

Product Catalogue

AMR Ready Smart Energy Meter - Single Phase Direct Meter



- + CERTIFICATION
STS 2.0, DLMS/COSEM
- + APPLICATION
SINGLE PHASE TWO WIRE
- + COMMUNICATION
PLC, RF, GSM/GPRS

02. SMART 2ND GENERATION SY-16RG

SY-16RG is our second generation smart energy meter with more sophisticated features in a more compact housing. Its full DLMS/COSEM package enables the readiness for AMI implementation, ensuring immediate interoperability with enriched IoT application.

- + REMOTE COMMUNICATION
GPRS/ PLC/RF EXCHANGEABLE
- + LOCAL COMMUNICATION
OPTICAL/RS-485 IEC 62056-21
- + PROTOCOL
DLMS MODE E/HDLC &
WRAPPER MODE



SY-16RG supports both prepayment and credit mode with switching of token or command code. Mechanically, it provides options of keypad and push buttons on the cover, with additional option of CIU as per request to work as a "split" meter, that can independently measure and record.

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SY-16RG

TECHNICAL SPECIFICATION

ELECTRICAL	SPECIFICATION
Reference voltage (Un)	110-120V/220-240V
Operation voltage	70% Un~120% Un
Limit voltage	0% Un~190% Un
Base current (Ib)	5A/10A
Maximum current (Imax)	60A/80A/100A
Frequency	50Hz/60Hz
Frequency range	47.5~52.5Hz
Accuracy class	Cl.1 as per IEC 62053-21
	Cl.2 as per IEC 62053-23
Starting current	0.4% b
Pulse constant	1000imp/kWh
	1000imp/kVARh
IP Grade	IP55
Utilization Class	UC2
Connection Type	LLNN/LNNL

CONSUMPTION	SPECIFICATION
Voltage circuit	<2W, 8VA
Current circuit	<1VA
ENVIRONMENT	SPECIFICATION
Operating temperature	-25° C~75° C
Storage temperature	-40° C~85° C
Humidity	≤95%
Altitude	0~3000m
EMC	SPECIFICATION
Electrostatic discharge (ESD)	Contact discharge: 8kV Air discharge: 15kV, IEC 61000-4-2
Fast transient burst	4 kV/100 kHz, IEC 61000-4-4
Immunity to HF Fields	80MHz-2GHz@10V/m with load
Conducted disturbances by RF	150kHz - 80MHz 10V/m, IEC 61000-4-6
Radio Interference	CISPR 22, IEC 61000-4-2,3,4,6
Over-voltage	400VAC for 48 hours, IEC 62053021
Surge immunity	30kA/kV , 4/10μs, IEC 61000-4-5

HIGHLY SECURED METERING & DATA



+ DIMENSION
120X192X60MM

+ WEIGHT
APPR. 0.54KG

+ BATTERY
1200mAH LITHIUM

FRAUD DETECTION

- Magnetic field Detection
- Magnetic field immunity
- Covers and terminal cover opening/closing detection
- Input - output swap detection
- Phase - Neutral swap detection
- Mains power cut detection
- Power factor variation detection & more...

Product Catalogue

AMR Ready Smart Energy Meter - Three Phase Direct Meter



THREE PHASE SMART 2ND
GENERATION
SY-031 SERIES

+ CERTIFICATION
STS 2.0, DLMS/COSEM

+ APPLICATION
THREE PHASE FOUR WIRE

+ COMMUNICATION
PLC, RF, GSM/GPRS



SY-031 provides the right answer to your need for reliable to the complex measuring with comprehensive additional functionality for advanced data acquisition and flexible tariff control. An optimal data flow is archived through the built-in communication interface or readily interchangeable communication modules, including cellular, Radio Frequency, PLC, G3-PLC Hybrid.

+ ENERGY

+A, -A, 4Q REACTIVE, +E, -E

+ POWER

+P, -P, 4Q REACTIVE, +S, -S

+ LOAD PROFILE

BILLING, POWER QUALITY

SY-031 features modular communication which provides the right choice for the best data channel at all times. «Plug and Play» modules also offer you full freedom of choice for deployment of new communication technologies.

Data registers are kept by internal storage for all billing and power quality monitoring, and powerful communications capabilities allow cost-effective remote data collection. Conformance with the latest DLMS communications standards ensures that SY-031 can be easily integrated into standard data collection systems.



Product Catalogue

AMR Ready Smart Energy Meter - Three Phase Direct Meter



Technical datasheet

Description	Specification
Reference voltage (Un)	3X110-230V/190-400V
Operation voltage	70% Un~120% Un
Limit of Voltage	0% Un~120% Un
Basic current (In)	5A
Maximum current (Imax)	100A
Short-circuit current	3,000A, <3ms
Frequency	50/60Hz
Frequency rage	47.5~52.5Hz
Accuracy class	Cl.1.0 for active energy, Cl.2 for reactive energy
Starting current	0.4%Ib (20mA)
Pulse constant	1000imp/kWh, 1000imp/kVarh
Connection type	L1L1L2L2L3L3NN, L1L2L3NNL3L2L1
Consumption	Specification
Voltage circuit	<2W, 8VA @230V
Current circuit	<1VA @ Base current (Ib)

Environment	Specification
Operating Temperature	-25° C~75° C
Storage Temperature	-40° C~85° C
Humidity	average <=95%, maximum <=100%, non-condensing
Altitude	<=3000m
EMC	Specification
Electrostatic discharge (ESD)	Contact discharge: 8kV Air discharge: 15kV, IEC 61000-4-2
Fast transient burst	4 KV/100 KHZ, IEC 61000-4-4
Immunity to HF Fields	80MHz-2GHz@10V/m with load; 80MHz-2GHz@30V/m with no load
Conducted disturbances by RF	150kHz - 80MHz 10V/m, IEC 61000-4-6
Radio Interference	CISPR 22, IEC 61000-4-2,3,4,6
Surge Immunity	30KA/KV , 4/10S against lightening, IEC 61000-4-5
Insulation	Specification



Product Catalogue

AMR Ready Smart Energy Meter - Three Phase CT Meter



+ CERTIFICATION
STS 2.0, DLMS/COSEM

+ APPLICATION
CONFIGURABLE
THREE PHASE FOUR WIRE
THREE PHASE THREE WIRE

+ COMMUNICATION
OPTICAL, RS485
GPRS/G3-PLC HYBRID

10. SY31CTR SMART TRANSFORMER OPERATED MCT

SY31CTR^{MCT} is a variant of SY31CT^M for big customer measurement. It is a transformer operated meter which accommodates both prepayment and credit mode application. It provides an optimal performance in all industrial and commercial application areas with its featured modular architecture, exceptional feature set and high interoperability. Its enhanced features derives from SY31CT^M offer the maximum flexibility through unique communication modularity, high interoperability and a comprehensive functionality for prepayment and credit modes.

Product Catalogue

AMR Ready Smart Energy Meter - Three Phase CT Meter



Description	Specification
Reference voltage (Un)	3x230/400V, 3x57.5/110V
Operation voltage	80% Un~120% Un
Limit of Voltage	60% Un~130% Un
Maximum switching voltage	>418V
Maximum withstand voltage	500V, 48 hours, no damages or accuracy deviation after restoration
Short-time withstand voltage	600V, 1 minute, no damages or accuracy deviation after restoration
Basic current (Ib)	1A
Maximum current (Imax)	10A
CT ratio	100A, 200A, 300A, 500A, 800A
Short-circuit current	3,000A, <3ms, no damage or accuracy deviation after restoration
Frequency	50Hz
Frequency rage	47.5~52.5Hz
Accuracy class	Cl.0.5 for active energy, Cl.2 for reactive energy. ** Can be Customized as Cl.0.2s**
Starting current	0.1% Ib (5mA)
Pulse constant	10000imp/kWh, 10000imp/kVarh
Utilization class	UC2
Contact mechanical life	>3000 cycles @ Maximum power, PF=1
Consumption	Specification
Voltage circuit	<1W, 2.5VA @230V
Current circuit	<0.1VA @ Base current (Ib)

Environment	Specification
Operating Temperature	-25°C~70°C
Storage Temperature	40°C~90°C
Humidity	average <=95%, maximum <=100%, non-condensing
Altitude	<=3000m
EMC	Specification
Electrostatic discharge (ESD)	Contact discharge: 8kV Air discharge: 15kV, IEC 61000 4-2
Fast transient burst	4 KV/100 KHZ, IEC 61000 4-4
Immunity to HF Fields	80MHz-2GHz@10V/m with load; 80MHz-2GHz@30V/m with no load - accuracy not affected by magnetic fields from all sides -front, sides, top and bottom of the meter
Conducted disturbances by RF	150kHz - 80MHz 10V/m, IEC 61000 4-6
Radio Interference	CISPR 22, IEC 61000 4-2,3,4,6
Surge Immunity	30KA/KV , 4/10S against lightning, IEC 61000 4-5



SY31CTR