

MS400 Substation

For over twenty years, Enermet has developed metering systems, communication and metering devices together to create reliable and cost efficient solutions for advanced automatic meter reading (AMR). This experience has created the MS400 substation which is a part of Enermet's AIM MV solution. MS400 substation is the backbone of medium voltage power line carrier (MV PLC) communication, tying together the AIM system and metering devices.



Cost efficient communication

MV PLC investment and operating costs are the lowest because it is based on an already existing infrastructure, the electricity network. The communication media is known and managed by the network company making the management and implementation simple.

Reliable and proven technology

MS400 and MV PLC provide reliable two way communication over long distances. The communication distances can be as long as 30 km. MV PLC is also a proven technology; it has been used successfully since 1985 in countless locations. It is incredibly stable against over-voltage and interference in the network.

Value for future

These benefits together make MS400 with MV PLC especially effective in rural areas, where communication distances are long and population density low.

MS400 and MV PLC Communication Characteristics

- Communication using existing medium and low voltage network
- Communication media owned and maintained by local network company
- Two way communication
- Wide coverage

Advantages

- Well known infrastructure for network company
- Proven technology (since 1985)
- Incredibly stable against over-voltage and interference
- Especially effective in rural areas

Benefits

- None or very small communication cost
- Low investment to build communication infrastructure
- Minimal maintenance

Suitable

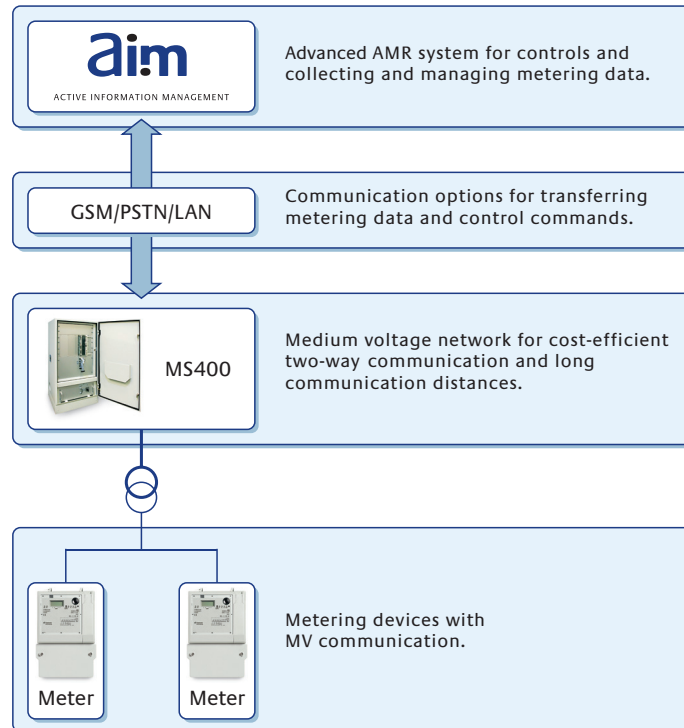
- Rural grids



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MS400 in AIM system



MS400 Technical Specification



Dimensions

- 60 cm x 60 cm x 90 cm (WxDxH) + supply transformers, height 30 cm/pc

Weight

- 110 kg

Protection class

- IP 20

Installation site requirements

- Temperature: 0 ... +45 °C
- Humidity: < 80%
- Installation space: 80 x 70 x 110 (WxDxH)

Power supply

- Cable: 4 x 2.5 + 2.5 mm² copper
- Protection: 3 x 16 A fuse
- Power: 800 VA, 3 x 400 VAC

Connection to the electrical network

- Cable: MCMK 3 x 16 + 16 copper 0.6/1 kV (from supply transformer to coupling capacitor)
- Protection: 16 A (high voltage)

Processor-card MSCP

- VME card using Motorola 68LC040 processor

Operating system

- Microware OS-9

External status inputs

- reading voltage 24 VDC
- potential free relay

External outputs

- max. 10 A 230 V
- potential free relay

Communication with system

- GSM or PSTN modem, LAN

Configuration and updates

- MS400UI program

aim

ACTIVE INFORMATION MANAGEMENT

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