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MS212 G3-PLC HYBRID or P2P

Single Phase Smart Energy Meter



MS212 Products presentation

- New Generation of Multi-Energies **Single-Phase** smart meters
- **Modular and extractible** communication module:
  - G3-PLC RF Hybrid
  - Cellular: 2G/LTE CAT-1 or 2G/LTE CAT-M/NB-IoT
- Last Gasp
- DLMS Security Suite 0, 1, 2
- Interoperability (DLMS/IDIS)
- Field Proven Datamodel
- G3-Alliance CEN-A and FCC certified / RED Certified

MECHANICAL CHARACTERISTICS	
Sealing method: Top cover and bottom cover are sealed together by ultrasonic welding. The terminal block cover is sealed by one dedicated screw and metallic ferrule.	
Connection diagram	BS or DIN
Cable cross section	4-35 mm²
Top Mounting bracket	Optional

SPECIFICATIONS		
Communication Interfaces	**Interfaces**	· Optical port (IEC 62056-31) · P1 DSMR or RS485 (RJ12 or RJ45) · 1st Auxiliary Relay (5A/230V) · 2nd Auxiliary Relay or digital input (Optional)
	RF Hybrid G3-PLC	· 866-928 MHz · G3-PLC HYB Alliance Standard · FCC/CEN-A
	Cellular Modem	· 2G/LTE CAT-1 or 2G/LTE CAT -M/NBIoT Modem · Internal antenna + SMA connector · 450MHz
Breakers	**1 Internal load disconnector in Phase**	· UC2 or UC3 · Max switching current: Imax = 90A or 120A

MAIN FUNCTIONALITIES (examples)	
Time of Use	Programmable Load profiles: Capture list/capture COSEM objects/capture period
	Programmable Billing profiles: Capture list/capture COSEM objects/capture period
	Tariff management via built-in programmable output relay
	Calendar/Time of Use management
Power Quality	Voltage Interruptions (Power down)
	Voltage Restoration (Power Up)
	Power Supply Quality
	Neutral current measurement for fraud detection
Security, Integrity and Verification	DLMS Security Suite 0, 1 (ready for 2)
	Auto diagnostic
	Data Storage strategy for integrity
	Local access to the meter by DLMS authentication Password (via the optical port)
Firmware and load Management	Load Disconnection: locally and remotely
	Local and remote Firmware upgrade

Note: this list of functionalities is not exhaustive. Deeper features list and Security detail can be delivered on special demand under Non-Disclosure Agreement (NDA).

SPECIFICATIONS		
Basic Features	**Voltage**	230 V
	Current	5(100)A
	Frequency	50 Hz
	Accuracy	Active Energy: MID Class B/IEC Class 1 Reactive Energy: IEC Class 1
	Communication	Bidirectional
	Quadrants	Q1/Q2/Q3/Q4, Import/Export Energy
	Events Management	Tamper event detection, recording and reporting
	Lifetime	15 years
Environment	**Operating temperature**	- 40°C/+ 70°C
	Humidity	< 95%
	Protection Index	IP 54
Customer Interaction	**Display**	· LCD: Dot matrix 5 x 8 · Digit Size: 7x3 mm · Symbols: 48 (3 lines of 16) · Scrolling: auto and manual · Backlight: (optional)
	LEDs	· 1 for Active Energy · 1 for Reactive Energy
	Push Buttons	· Main button for scrolling and breaker connection · Sealable button for maintenance
RTC	**Reading without power**	· Supercapacitor (7 days) · Built-in battery (2-or 5-years power back-up) · Extractible battery (2-or 5-years power back-up)

FRAUD DETECTION
Strong Magnetic field Detection and immunity
Top Cover and Terminal block cover opening/closing detection
Input - output swap detection
Neutral current fraud detection
Mains power cut detection
Power factor variation detection

CERTIFICATION
CE and IEC Declaration
UC2/UC3(breaker)EN62055-31
DLMS SECURITY suite 0, 1, 2
MID Directive 2014/32/EU and the Radio Equipment Directive (RED) 2014/53/EU
DLMS CTT V3.0
IDIS Package 3
G3 Alliance Certification
Local certifications

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