VTD SERIES
DC Voltage Transducers

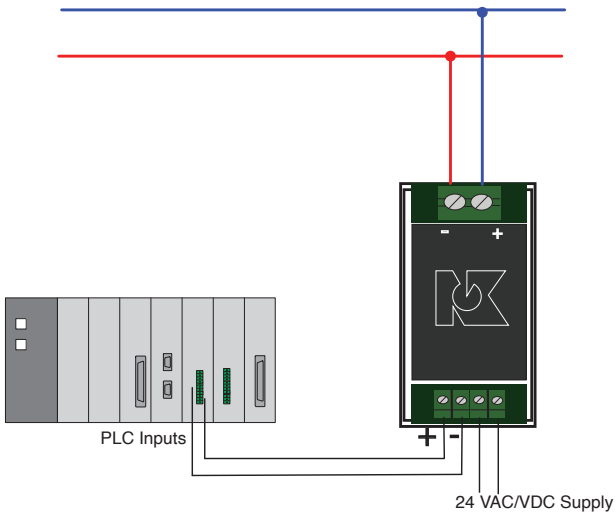
VTD Series Voltage Transducers are high-performance transducers for sensing voltage in DC powered installations. Applicable for use on circuits to 600 VDC, VTD voltage transducers provide fully isolated 0–5 VDC, 0–10 VDC, and 4–20 mA outputs proportional to rated nominal voltage in DC circuits. Housed in a slim, compact, easy-to-install DIN rail mounted case, the VTD Series comes in a variety of nominal voltages.

Voltage Transducer Applications

Voltage Monitoring

- Detect below normal or "brown out" voltage conditions; protect against possible motor overheating.
- Identify conductor loss conditions by detecting voltage reduction in one motor lead.
- Monitor over voltage conditions associated with regenerative voltage to help in diagnosing/avoiding motor drive issues.
- Detect voltage conditions that may cause stress or damage to soft starter components (SCRs).

DC Voltage Transducer Control



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

Voltage Transducer Features

Accurate Output

- Several ranges available for your application, from 0–15 VDC to 0–600 VDC.

Standard Current and Voltage Sensor Outputs

- Industry standard outputs makes use with existing controllers, data loggers and SCADA equipment easy and reliable.

Input/Output Isolation

- Input and output circuitry electrically isolated for improved safety of use.

Compact DIN Mounted Rail Case*

- Space saving slim enclosure mounts quickly for an attractive installation.

UL/cUL and CE Approved

- Accepted worldwide.

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

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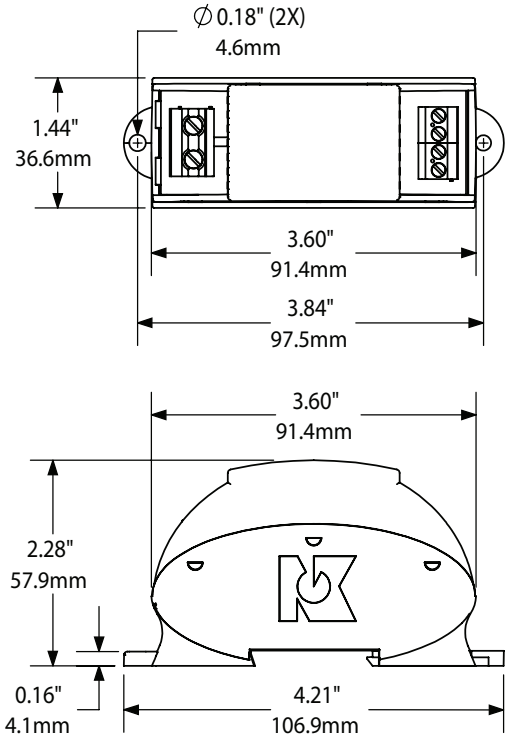
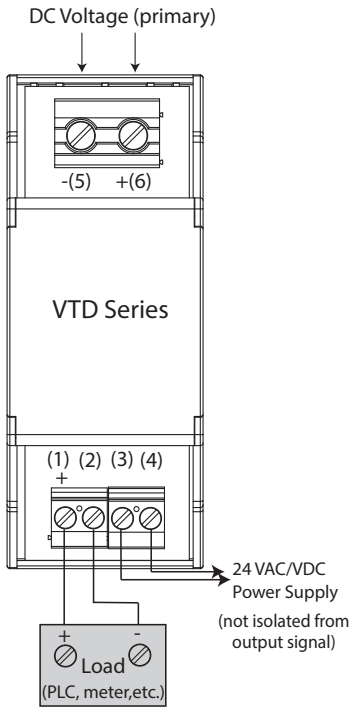
Voltage Transducer Dimensions



Voltage Transducer Connections



Voltage Transducer Specifications

Power Supply	24 VAC/VDC (nominal, 22-26 VAC/VDC); power supply and output are not isolated
Power Consumption	<2 VA @ 24 VDC; <5 VA @ 24 VAC
Input Range: Input Impedance	15 V: 25 KΩ, 25 V: 42 KΩ, 50 V: 82 KΩ, 150 V: 250 KΩ, 300 V: 500 KΩ, 600 V: 1.00 MΩ
Output Signal	• 4–20 mA (capped at 24 mA max.) • 0–5 VDC (capped at 5.75 VDC) • 0–10 VDC (capped at 11.5 VDC)
Output Loading	• 4–20 mA output: <500 Ω • 0–5/10 VDC output: >10 KΩ
Response Time	250 ms (90% step change)
Accuracy	<1% FS
Isolation Voltage	2200 VAC
Frequency Range	DC
Case	UL94 V-0 Flammability Rated
EMC/Immunity	EN50081-1, EN50082-2
Ripple	<1% (peak to peak)
Environmental	-4 to 140°F (-20 to 60°C) 0–95% RH, non-condensing
Listings	UL/cUL, CE

Voltage Transducer Ordering Information

Sample Model Number: VTD1-420-24U-DIN

DC voltage transducer with 25 VDC range, standard 4–20 mA proportional output; 24 VAC/VDC externally powered with a DIN rail compatible case.

	(1)		(2)			(3)			(4)		
VTD		–				2	4	U	D	I	N

(1) Nominal Range

0	0–15 VDC
1	0–25 VDC
2	0–50 VDC
3	0–150 VDC
4	0–300 VDC
5	0–600 VDC

(2) Output Type

005	0–5 VDC
010	0–10 VDC
420	4–20 mA

(3) Supply Voltage

24U	24 VAC/VDC external power supply

(4) Case

DIN	DIN rail compatible