

DT SERIES, 4-WIRE SOLID-CORE DC Current Transducers

DT Solid-core Series DC Current Transducers combine a Hall effect sensor and signal conditioner into a single package for use in DC current applications up to 200 A. The DT Series DC Current Transducers unipolar and bipolar models have jumper-selectable current input ranges and industry standard 0–20 mA, 4–20 mA, 0–5 VDC or 0–10 VDC outputs. Solid-core models are offered with ranges as low as 0–5 amps, and up to 0–200 amps.

DC Current Transducer Applications

Battery Banks

- Monitor load current.
- Monitor charging current.
- Verify operation.

Transportation

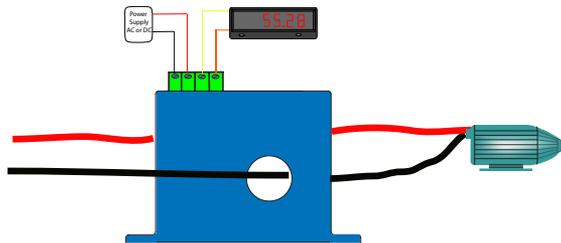
- Measure traction power or auxiliary loads.

Welding Processes

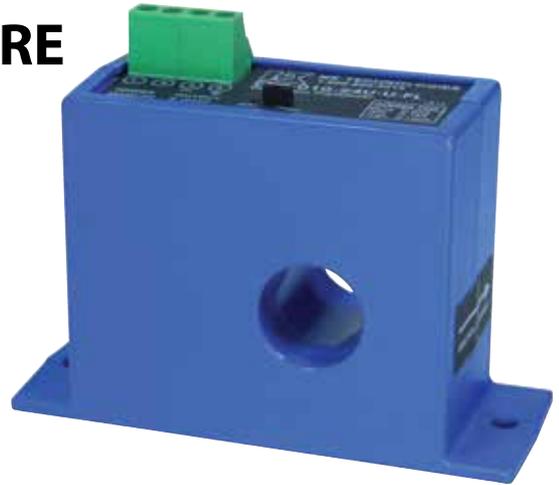
- Measure the current used while welding.
- Log processing time and number of operations.

Photovoltaic Panels

- Monitor panel or string current output.
- Monitor combiner box output.



Use a DT sensor over one lead to a DC motor to measure the current used. Over normal readings mean a jam or a bearing failure, and under normal current means a belt or coupling may have broken. The output can also be used to measure time of use to help with maintenance scheduling.



DC Current Transducer Features

Three Jumper-selectable Ranges

- Reduces set-up time.
- Reduces inventory.
- Eliminates zero and span pots.

Isolation

- Output is magnetically isolated from the input for safety.
- Eliminates insertion loss (voltage drop).

Internal Power Regulation

- Works well, even with unregulated power.
- Cuts installation cost.

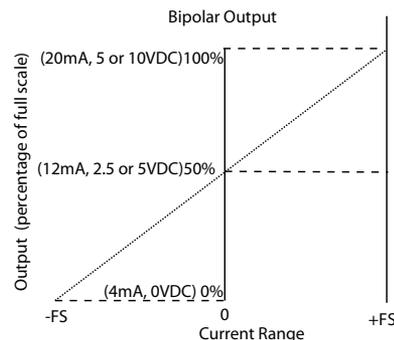
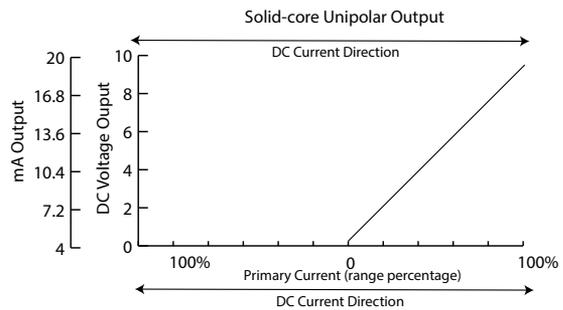
Solid-core Design/Built-in Mounting Brackets

- Makes installation a snap.

UL/cUL and CE Approved

- Accepted worldwide.

DC Current Transducer Output



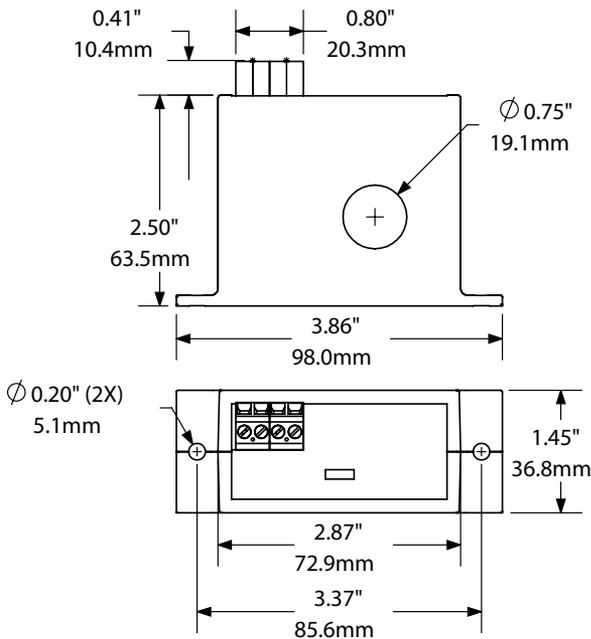
OEMs

Test & Evaluation Units for OEMs

Free program expedites evaluation process. See page 3 for details.

DC Current Transducer Dimensions

FL Case



DC Current Transducer Specifications

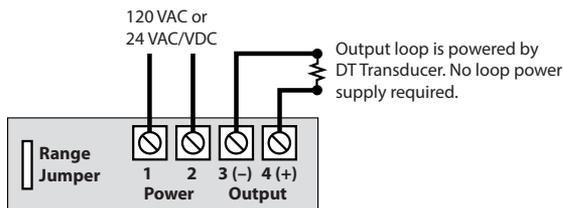


Power Supply	• 120 VAC (108–132 V) • 24 VAC/VDC (22–26 V)
Power Consumption	2 VA
Output Signal	• 0–20 mA, 4–20 mA, 0–5 VDC, 0–10 VDC
Output Limit	• 0–20 mA, 4–20 mA: 23 mA • 0–5 VDC: 5.75 VDC • 0–10 VDC: 11.5 VDC
Output Loading	• 0–20 mA, 4–20 mA: 500 Ω max. • 0–5 VDC: 25 KΩ min. • 0–10 VDC: 50 KΩ min.
Accuracy	1.0% FS
Repeatability	1.0% FS
Response Time	60 ms (to 90% of step change)
Frequency Range	DC
Isolation Voltage	Tested to 3 KV
Input Range	0–200 A max
Case	UL94 V-0 Flammability Rated
Environmental	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing
Listings	UL/cUL, CE (120 VAC model not UL listed)

DC Current Transducers

DC Current Transducer Connections

DT Series Unipolar and Bipolar Output Models



Notes:
Deadfront captive screw terminals.
30-12 AWG solid or stranded.
Observe polarity.

DC Current Transducer Ordering Information

Sample Model Number: DT2-420-24U-U-FL
DC current transducer, 0–100/150/200 A range, 4–20 mA output, 24 VAC/VDC powered, unipolar polarity, solid-core case. (DIN rail adapters are included)



(1) Full Scale Range

0	5, 10, 20 A
1	50, 75, 100 A
2	100, 150, 200 A

(2) Output Signal

020	0–20 mA
420	4–20 mA
005	0–5 VDC
010	10 VDC

(3) Power Supply

24U	24 VAC/VDC
120	120 VAC

(4) Output Polarity

U	Unipolar (output with current in one direction only)
BP	Bipolar

(5) Case Style

FL	Solid-core
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