

MCS301

Polyphase
Smart Meter for
Wind turbine
application



BLUE² meter

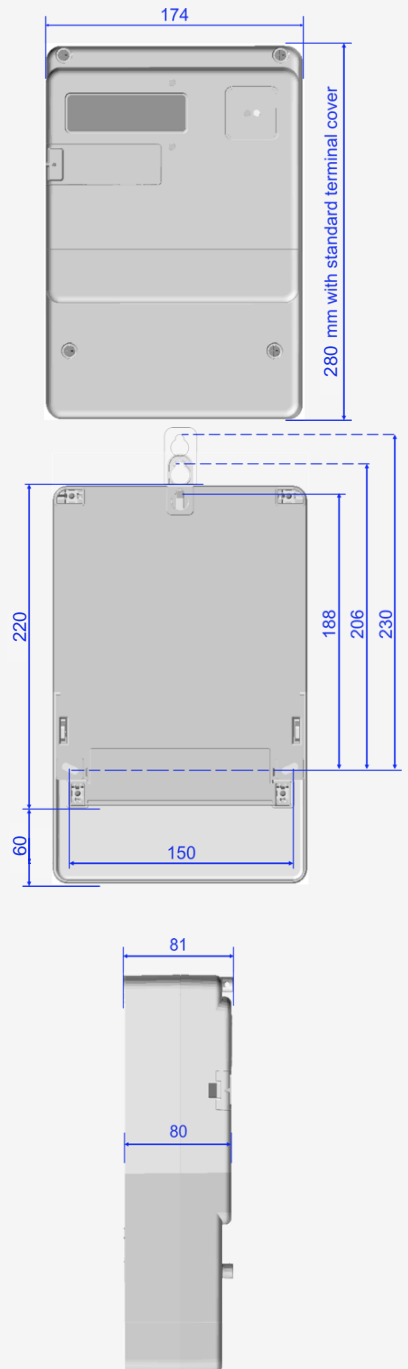
Specific meter for wind turbine application

- ✓ Special voltage range, 3x400/690V or 3x230/400 ... 3x415/720V
- ✓ Measurement of active (bi-directional), reactive (4-quadrants), apparent energy and demand
- ✓ Exchangeable communication modules (4G/3G/2G, CAT/M1 or Ethernet)
- ✓ Powered by auxiliary power supply
- ✓ Up to 8 energy tariffs and 4 demand tariffs
- ✓ Up to 10 load profile type (billing, PQ data ...)
- ✓ PQ monitoring according EN 50160
- ✓ Measuring of harmonics and THD
- ✓ High-level security (encryption & authentication)
- ✓ Optical interface, RS485 and/or RS232
- ✓ DLMS/COSEM & EN62056-21 protocol
- ✓ Simultaneous communication on all channels
- ✓ Real time clock (RTC) back-up with supercap and internal battery and external battery (option)
- ✓ Advanced Anti-Tampering features: Terminal & main cover detection, magnetic field, phase and power failure detection
- ✓ Support of application Firmware download

Technical Specification

Nominal voltage	4-wire, 3 systems	3 x 400/690V, 3 x 230/400 ... 3x415/720V
	3-wire, 2 systems	3 x 690 V; 3 x 230 ... 690 V
Nominal / maximum current	Indirect Connection	1(2) A; 1(6) A; 5(6) A;
		1(10) A; 5(10) A; 5(15) A
Frequency		50 or 60 Hz \pm 5%
Accuracy class	Indirect Connection	Class C or B (EN 50470-3); Class 1 (IEC 62053-21); Class 0.5S or Class 0.2S (IEC 62053-22)
Temperature / Environmental influences	Temperature	Operation: - 40°C ... +70°C Storage: - 40°C ... +85°C
	Humidity	95% rel. humidity, non-condensing
	Ingress protection	IP54
	Protection class	Class II to IEC 62052-11
Electro-magnetic Compatibility	Surge withstand	6 kV, $R_{source} = 40\Omega$
	1.2/50 us (EN 50407-1)	Auxiliary circuits 6 kV
	Insulation strength	4 kV _{rms} , 50 Hz, 1 min.
	EMC Conditions	MID E2
Real time clock	Accuracy	Crystal < 5 ppm = < 3 min./year (at Top= +25°C)
	Supercap	2 days
	Internal /External battery	5 / 8 years (without main power)
Internal tariff source	Acc. EN 62054	8 tariffs, 4 seasons, weekday dependent tariff scheme
Display	Characteristics	Type: LCD liquid crystal display backlighted
	number of digits	Value field: up to 8; index field: up to 7
	digit size	Value field: 4 x 8 mm; index field: 3 x 6 mm
	Read-out without power	With external battery (option)
Power supply	Type	switched based, auxiliary power supply
	Auxiliary Power Supply	100 ... 230V AC/DC or 48 ... 230 V AC/DC
Inputs and Outputs (option)	Control- or alarm-input	Max. 2: Control voltage Un +/- 20%
	S0 inputs	Max. 2: Acc. IEC 62053-31; Class A (max. 27 V DC)
	Output (electronic)	Max. 6: 12 to 230 V _{AC/DC} (+15%); 100 mA
	Bistable mech. relay	Max. 1: 230 V AC (+/- 15%); 10 A
Customer interface	acc. DSMR	accessible by customer
		RJ12 connector, pushing once per second
LED output	Type / Number	2 LEDs kWh / kvarh
	Meter constant	programmable
Communication Interfaces	Optical	Infrared, half-duplex; max. 19.200 bps;
	Electrical	RS485 half-duplex 2 wires and/or RS232. max. 19 200 bps DLMS / EN62056-21 Protocol
	Communication module	Exchangeable, under power
Housing	Dimensions	DIN 43857 part 2; DIN 43859
	Material	Polycarbonate (Lexan), partly glass-fiber reinforced, flame-retardant, self-extinguishing plastic, recyclable
	Environmental conditions	MID M1
Connections	main screws	Screw type terminals with cages; $\phi=5.0$ mm Pozidrive Combi No. 2
Weight		Aprox. 1.3 kg

Dimensions



BLUE SQUARE CONCEPT



About Us

MetCom Solutions GmbH was founded with the aim to Develop, Manufacture and Deliver innovative Metering solutions and support Utilities to master their Digital Transformation journey.



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