

MULTI-CHANNEL ELECTRONIC ENERGY METER

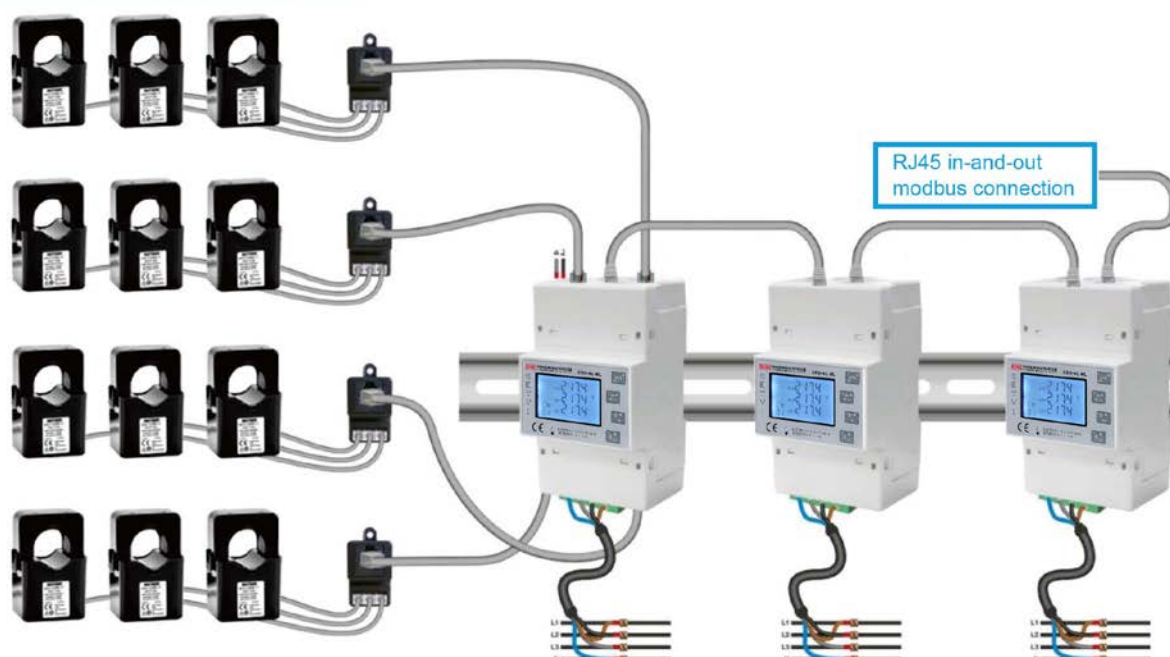


CED-4C ML

Features

- Comprising 4 modules within one energy meter, yet only 72mm in product width – more compact than using 4 x three-phase meters
- Convenient "easy-click" plug-in connection
- Current Input: RJ12 100mA
- Current transformer ratios can be programmed independently (Load 1, 2, 3, 4)
- Providing measurement of a variety of parameters
- RS485 RTU Modbus Communication
- THD of Voltage and Current
- Quad-Load Option (3P4W x 3, or 1P2W x 12)

Up to 12 single-phase current transformers on one meter (CED-4C ML)



Introduction

Providing measurement for multiple channels, this new multi-function electronic energy meter works with a variety of wiring modes and provides a variety of measurements, including *voltage, current, power, PF, THD, frequency, demand, energy*, and more. Easy to wire and install due to their plug-in connectors, these multi-load meters can be used as *4 x Three-Phase Energy Meters, or 12 x Single-Phase Energy Meters*. Required with these meters is the use of 100mA/100mV secondary external Current Transformers. The electronic meter comes with a RS485 communication port through 2 x RJ45 connectors.

Specification

Nominal voltage (Un)	3Φ, 400Y/230V ac
Operational voltage	80% ~ 120% of Un
Aux. power supply	85 ~ 276V AC or 120 ~ 380V DC
Insulation capabilities	
-AC voltage withstand	4KV for 1 minute
-Impulse voltage withstand	6KV-1.2μS
Rated current (Imax)	100mA CT input
Operational current range	0.4% Ib-Imax
Over current withstand	20 Imax for 0.5s
Operational frequency range	50 or 60Hz
Internal power consumption	≤ 2W / 10VA
Pulse output indicator	LED
Pulse output rate	1000imp / kWh
Display	LCD
Max reading	99999999 kWh / kVAh

Performance criteria

Operating humidity	≤ 90%
Storage humidity	≤ 95%
Operating temperature	-25° C - +55° C
Storage temperature	-40° C - +70° C
Reference temperature	23° C ± 2° C
International standard	IEC 62053-21
Accuracy class	Class 1
Installation category	CAT III
Degree of pollution	2
Protection against penetration of dust and water	IP51 (indoor)
Insulating encased meter of protective class	II

Accuracy

Voltage, Current	0.5%
Frequency	0.2% of mid-frequency
Power factor	1% of unity (0.01)
Active power, Apparent power	$\pm 1\%$ of range maximum
Reactive power	$\pm 1\%$ of range maximum
Reactive energy (VARh)	Class 2
Active energy (Wh)	Class 1

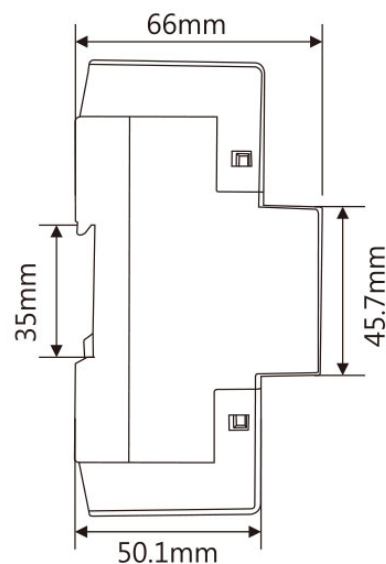
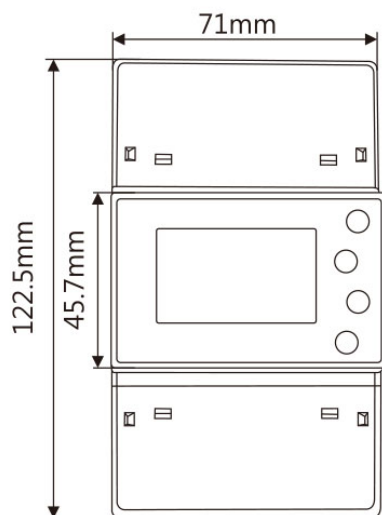
Modbus

Bus type	RS485 (semi-duplex)
Protocol	Modbus RTU
Baud rate	2400 / 4800 / 9600 / 19200 / 38400bps
Address range	1-247
Max. Bus loading	64pcs
Communication distance	1000m
Parity	EVEN / ODD / NONE
Date bit	8
Stop bit	1

Enclosure

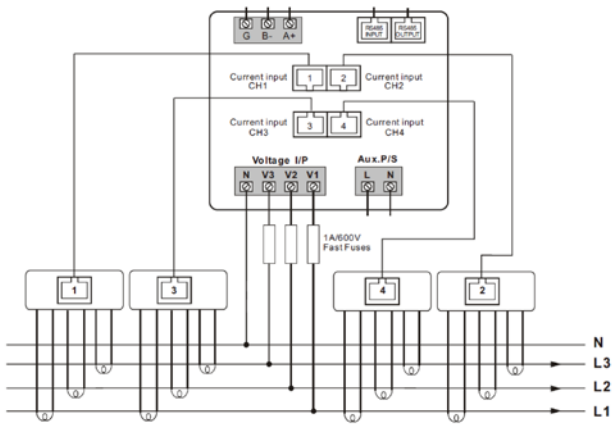
Mounting	DIN rail (DIN3880)
Dimesion	122.5 x 71 x 66mm (H x W x D)
Protecting rating	IP51 (indoor)
Material	UL 94 V-0
Weight	330g

Dimensions

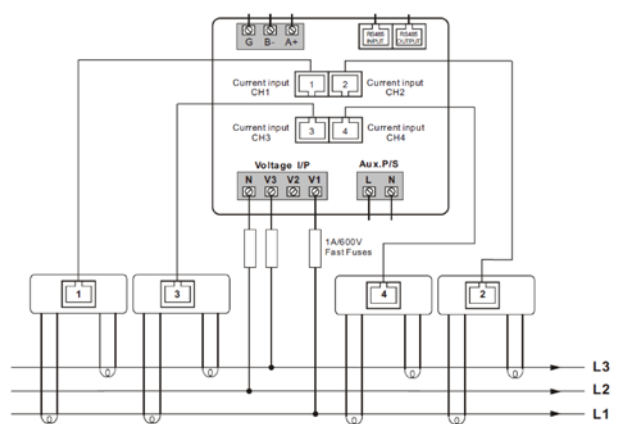


Height: 122.5mm
Width: 71mm
Depth: 66mm

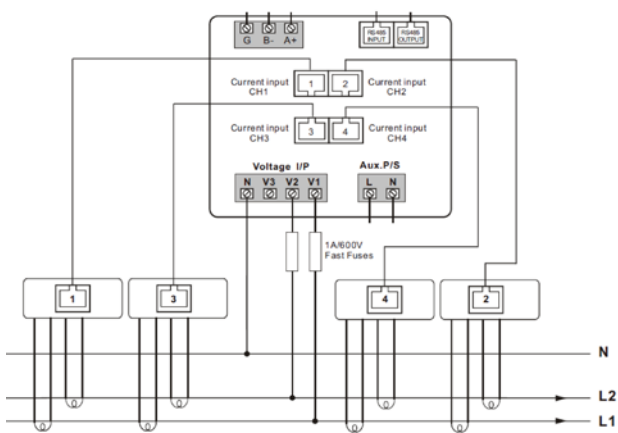
Wiring diagram



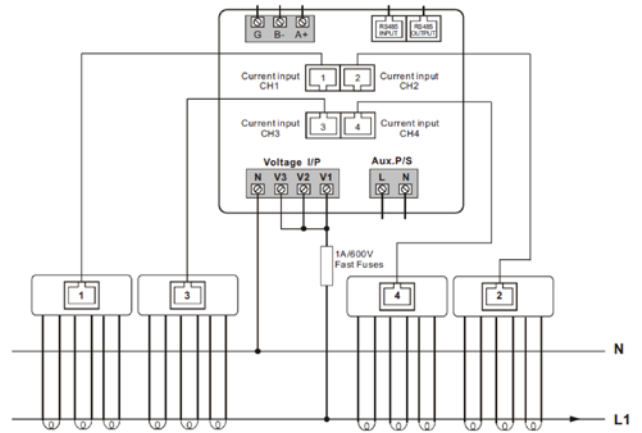
Three Phase 4 Wires



Three Phase 3 Wires



Single Phase 3 Wires



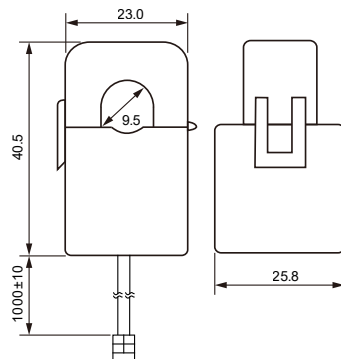
Single Phase 2 Wires

Accessories

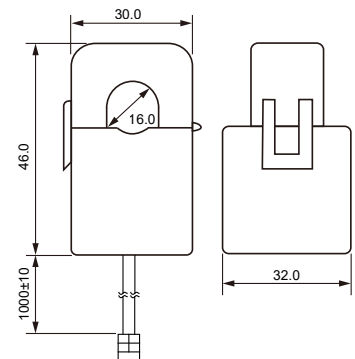
C Series

Split Core Current Transformer

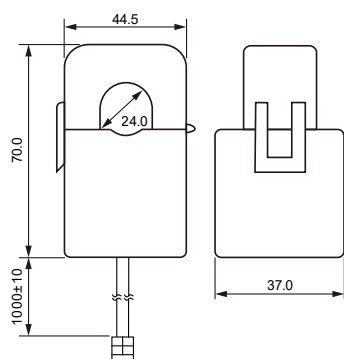
(Unit: mm)



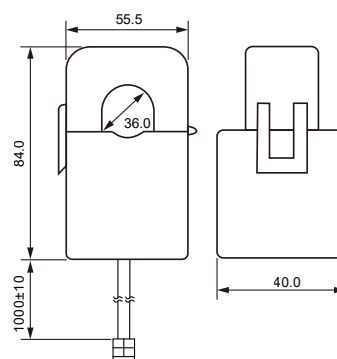
C10-020



C16-150



C24-300



C36-600

Specification (Split Core Current Transformer · C Series)

Frequency	50-60Hz
Rated current	20 A to 600 A loads
Rated output	100mA
Accuracy	Class 0.5 or 1 from 20% to 120% of rated current
Phase angle	Less than 2 degrees at 50% of rated current
Insulation voltage	600Vac
Maximum primary voltage	5000Vac (Insulated Conductor)
Dielectric strength	2.5KV / 1mA / 1min
Operating temperature	-12° C to +75° C.
Operating humidity	< 85%
Standard	IEC61869-2
Core	Permalloy
Internal structure	Epoxy
Leads	UL 1015, Twisted Pair, 22AWG

Dimensions (Split Core Current Transformer · C Series)

Model	Rated Amps	Output	Accuracy
C10-020	20 A	100mA	0.5
C16-150	150 A	100mA	0.5
C24-300	300 A	100mA	0.5
C36-600	600 A	100mA	0.5



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