

VTR SERIES

AC Voltage Transducers

VTR Series is a high-performance True RMS transducer for sensing voltage in single- and three-phase installations. Applicable on circuits of 120V, 240V, 480V and 600V, VTR Series voltage transducers provide a fully isolated, 4–20 mA output proportional to rated voltage in both sinusoidal and non-sinusoidal (variable frequency) situations. Housed in a slim, compact, easy-to-install DIN rail mount enclosure, the VTR Series comes in a variety of voltage ranges and with four-wire terminal block connection.

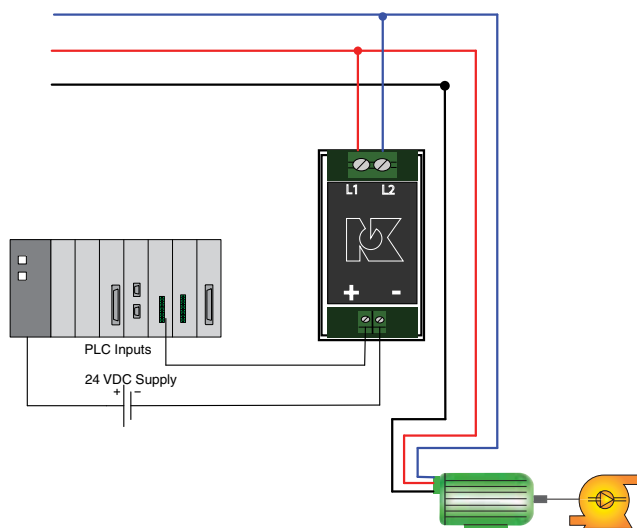


Applications

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



Features

True RMS Output

- Allows for use in situations where power supplied is non-sinusoidal such as VFD applications, poor power quality installations 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 Mount Enclosure*

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

*For panel mounting see DIN Rail mounting kit accessory page.

- For additional Application Examples, see page 104 and www.nktechnologies.com

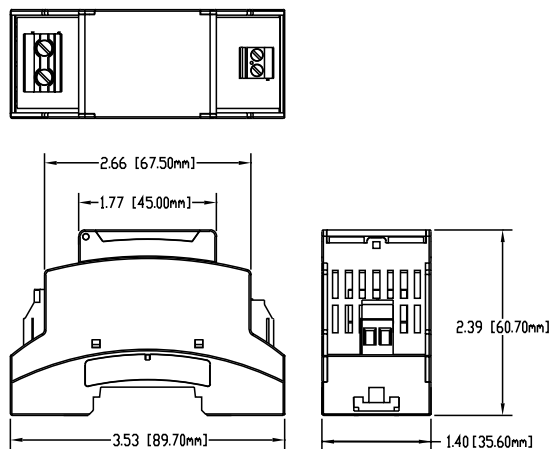
Test &
Evaluation Units

For **OEMS**

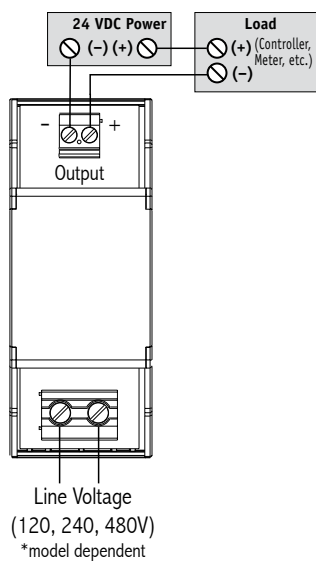
Free program expedites
evaluation process.
See page 1 for details.



Dimensions



Connections



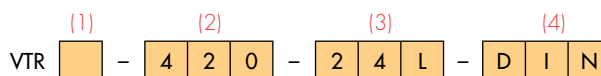
Specifications

Power Supply	24VDC Loop-powered
Input	120V, 150V, 240V, 480V, 500V, 600V
Output	4–20 mA Proportional; capped at 24mA max.
Response Time	250 ms (to 90% value)
Accuracy	10–100% of range
Linearity	<0.5%
Loading	<500 ohms
Isolation Voltage	UL listed to 2500VAC (tested to 5KV)
Frequency Range	40Hz–5
Mounting	DIN rail compatible
Case	UL94 V0 Flammability Rated; noncorrosive thermoplastic
Environmental	-22 to 140°F (-30 to 60°C), 0–95% RH non-condensing
EMC/Immunity	EN50081-1, EN50082-2
Ripple	<1% (peak to peak)
Listings	UL 508 Industrial Control Equipment (USA & Canada)

Voltage Transducers

Ordering Information

Sample Model Number: VTR1-420-24L-DIN
 True RMS voltage transducer with 120V voltage range, standard 4–20 mA proportional output; 24V loop-powered with a DIN-compatible enclosure.



(1) Voltage Range

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

(2) Output Type

420	4–20 mA
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(3) Supply Voltage

24L	24V Loop powered
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(4) Mounting

DIN	DIN rail compatible
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