

# CTC SERIES

## Signal Converters

CTC Series Signal Converters allow you to use an existing standard 5 A secondary or low-voltage ProteCT™ current transformer over a conductor to produce an industry standard 4–20 mA two-wire, loop-powered signal. The signal is proportional to the current in the primary circuit. The CTC series snaps onto a standard DIN rail. The sensor output is connected to the load (PLC or panel meter, etc.) and a 24 VDC power source, and the current transformer is connected to the input terminals.



### Signal Converter Applications

#### Adding Current Monitoring for System Upgrades

- Measure an entire plant current consumption or individual machine usage.

#### Detect Problems Before Failure Occur

- Detect bearing failures on drive motors and open discharge lines on pumps.

#### Tool Monitoring and Jam Protection

- Measure drive motor HP to determine tool travel or contact with work.
- Monitor motor current use to provide an indication of motor jams.
- Use existing current transformers to monitor the current, and transmit 4–20 mA industry standard output.

### Signal Converter Features

#### Uses any Standard 5 A Current Transformer or the Safer ProteCT™ Low Voltage Design

- Produces a 4–20 mA signal proportional to the AC current through the CT based on CT ratio.
- Two wires in, two wires out: Couldn't be easier.

#### Fast and Easy Installation

- DIN rail mounted\* and 24 VDC loop-powered supply allows for quick and easy two-wire installation.

#### No Calibration Needed

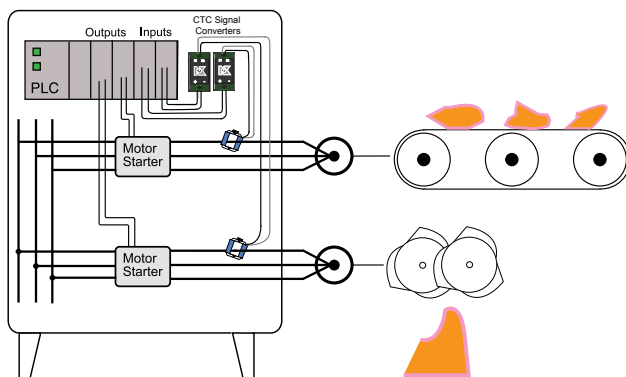
- The primary current transformer ratio provides the scaling required without any other installer intervention.

#### UL/cUL Approved

- Accepted worldwide.

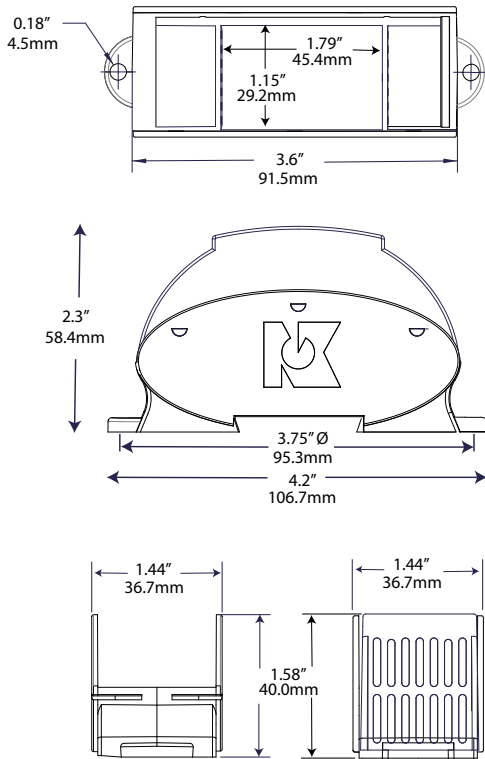
\*For information on the DIN rail accessories kit, see page 140.

Crusher/Grinder/Shredder Motor Interlocks

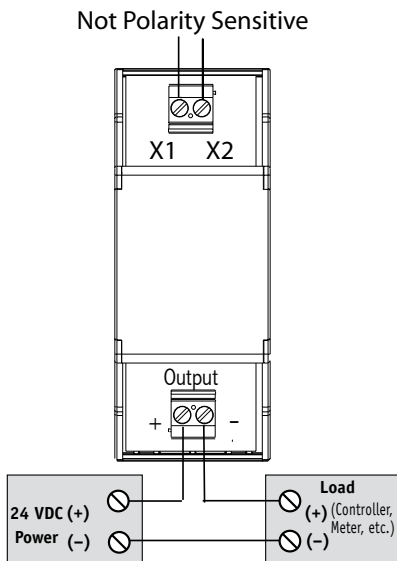


For additional Application Examples, go to [www.nktechnologies.com/applications](http://www.nktechnologies.com/applications)

Signal Converter Dimensions



Signal Converter Connections



Notes:

With 5 A secondary current transformers, the secondary must be connected to a load (NK Technologies' CTC converter or other load) when energized.

With ProteCT™ type (low voltage output) current sensors, there is no chance that dangerous voltages will result if the secondary is open when there is current through the sensing window.

Signal Converter Specifications



<b>Power Supply</b>	24 VDC loop-powered (12–30 V)
<b>Output</b>	4–20 mA proportional to max. current
<b>Output Impedance</b>	<500Ω
<b>Input Range</b>	Based on current sensor ratio
<b>Input Burden</b>	1.67 VA max. for stated accuracy
<b>Accuracy</b>	1.0% FS
<b>Response Time</b>	100 ms (to 90% step change)
<b>Max. Inrush Current</b>	300% FS (6 sec. duration)
<b>Frequency Range</b>	10–100 Hz
<b>Environmental</b>	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing
<b>Listings</b>	UL/cUL

Signal Converter Ordering Information

Sample Model Number: CTC333-420-24L-DIN  
 Transducer accepts 333 VAC inputs from ProteCT™ current sensors, and produces a corresponding 4–20 mA signal.



(1) Input CT Type

333	0.333 VAC low voltage ProteCT™
05 A	5 A secondary

(2) Output Signal

420	4–20 mA
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(3) Power Supply

24L	24 VDC loop-powered
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(4) Case Style

DIN	DIN rail mounting
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Signal Converters

**OEMs** Test & Evaluation Units for OEMs  
 Free program expedites evaluation process. See page 3 for details.

