, 9600
Address	1 to 247
Parity	None (default) / Odd / Even
Stop bits	1 (default) / 2
Enclosure	
Enclosure style	DIN-rail to DIN 43880
Dimensions	119x17.5x62mm (LxWxH)
Protection rating	Front IP51
Material	Self extinguishing UL 94 V-O
Weight	75 g
Cable size	0.5mm ² - 4mm ² stranded cable.



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