

PRODUCTS FOR ELECTRIC VEHICLE CHARGING STATIONS



BI-DIRECTIONAL ENERGY METERS

Energy meter WM3M4

Class 1 active energy
Class 2 reactive energy

Benefits

- ▶ German Eichrecht compliant
- ▶ Bi-directional metering
- ▶ MID approval
- ▶ 3-phase / 1-phase connection
- ▶ Multiple parameter measurements
- ▶ Digital signing of billing information
- ▶ 40A @ 70°C
- ▶ Public key QR-code
- ▶ 3 DIN modules



Energy meter WM3M4C

Class 1 active energy
Class 2 reactive energy



Benefits

- ▶ German Eichrecht compliant
- ▶ Bi-directional metering
- ▶ MID approval
- ▶ 3-phase / 1-phase connection
- ▶ Multiple parameter measurements
- ▶ Digital signing for a charging event
- ▶ High-temperature operation
- ▶ Public key QR-code
- ▶ 3 DIN modules



The **WM3M4 & WM3M4C** energy meters are intended for energy measurements in the three-phase and one phase electrical charger stations.

The WM3M4C energy meter features **high temperature** operation and **digital signing** for a charging event, whereas WM3M4 features only **high temperature** operation. Both meters measure energy directly in 4-wire networks according to the principle of fast sampling of voltage and current signals.

A built-in **microprocessor** calculates power, energy, current, voltage, power factor, power angle, frequency, harmonics of THD voltage and THD current harmonics. WM3M4C meter can detect and log events relevant for charging via RS485 communication. Thus the meter can produce relevant **digital signature** for charging event.

ENERGY METERS
Energy meter IE14xx series

Class 1 active energy

Class 2 reactive energy

Benefits

- ▶ 40 A direct connection
- ▶ Bi-directional metering
- ▶ MID approval
- ▶ Single phase per module
- ▶ Multiple parameter measurements
- ▶ SO, MBUS or MODBUS
- ▶ Side IR for add-ons
- ▶ NFC
- ▶ 1 DIN module



The meters IE14 and IE14M (MID certified) are intended for **energy measurements** in a single-phase electrical power network, and can be used in residential, industrial and utility applications. Meters measure energy directly in **2-wire networks** according to the principle of fast sampling of voltage and current signals. They are equipped with a **capacitive touch button** that allows the user to scroll measurements and the menu, make settings,... and **backlight** for better visibility. A **built-in microprocessor** calculates energy and other electrical quantities from the measured signals. It also controls LCD, LED, IR communication, and optional extensions.

ENERGY METERS

Energy meter IE38xx series

Class 1 active energy

Class 2 reactive energy

Benefits

- ▶ 80 A direct connection
- ▶ Bi-directional metering
- ▶ MID approval
- ▶ 3-phase / 1-phase connection
- ▶ Multiple parameter measurements
- ▶ Matrix LCD
- ▶ Alarm function
- ▶ RTC
- ▶ Side IR for add-ons
- ▶ NFC
- ▶ 3 DIN modules
- ▶ 80A @ 70°C
- ▶ Tariff input & S01, S02 or M/BUS or MODBUS



The meters IE38Mx are intended for **energy measurements** in three-phase electrical power network and can be used in residential, industrial and utility applications.

Meter **measures energy** directly in 3-wire and 4-wire networks according to the principle of fast sampling of voltage and current signals.

A **built-in microprocessor** calculates energy and other electrical quantities from the measured signals. It also controls LCD, LED, IR communication and optional extensions.

RESIDUAL CURRENT CIRCUIT BREAKERS (RCCB)

NFI4BK

RCCB Type A up to 125 a

RCCB Type B up to 80 a

Type A is sensitive to AC and is pulsating direct residual current.

Rated currents are from 16 A to 125 A.

Type B ensures the same tripping as type A together with smooth DC residual currents, residual DC currents that may result from rectifying circuits and high frequency ac residual currents. Tripping conditions for frequencies up to 1 kHz are defined.



Benefits

- ▶ Short circuit capacity **10 kA**
- ▶ Special type for ambient temperature **-35°C**
- ▶ RCCBs with left n-pole **on request**
- ▶ Suitable as **isolator**
- ▶ Rated currents - **up to 125 a**

Residual current circuit breakers (RCCB) are used for **protection** against indirect contact, fire protection and additional protection against direct contact.

With types AC, A, B, F, G, S and short-circuit capacity 10 KA, we can cover all our customers' needs. We can deliver RCCB product in **2-pole or 4-pole versions** with residual operational currents of 10 mA, 30 mA, 100 mA, 300 mA and 500 mA.

The most common types for **EV charging stations** are types A and B.

RESIDUAL CURRENT CIRCUIT BREAKERS (RCCB)

NFI4K High immunity

RCCB Type A up to 125 a

RCCB Type B up to 80 a

Transient resistant RCCB type A for EV application

High immunity against unwanted tripping at current harmonic components



Benefits

- ▶ Transient resistant type A RCCB for EV application
- ▶ High immunity against unwanted tripping at current harmonic components (e.g. frequency converters)
- ▶ High immunity against unwanted tripping at current impulses (e.g. a large number of fluorescent lamps, transient switching effects) or in the case of mounting under extremely critical conditions (e.g. impulse-shaped leakage currents at longer cables, storm damage, computers, x-ray devices, etc.)
- ▶ Short-time delayed RCCBs with minimum non-actuating time 10 ms (type G acc. to ÖVE E 8601)
- ▶ High resistance against surge currents of shape 8/20 μ s (up to 3 kA); reliable operation is assured also in case of strong making currents
- ▶ Sensitive to residual sinusoidal alternating and residual pulsating direct currents – type A
- ▶ Rated currents up to 100 A
- ▶ Rated residual current 30 mA
- ▶ Two- and four-pole types available

Residual current circuit breakers (RCCB) are used for **protection** against indirect contact, fire protection and additional protection against direct contact.

With types AC, A, B, F, G, S and short-circuit capacity 10 KA, we can cover all our customers' needs. We can deliver RCCB product in **2-pole or 4-pole versions** with residual operational currents of 10 mA, 30 mA, 100 mA, 300 mA and 500 mA.

The most common types for **EV charging stations** are types A and B.

INSTALLATION CONTACTORS

IKD432-40

Benefits

- ▶ No inrush current (with AC/DC coils)
- ▶ RFI suppression (using filters)
- ▶ **Special version:** 2-pole 32 a contactor in 1 module, manual control
- ▶ **Extremely long mechanical endurance** (up to 10 million)
- ▶ **Switching motors** of up to 15 kw



Installation contactors are the **most flexible** switching devices in all types of applications.

In electronic systems, they provide reliable, safe and efficient **management** of electrical equipment. They are mainly used for **switching small motors** (up to 15 kw), electrical heating, lightning and other electronic equipment, and are integrated in **EV charging stations**.

We have 2-pole and 4-pole versions of up to 63 A, with an AC or AC/DC coil inside. Because of AC/DC coils, contactors are **silent** (hum-free) and without inrush current. If electrical equipment is sensitive to RFI interferences, they can be reduced with type **KNB filters** (optional).



MINIATURE CIRCUIT BREAKERS**RI70****Types**

RI71	single pole
RI72	two pole
RI73	three pole
RI74	four pole
RI71N	single pole + neutral pole
RI73N	three pole + neutral pole

**Benefits**

- ▶ Protection against both overload and short circuit, function of isolation
- ▶ High short circuit capacity: $I_{cn} = I_{cs} = 10 \text{ kA}$ with Energy Limiting Class 3
- ▶ Contact position indicator
- ▶ 35 mm DIN rail mounting and screw mounting
- ▶ Full range accessories are available



Iskra d.o.o.
Stegne 21
1000 Ljubljana, Slovenia

Innovative. Smart. Sustainable.

© Iskra d.o.o. October 2022 version 2.0