

# 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

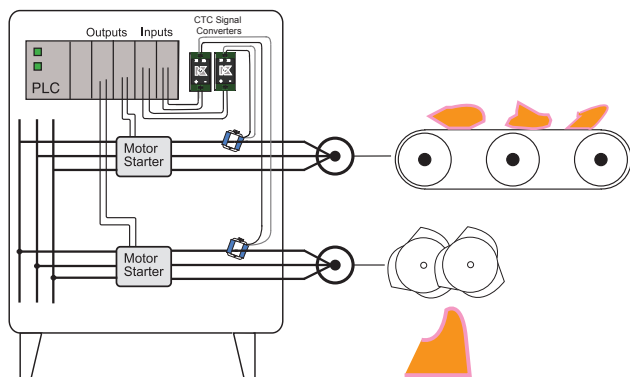
- The primary current transformer ratio provides the scaling required without any other installer intervention.

#### UL/cUL Approved

- Accepted worldwide.

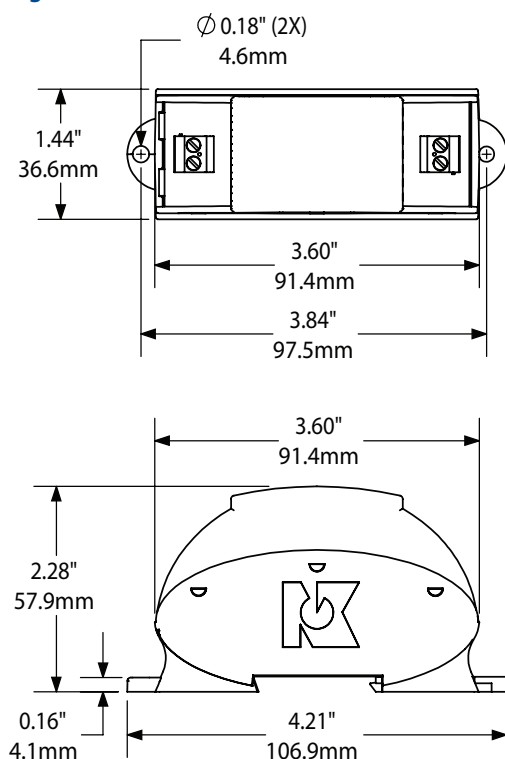
\*For information on the DIN rail accessories kit, see page 147.

#### Crusher/Grinder/Shredder Motor Interlocks

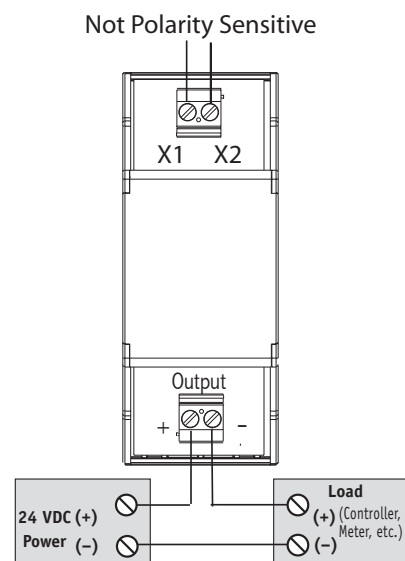


- For additional Application Examples, go to [www.nktechnologies.com/applications](http://www.nktechnologies.com/applications)

## 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 Loading</b>	<500 $\Omega$ @ 24 VDC
<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>Overload</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: CTC-333-420-24L-DIN

Converter accepts 0.333 VAC inputs from ProteCT™ current sensors, and produces a corresponding 4–20 mA signal.

CTC – (1) – (2) – (3) – (4)

CTC – 333 – 420 – 24L – DIN

## (1) Input CT Type

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

## (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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OEMs

## Test &amp; Evaluation Units for OEMs

Free program expedites evaluation process. See page 3 for details.

