

Ideal for Renewables!



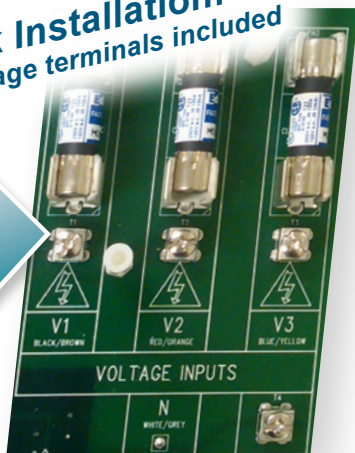
DTS SMX

Surface Mount Three Phase Energy Sub-meter

Versatile weather-proof design!



Quick Installation!
Fused voltage terminals included



FEATURES

- Line powered single / three phase energy sub-meter
- Class 0.5 Energy Meter** (ANSI C12.20) - "Revenue grade"
- NEMA 4x weather-proof surface mount enclosure
- Bi-directional for renewable systems (NET metering)
- Interfaces with "safe" mV, RopeCTs or 1/5A CTs
- Fused Voltage Terminals included for quick installation
- Easy access voltage and current terminations
- **Embedded Ethernet connectivity** - Modbus/TCP, BACnet/IP, SNMP or DNP 3.00
- RS-485 connectivity - Modbus RTU or BACnet MS/TP
- Communications setting via DIP switches for Modbus RTU
- LonWorks FT-10 communications
- **Pulse output standard**
- 2 digital status/counter inputs OR digital outputs - optional
- User configurable using DTS Config software
- User-definable Modbus register area
- Compatible with **PowerStudio** Energy Management Software
- **SunSpec Alliance** certified
- **Designed and Manufactured in the USA.** Complies with the Buy American Provisions of ARRA Section 1605

MEASUREMENT PARAMETERS*

	DTS SMX
Measurement Topologies	
3 Phase, 3 and 4-wire	✓
Single Phase 2 and 3-wire (120/208 & 120/240V)	✓
Measurements	
AC Volts (phase-phase)	L1, L2, L3 & III
AC Volts (phase-neutral)	L1, L2, L3 & III
AC Current	L1, L2, L3 & III
Frequency (Hz)	L1, L2, L3 & III
Neutral	L1, L2, L3 & III
Power	
Active Power - kW (consumed/generated)	L1, L2, L3 & III
Reactive Power - kVAr (inductive/capacitive)	L1, L2, L3 & III
Apparent Power - kVA	L1, L2, L3 & III
Power Factor	L1, L2, L3 & III
Phase Angle	L1, L2, L3 & III
Bi-directional for renewable systems	✓
Demand	
kW - Sliding Window	L1, L2, L3 & III
Energy	
Active Energy - kWh (consumed/generated)	L1, L2, L3 & III
Reactive Energy - kVArh (inductive/capacitive)	L1, L2, L3 & III
Setpoints, Alarms, Control	
Pulse / Status Outputs	1 - 3
Counter / Status Inputs	2 maximum
Communications	
Modbus RTU	✓
Modbus TCP	✓
BACnet MS/TP	✓
BACnet / IP	✓
SNMP	✓
DNP 3.00 over IP	✓
LonWorks FT-10	✓

* Model dependent ** CTs excluded

Call Toll Free: 1-877-PQ-SOLNS (1-877-777-6567) or 303-805-5252 email: info@measurlogic.com

MEASURLOGIC

www.measurlogic.com

SPECIFICATIONS*

Measuring Circuits:

Voltage range:	120-480V ac, L-L, 3 or 4 W
Rated voltage:	280 V ac L-N / 485 V ac L-L
Voltage overload:	1.2 x
Voltage burden:	<0.1 VA @ 280 V ac L-N
Frequency:	45 to 65 Hz
Rated current:	1A to 5A isolated
	333 mV for mV CT versions
Current overload:	1.5 x for 1A or 5A versions
	1.2 x for mV versions
Current input burden:	0.5 VA @ 5 A
Power overload:	1.2 x

Accuracy:

Voltage:	0.5%, <0.2% typical (80-120%)
Current:	0.5%, <0.2% typical (10-120%)
Power:	0.5%, <0.2% typical (10-120%)
Power Factor:	0.5% (between 0.5 and 1.0)
Energy:**	Class 0.5 (ANSI C12.20)

Mechanical:

Connection:	#6-32 screw terminals with captive washers
Case Material:	Polycarbonate
Protection:	Nema 4x
Dimensions:	11.45"(291mm) H x 4.92"(125mm) D x 8.98"(228mm) W
Weight:	3.75lbs (1.7 kg)

Voltage Supply:

Voltage:	Powered from Phase A & B or Phase A & Neutral (model dependent)
Frequency:	50/60 Hz
Burden:	<5VA
Operating temp:	-4° to 131°F (-20° to 55°C)
Tolerance:	-10%, + 10%
Storage temp:	-40° to 185°F (-40° to 85°C)
Humidity:	5 to 95% R.H. non-condensing

Communications: (Serial)

Connection:	3 way pluggable, screw terminal
Protocols:	Modbus RTU or BACnet MS/TP

Communications: (LonWorks)

Connection:	2 way pluggable, screw terminal
Protocols:	LonWorks FT-10

Communications: (Ethernet)

Connection:	RJ45, 10/100Base-T
Protocols:	Modbus TCP or BACnet/IP or SNMP or DNP 3.00 over IP

Pulse / Status Outputs: - Optional

Type:	Potential Free, N.O. Solid State Relay
Pulse Width:	100 mS default
	Min 50 mS, User configurable up to 10 Seconds
	Max 10 Pulses per Second
Pulse Rate:	1 Pulse / 1 kWh default, User configurable
Max On-Resistance:	30 ohm
Max switching voltage:	240Vac
Max switching current:	120mA (350mA for 10mS)
Connection:	Isolated Pin-Pair (Output 3, Outputs 1 and/or 2)

Counter / Status Inputs: - Optional

Type:	Dry Contact
Min Pulse Width:	50mS, Max 10 Pulses per Second
Max Current/Voltage:	15mA / 18V
Connection:	2 Pin-Pairs (Inputs 1 and/or 2)

Standards & Safety:

Safety:	IEC 61010 Pending
EMC:	IEC 61000-6-3 Emissions, IEC 61000-6-2 Immunity, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11
FCC:	CISPR 22/FCC 15 class A
Other:	IEC60688 Category III – 280Vac / 485Vac



MODEL NUMBER BUILDER*

DTS SMX - **a b** - **c d** - **e** - **f** - **g h**

Standard CT ranges:
5, 20, 50, 100, 200,
400, 600, 800, 1000,
1500, 2000, 2500,
3000, 4000, 5000
(Other currents on request)

Current & Voltage Inputs

- a:** 3 = 333mV CT
5 = 5A CT
9 = unburdened CT
- b:** 4 = 120 - 480 Vac
L-L 3 or 4 Wire
6 = 690 Vac
L-L 4 Wire

Communications

- c:** S = Serial
E = Ethernet
G = Ethernet Gateway
N = None
- d:** M = Modbus
B = BACnet
L = LonWorks
S = SNMP
D = DNP 3.0
N = None

I/O**

- e:** N = Not fitted
P = 1 x Digital output (PhotoMos relay)
A = 2 x Digital Inputs (Potential free) & 1 x Digital Output (PhotoMos relay)
3 = 3 x Digital output (PhotoMos relay)

** Other configurations available

Service Type

- f:** N = Neutral (1P 2W, 1P 3W, 3P 4W)
120 – 480 Vac
- 2 = No Neutral (3P 3W)
208 – 240 Vac L-L
- 4 = No Neutral (3P 3W)
480 Vac L-L
- 6 = Neutral (3P 4W)
690 Vac L-L

DC Auxiliary Option

- 1 = 12 Vdc
3 = 24 Vdc
5 = 48 Vdc

Split Core Current Transformers

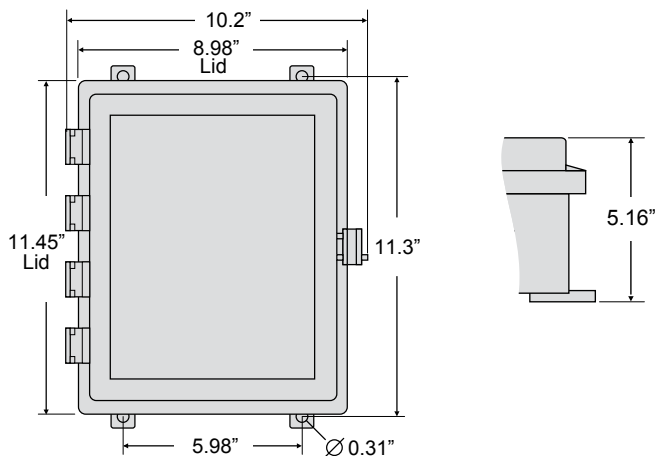
- g:** Amperage of CT's
Blank: if 333mV or 5A current input
- h:** CT Aperture Size
Blank: if 333mV or 5A current input

- T** = 0.4" diameter
S = 0.72" x 0.62"
M = 1.3" x 1.7"
L = 2" x 3.5"
H = 2" x 5.5"

RopeCTs

- R2** = 2" diameter
R3 = 3" diameter
R4 = 4" diameter
R6 = 6" diameter
R8 = 8" diameter
R12 = 12" diameter

DIMENSIONS



Distributor:

Call Toll Free: 877-PQ-SOLNS (877-777-6567)

Fax (425) 799-4780

email: info@measurlogic.com

* Model dependent ** CTs excluded
Technical details subject to change