

THREE-PHASE DIN RAIL MULTIFUNCTION ENERGY METER



CED-4C



Product Overview

The CED-4C three-phase DIN rail multifunction energy meter is available in two versions: the CED-4CFAA (CT-Connected Type) and the CED-4CFBA (Direct Connection Type). Both versions accurately measure and display a comprehensive range of electrical parameters in single-phase 2-wire, three-phase 3-wire, and three-phase 4-wire systems, including voltage (V), current (A), active and reactive power (kW, kvar), frequency (Hz), active energy (kWh), reactive energy (kvarh), forward energy, reverse energy, total harmonic distortion, and more. Designed for real-time monitoring of electrical parameters, these meters offer multifunction capability, versatility, high stability, and long service life.

The CED-4CFAA (CT-Connected Type) accepts current and voltage inputs via external instrument transformers, making it suitable for both high- and low-voltage systems, with support for currents up to 9999 A and voltages up to 500 kV. Its RS485 communication interface supports data transmission intervals as short as 100 milliseconds.

Features

- Compact design with a small footprint
- CED-4CFAA (CT-Connected Type): current input via direct connection to the CT secondary
- CED-4CFBA (Direct Connection Type): rated current up to 100 A
- Bidirectional metering; accurate measurement of forward and reverse energy
- Multifunction measurement with configurable cyclic display
- 2 pulse output terminals; configurable pulse constant, pulse width, and output unit
- Front-panel controls for easy configuration, with password protection for added security
- RS485 communication interface (supporting Modbus RTU protocol); baud rate up to 38,400 bps for remote monitoring and data transmission
- White backlit LCD display for easy reading
- DIN rail mounting for easy installation
- Compliant with CE, RoHS, and FCC standards

Technical Specifications

	CED-4CFAA	CED-4CFBA
Nominal Voltage (Un)	3 × 230 / 400 VAC	3 × 230 / 400 VAC
Operating Voltage	80% ~ 120% of Un	80% ~ 120% of Un
Auxiliary Power Supply	85 - 275 VAC (AUX)	Self-powered from measured voltage
Insulation Withstand Voltage	4 kV / 1 min	4 kV / 1 min
Impulse Withstand Voltage	6 kV, 1.2/50 μs	6 kV, 1.2/50 μs
Operating Current Range	0.4% Ib to Imax	0.04 ~ 100 A
Operating Frequency Range	50 or 60 Hz	50 or 60 Hz
Power Consumption	≤ 2 W, ≤ 10 VA	≤ 2 W, ≤ 10 VA
Pulse Output Indicator	LED	LED
Meter Constant	3200 imp/kWh	400 imp/kWh
Display	8-digit LCD multifunction display for electrical parameters	8-digit LCD multifunction display for electrical parameters
Maximum Display Value	9999999.9 (kWh & kvarh)	9999999.9 (kWh & kvarh)

Accuracy

	CED-4CFAA	CED-4CFBA
Voltage & Current	± 0.5%	± 0.5%
Frequency (Hz)	± 0.2%	± 0.2%
Power Factor (PF)	± 1%	± 1%
Active Power (kW) & Apparent Power (kVA)	± 1%	± 1%
Reactive Power (kvar)	± 1%	± 1%
Reactive Energy (kvarh)	Class 2	Class 2
Active Energy (kWh)	Class 1	Class 1

Performance Specifications

Operating Humidity	≤ 90%
Operating Temperature	-25°C ~ +55°C
Storage Temperature	-40°C ~ +70°C
Reference Operating Temperature	23°C (± 2°C)
Standard	IEC 62053-21
Accuracy Class	Class 1
Overvoltage Category	CAT III 600V
Ingress Protection Rating	IP51 (Indoor Use)

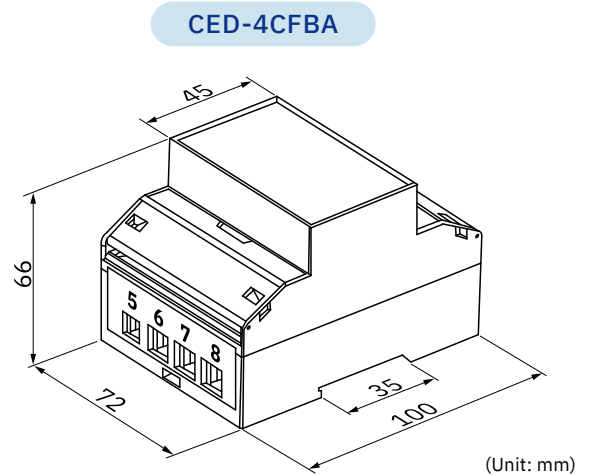
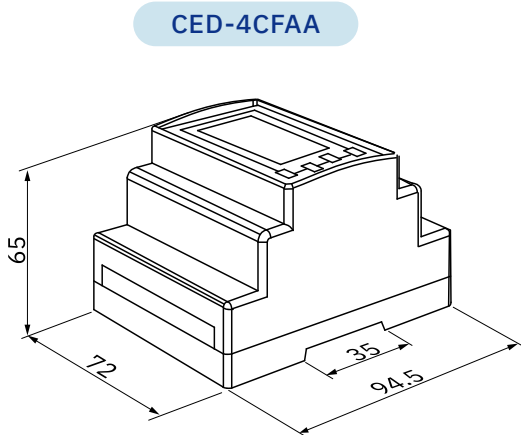
Communication

Communication Interface	RS485 (half-duplex)
Communication Protocol	Modbus RTU
Baud Rate (bps)	2400 / 4800 / 9600 (default) / 19200 / 38400
Address Range	1-247
Maximum Number of Connected Units	64 pcs
Transmission Distance	1000 m
Parity Check	EVEN / ODD / NONE (default)
Data Bits	8
Stop Bits	1

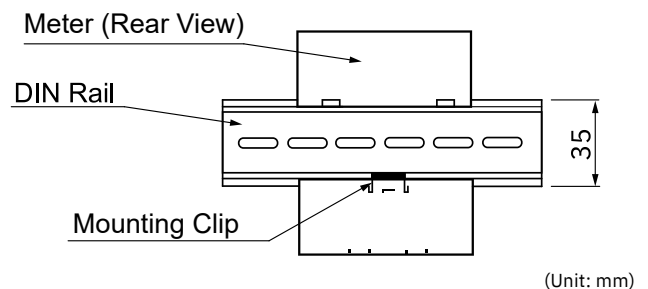
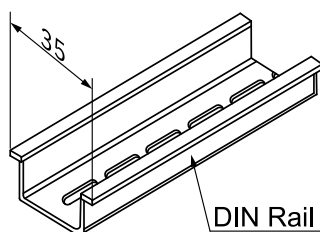
Installation & Related Information

	CED-4CFAA	CED-4CFBA
Mounting Method	DIN rail mounting (35 mm)	DIN rail mounting (35 mm)
Dimensions (mm)	94.5 × 72 × 65 (L × W × H)	100 × 72 × 66 (L × W × H)
Ingress Protection Rating	IP51 (Indoor Use)	IP51 (Indoor Use)
Weight (g)	330	400

Outline Dimensions

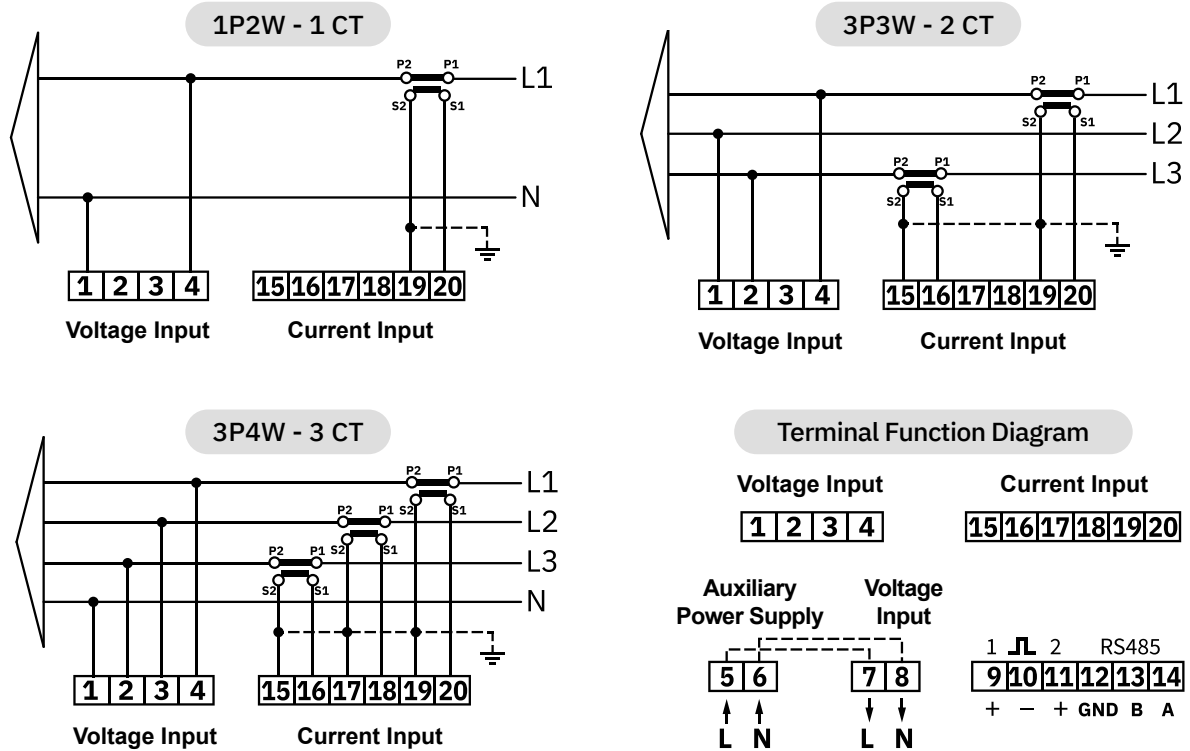


DIN Rail Dimensions

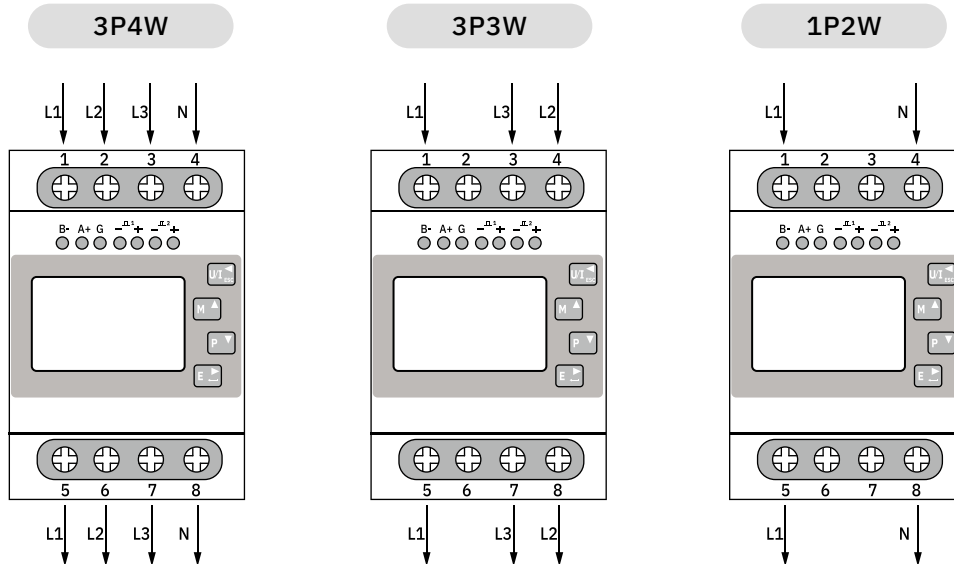


Typical Wiring Configurations

CED-4CFAA



CED-4CFBA



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