Ideal for Renewables!

DTS 310

Line Powered Three Phase Energy Sub-meter

Cost effective solution!

MEASURLOGIC INC MADE IN USA

SUNSPEC ALLIANCE

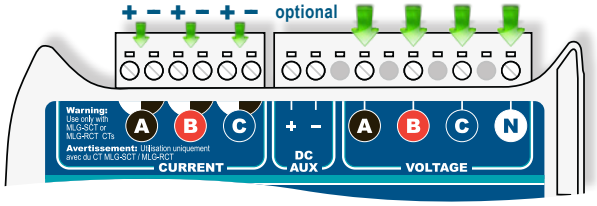
CE

ETL LISTED c US

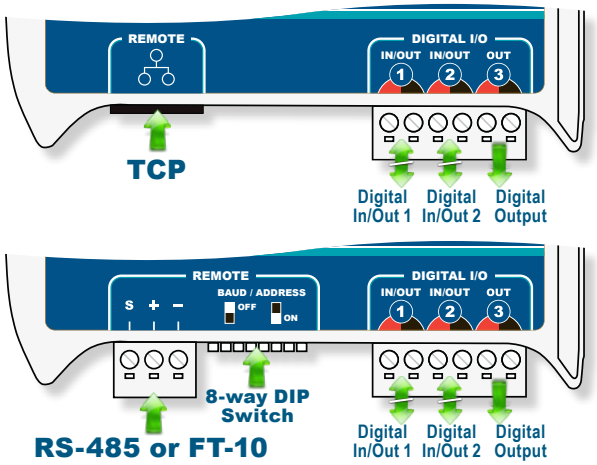
FEATURES

- **Line powered** single / three phase energy sub-meter with auto-topology detection
- Class 0.5 Energy Meter** (ANSI C12.20) - "**Revenue grade**"
- Bi-directional for renewable systems (NET metering)
- Interfaces with "safe" mV and RopeCTs
- **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
- 2 digital status/counter inputs OR digital outputs - optional
- Color coded, pluggable connectivity
- Compact DIN rail design
- User configurable using DTS Config software
- User-definable Modbus register area
- Compatible with **Power**Studio Energy Management Software
- **SunSpec Alliance** certified
- **Designed and Manufactured in the USA**. Complies with the Buy American Provisions of ARRA Section 1605

INPUTS



COMMS & I/O



MEASUREMENT PARAMETERS*

	DTS 310
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
Neutral Current	✓
Frequency (Hz)	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:	333 mV or model dependent
Current overload:	1.2 x
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)

Voltage Supply:

Voltage:	Powered from Phase A & B or Phase A & Neutral (model dependent)
Frequency:	50/60 Hz
Burden:	<3VA
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

Mechanical:

Connection:	Pluggable screw terminals suitable for 12AWG stranded wire (2.5mm^2)
Case Material:	Self-extinguishable, V0 plastic
Protection:	Nema 1 (IP40)
Dimensions:	4.73"(120mm) H x 4.25"(108mm) D x 1.38"(35mm) W
Weight:	1lb (0.45 kg)

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 / 6V
Connection:	2 Pin-Pairs (Inputs 1 and/or 2)

Standards & Safety:

ETL listing:	4001073
Conforms to:	UL Std 61010.1
Certified to:	CSA Std C22.2 # 61010.1
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 310 - a b - c d - e - f - g h

Current & Voltage Inputs

a:
- **3** = 333mV 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
- **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

Current Transformers

g: **Amperage of CT's**
Blank: if 333mV current input

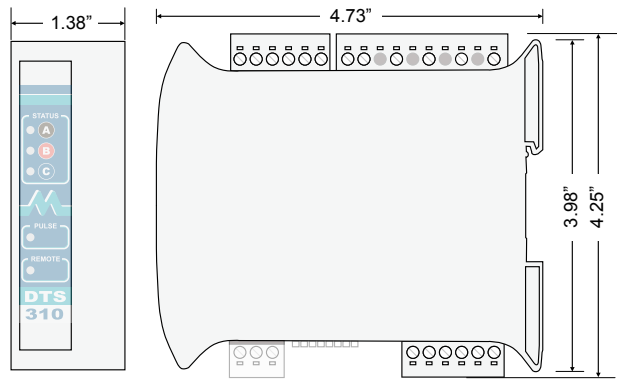
h: **CT Aperture Size**
Blank: if 333mV current input

Split Core CTs
- **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"

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

Solid Core CTs
- **C1** = 0.28" diameter
- **C2** = 0.35" diameter
- **C3** = 0.51" diameter
- **C4** = 0.75" diameter

DIMENSIONS



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Technical details subject to change

Distributor:

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