Specifications

Power Supply	24 VAC/VDC Nominal, 12-36 Volts Use Class 2 power supply only
Power Consumption	<2 VA
Output Signal	333 mVAC at full range current
Output Limit	112% of standard output range maximum value
Input Range	0-2000 A @ 300 V (see model range)
Frequency Range	40-400 Hz
Response Time	2 ms (to 90% step change)
Accuracy	+/- 1.0% FS (10-100% of range)
Output Loading	333 mAC models: 100 KΩ recommened for accuracy
Isolation Voltage	Tested to 3.5 KV
Sensing Aperture	4.5" (115 mm) diameter
Environmental	-20 to 50°C, (-4 to 122°F) 0-95% RH, Non-condensing Pollution Degree 2 Altitude to 6561 ft (2000 meters)
Listings	UL/cUL, CE

For products intended for the EU market, the following is applicable to the CE compliance of the product:
The CTRC series comply with EN 61010-1 CAT III 300 Vrms max line-to-neutral measurement category. If insulated cable is used for the primary circuit, the voltage rating of the measurement category can be improved according to the insulation characteristics given by the cable manufacturer. Use twisted pair for output connection.

Warning! Risk of danger

Safe operation can only be guaranteed if the transducer is used for the purpose it was designed for and within limits of the technical specifications. When this symbol is used, it means you must consult all documentation to understand the nature of potential hazards and the action required to avoid them.

Warning! Risk of shock

When operating the sensor certain parts may carry hazardous live voltage (e.g. primary conductors, power supply). The transducer should not be put into operation if the installation is not complete.

Model Number Key

CTRC - 333 -500- 24U - D

Case Style:
D - DIN Rail Mtg

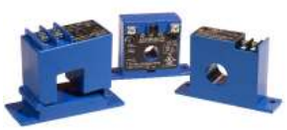
Power Supply:
24U - 24 VAC/VDC external power

Range:
300 - 0 - 300 A
500 - 0 - 500 A
1000 - 0 - 1000 A
1500 - 0 - 1500 A
2000 - 0 - 2000 A

Output:
333 - mVAC

Sensor Type:
CTRC - Flexible Coil AC current transducer

Know Your Power





Other NK Technologies Products Include:
AC & DC Current Transducers
AC & DC Current Operated Switches
1ϕ & 3ϕ Power Transducers
Current & Potential Transformers (CTs & PTs)

NK Technologies

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INSTRUCTIONS



CTRC SERIES

Flex Coil AC Current Transducers

333 mVAC Output
True RMS

Quick "How To" Guide

1. Wrap the sensing coil around the conductor you are monitoring, and snap the loose end into the connector. If used for power monitoring, be sure the arrow on the connector points to the source power.
2. Mount the base integrator to DIN rail or similar method.
3. Connect output wiring.
   A. Use 22-12 AWG, 60/75°C copper conductors only and tighten to 6 in-lbs torque.
   B. Make sure output load does not exceed product specifications.
   C. Connect proper power supply and load.

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Description

CTRC Series transducers utilize a flexible coil to surround the conductor(s), connected as a matched set with a factory calibrated integrating signal conditioner. This provides high accuracy, lower wiring costs, easier installation and saves valuable panel space. CTRC Series products are available in flexible core with 333 mVAC outputs.

CTRC Series products feature a True RMS output designed for applications on distorted current waveforms such as VFD outputs, or sinusoidal waveforms.

Installation

CTRC Series transducers are designed for use in the same environment as motors, contactors, heaters, pull-boxes, and other electrical enclosures.

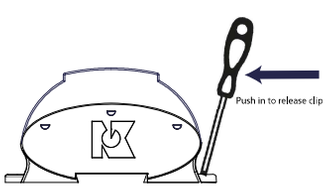
Wrap the flexible sensing coil around the conductor(s), once and reconnect the open end to the connecting block on the cable.

Mount CTRC transducer using a standard DIN rail, taking care to maintain at least one-inch clearance in all directions between the sensing coil and other magnetic devices for proper operation. Connect the output to the controller, and connect 24 volts AC or DC to the power supply input terminals on the transducer base.

When used as a current input to a power monitor, the phase angle is critical and the flexible loop MUST be installed with the arrow printed on the connector label pointing to the source power.

It is not recommended to wrap the sensing coil around the conductor more than once. Multiple wraps of the coil around the conductor will decrease the sensor accuracy, and may produce an unreliable output signal.

To mount on DIN rail: Orient transducer so that current sensing cable enters the top of unit and snap securely onto DIN rail. To remove, insert small screwdriver into the lower mounting hole of the spring loaded clip, and push the handle end of the screwdriver toward the sensor base to release the tension on the rail.



To mount using screws: Insert screws and mount to back plane or other suitably flat surface.

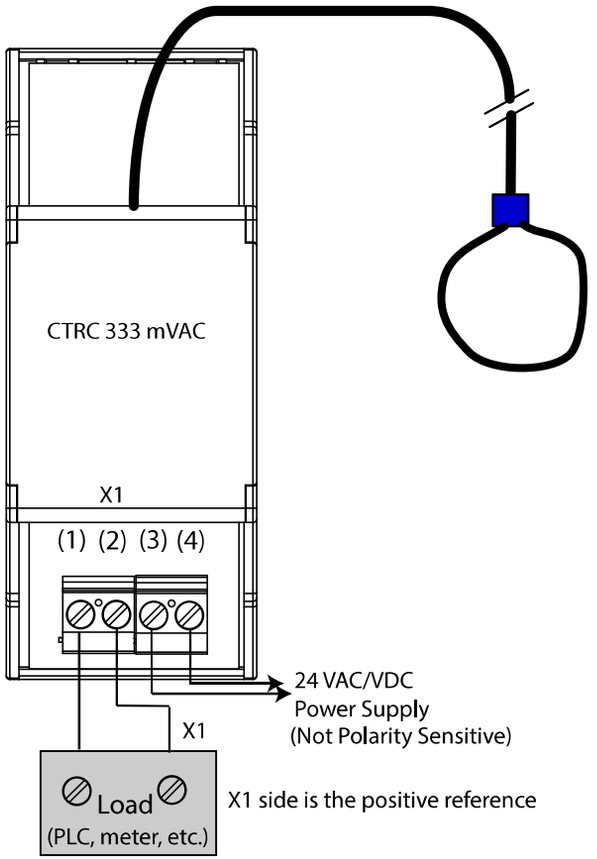
Output Wiring

Connect control or monitoring wires to the sensor. Use up to 22-12 AWG copper wire and tighten terminals to 6 in-lbs torque. Be sure the output load is at least 100 K ohm to achieve stated accuracy.

Connection Notes:

- Captive screw terminals.
- 22-12 AWG solid or stranded.
- Observe polarity of connections.
- See label for range limitations.

Note: The coil and the signal conditioner are matched and calibrated at the factory. If the coil is damaged in the field, please return both pieces as a set to the factory after obtaining authorization.



Range Select

CTRC Series transducers feature a single, factory calibrated range. There is no need for time consuming and inaccurate field setting of zero or span.

1. Determine the normal operating amperage of your monitored circuit.
2. Select the model with a range that is equal to or higher than the normal operating amperage.

Trouble Shooting

1. Sensor has low or no output.

A. Power supply is not properly sized. *Check power supply voltage and current rating.*

B. Polarity is not properly matched. *Check and correct output wiring polarity.*

C. Monitored load is not AC or is not on. *Check that the monitored load is AC and that it is actually on.*

2. Output Signal Too Low.

A. Range may be too high for the current being monitored. *Select model carefully.*

B. Input load (monitored current) is below minimum required. *Loop the monitored wire several times through the aperture until the "sensed" current rises above minimum. Sensed Amps = (Actual Amps) x (Number of Loops). Count loops on the inside of the aperture.*

3. Output Signal is constant at 333 mVAC or higher.

A. Range may be too low for current being monitored. *Select different CTRC model with higher range.*

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