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EST. 1964

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RI-D18-100-CT Kit

Single Phase Multifunction DIN Rail Energy Meter and CT

- Single module DIN rail mounted
- Energy pulse LED
- Supplied with Mini split-core CT with 16mmØ aperture for easy retrofitting (Input 100A/330mV)
- Single phase network compatible
- Import & Export energy measurement
- Clear 6 digit backlit LCD display with 1 or 2 decimal places
- True RMS measurement
- Cost effective and accurate
- Simple operation
- Modbus communication plus 2 x Pulse outputs
- Non-volatile memory

Product Description

The RI-D18-100-CT is a DIN rail single-phase energy meter. Suitable for monitoring energy consumption and many other electrical parameters in industrial and commercial applications. These meters may be used in single phase systems.

A high efficiency backlit LCD display provides a clear indication of the measured value in all light conditions. The push-button on the front of the meter allows the user access to the display page required.

The meter is available in ONE version:

- With RS485 Modbus communication and 2 x pulse outputs.

The unit is housed in a compact single module width housing suitable for 35mm DIN rail mounting.

Displayed Parameters

Total active energy (kWh)
Import active energy (kWh)
Export active energy (kWh)
Voltage (V)
Current (A)
Active power (W)
Frequency (Hz)
Power Factor (PF)
Modbus ID
Baud rate
Parity

Display

Display Type	LCD, High definition with green back-light
Digit height	6.35mm (Displayed parameter)
Page scrolling	Manual by front key / auto scroll
Displayed parameters and accuracies	Voltage 0.5% of full scale Current 0.5% of full scale Frequency 0.1% of full scale Power factor 1% of unity Active power 1% Reactive power 1% Apparent power 1% Active Energy Class 1 (IEC/EN62053-21) Reactive Energy Class 2 (IEC/EN62053-23)
Energy maximum display	9999.99 or 99999.9

Input

Connection	Single phase
Input voltage range	120...275V
Voltage Rated Burden	<8VA
Max current (Imax)	100A
Starting current	10mA
Short time overcurrent	30 x Imax to IEC/EN62053-21 + 23
Impulse voltage withstand	6kV 1.2/50µS 0.5J
AC voltage withstand	4kV 50Hz for 1 min.
CT primary current range (Min...Max.)	5A...100A
CT secondary current	0.330mV
Frequency	50...60Hz

Programming

Software	Special Modbus software is required to program this device - available on request

Auxiliary Supply

Voltage range	Self-supplied from measuring input
Operating frequency	See input section
Power consumption	See input section

Outputs

Communication - Modbus Version	
Communication type	RS485
Communication protocol	Modbus
Address	001...255 (001 default)
Number of bits	8bits
Parity	None, even (None default)
Baud rate	300, 600, 1200, 2400, 4800, 9600, 19200
Required response time to request	≤100ms
Number of meters connected on the bus	64 (up to 255 with RS485 repeater)
Max distance from Master device	1200M

Outputs

Energy pulses	
Number of pulse outputs	2
Pulse output function	1 x 1000imp/kWh. 1 x User configurable pulse rate and energy type (kWh or kVArh)
Pulse output type	Semiconductor (does not support volt-free operation)
Pulse output Max. current	27mA (Class A to IEC/EN62053-31)
Pulse output voltage range	5...27VDC
Pulse duration	Selectable 60, 100, 200mS
Selectable pulse resolution (kWh)	0.001, 0.01, 0.1, 1

Insulation

Installation category	III
Pollution degree	2
Insulation voltage rating	300V (L-N)

Environmental Conditions

Reference temperature	23°C ±2°C
Specified temperature operating range	–25°C...+55°C
Storage temperature	–40°C...+70°C
Relative humidity	0...75%, non condensing

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Mechanical

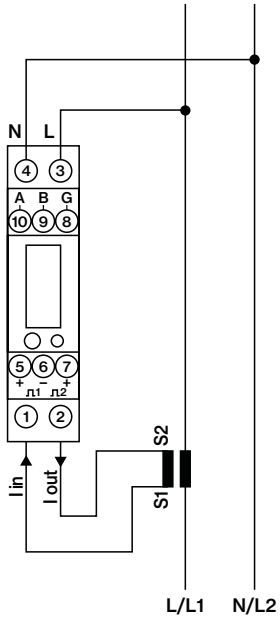
Housing	
Housing	1 module DIN 43880
Mounting	Snap-on 35mm rail
Housing material	Self-extinguishing polycarbonate (UL94 V-0)
Protection degree (IEC/EN60529)	IP20 (terminals), IP51 (front of housing)
Weight	<210g
Termination	
Current input terminal type	Screw clamp type
Max wire size	4mm²
Voltage input terminal type	Screw clamp type
Max wire size	4mm²
Communication output (RS485 and Pulse)	Screw clamp type
Max wire size	1.5mm²

Conformity

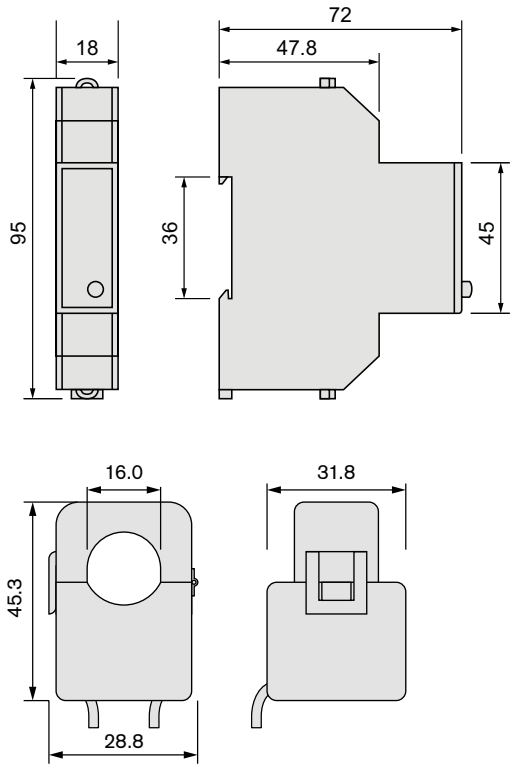
Electromagnetic compatibility	IEC/EN61326-1, IEC/EN55011 Class A, IEC/EN61000-4-2, -3, -4, -5, -6, -8, -11
Accuracy and functionality	IEC/EN62053-21, IEC/EN62053-23
Safety	IEC/EN61010, IEC/EN62053-31

Wiring Diagrams

Note: # All fuse types : 0.5A class CC UL type
0.5A fast acting >250V (600V for L-L)



Dimensions (mm)



Model Selection Table

Communications	Model
RS485 Modbus and 2 x Pulse outputs	RI-D18-100-CT

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