THREE-PHASE ELECTRONIC METER CST 0420

SMART METER PLATFORM

Base meter functions:

The base meter measures active and reactive energy consumption in all 3- and 4-wire networks. It is direct connected for 1, 2 or 3 phase measurement. The functionality of this meter is suitable for smaller consumers, i.e. for households and small industries. There are tariff registers for active energy. The meter is equipped with a clear LCD display for multi utility purpose. An optical interface for local connection and an interface for the AMR module are available. The optical interface is security protected according to EN 62056-21 standards. The exchangeable AMR module is placed outside the calibration seal. The module provides additional functionality as well as communication with the central system using various solutions like GSM/GPRS, PLC, RF or other media.

AMR MODULE

The base meter can be extended with various AMR modules for additional functions and communications. The interface of the meter includes functions for:
- Measurement values;
- Tariffs, up to 6 tariffs can be handled;
- Display handling, multi utility functions;
- Event logs;
- Tampering events;
- Power limitation;
- Disconnector control.

Depending on module it will typically include the following functions:
- Remote communication like GSM/GPRS, PLC, RF;
- Local communication like M-bus, M-bus wireless, Zigbee;
- Pulse inputs;
- Control outputs.

DISCONNECTOR

The disconnector is optional and can be used for different solutions, in general for connection and disconnection functionalities. The status of the disconnector is displayed on the meter.

Typical functionalities are:
- Remote disconnect, from central system due to any reason like change of tenant, late payment;
- Prepayment;
- Power limitation/Soft fuse;
- Disconnect at tampering alarm;
- Emergency load management.

PARAMETRIZATION

The meter can be customised, i.e. specific parameters can be set with software according to the specific requirements of each customer. The parameters can be set during manufacturing or later by parametrization software through the optical port or remotely through the AMR module. The parameters stored in the meter are protected against unauthorized overwriting.

TECHNICAL CHARACTERISTICS

General:
- 1, 2 or 3 phase measurement in 3 or 4 wire networks.

Voltage:
- Nominal Un: 3x230/400V;
- Extended operating range: 80% - 115% Un;
- Frequency: 50Hz ±2;

Metrological specifications:
- Active energy measurement;
- Accuracy Class A or B MID;
- According to EN 50470-1, EN 50470-3;
- Reactive energy measurement;
- Accuracy Class 2 IEC.

Current:
- Reference current Ib: 5, 10A;
- Max. current Imax: 60 or 80A;
- Thermal 100A;
- Red test diodes for active and reactive energy.

Temperature range:
- Operation -40°C ~ 70°C;
- Transport and storage -40°C ~ 70°C.
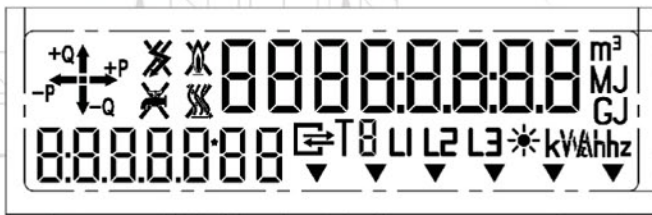
Electromagnetic compatibility:
According to: EN 61000-4-1; EN 61000-4-2;
             EN 61000-4-3;
             EN 61000-4-4; EN 61000-4-5;
             EN 61000-4-6;
             EN 61000-4-8; EN 61000-4-11;
             EN 61000-4-12; EN 55022

- Insulation strength: 4kV at 50Hz during 1 min
- Up to 6 tariff registers for active energy;
- Test diodes for active and reactive energy;
- Security protected optical interface for local communication AMR modules serial interface;
- AMR module is exchangeable and placed outside of calibration seal;
- Magnetic anti tampering function.

Three pushbuttons for the following functions:
- Display handling;
- Breaker handling;
- Reset of maximum demand value.

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Display:
- Type LCD
- Digit size value field 8mm, number of digits 8;
- Digit size index field 6mm, number of digits 7.

Disconnector:
The disconnector has the following capabilities:
- electrical resistance: 5000 (120A/230V with resistive load);
- Mechanical endurance: 100 000 times (no load; at frequency of 1200 pos/h) 120A
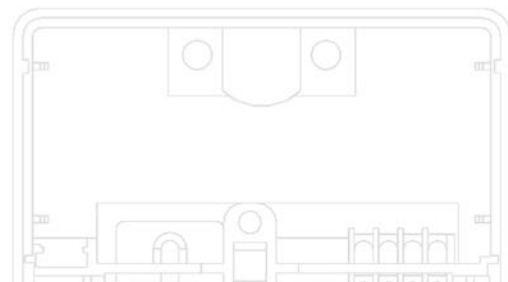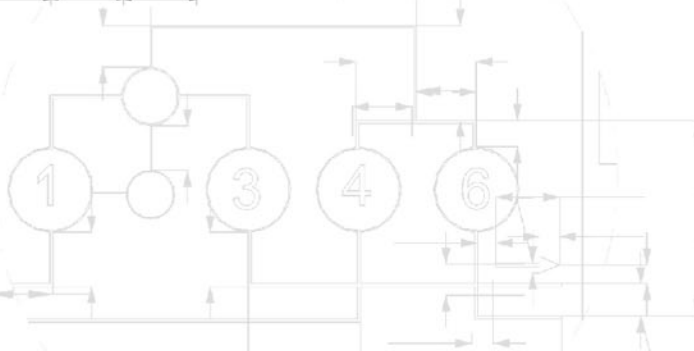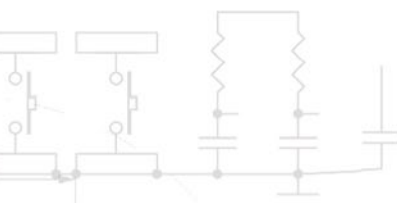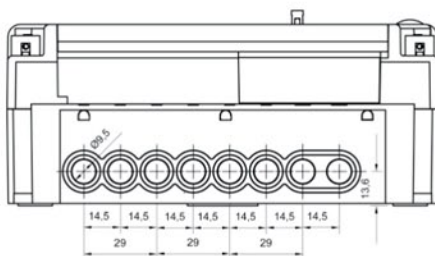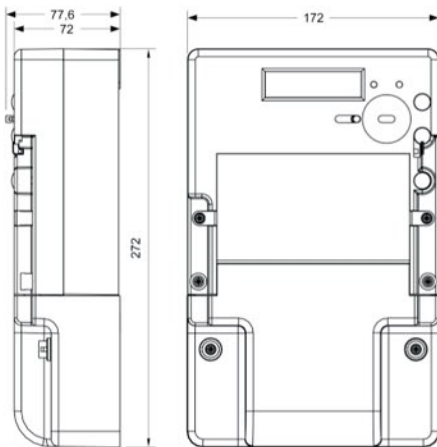
Phase connections:
Type: screw type terminals
Maximum diameter 8.6mm

Dimensions:
- Compliant with DIN 43857

External dimensions:
- Width max. 172 mm;
- Height max. 272 mm;
- Depth max. 77.6 mm;
- Material: polycarbonate, partly glass-fibre reinforced.