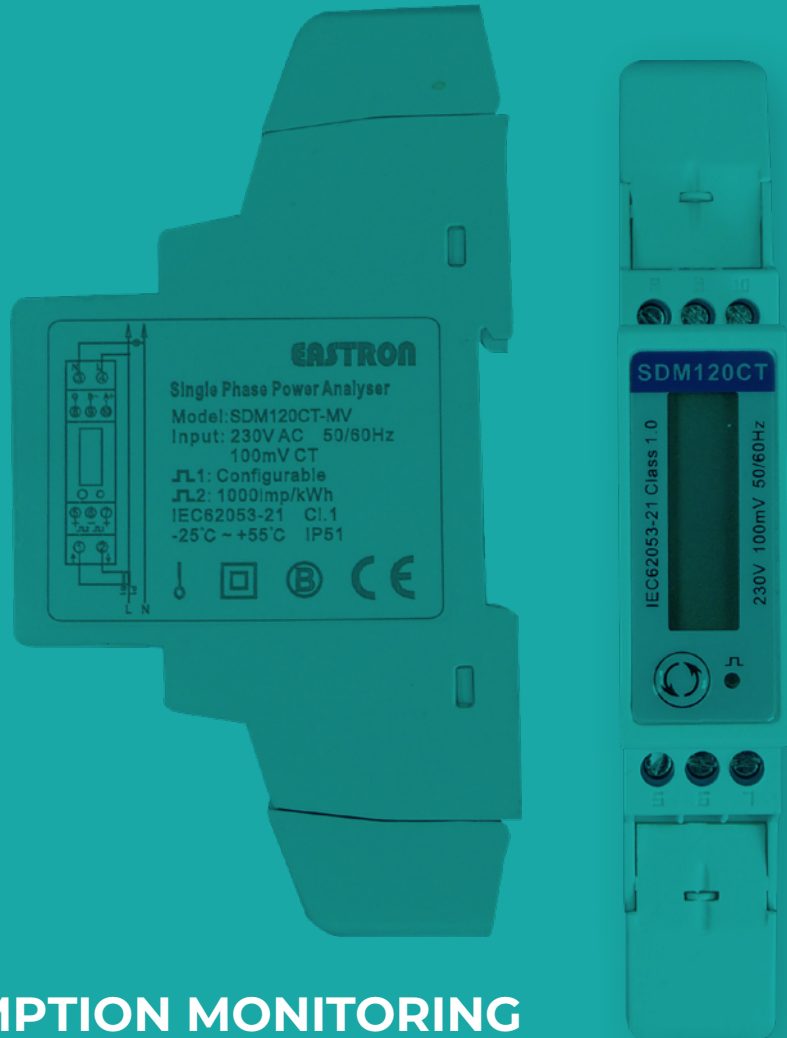


# Single Phase Energy Meter



## ENERGY CONSUMPTION MONITORING OF SINGLE PHASE POWER SUPPLY

The RDM Single Phase Energy Meter is a slim (17.5 mm) DIN rail mounted device which measures power consumption of a single phase supply. Energy is measured via a direct voltage connection to the supply and a split core current transformer (CT), which is included with the purchase of the Single Phase Energy Meter. Split core CT's are able to be fitted around the existing supply cable without physically disconnecting, resulting in a quick and simple installation process.

Offering bi-directional energy monitoring, the energy meter is perfectly suited for applications such as wind or solar energy monitoring where both import and export energy measurements may be desired. Featuring two volt-free pulse outputs, the meter can provide a signal to an external device by emitting a pulse after a certain amount of energy has been recorded, such as 1000 kWh. The meter also contains a Modbus RS485 port to enable network communication with a suitably equipped front-end or monitoring system, including RDM's control system front-end DMTouch.

## Overview

The meter measures energy through a direct voltage connection to the supply and a split core CT. The measured voltage can be in the range of 176-276 VAC. When ordering a Single Phase Energy Meter, a split core CT is included in one of five specified amperage ranges: five Amp, 10 Amp, 20 Amp, 50 Amp, or 75 Amp. Split core CT's, as opposed to solid core, have a "split" in the core allowing the CT to open and be placed around the conductor cable. This provides an extra advantage of convenience, especially in retrofit installations.

Setup of the meter is aided by an LCD display and pushbutton. The device can also be programmed using the RDM front-end DMTouch, once a connection is established using either a USB Modbus adapter PR0623 or (PR0623 DIN) or the TCP/IP Modbus Gateway (PR0020 DUALDIN MOD). The Modbus connection allows the meter to communicate with a multitude of third-party devices. The Modbus registers for the device are listed in the full user guide so that a third-party Modbus programming tool can be utilised for setup if desired.

## Key Features

- Slim hardware footprint with DIN Rail mounting capabilities.
- Supports supply voltages between 176-276 VAC, CT's measuring between 5 and 75 Amps.
- Modbus RS485 connection.
- Two volt-free pulse outputs to signal energy consumption milestones.



Energy Mgmt



Plug-In



Smart Meter



Open Protocol

## Technical Specifications

### Power Supply

FEATURE	SPECIFICATION
Voltage Supply	230 VAC
Voltage Range	176-276 VAC
Power Consumption	<2W/10VA
Supply Frequency	50/60 Hz (±10%)
Display	Backlit LCD, Max. Reading 99999.9 kWh

### Accuracy

FEATURE	SPECIFICATION
Voltage	0.5% of Range Max.
Current	0.5% of Nominal
Frequency	0.2% of Mid-Freq

### Environment

FEATURE	SPECIFICATION
Operating Temp.	-25°C to +55°C
Storage & Transportation Temp.	-40°C to +70°C
Relative Humidity	0 to 95%, Non-condensing

### Mechanical

FEATURE	SPECIFICATION
Dimensions	17.5mm x 119mm x 62mm (WxHxD) DIN 43880
Mounting	DIN Rail 35mm
IP Rating	IP51 (Indoor)
Material	Self-extinguishing UL94V-0

## Ordering Information

DESCRIPTION	PART NUMBER
1 PH DIN Rail Mountable Power Meter with RS485 and 1x 5A CT	PR0671-1PH-5A
1 PH DIN Rail Mountable Power Meter with RS485 and 1x 10A CT	PR0671-1PH-10A
1 PH DIN Rail Mountable Power Meter with RS485 and 1x 20A CT	PR0671-1PH-20A
1 PH DIN Rail Mountable Power Meter with RS485 and 1x 50A CT	PR0671-1PH-50A
1 PH DIN Rail Mountable Power Meter with RS485 and 1x 75A CT	PR0671-1PH-75A
USB Modbus Adapter	PR0623 or PR0623 DIN
TCP/IP Modbus Gateway	PR0020 DUALDIN MOD