

# DTS 307

## ULTRA COMPACT DIN RAIL POWERED THREE PHASE ENERGY SUBMETER

Small  
Footprint!



### FEATURES

- Line powered single / three phase energy submeter with auto-topology detection
- Ultra-compact DIN rail design: 3.11" L x 1.38" W x 4.25" H
- UL Listed, CE, FCC Part 15 Class B
- ANSI C12.20 – "Revenue grade"
- 208-480 Vac (1P 2W, 1P 3W, 3P 4W)
- Interfaces with 333mV output CTs or RopeCTs
- RS-485 connectivity – Modbus RTU or BACnet MS/TP
- Bi-directional for renewable systems (NET metering)
- Color coded, pluggable connectivity
- User configurable using DTS Config software
- User-definable Modbus register area
- BTL Listed, SunSpec Alliance certified
- Optional Low Voltage AC/DC Auxiliary (12-24Vdc or 24Vac)
- Optional single Pulse Output (PhotoMos relay)
- Designed and Manufactured in the USA. Complies with Buy American Provisions of ARRA Section 1605
- Also available in a OEM board level format

### MEASUREMENT PARAMETERS\*

#### 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)	✓

#### 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	✓
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#### 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

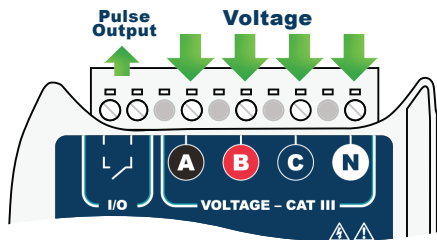
#### Setpoints, Alarms, Control

Pulse / Status Output	1
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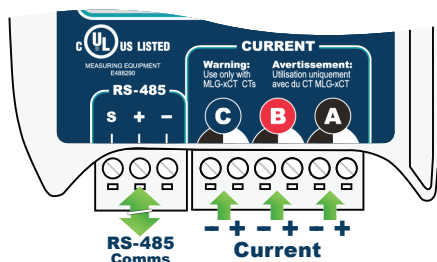
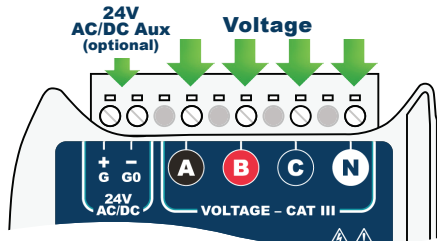
#### Communications

Modbus RTU	✓
BACnet MS/TP	✓

\* Model dependent \*\* CTs excluded



- OR -



## SPECIFICATIONS\*

### Measuring Circuits

Voltage range:	208-480Vac, L-L (CAT III) 120-277Vac, L-N (CAT III)
Voltage overload:	1.1 x
Voltage burden:	<0.1 VA @ 277 Vac 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 0.2 (ANSI C12.20)

### Voltage Supply (Self-Powered)

Voltage:	Powered from Phase A & B or Phase A & Neutral (model dependent)
Frequency:	50/60 Hz
Burden:	<2VA

### Low Voltage AC/DC Auxiliary (Option)

Voltage options:	12-24Vdc or 24Vac
Tolerance:	+/- 10%
Burden:	<2VA
Isolation:	Must be powered from a Class 2 IEC 60950 isolated power supply

### Mechanical

Connection:	Pluggable screw terminals suitable for 12AWG stranded wire (2.5mm <sup>2</sup> )
Case Material:	Self-extinguishable, V0 plastic
Protection:	Nema 1 (IP40)
Dimensions:	3.11" (79mm) D x 4.25" (108mm) H x 1.38" (35mm) W
Weight:	0.5lb (0.23 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 (BACnet Listed)

### 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

### Standards & Safety

UL Listing:	E488290
Conforms to:	UL Std 61010.1 3rd Edition, May 11, 2012, Revised July 15, 2015
Certified to:	CAN/CSA C22.2 # 61010.1, 3rd Edition, Revised July 15, 2015
Additional Standards:	IEC 61010-2-030: 2010, 1st Edition
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 B / FCC Part 15 Class B
Other:	Measurement Category III – 300Vac L-N / 520Vac L-L

## MODEL NUMBER BUILDER\*

DTS 307 - **a b** - **c d** - **e** - **f**

### Current & Voltage Inputs

<b>a:</b>	3 = 333mV CT 9 = Rope CT
<b>b:</b>	4 = 208 - 480 Vac L-L 3 or 4 Wire 2 = 208 - 240 Vac L-L 3 or 4 Wire

### Communications

<b>C:</b>	S = Serial N = None
<b>d:</b>	M = Modbus B = BACnet N = None

### I/O

<b>e:</b>	N = Not fitted P = 1 x Digital output (PhotoMos relay)
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### Service Type

<b>f:</b>	N = Neutral (1P 2W, 1P 3W, 3P 4W) 120 – 480 Vac 2 = No Neutral (3P 3W) 208 – 240 Vac L-L
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## CURRENT TRANSFORMER COMPATIBILITY

### Split Core CTs

measurlogic.com/102



### Solid Core CTs

measurlogic.com/104



### Rope CTs

measurlogic.com/106



- OR -

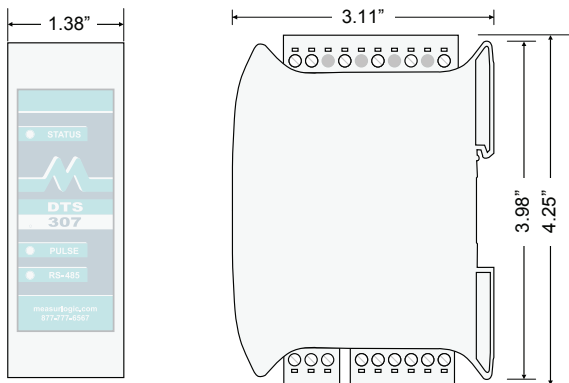
**f**

### Low Voltage Option

<b>f:</b>	A = 12 - 24Vdc or 24Vac
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Distributor:

## DIMENSIONS



\* Model dependent \*\* CTs Excluded  
Technical details subject to change