



**3
Current
Inputs!**



FEATURES

- **DC power / energy** sub-meter provides Voltage, Current, Power and Energy measurements
- Bi-directional for renewable systems (**NET** metering)
- Suitable for **Positive and Negative Ground** systems
- **3 Current Channels** that interface with shunt or external Hall Effect current sensors
- Up to **1500Vdc** Voltage input
- **Embedded Ethernet connectivity** - Modbus TCP, BACnet/IP, SNMP or DNP 3.0
- RS-485 connectivity - Modbus RTU or BACnet MS/TP
- Communications setting via DIP switches for Modbus RTU
- **48 Vdc self-powered** version for telecom applications
- Pulse Output (kWh) & 2 digital inputs standard
- Compact DIN rail design
- User configurable using DTS Config software or Embedded Webpages
- 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

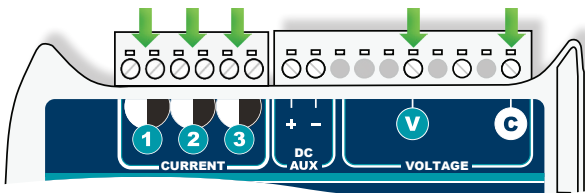


Telecom Systems (Positive Ground)

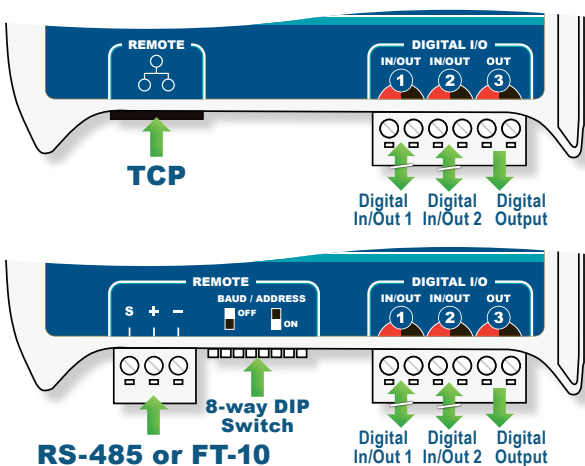


Data centers

INPUTS



COMMS & I/O



MEASUREMENT PARAMETERS*

	DTS DC
Measurements	
DC Volts (Instantaneous, Max and Min)	✓
DC Current (Instantaneous, Max and Min)	3 Channels
Power	
DC Power - kW (consumed/generated)	✓
Bi-directional for renewable systems	✓
Energy	
DC Energy - kWh (consumed/generated)	✓
Amp-Hours	✓
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	✓

* Model dependent

SPECIFICATIONS*

Measuring Circuits

Voltage range:	60, 150, 400, 1000 or 1500Vdc
Voltage overload:	1.2 x (1.05x for 1000Vdc range)
Self powered:	120-400 Vdc, 420 Vdc Max 18 - 48Vdc, 72Vdc Max
Input Impedance:	1MΩ for 400Vdc range & 2MΩ for 1000Vdc range 3MΩ for 1500Vdc range
Current Input Options:	3x external current shunt or Hall effect sensor
Shunt:	50 - 100mV (configurable)
Hall Effect sensors:	0-20mA or 4-20mA 0-4Vdc or 0-5Vdc

Accuracy

Voltage:	0.5% (10-110%)
Current:	0.5% (10-120%)
Power:	0.5% (10-120%)
Energy:	0.50%

DC Aux Supply (Not required for self-powered)

Voltage options:	12Vdc, 24Vdc or 48Vdc
Tolerance:	-25%, +50%
Burden:	<5VA
Isolation:	1500Vdc

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)

Environmental

Operating temp:	-4° to 131°F (-20° to 55°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, 10/100Base-T
Protocols:	Modbus TCP (SunSpec Certified) BACnet/IP (BTL Listed) or SNMP, DNP 3.0 over IP

Digital Output (Solid State Relay)

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

Counter / Status Inputs

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

Standards & Safety

Designed to:	UL Std 61010.1 CSA Std C22.2 # 61010.1
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
FCC:	CISPR 22/FCC 15 class A
Communications:	BTL Listed, SunSpec Alliance certified
RoHS:	Compliant

MODEL NUMBER BUILDER*

DTS DC3 - **a b** - **c d** - **e** - **f** - **g**

Current & Voltage Inputs

- a:** T = 50-100 mV shunt
J = external hall effect (20 mA)
V = external hall effect (10 Vdc)
- b:** 1 = 60 Vdc
2 = 150 Vdc
4 = 400 Vdc
10 = 1000 Vdc
15 = 1500 Vdc

Communications

- C:** S = Serial
E = Ethernet
- d:** B = Modbus & BACnet
S = SNMP
D = DNP 3.0

I/O

- e:** A = 2 x Digital Inputs (Potential free) & 1 x Digital Output (PhotoMos relay)
P = 1 x Digital output (PhotoMos relay)
3 = 3 x Digital output (PhotoMos relay)

Aux Supply

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

-J15 H.E. Power

- g:** 15 = +/- 15 Vdc
12 = 12 Vdc
5 = 5 Vdc
"Blank" = Not fitted

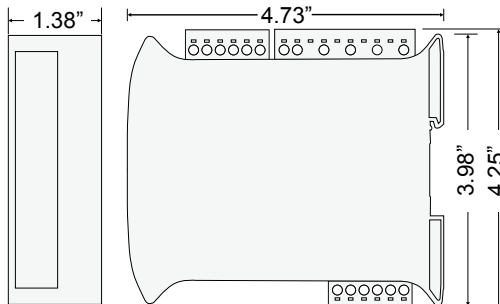
** Order DTS PS2 for J1/J2/J4/J10 Models

ORDERING EXAMPLES

Part Number	Current	Voltage	Communications	I/O	Powering
DTS DC3-J1-EB-A-3	20mA Hall effect	60 Vdc	Ethernet: BACnet IP & Modbus TCP	1x digital output (kWh), 2x digital inputs	24Vdc
DTS DC3-J15-EB-A-3-15	20mA Hall effect	1500 Vdc	Ethernet: BACnet IP & Modbus TCP	1x digital output (kWh)	24Vdc
DTS DC3-T4-SB-A-N	50 - 100mV shunt	400 Vdc	RS-485: BACnet MS/TP & Modbus RTU	1x digital output (kWh), 2x digital inputs	self-power (120-400Vdc)

DIMENSIONS

*2.36"
FOR
1500VDC
MODEL



Distributor: