VT3-OS SERIES

Three-Phase Voltage Transducers

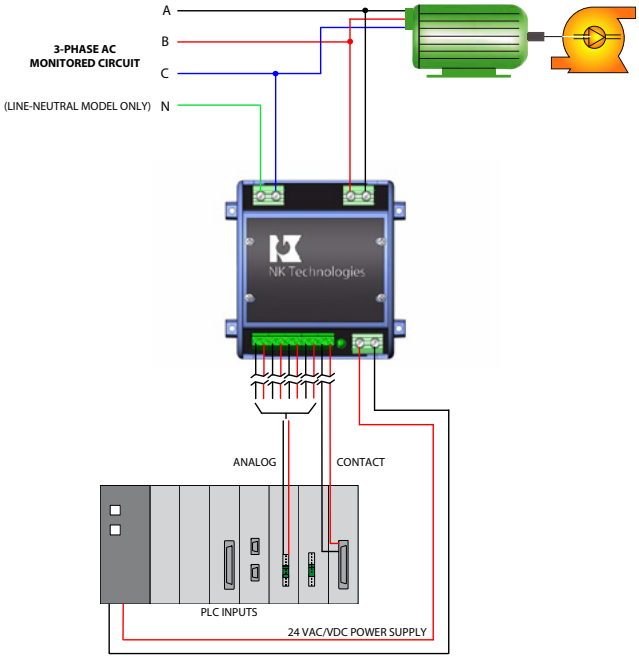


The VT3-OS Series Voltage Transducers are high-performance, True RMS transducers designed for accurate voltage sensing in three-phase applications. Housed in a DIN rail or panel mount case, the VT3 monitors common three-phase voltage ranges (120, 240, and 480 VAC) up to 600 VAC and includes Phase Loss Detection with an SPST Form A relay. Available in 3-wire (Line-Line) or 4-wire (Line-Neutral) voltage configurations, it provides industry-standard analog outputs proportional to the connected voltage.

Power Monitoring Applications

True RMS Voltage Monitoring

- Detect below normal or "brownout" voltage conditions to prevent motor overheating.
- Monitor sinusoidal or non-sinusoidal waveforms in relevant applications.
- Identify over-voltage conditions associated with regenerative voltage to diagnose and avoid motor drive issues.
- Detect voltage conditions that could stress or damage soft start components.
- Identify phase loss conditions by detecting voltage reduction.



3-Phase Voltage Transducer Features

Monitor 3-Phase Voltage Inputs

- Measures True RMS voltage individually for all three phases.
- Provides an additional output with the average RMS voltage across all three phases.
- Ideal for challenging electrical environments and non-sinusoidal power applications.

Industry-Standard Output Options

- Offers industry-standard output options (4–20 mA, 0–5 or 0–10 VDC).
- Compatible with existing PLC controllers, data loggers and SCADA equipment.

Phase Loss Detection

- SPST Form A relay activates when voltage drops below threshold.

Externally Powered

- Externally powered (24 VAC/VDC) with low consumption.

UL/cUL Listed, CE Certified

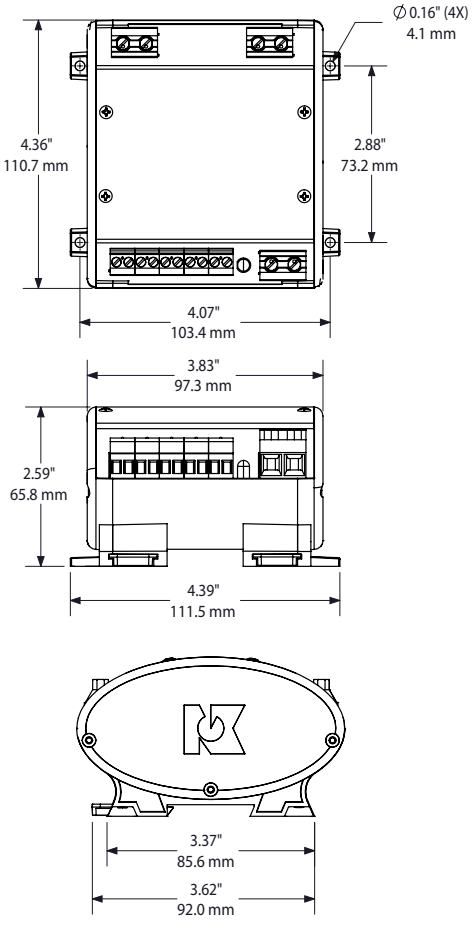
- Accepted worldwide.

Mount Options

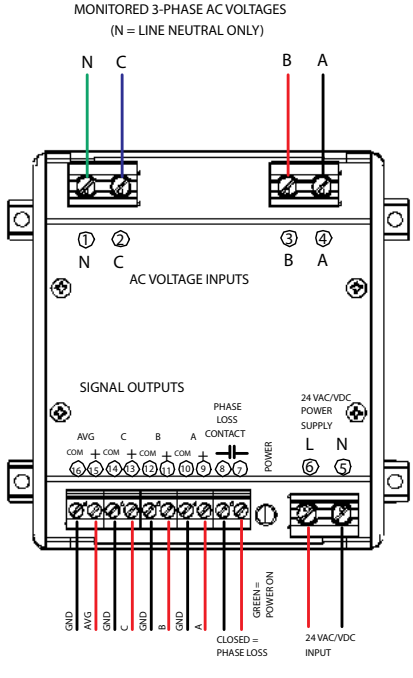
- Snap case onto a DIN rail, or mount directly to panel using screws.
- Need a DIN Rail? The optional DIN Rail Kit (DINKIT) includes a 175 mm wide DIN rail and two end stops.

NK Technologies

Voltage Transducer Dimensions



Voltage Transducer Connections



Voltage Transducer Specifications

Power Supply	24 VAC/VDC (+/-10%)
Power Consumption	<4.4 VA 0-5, 0-10 V output <6 VA 4-20 mA output
Input Range Line-Line **Line-Neutral**	0-150, 0-300, 0-600 VAC 0-150, 0-300 VAC
Input Frequency Range	50-60 Hz
Input Impedance	400 KΩ
Output Signal	• 4–20 mA (capped at 20 mA) • 0–5 VDC (capped at 5 VDC) • 0–10 VDC (capped at 10 VDC)
Response Time	200 ms (to 90% step change)
Accuracy	<1% FS
Output Loading	• 4–20 mA output: <500 Ω • 0–5/0-10 VDC output: >10 KΩ
Phase Loss Detection Relay	SPST Form A Relay Contact 1 A @ 30 VDC; 0.5 A @ 125 VAC
Isolation Voltage	1250 VAC
Case	UL94 V-0 Flammability Rated noncorrosive thermoplastic
Environmental	-4 to +140°F (-20 to +60°C) 0–95% RH, non-condensing
Listings	UL Listed to UL 508 (NRNT.E129625), CE

Voltage Transducer Ordering Information

Sample Model Number: VT3-LL2-420-24U-OS

Three-phase voltage transducer, 0-300 VAC Line-Line input with proportional 4-20 mA output, powered by 24 VAC/VDC in a DIN rail compatible case.

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(1) Range

LL1	0-150 VAC, Line-Line, Phase Loss @ 90 VAC
LL2	0-300 VAC, Line-Line, Phase Loss @ 180 VAC
LL3	0-600 VAC, Line-Line, Phase Loss @ 360 VAC
LN1	0-150 VAC, Line-Neutral, Phase Loss @ 90 VAC
LN2	0-300 VAC, Line-Neutral, Phase Loss @ 180 VAC

(2) Output

420	4-20 mA
005	0–5 VDC
010	0–10 VDC

(3) Power Supply

24U	24 VAC/VDC

(4) Case Style

OS	DIN Rail or Panel Mount