

# DT-DL SERIES, LARGE APERTURE DC Current Transducers

DT Series Large Aperture DC Current Transducers combine a Hall effect sensor and signal conditioner into a single package for use in DC current applications up to 1200 A. The DT Series Large Aperture Transducers have factory set and calibrated ranges, industry standard 4–20 mA, 0–5 VDC or 0–10 VDC outputs, and are available in solid-core DIN rail mount case.



## DC Current Transducer Applications

### Battery Banks

- Monitor load and charging currents.
- Verify operation.

### Transportation

- Measure traction power or auxiliary loads.

### Wind and Solar Generated Power

- Measure the current produced or consumed.
- Detect mechanical problems before failure occurs.

### Monitor DC Powered Motors

- Monitor current of cranes, saws, sorters and positioning equipment.

## DC Current Transducer Features

### Factory Set and Calibrated Ranges

- No need for field calibration.
- Eliminates zero and span pots.

### Isolation

- Output is magnetically isolated from the input for safety.
- Eliminates insertion losses, no added burden.

### Internal Power Regulation

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

### DIN Rail Mounted Case\*

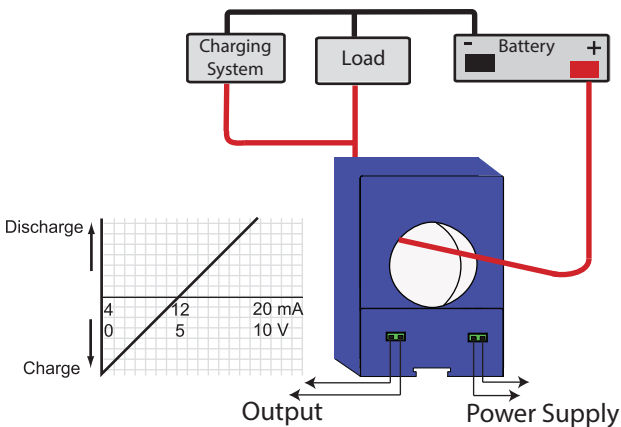
- Makes installation a snap.
- No drilling or screws to lose.
- Optional DIN rail kit available for chassis mounting.\*

### UL/cUL and CE Approved

- Accepted worldwide.

\*For information on the DIN rail accessories kit, see page 147.

Battery Charging System



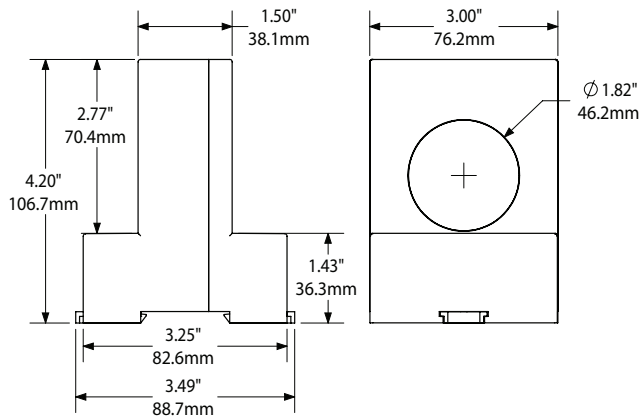
For additional Application Examples, go to [www.nktechnologies.com/applications](http://www.nktechnologies.com/applications)

OEMs

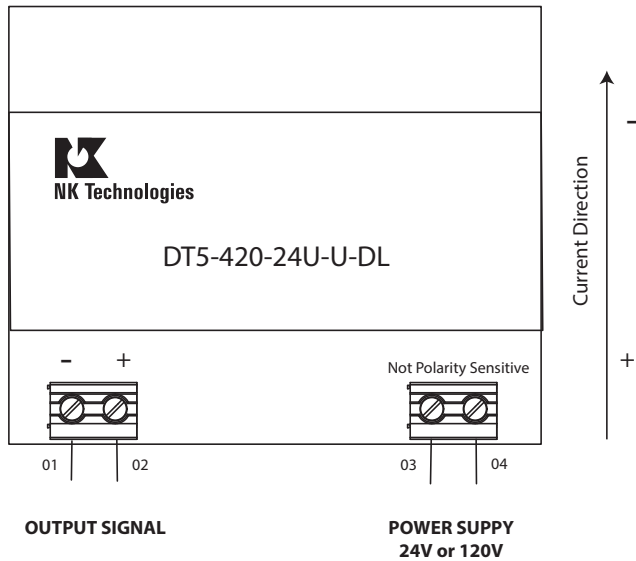
Test & Evaluation Units for OEMs

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

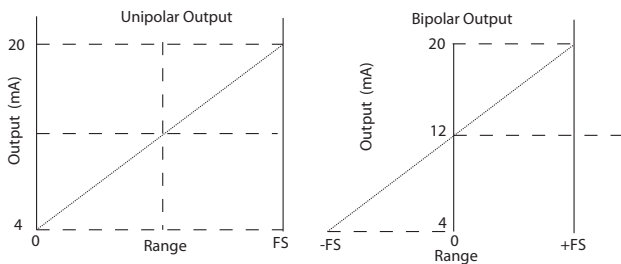
DC Current Transducer Dimensions



DC Current Transducer Connections



DC Current Transducer Output



Notes:  
 Deadfront captive screw terminals.  
 12–22 AWG solid or stranded.  
 Observe polarity.  
 Unipolar Output: Signal With Current flowing in one direction only.

DC Current Transducer Specifications



<b>Power Supply</b>	• 120 VAC (+/- 10%) • 24 VAC/VDC (+/- 10%)
<b>Power Consumption</b>	2 VA
<b>Output Signal</b>	4–20 mA, 0–5 VDC, 0–10 VDC
<b>Output Limit</b>	• 4–20 mA: 23 mA • 0–5 VDC: 5.75 VDC • 0–10 VDC: 11.5 VDC
<b>Output Loading</b>	• 4–20 mA: 500 Ω max. • 0–5 VDC: 25 KΩ min. • 0–10 VDC: 50 KΩ min.
<b>Accuracy</b>	2.0% FS
<b>Repeatability</b>	1.0% FS
<b>Response Time</b>	100 ms (to 90% of step change)
<b>Input Range</b>	0–1200 A DC
<b>Frequency Range</b>	DC
<b>Isolation Voltage</b>	UL listed to 1480 VAC, tested to 3 KV (monitored line to output)
<b>Case</b>	UL94 V-0 Flammability Rated
<b>Environmental</b>	-4 to 122°F (-20 to 50°C) Surrounding Temperature 0–95% RH, non-condensing
<b>Listings</b>	UL/cUL, CE

DC Current Transducer Ordering Information

Sample Model Number: DT6-420-24U-U-DL  
 Solid-core DC current transducer, 0–500 A range, 4–20 mA, 24 VAC/VDC powered, unipolar output.



<b>(1) Full Scale Range</b>		<b>(3) Power Supply</b>	
5	300 A	24U	24 VAC/VDC
6	500 A	120	120 VAC
7	750 A		
8	1000 A	<b>(4) Output Polarity</b>	
9	1200 A	U	Unipolar
		BP	Bipolar
<b>(2) Output Signal</b>		<b>(5) Case Style</b>	
420	4–20 mA	DL	Solid-core, DIN rail mounting
005	0–5 VDC		
010	0–10 VDC		

DC Current Transducers

