



Libra3

ANSI Socket Smart Energy Meter

Designed for residential and industrial energy management

Providing flexible solution for your AMI initiatives

www.wasion.com

Description	Value
Voltage	
Reference voltage	120, 240V, 120/277V, 120-480V
operating voltage range	80%-120%Un
Current	
Basic current	2.5A / 15A/30A
Maximum current	20A / 100A / 200A
Starting current	0.01A/0.05A/0.1A According to ANSIC12.20
Accuracy	
	CA0.2, CA0.5
Frequency	
Rated frequency (fn)	50Hz or 60Hz
Frequency range	±2%
Pulse constant	
Temperature	
Normal Operation range	-25°C to +55°C
Limit operation range	-40°C to +70°C
Limit range for storage and transport	-40°C to +85°C
Humidity	
	Up to 95% non-condensing
Power Consumption	
Power consumption in voltage circuit	≤5 W According to ANSIC12.20
Power consumption in current circuit	≤20 VA According to ANSIC12.20
Insulation Strength	
AC voltage test	4kV
Surge Withstand	6kV
Protection class	UL50-TYPE3
Electromagnetic Compatibility	
Electrostatic discharges	Contact 8kV, air 15kV
Fast transient burst	4kV
150KHZ Surge(ANSI/IEEE C62.41)	6 kV
Immunity to electromagnetic RF fields	10V/m at reference current, 30V/m without current

Protection degree	IP54
Breaker	Optional
Lifetime	Bi-stable relay 10000 cycles at I_{max} PF=1 and PF=0.5L
Performance	UC3
Maximum switching Voltage	250VAC
Maximum switching current	100/200A for 1Phase and 2Phase. 100A for 3 Phase
Maximum switching power	30kVA
Lifetime	\geq 15 years



■ Main Functionalities

➤ Measurement

- 4 quadrant measurement
- Instantaneous Vrms, Irms, Frequency, Power Factor.
- +Kwh, -Kwh, 4 quadrant Kvarh.
- Support Demand. Demand Source can be programmed.

➤ RTC

- Clock accuracy (daily deviation): $\leq 0.5s/day$
- Temperature compensation
-

➤ Tariff

- Up to 4 Tier, 4 Season, 4 Day-Type
- Up to 104 Tou Schedule Setting
- Up to 5 billing & 4 demand measures per TOU period
- Support DST, Self Read, Demand Reset

➤ Battery backup

- Flexible backup power for RTC, including replaceable
- Battery life 10 year (Typical value).

➤ Load control

- Remote control command support
- Over current/voltage control support
- Power limit support

➤ Firmware upgrading

- The firmware can be upgraded via local interface and WAN interface(OTA).

➤ **Load profile**

- Energy profiles (Typical value : 5min, 16 channels, capacity is 120days)
- 1~60 minutes interval time is programmable.
- Each channels of data source is programmable.
- Output to *.csv format file by software. Easy to make graph.

➤ **Power quality monitor**

- Under voltage / Over voltage / Over Current
- Voltage imbalance
- Power failure monitor

➤ **Event record**

- Tamper detect (Meter remove/cover open, current reverse etc.)
- Failure detect (Memory error, relay error, battery low voltage, clock invalid etc.)
- Power quality event (Under voltage / Over voltage / Over current/ Voltage imbalance, Power failure, etc.)
- Security event (Parameters change, clock adjust, etc.)

➤ **Relay Control**

- Disconnect or reconnect control by remote system or local optical

➤ **WAN Communication**

- Plug and play module to support kinds of communication technology
- RPMA/2G/3G/4G/PLC/RF
- Protocol: ANSIC12.18/ANSIC12.19/Modbus-RTU



➤ **Optical port**

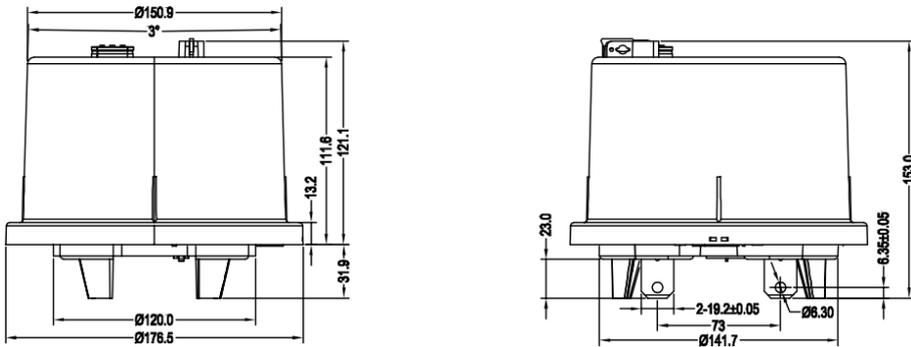
- Comply with ANSIC12.18 standard
- Protocol: ANSIC12.18

- HLS support authentication and encryption for local and remote communication (with ANSIC12.22 module in side)

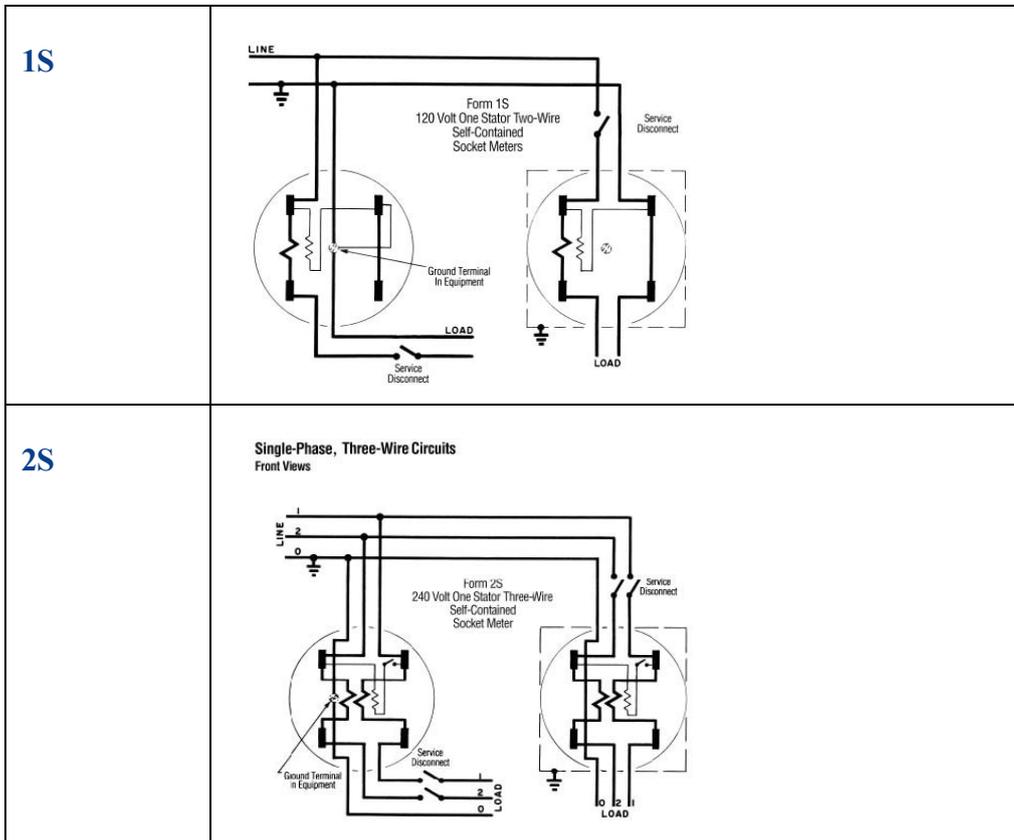
➤ **Security (LLS or HLS)**

- LLS support 3 level passwords for local and remote communication

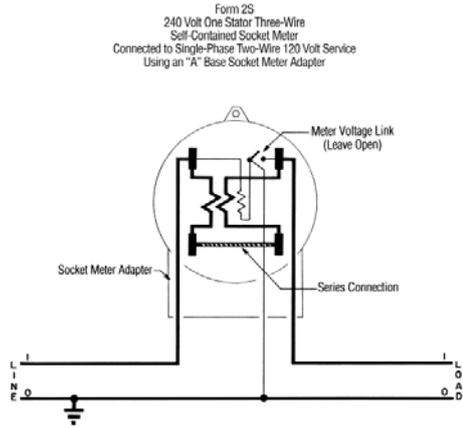
➤ Meter Installation Dimensions



➤ Meter Wiring

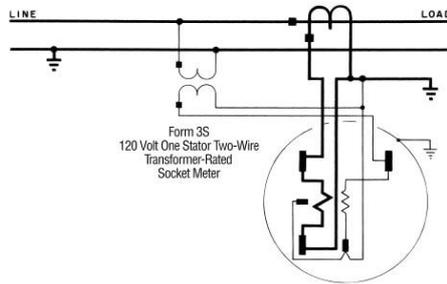


2S



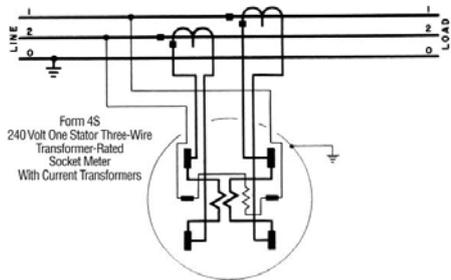
3S

Single-Phase, Two-Wire Circuits
Front Views

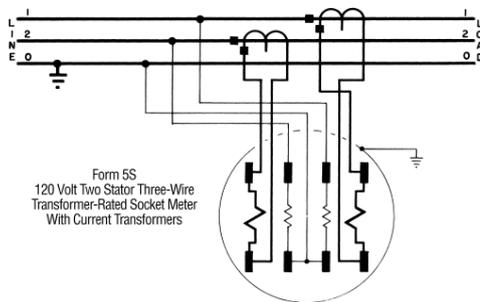


4S

Single-Phase, Three-Wire Circuits
Front Views

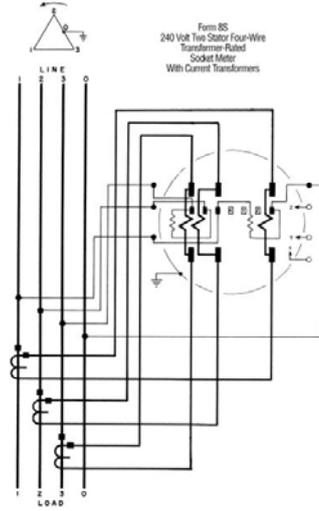


5S



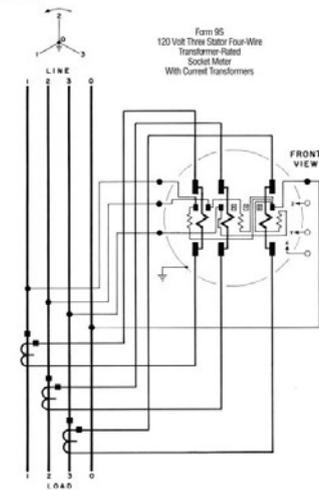
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Three-Phase, Four-Wire Delta Circuits
Front View



9S

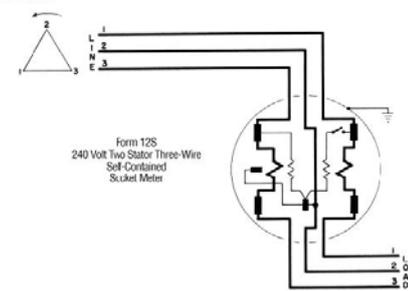
Three-Phase, Four-Wire Wye Circuits
Front View



Figures 12-48. Current Transformers.

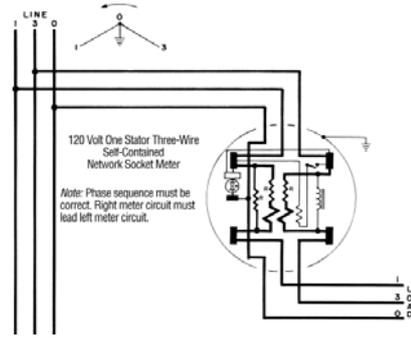
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Three-Phase, Three-Wire Circuits
Front Views



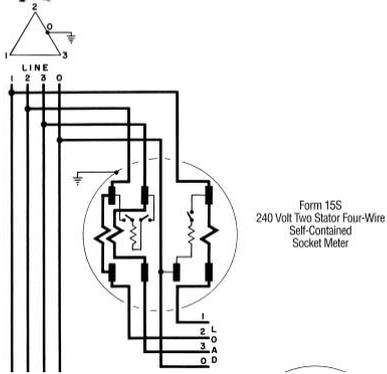
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Three-Wire Network Circuit
Front Views

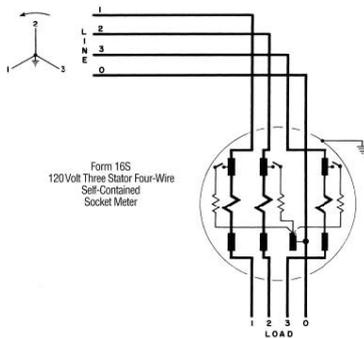


15S

Three-Phase, Four-Wire Delta Circuits
Front Views



16S



➤ Certificates

