

DT 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 mounted 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

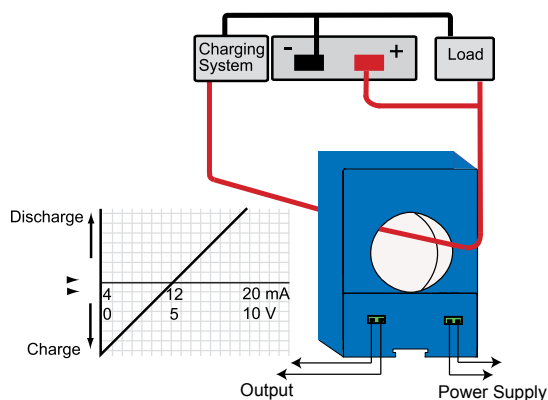
- Works well, even with unregulated power.
- Cuts installation cost.

DIN Rail Mounted Case

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

*For information on the DIN rail accessories kit, see page 111.

Battery Charging System



- For additional Application Examples, go to www.nktechnologies.com/applications

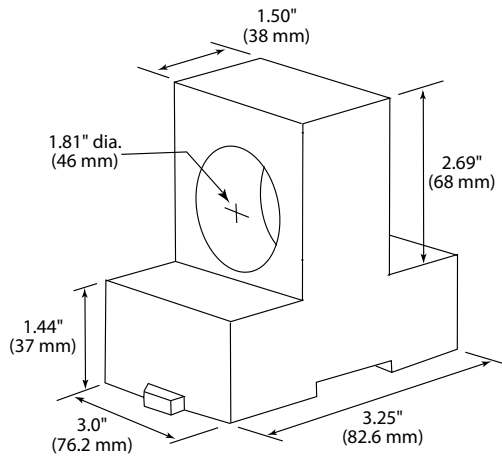
OEMs

Test & Evaluation Units for OEMs

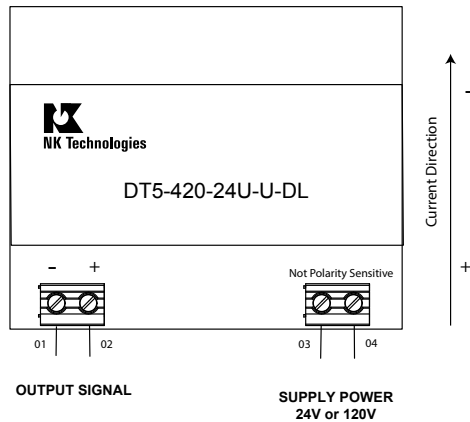
Free program expedites evaluation process. See page 1 for details.



DC Current Transducer Dimensions



DC Current Transducer Connections



DC Current Transducer Specifications

Output Signal	4–20 mA, 0–5 VDC, 0–10 VDC
Output Limit	<ul style="list-style-type: none"> 4–20 mA: 23 mA 0–5 VDC: 5.75 VDC 0–10 VDC: 11.5 VDC
Accuracy	2% FS
Repeatability	1.0% FS
Response Time	100 ms (to 90% of step change)
Frequency Range	DC
Power Supply	24 VAC/DC, isolated from output 120 VAC
Power Consumption	2 VA
Loading	<ul style="list-style-type: none"> 4–20 mA: 650 Ω max. 0–5 VDC: 25 KΩ min. 0–10 VDC: 50 KΩ min.
Isolation Voltage	3 KV (monitored line to output)
Linearity	0.75% FS
Current Ranges	Ranges from 0–1200 A DC
Sensing Aperture	1.875" (46 mm) dia.
Case	UL94 V0 Flammability Rated
Environmental	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing
Listings	UL 508 Industrial Control Equipment, CE (pending)

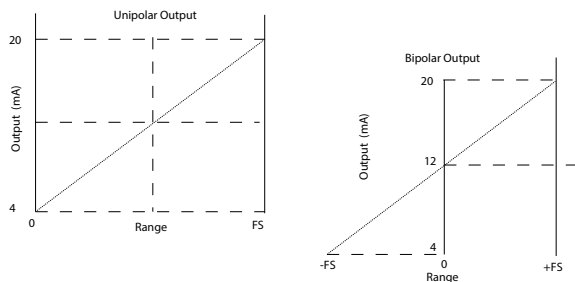
DC Current Transducer Ordering Information

Sample Model Number: DT6-420-24U-U-DL

Solid-core DC current transducer, 0–500 A range, 4–20 mA, 24 VAC/DC powered, unipolar output.

DT (1) - (2) - (3) - (4) - (5)
D L

DC Current Transducer Output Type



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

(1) Full Scale Range

5	300 A
6	500 A
7	750 A
8	1000 A
9	1200 A

(2) Output Signal

420	4–20 mA
005	0–5 VDC
010	0–10 VDC

(3) Power Supply

24U	+24 VAC/DC
120	120 VAC

(4) Output Polarity

U	Unipolar
BP	Bipolar

(5) Case Style

DL	Solid-core, DIN rail mount
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