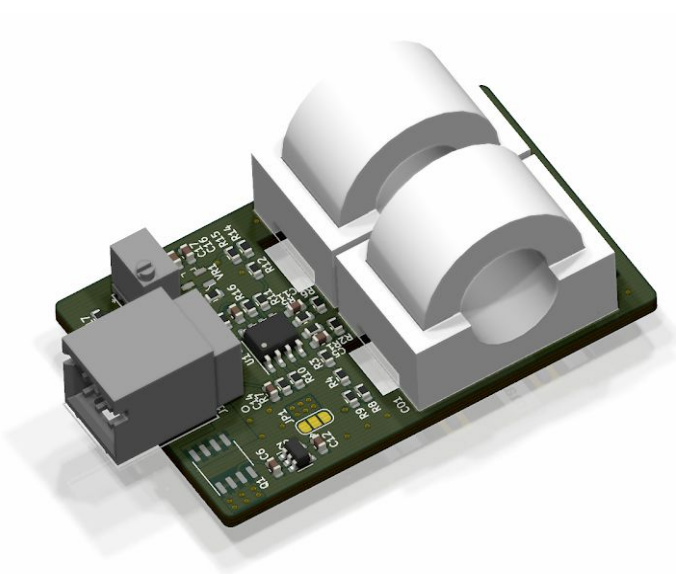


Redundant Current Sensor with Analog Output

MCO-T10R01A



Description

The MCO-04TR01A is a redundant current measurement Sensor for safety critical application, offering full redundancy. Thanks to its patent clamp on systems, the sensor can be easily installed without requiring any disconnection and therefore being ideal for retrofit installations in the industrial, IoT and metering applications. Furthermore, thanks to its unique magnetic design, a broad dynamic range of currents can be measured and no calibration is required by the customer.

The module has a differential output, where each sensor signal is outputted from a programmable reference voltage. Each Hall-Sensor will generate a rising or falling signal, depending on current flow.

Properties and features

- Input Supply Voltage
 - + 10 VDC
- Current Measuring Range
 - + DC and AC up to 100kHz
 - + different sensitivity ranges
 - ± 20 A
 - ± 50 A
 - ± 100 A
 - ± 200 A
 - + Hall-Sensor Measurement
- Measurement accuracy
 - + dual differential output 1%
- Temperature Range
 - + -20 to +85 °C
- Redundant Current Measurement

Advantages

- Differential Signal Output
- Sensor redundancy
- reverse polarity protection
- small size / light weight
- Offset adjustable base voltage

Applications

- Industrial
- E-mobility
- Photovoltaic
- Redundant measurements

System Overview

Absolute Maximum Ratings

Parameter	CMS	Unit
Supply Voltage	10	V
Max. Measurement Range	250	A peak
Operating Temperature Range	-40 to +85	°C

Electrical Characteristics

(VCC = 10.0V, VEE = GND, TA = 25°C, unless otherwise specified)

Parameter	Conditions	CMS			Unit
		Min.	Typ.	Max.	
Supply Current	Vcc = 10 V	22	24	26	mA
Power Consumption	Vcc = 10 V	220	240	260	mW
Output Quiescent Voltage	Vcc = 10 V	-	5 ± 0.1	-	V
Differential Output Quiescent Voltage		-	± 6	-	mV
Differential Output Quiescent Gain		-	11.11	-	mV/A

RCS = redundant Current Sensor

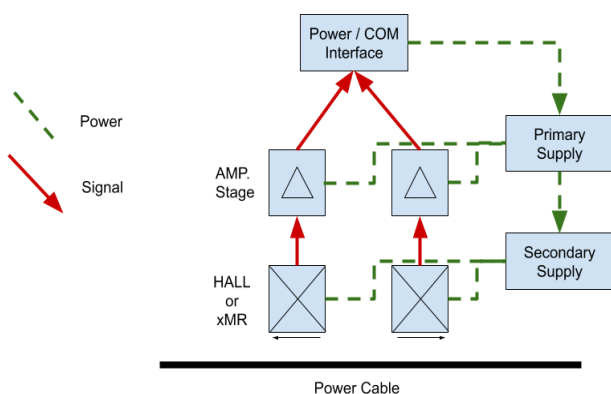


Figure 1: System Overview

RCS Signal

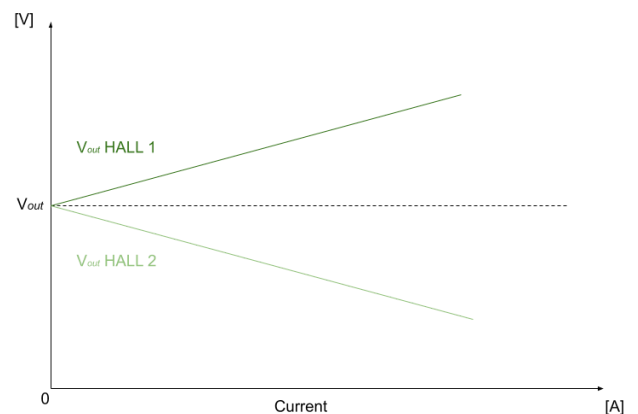
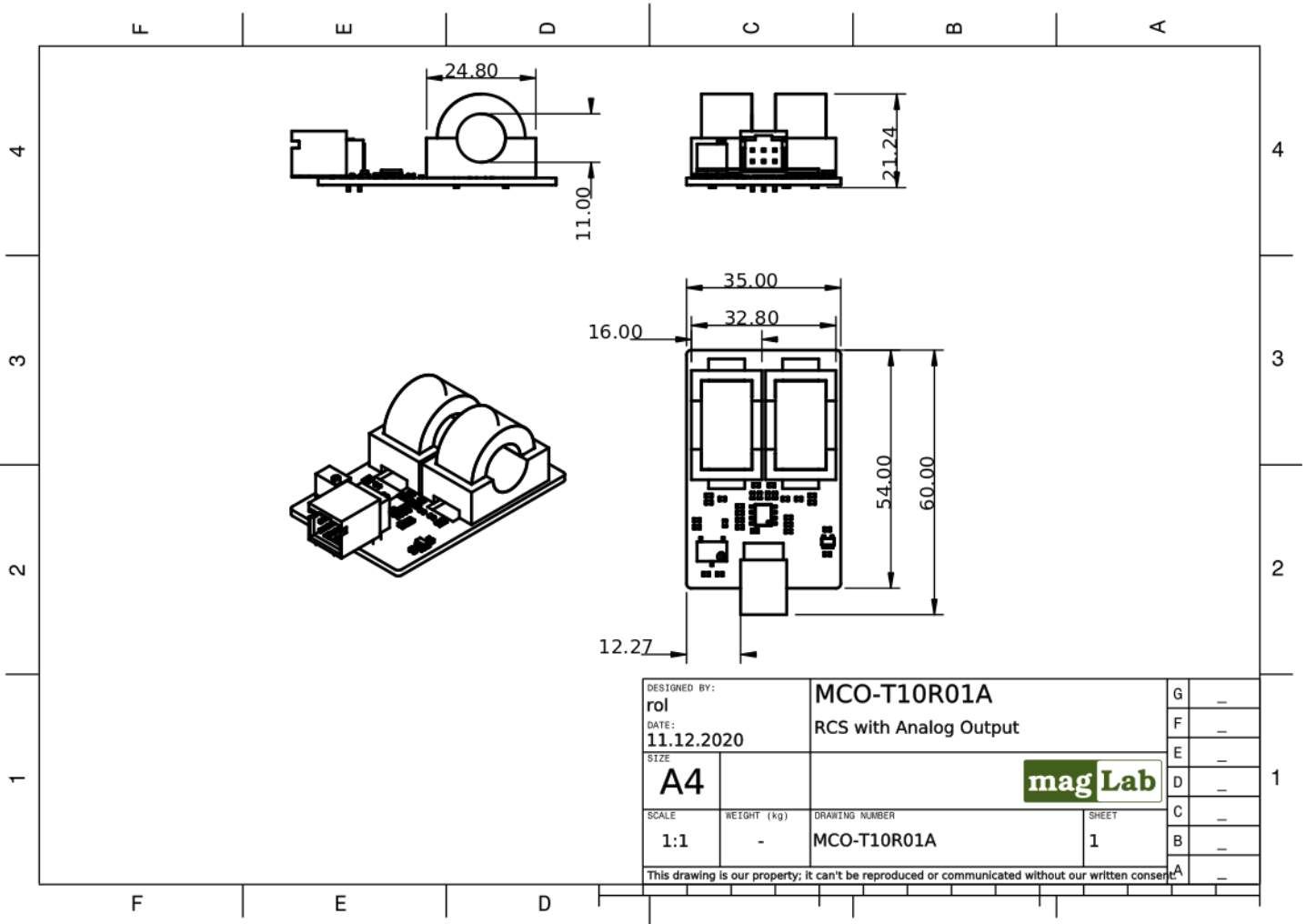


Figure 2: Representation of the signal Output

Dimensions



Mechanical Characteristics

Length	54 mm	2.13 inch
Width	35 mm	1.38 inch
Height	16.5 mm	0.65 inch
Weight	?	?
Connector	TE_5-103166-1	
Wire diam.	10 mm	0.39 inch