



## Energy Management, Energy Meter, Type EM21 72D

Compatible with DATAcentre, MIDcentre & Assure24seven



A three-phase energy meter with removable front LCD display unit. The same unit can be used either as a DIN-rail mounted or a panel mounted energy meter. This general purpose three-phase energy meter is suitable for both active and reactive energy metering for cost allocation but also for main electrical parameter measurement and retransmission (transducer function). Current measurements are carried out by means of external current transformers and voltage measurements carried out either by means of direct connection or by means of potential transformers. EM21-72D is provided standard with a pulsating output for active energy retransmission. In addition a two wire RS485 communication port is available as an option.

### Features:

- Class B (kWh) according to EN50470-3 • Class 1 (kWh) according to EN62053-21 • Class 2 (kvarh) according to EN62053-23 • Instantaneous variables readout: 3 DGT • Energies readout: 6+1 DGT • System variables:  $V_{LL}$ ,  $V_{LN}$ , A, PF
- Energy measurements of distorted sine waves (voltages/currents)
- Dimensions: 4-DIN modules and 72x72mm • Protection degree (front): IP50
- Application adaptable display and programming procedure (Easyprog function)
- Multi-use housing: for both DIN-rail and panel mounting applications

UK: Installation must only be undertaken by a Competent Person in accordance with the IET Requirements for Electrical Installations: IEE Wiring Regulations BS7671/IEC60364 For other countries refer to local regulations.

General specifications	
Operating temperature	-25°C to 55°C (-13°F to 131°F) (R.H. from 0 to 90% non-condensing @ 40°C) according to EN62053-21 and EN62053-23
Storage temperature	-30°C to 70°C (-22°F to 158°F) (R.H. < 90% non-condensing @ 40°C) according to EN62053-21 and EN62053-23
Installation category	Cat. III (IEC60664, EN60664)
Insulation (for 1 minute)	4000 VRMS between measuring inputs and digital output
Dielectric strength	4000 VRMS for 1 minute
Noise rejection CMRR	100 dB, 48 to 62 Hz
EMC Electrostatic discharges Immunity to irradiated	According to EN62052-11 15kV air discharge; Test with current: 10V/m from 80 to 2000MHz;
Electromagnetic fields	Test without any current: 30V/m from 80 to 2000MHz;
Burst	On current and voltage measuring inputs circuit: 4kV
Immunity to conducted disturbance	10V/m from 150kHz to 80MHz
Surge	On current and voltage measuring inputs circuit: 6kV;

General specifications	
Radio frequency suppression	According to CISPR 22
Standard compliance Safety	IEC60664, IEC61010-1 EN60664, EN61010-1 EN62052-11
Metrology	EN62053-21, EN62053-23, EN50470-3
Pulse output	DIN43864, IEC62053-31
Approvals	CE, cULus listed, MID (PF option only)
Connections Cable cross-section area	Screw-type 2.4 x 3.5 mm Min./Max. Screws tightening torque: 0.4 Nm / 0.8 Nm
Housing Dimensions (WxHxD) Material	72 x 72 x 65 mm Noryl PA66, Self-extinguishing: UL 94 V-0
Mounting	Panel and Din-rail
Protection degree Front Screw terminals	IP50 IP20
Weight	Approx. 400g (packing included)
Part number	FTEM40-ENGMTR-E P & FTEM24MS110 required