

Suitable for  
outdoor / indoor  
applications



### FEATURES

- Line powered single / three phase energy submeter
- ANSI C12.20 – “Revenue grade”
- Non-metallic weather-proof surface mounting enclosure
- Bi-directional for renewable systems (NET metering)
- 3 line LCD backlit display
- Interfaces with 333mV, flexible Rogowski or 5A CTs
- Fused Voltage Terminals included for quick installation
- Easy access voltage and current terminations
- CT ratio set by DIP switches
- Ethernet connectivity – Modbus TCP, BACnet/IP, SNMP or DNP
- RS-485 connectivity – Modbus RTU or BACnet MS/TP
- Lonworks FT-10 communications option
- Pulse Output (kWh) standard
- 2 digital status/counter inputs OR digital outputs – optional
- ETL Listed, CE
- BTL Listed, SunSpec Alliance certified
- User-definable Modbus register area
- User configurable using DTS Config software
- Designed and Manufactured in the USA
- Complies with Buy American Provisions of ARRA Section 1605

### MEASUREMENT PARAMETERS\*

#### Measurement Topologies

Three Phase 3 or 4 wire	✓
Single Phase 2 and 3 wire (120/208 & 120/240Vac)	✓

#### Measurements

AC Volts (phase-phase)	L1, L2, L3 & III
AC Volts (phase-neutral)	L1, L2, L3 & III
AC Current	L1, L2, L3 & III
Neutral Current	✓
Frequency (Hz)	✓

#### 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	✓
---------------------	---

#### Energy

Active Energy - kWh (Net)	L1, L2, L3 & III
Active Energy - kWh (consumed/generated)	III
Reactive Energy - kVARh (Net)	L1, L2, L3 & III
Reactive Energy - kVARh (inductive/capacitive)	III

#### Setpoints, Alarms, Control

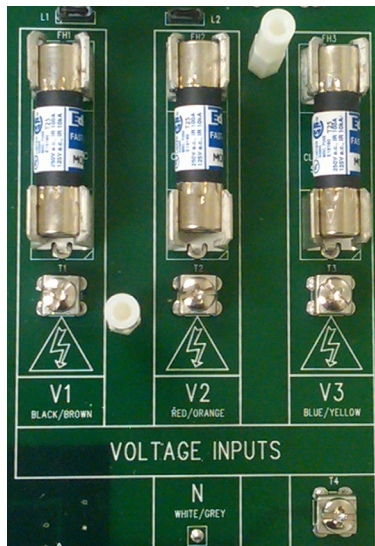
Pulse / Status Outputs	1 – 3
Counter / Status Inputs	2 maximum

#### Communications

Modbus RTU	✓
Modbus TCP	✓
BACnet MS/TP	✓
BACnet / IP	✓
SNMP	✓
DNP 3.00 over IP	✓
LonWorks FT-10	✓



### Quick Installation! Fused voltage terminals included



## SPECIFICATIONS\*

### Measuring Circuits

Voltage range:	208-600Vac, L-L (CAT III) 120-347Vac L-N (CAT III)
Voltage overload:	1.1 x (1.06 x for 600V)
Voltage burden:	<0.1 VA @ 277 Vac L-N
Frequency:	45 to 65 Hz
Rated current:	333mV 5A
Current overload:	1.2 x 1.5x
Power overload:	1.2 x 1.5x

### 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 0.2 (ANSI C12.20)

### Voltage Supply (Self-Powered)

Voltage:	Powered from Phase A & B or Phase A & Neutral (model dependent)
Frequency:	50/60 Hz
Burden:	<5VA

### 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:	3.75lb (1.7 kg)

### Environmental

Operating temp:	-4° to 158°F (-20° to 70°C)
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 (SunSpec Certified) or BACnet MS/TP (BTL Listed)

### Communications (Ethernet)

Connection:	RJ45, 10/100 Base-T
Protocols:	Modbus TCP (SunSpec Certified) BACnet IP (BTL Listed), SNMP, DNP3.00

### Communications (Lonworks)

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

### Pulse Output

Type:	Potential Free, N.O. Solid State Relay
Pulse Width:	Max 10 Pulses per Second
Pulse Rate:	1 Pulse / 1 kWh default, user configurable
Max On-Resistance:	30 ohm
Max switching voltage:	50Vdc or 30Vac
Max switching current:	120mA (350mA for 10mS)
Connection:	Isolated Pin-Pair

### Counter / Status Inputs

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

### Standards & Safety

ETL listing:	4001073
Base Standards:	UL 61010-1:2012 Ed. 3 +R: 29Apr2016 CAN/CSA C22.2 # 61010-1:2012 Ed. 3 +G1
EMC:	IEC 61326-1 (2012) Ed2. IEC 61000-3-2, IEC 61000-3-3, 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
Emissions:	CISPR 11 Group1 Class A / FCC Part 15 Class A
Communications:	BTL Listed. SunSpec Alliance certified
RoHS:	Compliant

## MODEL NUMBER BUILDER\*

DTS SMX - **a** - **cd** - **e** - **f**

### Current & Voltage Inputs

- a:** 3 = 333mV or Rogowski CT  
5 = 5A CT
- b:** 4 = 208 - 480Vac L-L 3 or 4 Wire  
6 = 600Vac L-L 4 wire

### Communications

- C:** S = Serial  
E = Ethernet  
N = None
- d:** M = Modbus  
B = BACnet  
+ Modbus  
S = SNMP  
D = DNP 3.0  
N = None

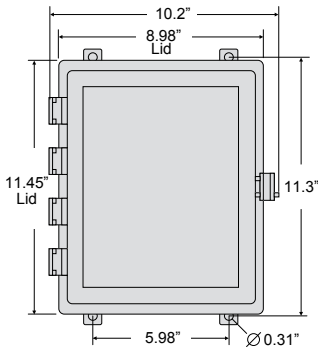
### I/O

- 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)

### Powering

- f:** N = Va-N  
(1P 2W, 1P 3W, 3P 4W) 120-277 Vac L-N
- 4 = Va-Vb  
(3P 3 or 4W) 208-480 Vac L-L
- 6 = Va-N  
(3P 4W) 120-347 Vac L-N

### DIMENSIONS



### ORDERING EXAMPLES

Part Number	Current	Voltage	Communications	I/O	Powering
DTS SMX-34-NN-P-4	333mV or flexible Rogowski CT	208V-480V 3 phase 3 or 4 wire systems	None	1 x digital output (kWh)	Self-powered (Va - Vb)
DTS SMX-34-SB-P-4	333mV or flexible Rogowski CT	208V-480V 3 phase 3 or 4 wire systems	RS-485: BACnet MS/TP & Modbus RTU	1 x digital output (kWh)	Self-powered (Va - Vb)
DTS SMX-54-EB-P-4	5A	208V-480V 3 phase 3 or 4 wire systems	Ethernet: BACnet IP & Modbus TCP	1 x digital output (kWh)	Self-powered (Va - Vb)
DTS SMX-56-EB-P-6	5A	600V 3 phase 4 wire systems	Ethernet: BACnet IP & Modbus TCP	1 x digital output (kWh)	Self-powered (Va - N)

## CURRENT TRANSFORMER COMPATIBILITY



**Split Core CTs**  
measurlogic.com/102



**Solid Core CTs**  
measurlogic.com/104



**Rogowski CTs**  
measurlogic.com/106

### Distributor:

Drawings are for illustrative purposes only.  
\* Technical details subject to change \*\* Meter Only

R25A