SmartMQn Energy
Power and Energy Monitor
HS-EXTM (standard) &
## HS-EXTE (with Ethernet)

The SmartMQn Energy is a Power and Energy Monitor that requires no software to setup, and provides a variety of advanced features, including:

- 3-phase Power Monitoring with three current (0-5A CTs) and voltage inputs (480V, direct connect or PTs)

- Display of Energy and Power Values on 3.5", Backlit LCD Touchscreen

- Historical Datalogging to Removable Media, up to 2GB stored locally

- Remote Access to Live Data (Modbus, opt. Modbus/TCP) and Historical Data (via opt. EnvisionFX Software)

1   SPECIFICATIONS

CURRENT INPUTS			VOLTAGE INPUTS	
Conversion	True RMS 78.1K samples/sec		**Conversion**	True RMS
CT Input	5A Secondary		**PT Input (or direct)**	480V Secondary
Burden	0.2VA		**Burden**	2.0Mohm
Range	1 to 150% of CT Primary		**Input Range**	40 to 600Vac
Full Scale	150% of CT Primary		**Full Scale**	600Vac
Accuracy	<1% of Full Scale		**Accuracy**	Better than 1% full scale
RELAY OUTPUT (Form C)				
Current	1A max at 30Vdc 0.5A max at 125Vac		**Contact Voltage**	30Vdc, Max 125Vac, Max
MEASURED DATA VALUES				
Phase A RMS voltage (Va)			Watts (W)	
Phase B RMS voltage (Vb)			Power Factor (PF)	
Phase C RMS voltage (Vc)			Volt-Amps (VA)	
Phase A RMS current (Ia)			Volt-Amps Reactive (VAR)	
Phase B RMS current (Ib)			Kilowatt Hour (KWhr)	
Phase C RMS current (Ic)			Voltage Peak (Vpeak)	
Frequency (Hz)			Current Peak (Ipeak)	

GENERAL SPECIFICATIONS	
Required Power (Steady State)	200mA @ 24 VDC
Required Power (Inrush)	30A for 1 ms @ 24 VDC (DC switched)
Primary Power Range	10-30VDC
Clock Accuracy	+/-7 minutes/month
Operating Temperature	-10 to +60 C
Relative Humidity	5 to 95%, Non-condensing
CONNECTIVITY	
Serial Ports	RS-232/RS-485 Modbus Slave (MJ2)
Ethernet Port (HS-EXTE only)	Modbus/TCP Slave
CAN Port	Horner CsCAN Peer-to-Peer
Removable Media	microSD, 2GB

Information is subject to change without notice.

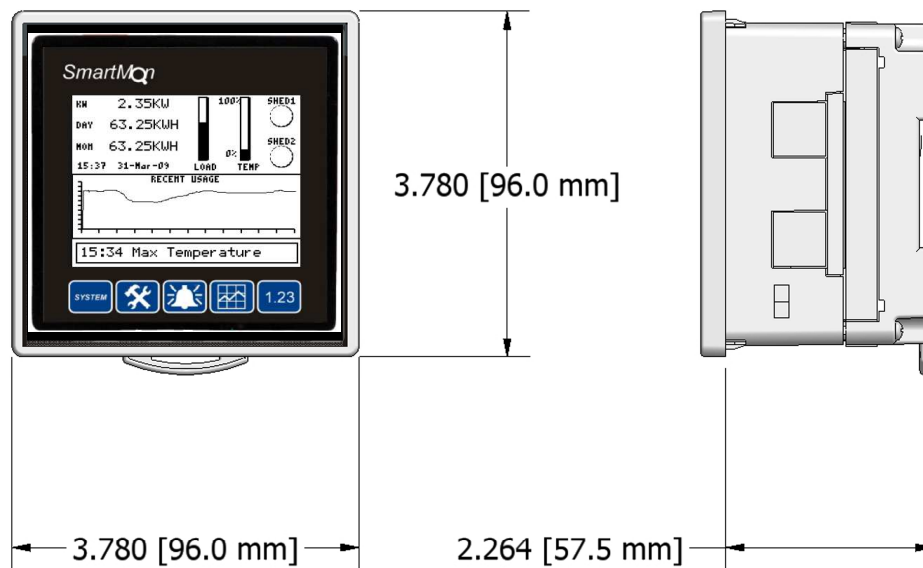## 2   WIRING
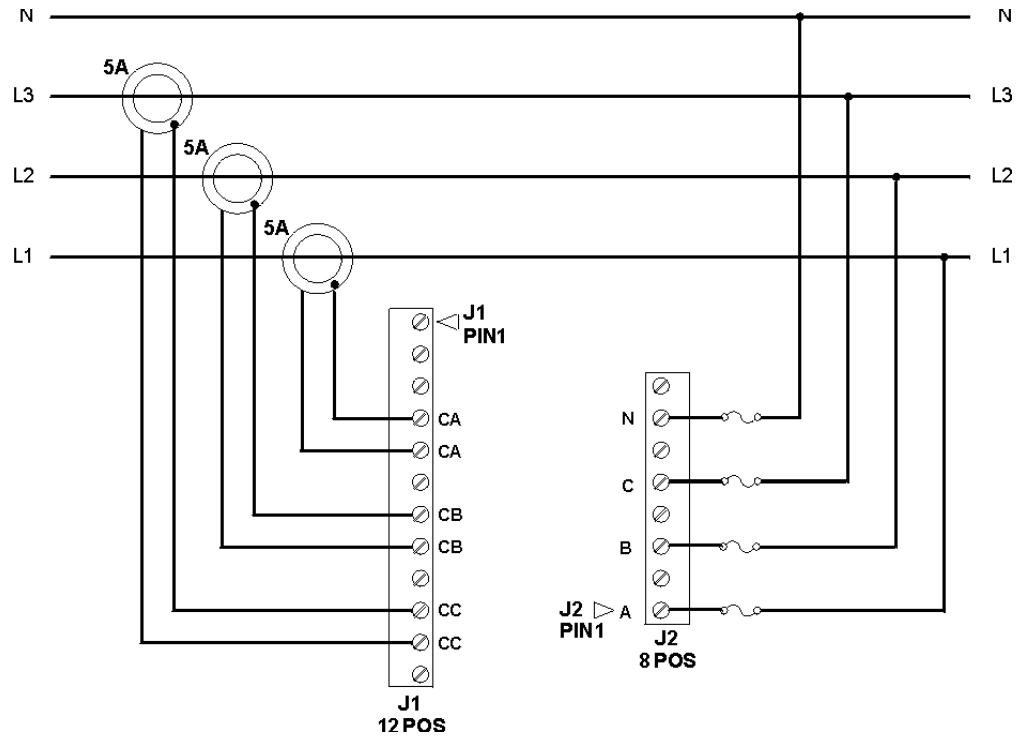
4-wire Wye or 4-wire Delta
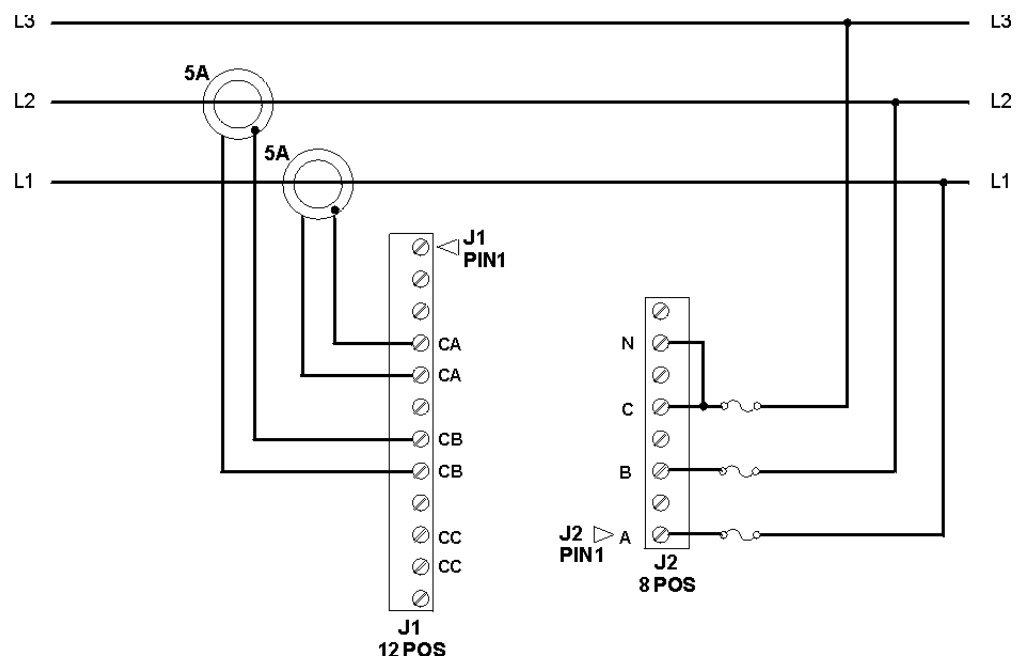
3-wire Delta

3   DIMENSIONS, CUTOUT, AND INSTALLATION

3.780 [96.0 mm]

3.780 [96.0 mm]

2.264 [57.5 mm]

Note: Ethernet model is 0.5" deeper

3.622 [92mm]

3.622 [92mm]
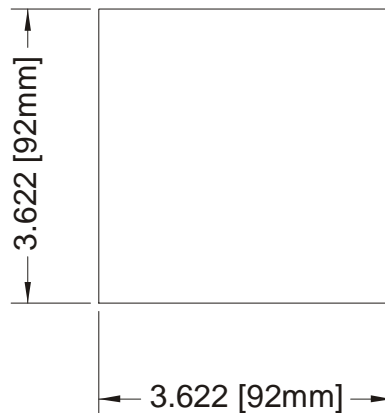
001XLE002
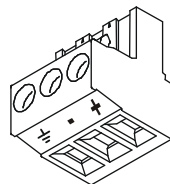
DC Power Connector (10-30Vdc)

001CAN005

CsCAN Connector

(No Power Required)

4   INSTALLATION / SAFETY

Warning: Remove power from the SmartMQn Monitor, CAN port, and any peripheral equipment connected to this local system before adding or replacing this or any module.
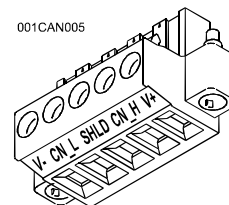
Use the following wire type or equivalent:

- Belden 8917

- 16 AWG or larger

When found on the product, the following symbols specify:

Warning: Consult user documentation.

Warning: Electrical Shock Hazard.

WARNING: To avoid the risk of electric shock or burns, always connect the safety (or earth) ground before making any other connections.

WARNING: To reduce the risk of fire, electrical shock, or physical injury it is strongly recommended to fuse the voltage measurement inputs. Be sure to locate fuses as close to the source as possible.

WARNING: Replace fuse with the same type and rating to provide protection against risk of fire and shock hazards.

WARNING: In the event of repeated failure, do not replace the fuse again as a repeated failure indicates a defective condition that will not clear by replacing the fuse.

WARNING: Only qualified electrical personnel familiar with the construction and operation of this equipment and the hazards involved should install, adjust, operate, or service this equipment. Read and understand this manual and other applicable manuals in their entirety before proceeding. Failure to observe this precaution could result in severe bodily injury or loss of life.

5 TECHNICAL SUPPORT

For assistance and manual up-dates, contact Technical Support at the following locations:

North America:+

(317) 916-4274

www.heapg.com

Europe:

(+) 353-21-4321-266

www.horner-apg.com

NOTES