VTR SERIES
AC Voltage Transducers

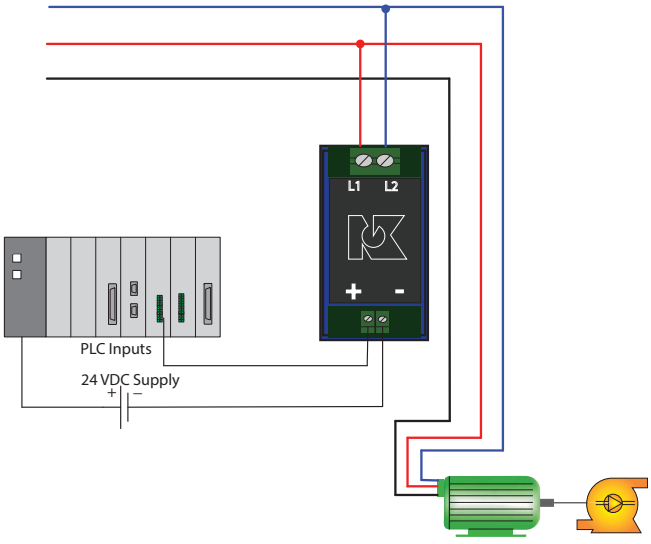
VTR Series AC Voltage Transducers are high-performance True RMS transducers for sensing voltage in single- and three-phase installations. Applicable on circuits of 120 V, 240 V, 480 V and 600 V, the VTR Series voltage transducers provide a fully isolated, 4–20 mA output proportional to rated voltage in sinusoidal situations. Housed in a slim, compact, easy-to-install DIN mounted rail case, the VTR Series comes in a variety of voltage ranges.

Voltage Transducer Applications

True RMS Voltage Monitoring

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

Phase Loss Protection



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

Voltage Transducer Features

True RMS Output

- Allows for use in situations where power supplied is poor power quality or other electrically harsh/challenging environments.

Standard 4–20 mA Loop-powered Output

- Industry standard output 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*

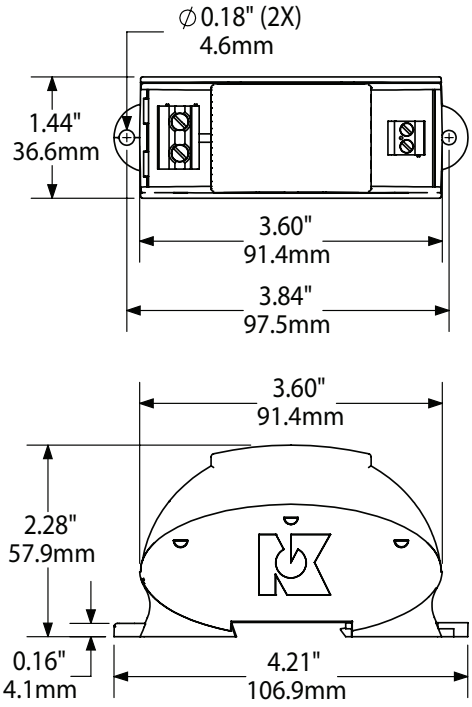
- Space saving, slim enclosure mounts quickly for an attractive installation.

UL/cUL and CE Approved

- Accepted worldwide.

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

Voltage Transducer Dimensions



Voltage Transducer Specifications

Power Supply	24 VDC loop-powered (12–40 VDC)
Input Range: Input Impedance	50-150 V: 73 KΩ, 240-300 V: 46 KΩ, 400-500 V: 300 KΩ, 600 VAC: 365 KΩ
Output Signal	4–20 mA proportional
Output Limit	24 mA
Output Loading	500 Ω max. loop impedance
Overload	130% of range
Response Time	250 ms (to 90% of step change)
Accuracy	1.0% FS at 60 Hz (25-100% of range) (2.5% FS at 50 Hz)
Isolation Voltage	UL listed to 2200 VAC
Frequency Range	40–100 Hz
Case	UL94 V-0 Flammability Rated
Environmental	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing
Listings	UL/cUL, CE

Voltage Transducer Ordering Information

Sample Model Number: VTR1-420-24L-DIN

True RMS voltage transducer with 120 V voltage range, standard 4–20 mA proportional output; 24 V loop-powered with a DIN rail compatible case.

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(1) Voltage Range

1	120 V
2	150 V
3	240 V
4	480 V
5	500 V
6	600 V

(2) Output Type

420	4–20 mA

(3) Supply Voltage

24L	24 VDC loop-powered

(4) Case

DIN	DIN rail compatible

Voltage Transducer Connections