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.

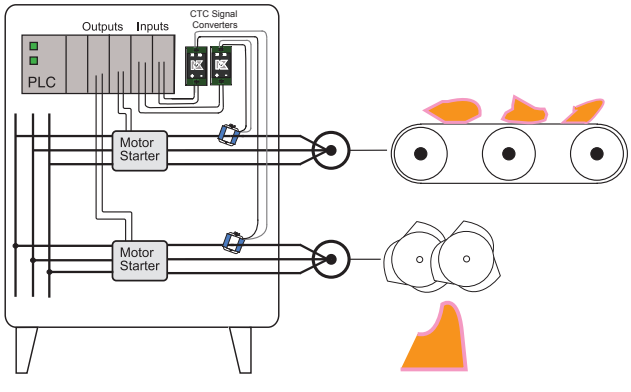
Fast and Easy Installation
- DIN rail mounted* and 24 VDC loop-powered supply allows for quick and easy two-wire installation.

No Calibration Needed
- The primary current transformer ratio provides the scaling required without any other installer intervention.

UL/cUL Approved
- Accepted worldwide.

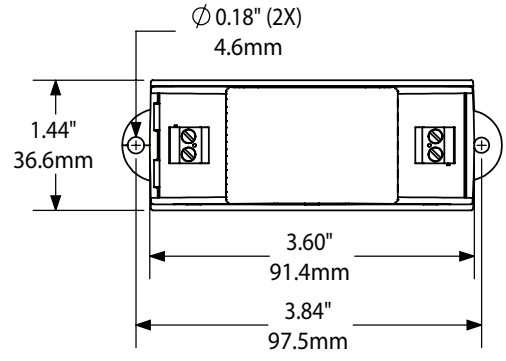
*For information on the DIN rail accessories kit, see page 147.

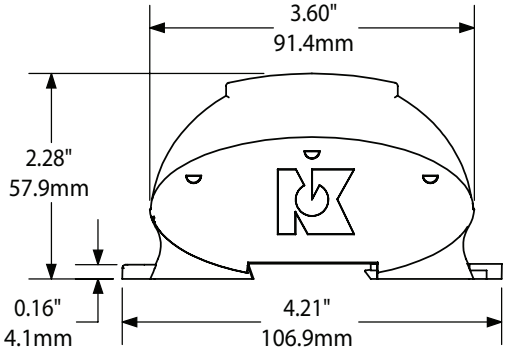
Crusher/Grinder/Shredder Motor Interlocks



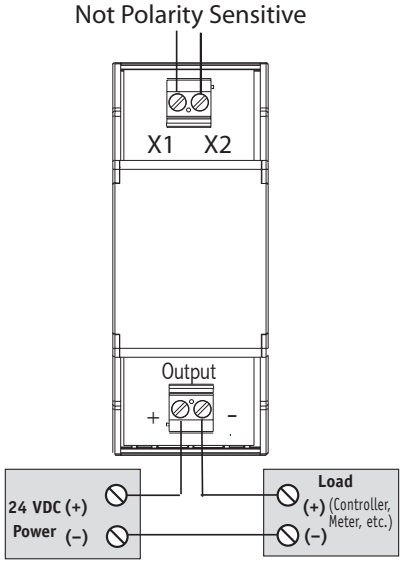
For additional Application Examples,

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.

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

Signal Converter Specifications

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

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(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

(3) Power Supply

24L	24 VDC loop-powered

(4) Case Style

DIN	DIN rail mounting