PHENIX

AC Current Sensor

CSL – 100 – XX - XX

Programmable Single Phase 3-Wire AC Current Sensor

DESCRIPTION

CSL-100 is a low cost single phase AC current sensor. Operating voltage model ranges between 2 and 48 VDC and sensing ranges from 0 to 50A. The operating voltage and FET output is ideal for logic level applications. The normally open N-FET output can handle up to a 500 mA continous load. The trip point is settable using a Phenix IR Programmer and the set point is stored in non-volatile memory. The IR programmer prevents unauthorized changes to the set point in the field.

SPECIFICATIONS	
Sensing Ranges	0 - 50A
Sensor Frequency Range	50 – 60 Hz
Trip Point	IR Programmable
Temperature Range	-20°C to 80°C
Maximum Wire Size	3/8”
Dimensions (L x W x H)	1.5" x 1.125" x 0.5"
Connections	6-32 Screw Terminals (3)
Operating Voltage	2 – 48 VDC
Operating Current	1 mA Typical
Output Type	N-FET
Load Rating	500 mA Continuous

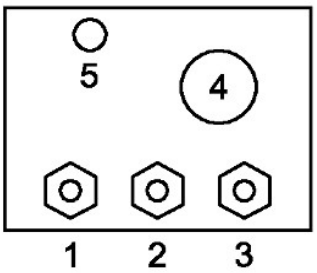
FEATURES

- Encapsulated to prevent environmental and physical damage
- Accommodate wires up to 3/8 inch
- Programmable trip
- Small size
- Low operating current
- Wide temperature range
- Full specifications

APPLICATIONS

- Protects motors
- Increases Motor Life
- Pumping
- Irrigation
- Conveyors
- Loaders
- Fans and Blowers
- Ovens and Heaters
- Waste Management
- Material Handling
- Industrial Process Control

CSL-100 Layout



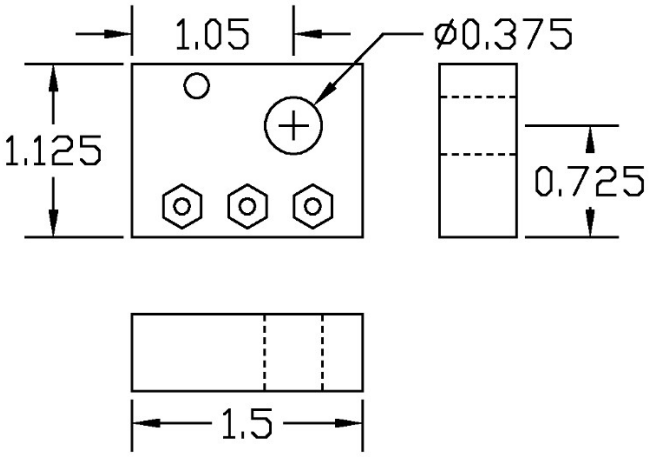
1	Supply Minus -
2	N-FET Output
3	Supply Plus +
4	3/8" Sensing Pass through
5	IR Programming Input

PHENIX

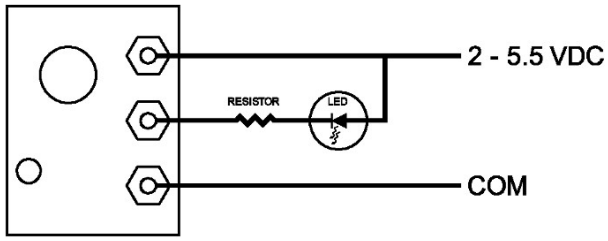
AC Current Sensor

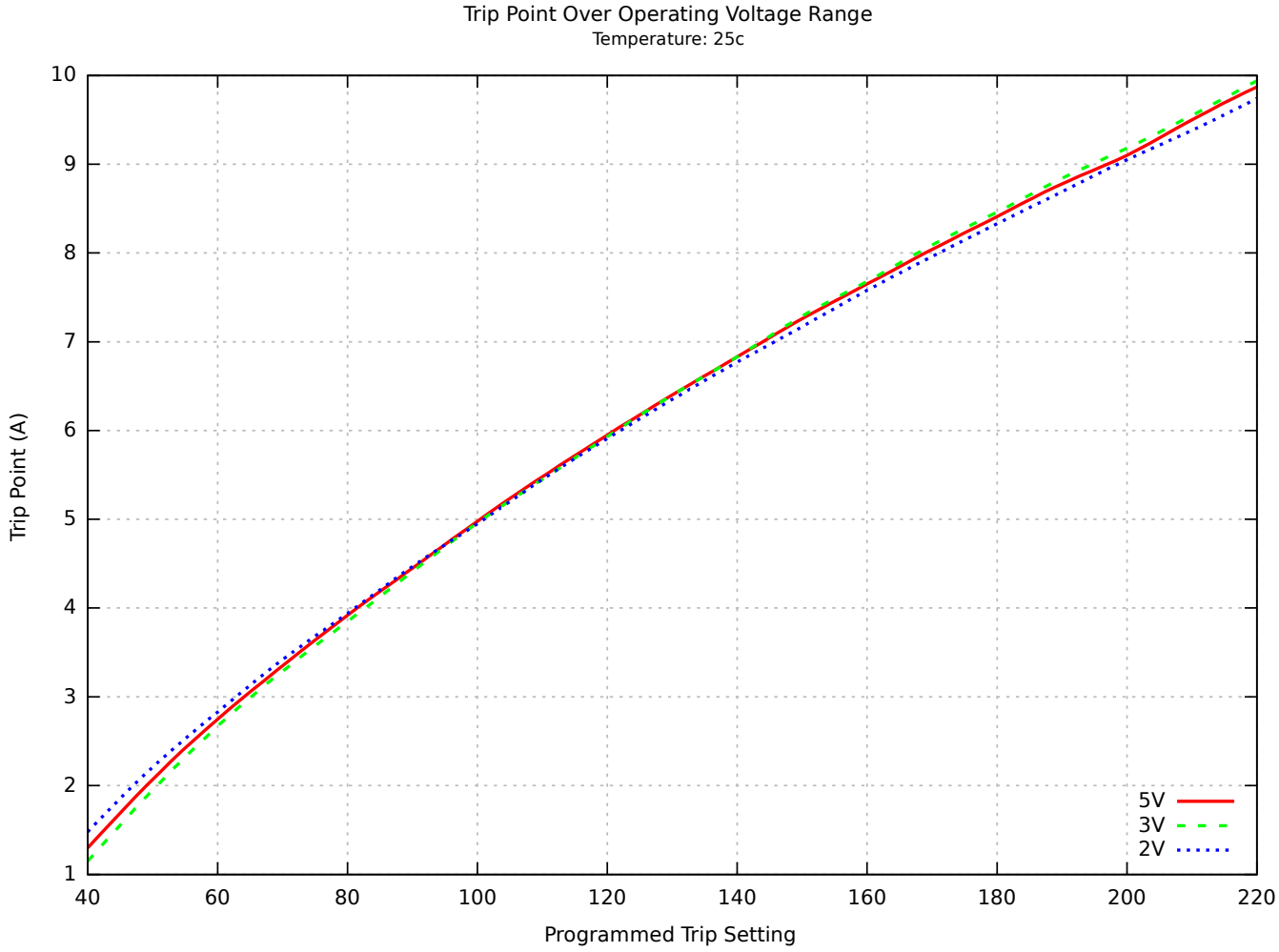
CSL – 100 – XX - XX

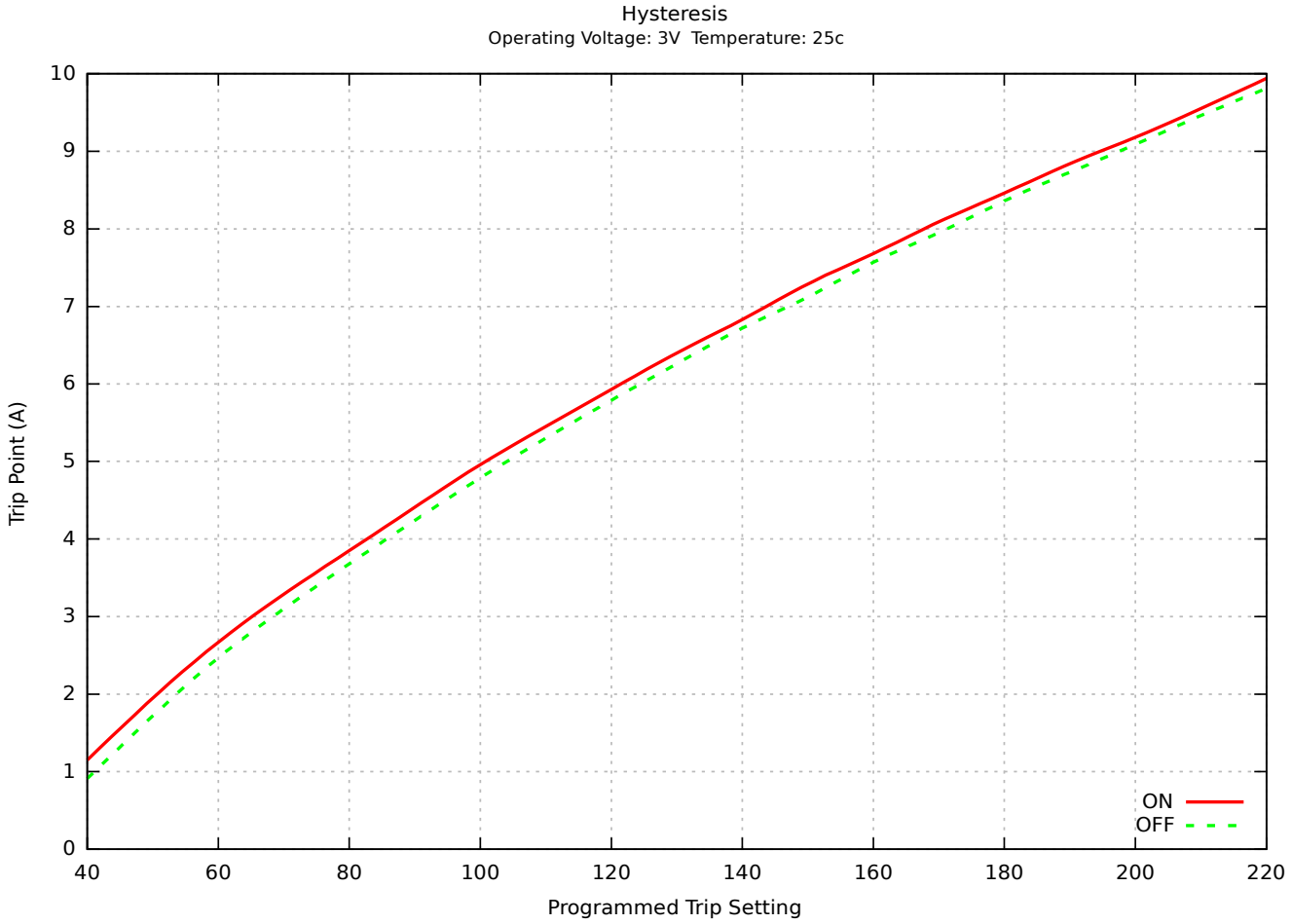
CSL-100 Dimensions

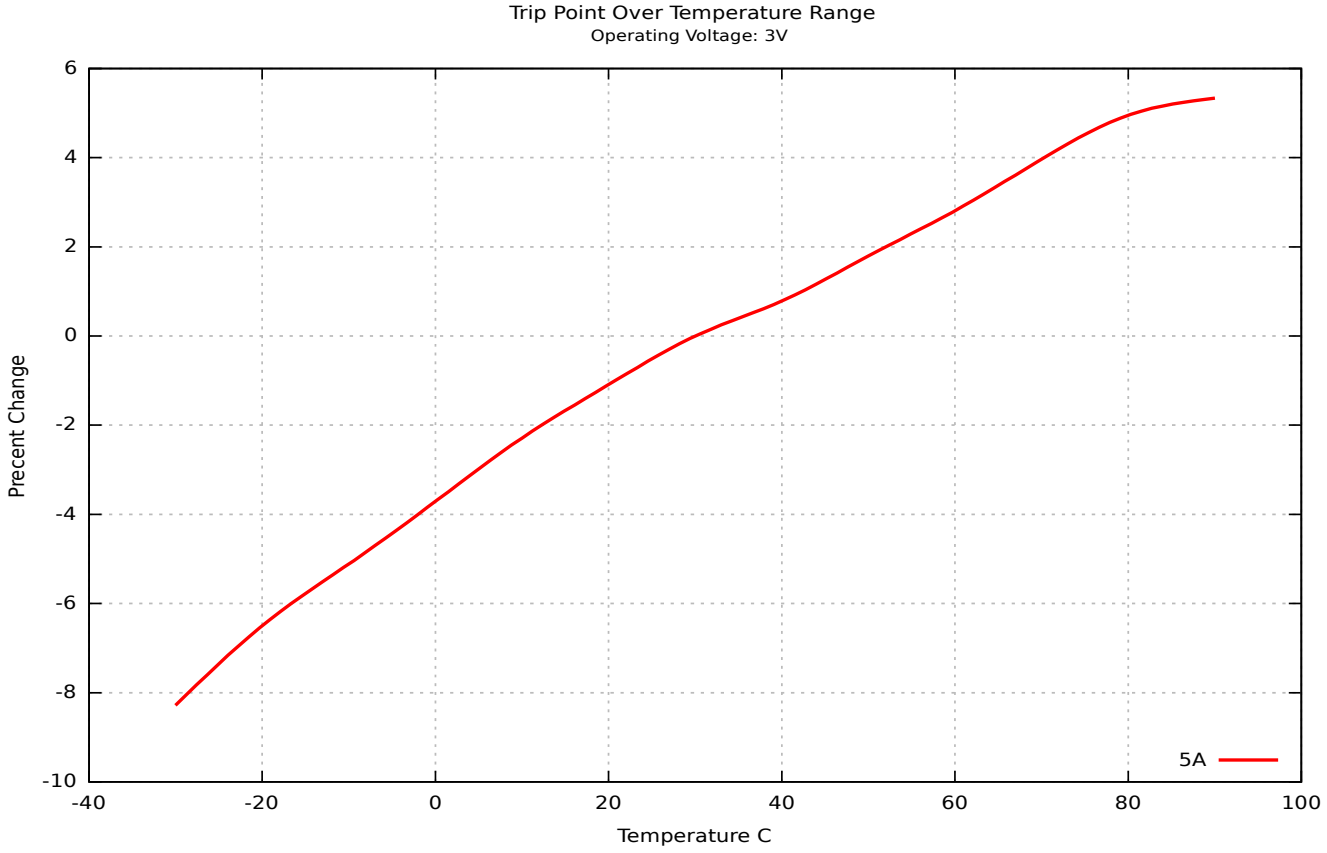


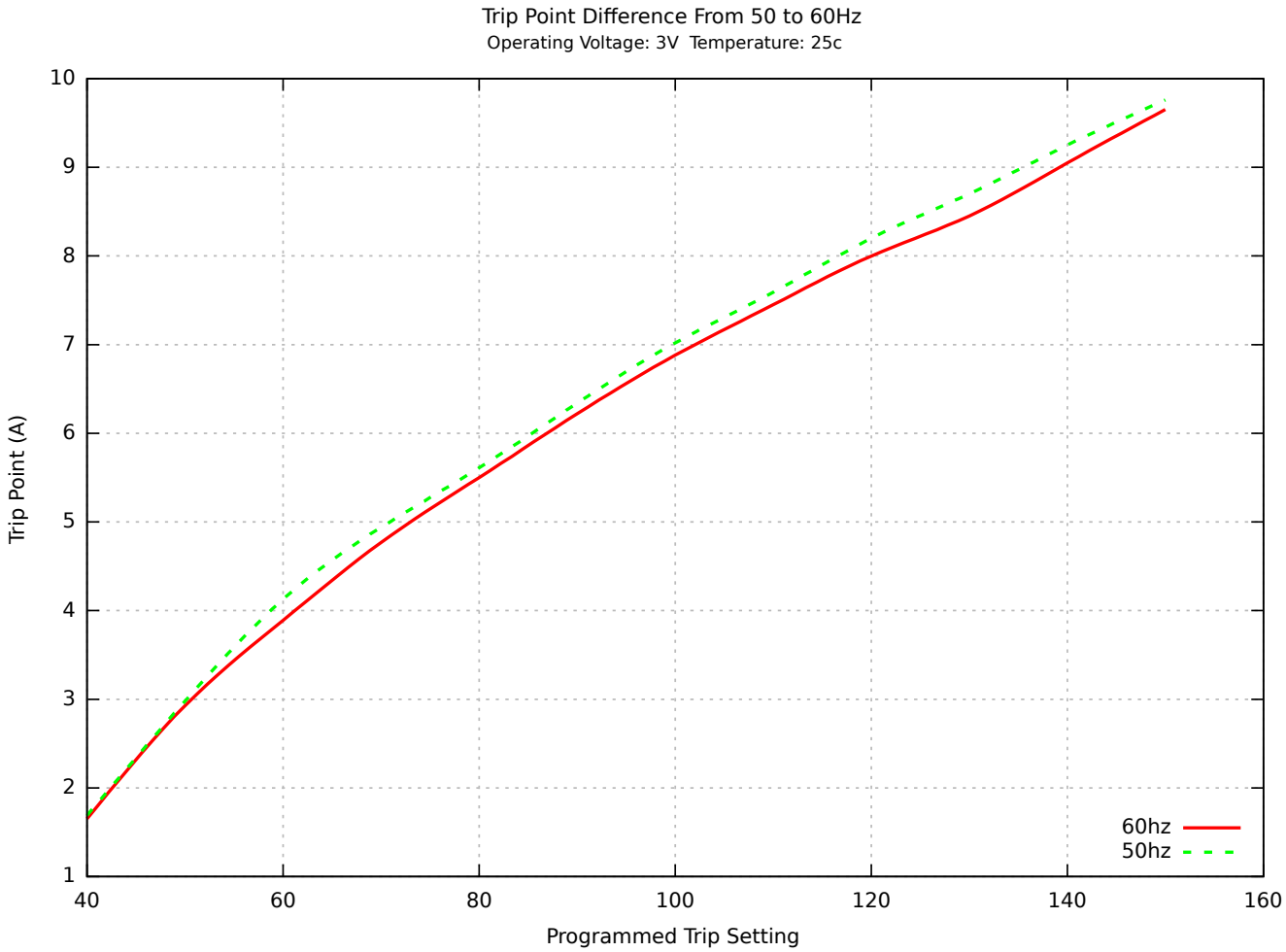
CSL-100 Sample Connection






Hysteresis
Operating Voltage: 3V Temperature: 25c
Trip Point (A)
Programmed Trip Setting
ON
OFF
0
1
2
3
4
5
6
7
8
9
10
40
60
80
100
120
140
160
180
200
220


Trip Point Over Temperature Range
Operating Voltage: 3V
Precent Change
Temperature C
5A
6
4
2
0
-2
-4
-6
-8
-10
-40
-20
0
20
40
60
80
100



Ordering Information

	CSL - 100	-	05	-	10
1. Series					
CSL - 100					
2. Operating Voltage (DC)					
2 – 5.5			05		
5 – 12			12		
12 – 24			24		
24 – 48			48		
3. Sensing Range (Amps)					
0 – 5					05
0 – 10					10
0 – 25					25
0 – 50					50

Infrared Programming

Define settings for the device using Phenix Programmer software

Device settings are then transferred into a remote programmer

Remote then transfers the settings into the device

The CSL-100 series trip point and other settings can be programmed using the infrared programming port on the device. The PC Phenix Programmer Software is available to download for free at http://PhenixControls.com/Software. The trip point is entered into the software and then transferred to a remote infrared programmer using the USB interface. The remote can then transfer the settings to any number of devices in the field. The settings are stored in non-volatile memory and persist after loss of power. Some of the programmable settings include:

- Manual Trip Point Value
- Hysteresis
- Trip ON delay
- Trip OFF delay

Programming Trip Point

The trip point can be manually programmed to a value that corresponds to a current value detected by the CSL-100. The trip point value ranges from 0 to 1024 and is a non-linear curve with 0 representing 0 amps and increasing to the maximum sensing range along the curve. The value may vary from unit to unit.

CSL-100 trip point can also be programmed to a percentage value above the current running through the unit. While a current is running through the sensor, the sensor will measure the current and then set the trip point to a value above the detected current.

Factory Programming

The CSL-100 can be factory programed and shipped with any settings.