

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	<3 VA
Output Signal	4-20 mA, 0-5, 0-10 VDC
Output Limit	20.8 mA, 5.25 or 10.5V model dependant <i>Note: bipolar output models will not produce signals below 4 mA or zero voltage</i>
Output Load Impedance	4-20 mA: 500 Ω Maximum 0-5/10 VDC: 2K Ω Minimum
Accuracy	1.0% FS
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 a Class 2 power limited supply protected with secondary fused as appropriate.

Model Number Key

DT 3 - 420 - 24U - U - FD

DT
3
420
24U
U
FD

CASE STYLE
FD- Fixed core,
DIN or Panel

OUTPUT TYPE

U- Unipolar, output with current in one direction
BP - Bipolar, output with current in either direction

POWER SUPPLY:
24U- 24VAC or DC

OUTPUT:

420 - 4-20mA
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
1φ & 3φ Power Transducers
Current & Potential Transformers (CTs&PTs)



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INSTRUCTIONS



DT-FD 2, 3 & 4 SERIES DC Current Transducers 4-20mA, 0-5 and 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 wiring.
 - A. Use 22- 14 AWG rated min. 75°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

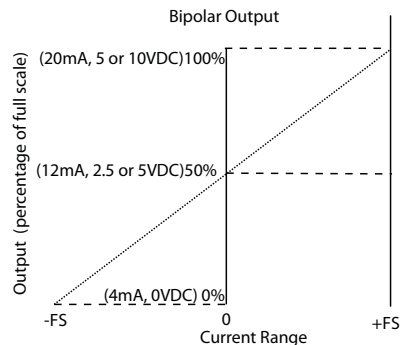
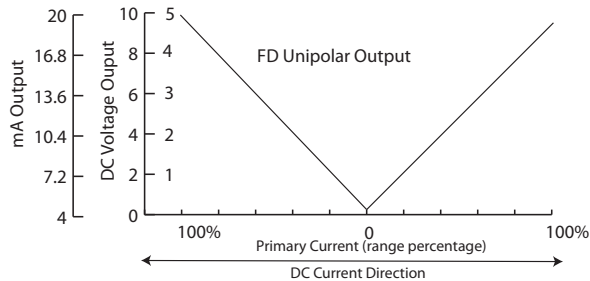
DT-FD Series transducers combine a current sensing method and a signal conditioner into a single package. This provides higher accuracy, lower wiring costs, easier installation and save valuable panel space. DT-FD Series are available in solid core with industry standard outputs.

Installation

Run wire(s) to be monitored through the sensing aperture. The **unipolar** output produces an output signal with DC current flowing in either direction. The **bipolar** output models produce the output signal which uses half of the full scale output with zero monitored current, rising to full scale (20mA, 5V or 10V) with current flowing in one direction, and falling to minimum output (4mA, ~0V) when current flows in the opposite direction. This is used to indicate the current flow direction.

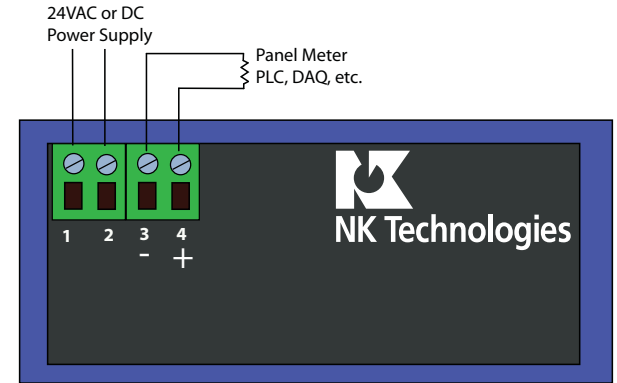
DT-FD Series transducers work in the same environment as motors, contactors, heaters, pull-boxes, and other electrical enclosures. They can be mounted in any position or hung directly on wires with a wire tie. Just leave at least one inch distance between sensor and other magnetic devices.

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 75°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.*