



APPLICATION NOTE

APP #148

Revision History

Date	Author	Description
12-10-2020	DEW	Setup
12-15-2020	DEW	Corrections from Bret

Monitoring Small AMP Readings Using MCS Current Sensors



Any questions regarding this release, contact: support@mcscontrols.com

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MCS Current Sensors monitor current flowing to compressors, pumps and fans. The magnitude of the current is converted to a linear 0 to 5vdc output signal which can be read as a standard analog input signal. The signal is used by MCS micro controllers for the following:

1. For slide valve positioning on screw machines
2. For high/low amp motor overload protection
3. For verification of device on / off
4. Used in kw calculations

To read extremely low ampere, up can do the following:

1. Wrap the wire 10 times around the sensor as shown:

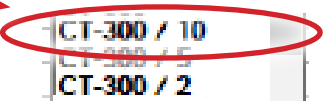
For example with 10 wraps of the wire around the MCS-CT300 and an actual ampere of 1A on the wire, the MCS-CT300 would see 10 amps (1A x 10 wraps). Then with a sensor display type of CT-300/10, the firmware will take the 10 amp reading and divide it by 10 and display 1Amp.

Wire wrapped 10 times around MCS-CT300



MCS-Controller use the following setup to calculate the reading from the low ampere line.

Depending on the number of times the wire is wrapped around the current transformer and the setting in display type, the actual amps can be determined.



Display Type	# WIRE WRAPPED	LOWEST AMPERE READING	AMPERE READING MAX
CT-300	0	5 AMPS	300 AMPS
CT-300 / 10	10	0.5 AMPS	30 AMPS
CT-300 / 5	5	1 AMP	60 AMPS
CT-300 / 2	2	2.5 AMPS	150 AMPS

Pick the range that works best for measuring the device amps.