

MIVO CONNECT

Meter Collection Cabinet IC14

IC14 is a data collection unit that includes MIVO Connect and four MIVO M-Bus Extender 256 modules. The unit is made of impact-resistant ABS plastic and complies with the IP65 standard. It is equipped with a circuit breaker.

MIVO CONNECT DATA GATEWAY

MIVO Connect is an open M-Bus gateway for collecting meter data in buildings. Data is gathered via internal or external interfaces, including M-Bus, M-Bus over IP, or Modbus RTU/TCP.

The collected data can be transmitted via fixed Ethernet to one or more user-defined services, including cloud-based services and local control systems.

To prevent data loss during network or power outages, the device includes local storage. In addition, it features routing functionality and a user-friendly web interface to simplify administration and troubleshooting.

MIVO M-BUS EXTENDER 256

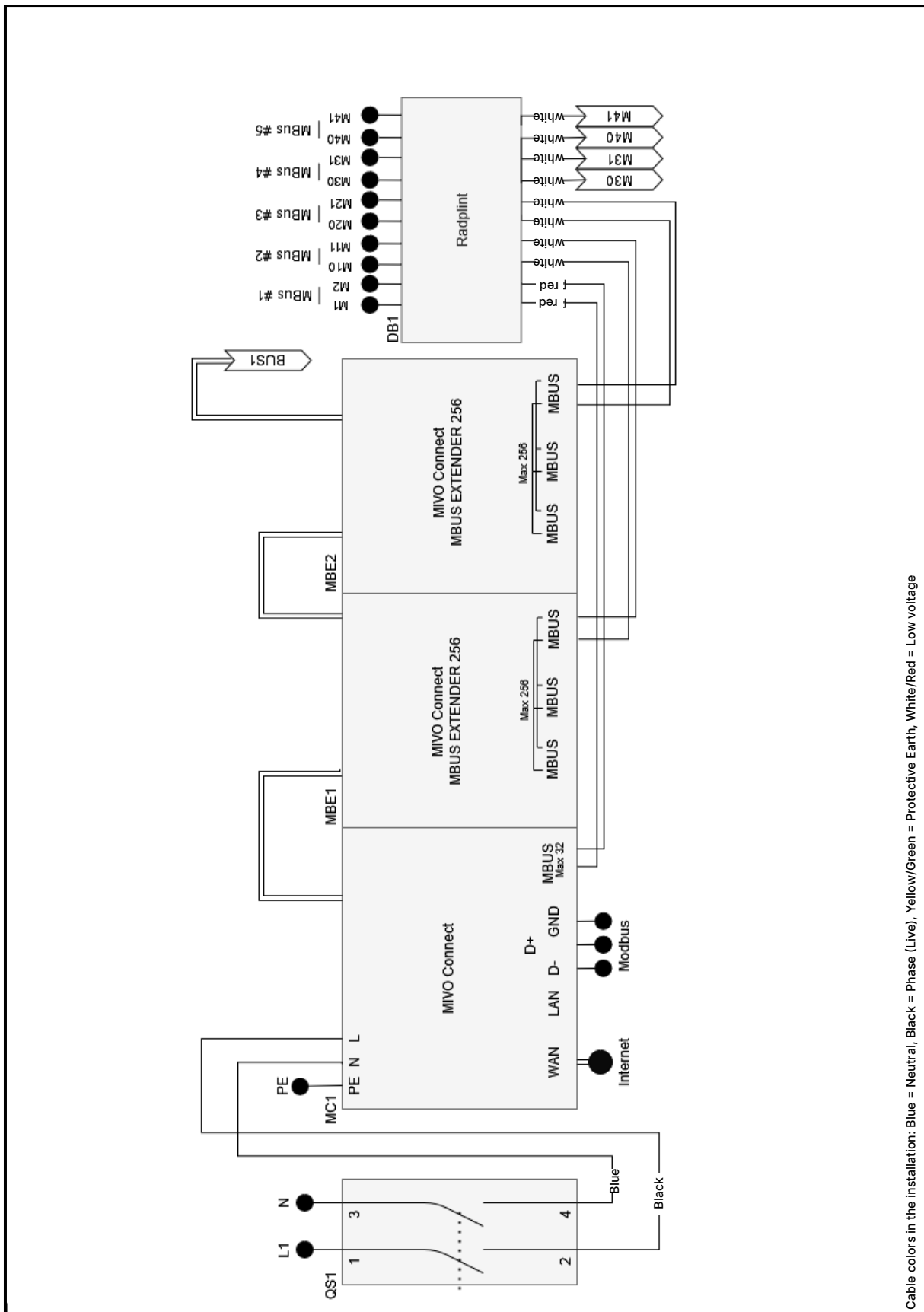
The MIVO Connect M-Bus Extender 256 is an add-on module that expands the system's M-Bus capacity by an additional 256 M-Bus loads. The system is easily connected using the supplied cable and can be expanded with up to ten modules for M-Bus or wireless M-Bus.

The module indicates faults and measures nominal bus voltage and current for easier diagnostics, both visually and via the MIVO Connect Data Gateway.

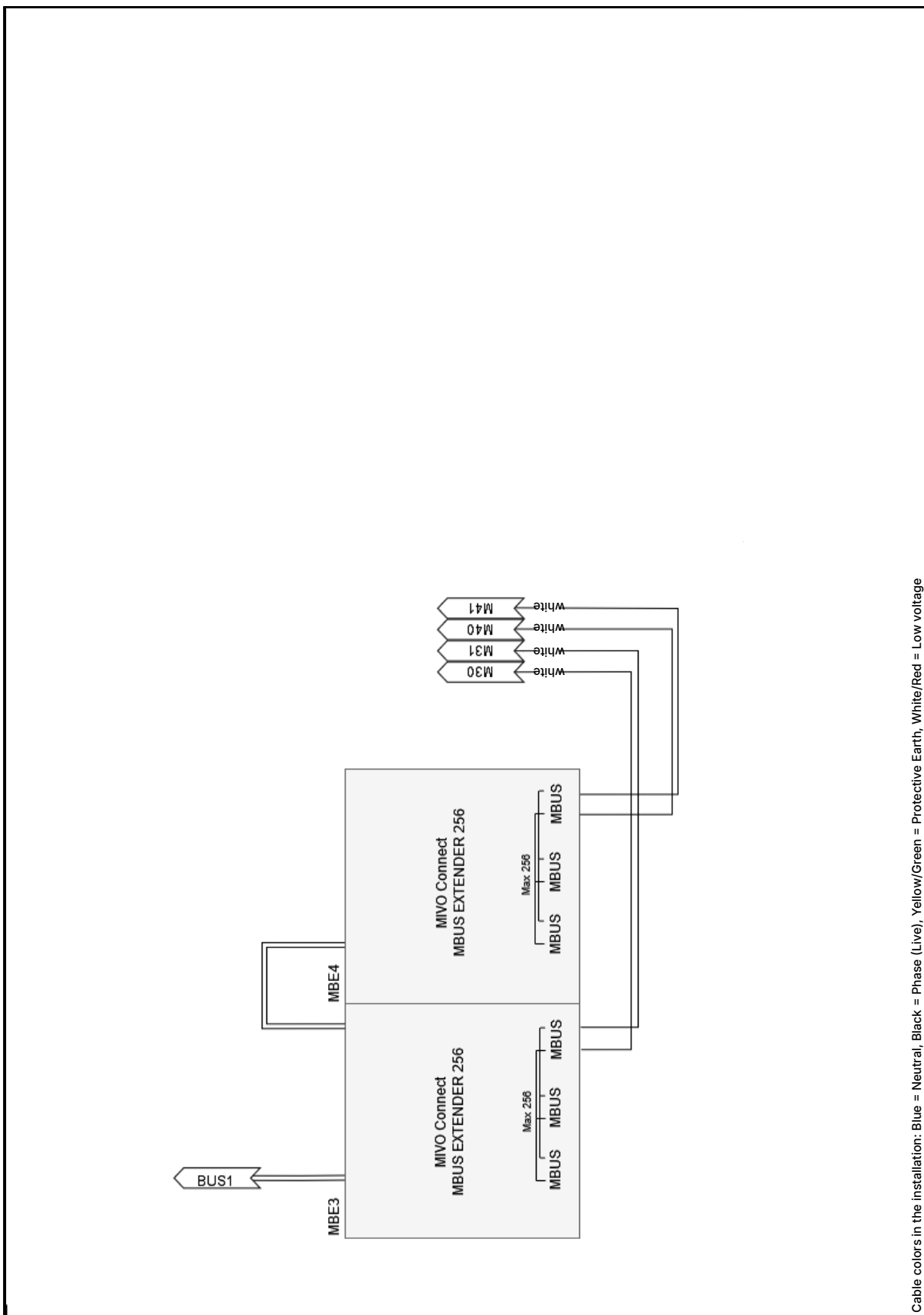


MIVO B2B Webshop

Assembly Drawing / Circuit Diagram

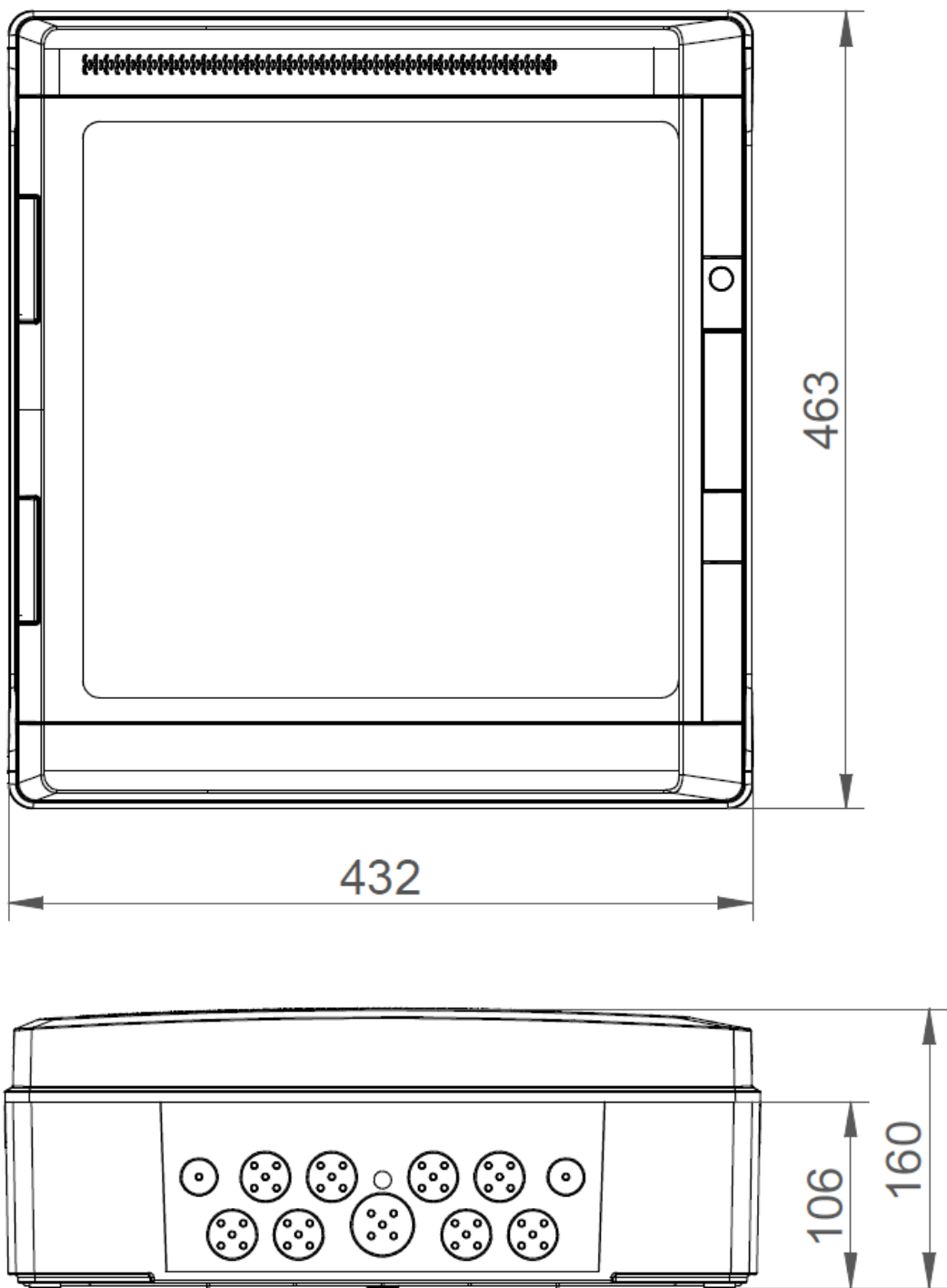


Assembly Drawing / Circuit Diagram



Cable colors in the installation: Blue = Neutral, Black = Phase (Live), Yellow/Green = Protective Earth, White/Red = Low voltage

Dimension



MIVO CONNECT

SMART DATA GATEWAY

MIVO Connect Smart Data Gateway collects data from up to 2000 meters or sensors. The data is collected using internal or external interfaces which include M-Bus, M-Bus over IP or Modbus RTU/TCP.

The collected data can be communicated to one or more user defined services, these include cloud-based services and local building management systems.

To prevent data loss in case of network or power failures the device contains local storage. The device also features router functionality and a user friendly web interface to simplify the administration and troubleshooting process.

The built in expansion bus provides an easily expandable and future proof solution.

Modern web interface for easy installation, configuration, and troubleshooting

In the web interface you can read data, check connections, and retrieve historical data.

Flexible scheduled reports for one or more external systems

Each scheduled export is entirely individual and can be configured with different meters, delivery formats, data resolution and reporting intervals. The intelligent data collection engine optimizes data in the most efficient way.

Built-in M-Bus decoding for easy integration

MIVO Connect Smart Data Gateway has a complete M-Bus decoder that has been tested for many years in operation with most meter manufacturers on the market. When delivering data to higher-level systems, meter readings can be normalized to the desired unit and scaling, simplifying integration.

Delivery of meter readings via standardized transport protocols

The device supports the most common transport protocols: HTTP(S), FTP(S), MQTT, and has predefined report formats and is regularly expanded with new formats.



Easy integration with local control systems

The Device can integrate with DUCs (Data Utilization Center) via M-Bus over IP, ModBus RTU, and ModBus TCP. The built-in web interface makes it easy to configure and generate Modbus mappings and associated Excel documentation.

Internal storage safeguards against data loss

The internal storage protects against data loss in case of internet connection issues or potential data loss in higherlevel systems.

Expandable, upgradeable and future-proof

MIVO Connect Smart Data Gateway features a smart modular system, allowing the device to be expanded with new physical interfaces or software functions as future needs arise.

TECHNICAL SPECIFICATION

Mechanics

Dimensions (w x h x d)	70 × 85 × 57 mm (4 DIN-modules)
Montage	35mm DIN
Weight	200g
Protection class	IP20

Environmental

Storage temperature	-25 to +55 C
Operating temperature	-25 to +55 C
Operating humidity	5 till 90% Non-Condensing
Max. operating altitude	2000m
Pollution degree	2
Operating environment	Indoors

Power

Input voltage	230 VAC (±10%), 50Hz
Power consumption (max)	<5W (20W)
Overvoltage category	CAT 3 (OVC III)
Connection terminals	Spring loaded terminals 0.75 - 1.5mm ²

Ethernet - 2st (WAN / LAN)

Connection	RJ45
Speed	10/100MBit
Router functionality	Yes

LTE *

Typ	LTE Cat-M
SIM	Mini-SIM (2FF)
Connection	SMA

M-Bus Master

Standard	EN 13757
Speed	300/2400/9600 Baud
Nominal voltage	30V
Maximum output current	85mA
Unit loads	32**
Maximum cable length	1000m
Electrical isolation	1500V

RS485 (Modbus RTU)

Type	Isolated
Speed	9600 to 115200 Baud
Termination	None
Biasing	Weak (1kOhm)
Maximum number of nodes	256
Connection	Spring Loaded Terminals (0.75 - 1.5 mm ²)

Other Connections

Expansion bus	MIVO-Link
USB Connection Front	USB-C
USB Connection Bottom	USB-A

Other

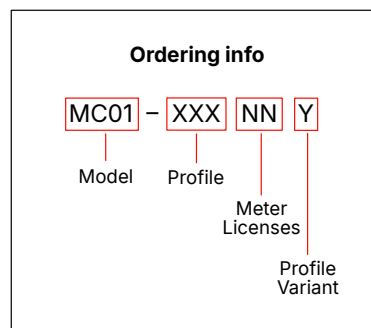
Maximum Number of Sensors	2000
Collecting Period	1min - 24h
Storage Examples **	
	- 100 sensors, hourly values → 20 years
	- 1000 sensors, hourly values → 2 years
	- 2000 sensors, hourly values → 1 year

Approvals

EMC	EN 61000-6-2, EN 61000-6-3
RED	EN 301489-1, EN 301489-7
Safety	EN 62368-1 (OVC III)
Environment	RoHS, WEEE

* Optional

** Can be increased with expansion modules.



MIVO CONNECT

M-BUS EXTENDER 256

An add-on module for the MIVO Connect Smart Data Gateway and expands the systems M-Bus capacity with an additional 256 M-Bus loads.

The system is easily expanded with the included expansion cable and can be forwarded with up to 10 expansion units.

The module indicates errors and measures nominal bus voltage and current for easier diagnostics both visually and via the MIVO Connect Smart Data Gateway.



TECHNICAL SPECIFICATION

Mechanics

Dimensions (wxhxd)	70 × 85 × 57 mm (4 DIN-modul)
Montage	35mm DIN
Weight	200g

Environmental

Storage temperature	-25 to +55 C
Operating temperature	-25 to +55 C
Operating humidity	5 to 90% non-condensing
Max.operating altitude	2000m
Pollution degree	2
Operating environment	Indoors

Power

Input voltage	Via expansion port
Power consumption (max)	<5W (20W)
Overvoltage category	CAT 3 (OVC III)
Connection terminals	Spring loaded terminals 0.75 - 1.5mm ²

M-Bus Master

Standard	EN 13757
Speed	300 / 2400 / 9600
Baud Nominal voltage	40V
Maximum output current	500mA
Unit loads	256
Maximum cable length	5000m
Electrical isolation	1500V

Other

LED	Status, Error, TX, RX
Error codes	Short circuit, Overload, No load
Accuracy current measurement	3%+1mA
Maximum number of expansion modules	10

Approvals

EMC	EN 61000-6-2, EN 61000-6-3
Safety	EN 62368-1 (OVC III)
Environment	RoHS, WEEE