

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 mount case, the VTD Series comes in a variety of nominal voltages.

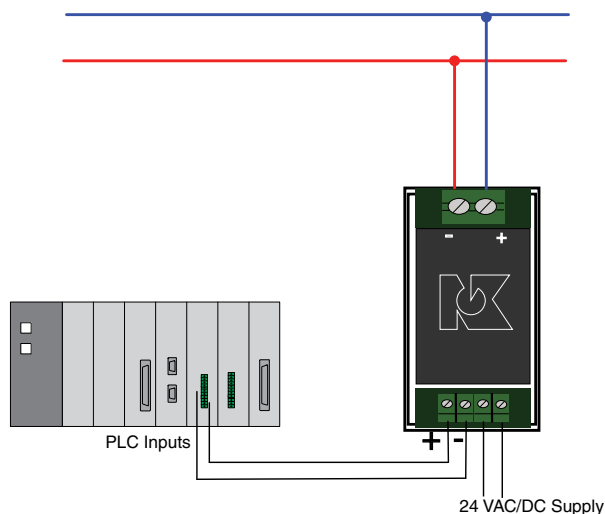


Voltage Transducer Applications

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 Rail Mounted Case*

- Space saving 35 mm wide enclosure mounts quickly for an attractive installation.

*For information on the DIN rail accessories kit, see page 116.

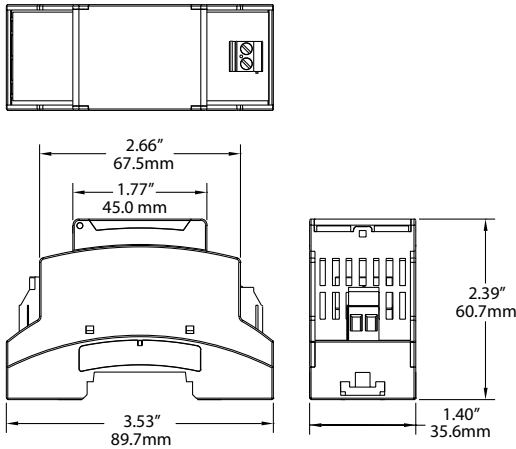
OEMs

Test & Evaluation Units for OEMs

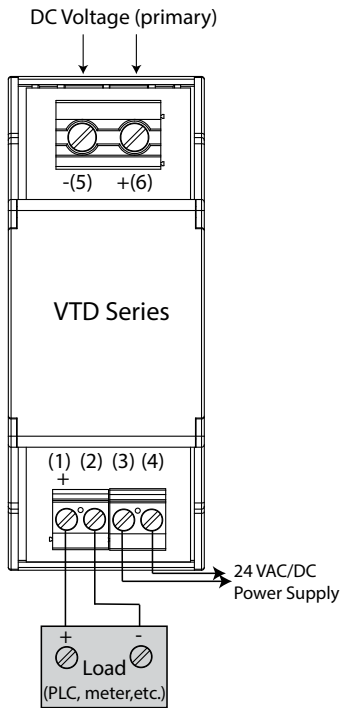
Free program expedites evaluation process. See page 1 for details.



Voltage Transducer Dimensions



Voltage Transducer Connections



Voltage Transducer Specifications



| | |
|--------------------------|--|
| Power Supply | 24 VAC/DC (20–45 DC, 22–38 VAC) |
| Input | 15 V, 25 V, 50 V, 150 V, 300 V, 600 VDC |
| Output | <ul style="list-style-type: none"> • 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 Impedance | <ul style="list-style-type: none"> • 4–20 mA output: <500 Ω • 0–5/10 VDC output: >10 KΩ |
| Response Time | 250 ms (to 90% value) |
| Accuracy | <1% |
| Linearity | <0.5% |
| Isolation Voltage | UL listed to 2500 VAC, tested to 5 KV |
| Frequency Range | DC |
| Mounting | DIN rail compatible |
| Case | UL94 V0 Flammability Rated; noncorrosive thermoplastic |
| EMC/Immunity | EN50081-1, EN50082-2 |
| Ripple | <1% (peak to peak) |
| Environmental | -4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing |
| Listings | UL 508 Industrial Control Equipment (USA & Canada), CE |

Voltage Transducer Ordering Information

Sample Model Number: VTD1-420-24U-DIN
 DC voltage transducer with 25 V range, standard 4–20 mA proportional output; 24 V externally powered with a DIN rail compatible case.



(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/DC external power supply |
|-----|---------------------------------|

(4) Mounting

| | |
|-----|---------------------|
| DIN | DIN rail compatible |
|-----|---------------------|

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