EMF 1102
Cost Centre and Alarm Unit

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The EMF 1102 is a compact and cost-effective system for the aquisition of meter readings, switching status and alarm signals.

Description
It consists of a data acquisition and memory unit plus modular software components for easy user configuration and for the evaluation and management of the data.

Data acquisition for all types of utility such as electricity, water, gas, compressed air or meter pulse inputs via an S0 interface (= digital inputs).

- Calculation of power, energy and flow rates
- Monitoring of power, energy or flow rate with high and low alarm settings
- Determination of running time and downtime for each channel (running time meter)
- Operating cycle counter
- Monitoring of running times and downtimes with alarm settings (e.g. to detect instrument failure)
- Monitoring of key operating conditions
- Connection optionally with RS-232 interface adapter (optional) or via COM server directly to PC – or via FRAKO Starkstrombus to the PQM
- Option of visualising and evaluating the meter data via the FRAKO Energy Management System software module (EMVIS 3000)
- Option of displaying, configuring and evaluating the recorded data via the PC by means of the EMF-SW cost centre and alarm software EMF-SW (optional)

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Technical Data

Power supply	
Mains voltage	230 V AC +/- 10 %
Frequency	45 to 65 Hz
Power consumption	Approx. 10 VA

Inputs	
General	S0-Interfaces (DIN 43864) for connection of potential-free contacts, common 'E-'-Potential switching time: >= 25 ms Voltage with open contact: 12 V DC +/- 10 % Short circuit current: 12 mA +/- 10 %
12 Pulse Inputs	Pulse frequency: max. 20 Hz Internal shifter shafts: 'Off' at approx. 3 mA, 'On' at approx. 7.5 mA

Outputs	
1 Voltage output	12 V DC, max. 50 mA

Interfaces (mode can be selected)	
1 FRAKO Starkstrombus	For connection to FRAKO Energy Management System, according to EN 50170 (P-Net), standardized fieldbus, RS-485 Transfer rate: 76.8 kbit/s
RS-232 Interface	Optional via RS-232 Adapter direct connection to PC Tranfer rate: 19 200 Baud
Display elements	14 LEDs
Connections	Screw terminals Conductor cross-section: max. 2.5 mm²

Mechanical construction	
Dimensions	140 x 90 x 59 mm (W x H x D), DIN module cases 8 HP
Ingress protection	Housing/Terminals IP40/20
Version	Protection class II according to VDE 0411 / DIN EN 61010-1
Housing	flame retardant UL94-V0
Installation	on standard rail 35 mm according to DIN EN 50022
Mounting position	Optional
Weight	Approx. 0.6 kg

Operating conditions	
Ambient temperature	0 °C up to +60 °C
Article-No.	20-40005

Optional Accessories

Article-No.	Type	Description
20-10310	EM-RS 232	RS-232 Adapter for direct access via PC to the data of EMA 1101 (SW-Version 1.11*), EMR 1100 (SW-Version 1.95*) and EMF 1102 (SW-Version 1.0*)
20-10309	EM-RS 232 for modem operation	RS-232 Adapter for direct access via PC to the data of EMA 1101 (SW-Version 1.11*), EMR 1100 (SW-Version 1.95*) or EMF 1102 (SW-Version 1.0*) via modem
20-10319	Registration license EMF 1102	License allows EMVIS 3000 access to a Cost Centre and Alarm System EMF 1102, if this is logged by using a virtual data collector.
20-10313	EMF-SW	Display, analysis and configuration software for Cost Centre and Alarm System EMF 1102. Access via: PQM and RS-232 adapter. **Note:** included in scope of delivery of FRAKO-NET (for CD delivery)

* or higher

Dimensions
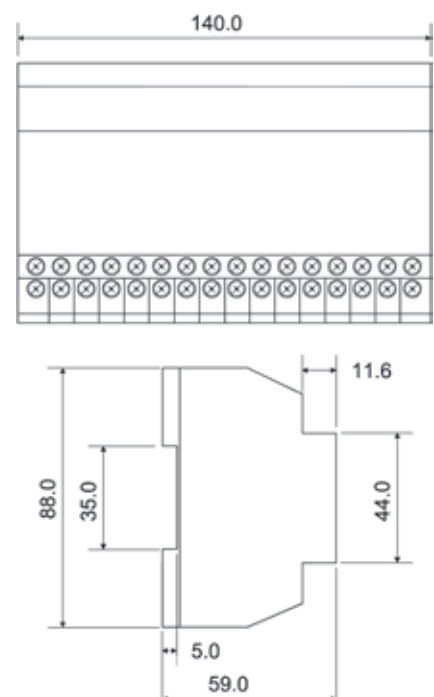
Dimensional drawing EMF 1102   All dimensions in mm

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