

Ideal for Renewables!



DTS DC

DC Energy Sub-meter with Remote Communications

Versatile and Easy to Configure!



Available with embedded Ethernet



SUNSPEC ALLIANCE



FEATURES

- DC power / energy sub-meter provides Voltage, Current, Power and Energy measurements
- Bi-directional for renewable systems (**NET** metering)
- Interfaces with shunt or external Hall Effect current sensors
- Up to 800Vdc Voltage input
- **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
- Compact DIN rail design
- User configurable using DTS Config software
- User-definable Modbus register area
- **SunSpec Alliance** certified
- **Designed and Manufactured in the USA.** Complies with the Buy American Provisions of ARRA Section 1605

APPLICATIONS



Solar / PV



Wind generators

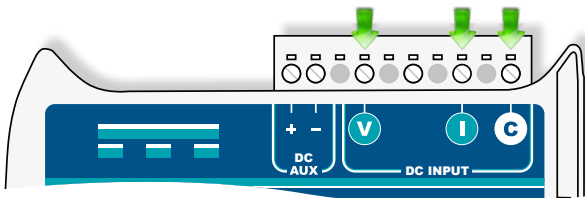


Battery chargers and systems

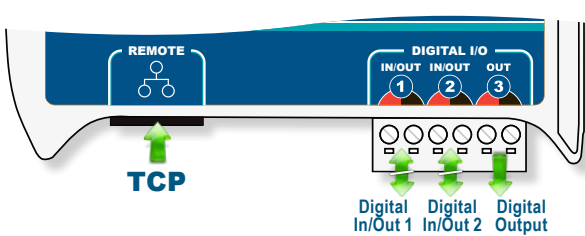


Data centers

INPUTS



COMMS & I/O



TCP

Digital In/Out 1 Digital In/Out 2 Digital Output

8-way DIP Switch

RS-485 or FT-10

Digital In/Out 1 Digital In/Out 2 Digital Output

MEASUREMENT PARAMETERS*

| Measurements | DTS DC |
|---|--------|
| DC Volts (Instantaneous, Max and Min) | ✓ |
| DC Current (Instantaneous, Max and Min) | ✓ |
| Power | |
| DC Power - kW (consumed/generated) | ✓ |
| Bi-directional for renewable systems | ✓ |
| Energy | |
| DC Energy - kWh (consumed/generated) | ✓ |
| Setpoints, Alarms, Control | |
| Pulse / Status Outputs | 1 - 3 |
| Counter / Status Inputs | 2 |
| Communications | |
| Modbus RTU | ✓ |
| Modbus TCP | ✓ |
| BACnet MS/TP | ✓ |
| BACnet / IP | ✓ |
| SNMP | ✓ |
| DNP 3.00 over IP | ✓ |
| LonWorks FT-10 | ✓ |

* Model dependent

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: 0 - 50, 150, 400 or 800Vdc
 Permanent overload: 1.2 x (1.05x for 800Vdc range)
 Self powered: 120-400 Vdc, 420 Vdc Max
 Input Impedance: 1MΩ for 400Vdc range & 2MΩ for 800Vdc range
 Current Input Options: 0 - 5A (direct input)
 >5A (external current shunt or Hall effect sensor)
 Permanent overload: 1.25 x In
 Shunt: 50 - 100mV (configurable)
 Hall Effect sensors: 0-4Vdc or 0-5Vdc
 0-20mA or 4-20mA

Accuracy:

Voltage: 0.5% (10-110%)
 Current: 0.5% (10-120%)
 Power: 0.5% (10-120%)
 Energy: 0.5% (10-120%)

Aux Supply: (Not required for self-powered)

Voltage options: 12Vdc, 24Vdc or 48Vdc
 Burden: <3VA
 Isolation: 1500Vdc
 Operating temp: -4° to 131°F (-20° to 55°C)
 Tolerance: -25%, + 50%
 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 (2.5mm²)
 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)

Communication: (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

Communication: (Ethernet)

Connection: RJ45, 10/100Base-T
 Protocols: Modbus TCP or BACnet/IP or SNMP or DNP 3.0 over IP
 Limits: Not available for 800Vdc range

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: Pending
 Designed to: UL Std 61010.1
 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 DC - **a b** - **c d** - **e** - **f** - **g**

Current & Voltage Inputs

a: S = 50-100 mV shunt
 I = external hall effect (20 mA)
 V = external hall effect (5 Vdc)
 D = 0-5A direct
b: 1 = 50 Vdc
 2 = 150 Vdc
 4 = 400 Vdc
 8 = 800 Vdc

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 Options**

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

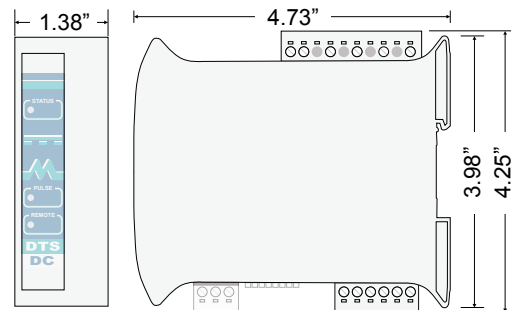
Aux Supply

f: 1 = 12 Vdc
 3 = 24 Vdc
 5 = 48 Vdc
 N = self-powered (120-400 Vdc)

Current Range

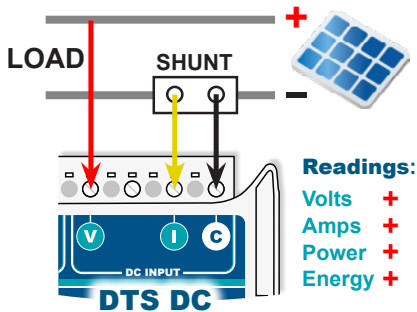
g: Amperage of sensor
Blank: if no external sensor supplied

DIMENSIONS

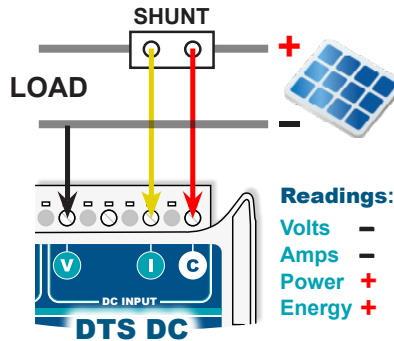


CONNECTIONS (SHUNT OR DIRECT)

Current Measurement in NEGATIVE Leg (recommended)



Current Measurement in POSITIVE Leg



Distributor:



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

Fax (425) 799-4780

email: info@measurlogic.com

* Model dependent
 Technical details subject to change