

Specifications

Current Ranges	0-200, 0-300 and 0-400A (See Model Number Key)
Power Supply	24V nominal (22-26VAC or DC) <i>Power supply is not isolated from the output.</i>
Power Consumption	<2 VA
Output Signal	+/-5 or +/-10VDC
Output Limit	5.25V or 10.5V model dependant
Accuracy	1.0% FS
Output Load Impedance	3K Ω minimum
Frequency Range	DC
Working Voltage	1500 VDC (Tested to 5375 VAC)
Response Time	150ms max (10-90% of step change)
Case	UL 94V-0 Flammability rated thermoplastic
Environmental	-20° to +50°C (-4° to +122°F) 0-95% RH non-condensing Pollution degree 2 Altitude to 2000 meters
Approvals	Designed for UL, cUL and CE RoHS Compliant

Power Supply

Use Class 2 power limited supply or protect power supply circuit with 8 amp, 30 VAC/DC secondary fuses.

Model Number Key

DT 3 - 010 - 24U - BD - FD

CASE STYLE

FD- Fixed core,
DIN or Panel

OUTPUT TYPE

BD - Bidirectional, +/-5VDC or
+/-10VDC to indicate current
flow direction or polarity

POWER SUPPLY:

24U- 24 VAC or DC

OUTPUT:

005 - +/- 0-5 VDC

010 - +/- 0-10 VDC

RANGE

2 - 200 A

3 - 300 A

4 - 400 A

SENSOR TYPE:

DT - DC current sensor, externally powered output

Know Your Power



Other NK Technologies Products Include:

AC & DC Current Transducers
AC & DC Current Operated Switches
1 ϕ & 3 ϕ Power Transducers
Current & Potential Transformers (CTs&PTs)



NK Technologies

3511 Charter Park Drive, San Jose, CA 95136

Phone: 800-959-4014 or 408-871-7510

Fax: 408-871-7515

sales@nktechnologies.com, www.nktechnologies.com



INSTRUCTIONS



DT-FD 2, 3 & 4 SERIES

DC Current Transducers

+/-0-5 or +/-0-10VDC Output

Designed For Use To 1500 VDC

Quick "How To" Guide

1. Run the wire you are monitoring through aperture.
2. Mount the sensor to a DIN rail or panel, or suspend from wire with cable ties.
3. Connect output and power supply wiring.
 - A. Use 22- 14 AWG rated min. 60°C copper wires only. Tighten to 5-7 inch-pounds.
 - B. Make sure output impedance does not exceed product specifications.
 - C. Connect matching power supply, sensor and load (PLC, panel meter, etc.) in series.
4. Energize monitored circuit.
 - A. Read output signal proportional the current used by the measured load.

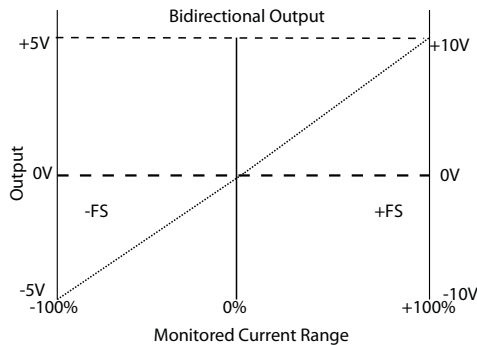
Description

DT-FD Series transducers combine a current sensing method and a signal conditioner into a single package. This provides higher accuracy, lower wiring costs, easier installation and save valuable panel space. DT-FD Series are available in solid core with industry standard outputs.

Installation

Run wire(s) to be monitored through the sensing aperture. The **bidirectional** output models produce the output signal which produces +5 or +10VDC when current flows in one direction, and -5 or -10VDC with full range current flowing in the opposite direction. This is used to indicate the polarity of the monitored current. DT-FD Series transducers work in the same environment as motors, contactors, heaters, pull-boxes, and other electrical enclosures. They can be mounted in any position or hung directly on wires with a wire tie. Just leave at least one inch distance between sensor and other magnetic devices.

The housing is designed to fit onto a DIN rail or attached to a back panel with screws through the holes in the mounting tabs.

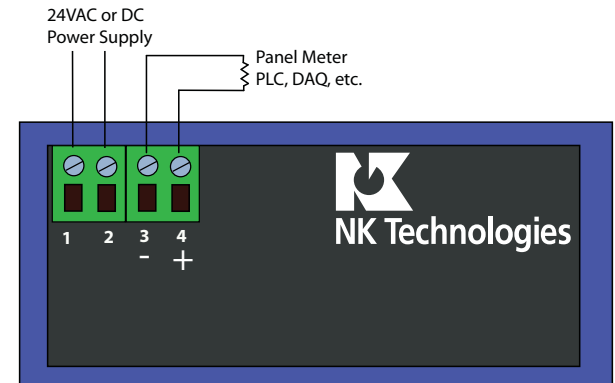


Output Wiring

Connect control or monitoring wires to the sensor. Use 22-14 AWG copper wire rated for 60°C minimum, and tighten terminals to 5-7 inch-pounds torque.

Connection Notes:

- Fingersafe terminals.
- 22-14 AWG solid or stranded, copper only.
- Observe Polarity of Output, power supply is not polarity sensitive
- Power supply is not isolated from the output.
- See label for model range



Range Select

DT-FD Series transducers feature a small, compact housing with ranges to 400A. The range is factory calibrated, eliminating time consuming and inaccurate field setting of zero or span.

1. Determine the normal operating amperage of your monitored circuit
2. Select the model that is equal to or slightly higher than the normal operating amperage.

Trouble Shooting

1. Transducer has no output

- A. Power supply is not properly sized. *Check power supply voltage at sensor and output rating.*
- B. Polarity is reversed. *Check and correct wiring polarity.*
- C. Output connections are not secure. *Check tightness of all terminations.*

2. Output Signal Too Low

- A. The model selected may have a range that is too high for current being monitored. *Replace with the correct sensor range.*

- B. Monitored current is well below the sensor range.

Loop the monitored wire several times through the aperture until the “sensed” current rises sufficiently. Sensed Amps = (Actual Amps) x (Number of Loops). Count loops on the inside of the aperture.

3. Transducer is always at minimum:

- A. Monitored current is not DC or is not on. *Check that the monitored current is DC and that it is actually on.*

4. Output Signal is always at maximum:

- A. The range is too low for current being monitored. *Select a sensor with a range higher than the current used.*