LY-SM Series **Three-phase**

Smart Meter Energy Meter

SM300/310

Brief Introduction

LY-SM300 Series Three-phase Smart Energy Meter is a highly advanced Smart Meter available either for whole current measurement (Direct Connection) or for transformer measurement (CT operated or CTPT operated) to measure three-phase AC active/reactive energy with frequency of 50/60Hz. It has a variety of sophisticated functions to realize Smart Measurement & Management of energy, with features of high accuracy, excellent sensitivity, good reliability, wide measurement range, and low consumption, solid structure and nice appearance etc. Equipped with M-Bus port, RS-485 port, and field replaceable PLC or GPRS/3G/4G communication modules etc. makes it flexible to communicate with other devices. The meter is fully complying with DLMS/COSEM IEC standards, allowing billing and management applications in IEC compliant countries for residential, commercial and industrial energy measurement and management, with configurable post-paid and prepaid mode and compliant to STS (Standard Transfer Specification) specification.

Technical Parameters

Type		SM300-DC/CT/CTPT	SM310-DC
Electrical reference	Voltage (V)	3x220/380, 3x230/400, 3x240/416 (70% ~ 130%)	
	Nominal Current (A)	5(80), 5(100), 20(80), 20(100)	
	Frequency (Hz)	50/60	
Accuracy		1.0 (IEC 62053-21); 2.0 (IEC 62053-23)	
Constant	Active (imp/kWh)	300, and 1000 etc.	
	Reactive (imp/kvarh)	300, and 1000 etc.	
Power Consumption		≤ 1.5W/8VA(voltage); ≤ 1VA(Current)	
RTC	Backup	Battery	
	Accuracy	≤ 0.5s/d	
Environment	Operating temperature	- 25 ~ +70 ℃	
	Relative Humidity	≤ 95%	
Housing	Protection class	MCU: IP54	
	Terminal holes diameter (mm)	8.5	
	MCU (LWH) (mm)	270x170x81.5	
Weight (g)		Approx.1880 (MCU)	
Connection type		3P4W, 3P3W(optional)	
Installation		BS (w/o prepay)	BS (w/ prepay)
Local interface		Optical port, RS485	
Standards		IEC62052-11/21, IEC62053-11/21, IEC62053-23, IEC62055-31/41/51, IEC62056-21/46/47/53/61/62	

Main Functions

Measurement

> Bi-directional measurement of import/export active, reactive and apparent energy as well as Absolute value of active energy management
> Instantaneous parameters of voltage, current, power, frequency, power factor etc.
> Max demand with timestamp, slide mode with configurable integration period
> Measurement of Total Harmonic Distortion.(THD)

Time of Use

> Support up to 8 TOU configurable tariffs with DST
> Support 50 special days (configurable), 4 seasonal profiles, 4 weekly profiles, 8 daily profiles, and 10 time periods

Demand/Load Management

> Demand/load management including normal and emergency situations
> 3 levels of Credit management (prepayment mode)
> Configurable disconnection of load switch upon tampering events and other conditions such as Over/Under voltage, Overload, Power off etc.

Anti-tampering

> Meter cover, terminal cover open detection, Magnetic field detection, Reverse connection and etc.

Prepayment Management

> SM310-DC supports prepayment function
> Prepayment through split keypad on CIU by 20-digit STS TOKEN
> Prepayment / Post-paid mode configurable

Load Profile

> 3 types of load profile are supported: Load profile 1 for demand &energy, Load profile 2 for instantaneous quantities, Load Profile 3 for Multi utility meters

Event Recording

> Programming, Power up/down, Over/under voltage, Max demand clearing, Meter/terminal cover open, Magnetic interference and current reverse, and etc.

Billing

> Monthly (13 months) & daily (62 days) billing data with configurable billing date/time

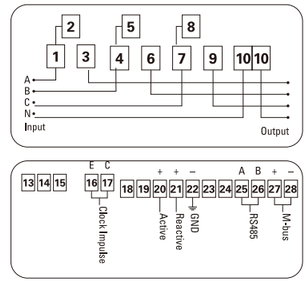
Security

> 4 levels of Data Security and 4 Bi-directional authentications (CRC, MD5, SHA-1 and GMAC)
> Physical sealing of meter/terminal cover screws

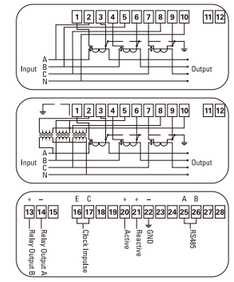
Communication

> Communication options: RS485, Optical port
> Communication interface between MCU and CIU using PLC, RF or Cable connection etc.
> Optional communication with water meter, gas meter, in home display (IHD) and other devices
> Field replaceable communication modules including, GPRS/3G/4G, BPSK PLC module, G3 PLC module

Wiring Connection



DC



CT/CTPT

Dimensions