

Technical Specifications
of
kWh Energy Meter
(SPK300)



Class 1.0S

SPowerZ Solutions Pvt.Ltd

New#13, Old,#28, Janakiram Colony
Arumbakkam, Chennai-600106

Website : www.spowerz.com

Email : info@spowerz.com

Phone : 044- 43192660

General Specifications

1) GENERAL:

- Meter measures Active Power and Active energy on 3 phase 4 wire system,
- All four quadrant measurement for KWh are measured and stored in energy accumulators,
- Parameters can be viewed through 7 segment LED (3 row),
- Soft Keys are provided to stop, scroll, edit and to view the parameters,
- RTC with battery backup is used for time keeping and has a calendar of 100 years,
- Power Line Communication can be done using RS485 communication with MODBUS RTU,

2) METER FEATURES:

2.1) Display Details:

- 7 segment (3*4 digits) LED type – The parameters are calculated by the meter are displayed,
- Selectable Parameters – Can select any out of 7 parameters.
- Scroll rate – The scroll rate of the display parameter scroll in steps of 4secs.
- Keys are provided to stop, scroll, edit and to view the particular parameter.

2.1.1) Display Parameters:

- Time,
- Date,
- Meter ID with Phase Sequence,
- Frequency (Hz.),
- Cumulative – RYB – Active Energy (KWh),
- Instant Active Power – KW – R,Y,B,
- Instant – KW – RYB.

2.2) Key Features:

- The Parameter setup can be done through 4 nos. of soft keys on front fascia,
- Keys on the front panel is used to
 - ✓ scroll, increment, decrement through display parameter,
 - ✓ to set the Meter ID,
 - ✓ Time, Date,
 - ✓ Energy Reset,
 - ✓ Change Password

- Press scroll key once the parameter set is completed, this allows to view the parameters one after the other automatically (change over time period is 4 secs). If this is not done auto scroll will not happen.

2.3) Rear Terminal Details:



2.5) Safety Precautions:

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices.
- Only qualified electrical workers should install this equipment. Such work should be performed only after reading this entire set of instructions.
- If the equipment is not used in a manner specified by the manufacturer, the protection provided by the equipment may be impaired.
- NEVER work alone.
- Before performing visual inspections, tests, or maintenance on this equipment, disconnect all sources of electric power.
- Assume that all circuits are live until they have been completely de-energized, tested, and tagged.
- Pay particular attention to the design of the power system.
- Consider all sources of power, including the possibility of back feeding.
- Turn off all power supplying the dual energy meter and the equipment in which it is installed before working on it.
- Always use a properly rated voltage sensing device to confirm that all power is off.
- Before closing all covers and doors, inspect the work area for tools and objects that may have been left inside the equipment.
- When removing or installing panels do not allow them to extend into the energized bus.
- The successful operation of this equipment depends upon proper handling, installation, and operation.
- Neglecting fundamental installation requirements may lead to personal injury as well as damage to electrical equipment or other property.
- NEVER bypass external fusing.
- NEVER short the secondary of a PT.
- NEVER open circuit a CT
- High voltage testing may damage electronic components contained in the kWh meter.
- Ensure that no wiring strands are straying outside after connecting wires.
- kWh Meter should be installed in a suitable electrical enclosure.

Failure to follow these instructions will result in death or serious injury

Technical Specifications

Accuracy	: Class 1.0S
System type	: 3 Phase 4 Wire
Resolution	: 0.01 (for Combined kWh)
Display	: Multi Parameter LED (3 ROW)
Auxiliary Supply	: 85 – 265 VAC
Current CT	: Whole Current (External) – (10 – 60)A
Starting Current	: 10mA
Power Factor	: 4 quadrant operation
Frequency	: 50Hz, $\pm 5\%$
Temperature	: Operating Temp. – (-10 to 55) $^{\circ}$ C Storage Temp. – (-20 to 70) $^{\circ}$ C Humidity 5 to 95% RH at 50 $^{\circ}$ C (Non-Condensing)
Dimension	: (96 x 96 x 48) mm (Inclusive of connector)
Panel Cutout	: 92 x 92 mm (-0.5mm)
Mounting	: Panel Mountable
Connector Type	: Screw type terminals (U Lug 2.5mm)
Weight	: 350gms. (app.)