

HCSO-1W

Automotive Open Loop Hall Effect Current Sensor



KEY FEATURES

- ▶ Open loop current transducer based on Hall effect
- ▶ Dual channel sensor for high and low currents
- ▶ Cable mount
- ▶ Simple or redundant analog ratiometric output
- ▶ Measured current value from ± 25 A to ± 1000 A
- ▶ Non-intrusive technology
- ▶ Galvanic separation between power and control
- ▶ Operating temperature from -40°C to $+125^{\circ}\text{C}$

DESCRIPTION

Piher Sensing Systems' HCSO-1W family of open loop current sensors generates a ratiometric analog output voltage signal proportional to the current flowing through the conductor. Based on Hall effect technology the sensor has been designed for accurate measurement of AC and DC currents in automotive battery management and motor control applications.

APPLICATIONS

- ▶ Battery management
- ▶ Motor control
- ▶ EV motor inverters
- ▶ DC/DC converters

SPECIFICATIONS

Supply voltage	5 V $\pm 10\%$
Current consumption	Typ. 26 mA
Analog output	0.5 V to 4.5 V
Creepage distance	3.95 mm
Clearance	3.95 mm
Operating temperature	-40°C $+125^{\circ}\text{C}$
Over voltage protection	+10 V
IP rating	IP67 / IP69K (not considering connector)
Connector	TYCO 1-1564559-1
Max. Mounting torque	2.5 N.m (M4x, 7mm)

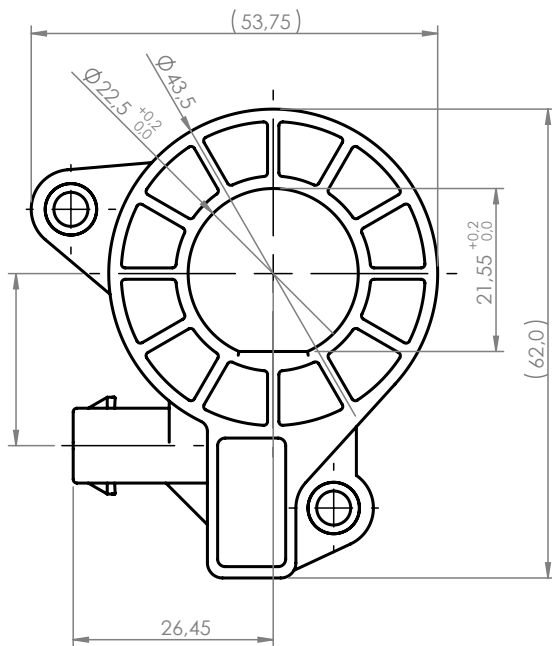
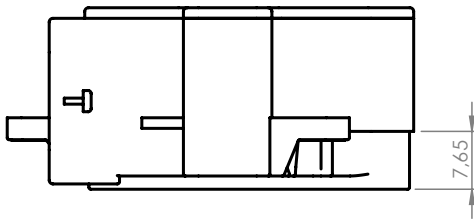
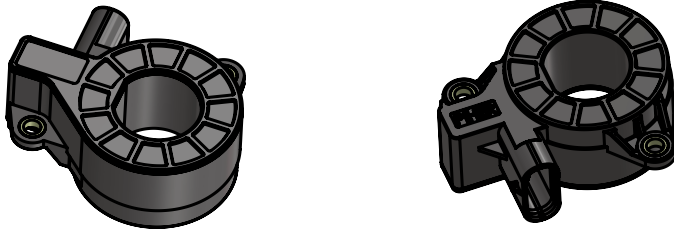
HCS0-1W

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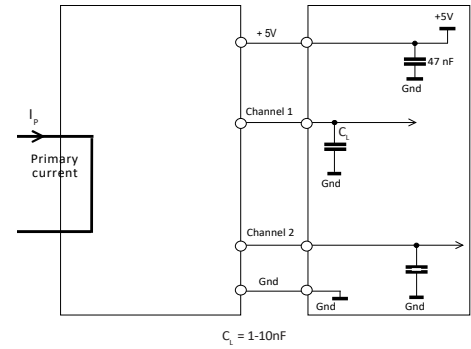
DIMENSIONS (IN MM)



Download the STEP file here:
www.piher.net

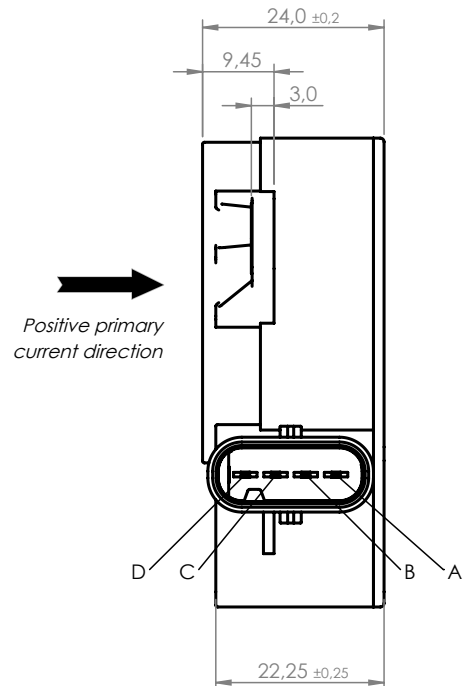


Scheme Example



CONNECTION SCHEME

PIN	
A	Uc 5V
B	Vout high current range
C	GND
D	Vout low current range



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PERFORMANCE DATA

LOW	HCSO-1WD- _ _ _ _ - _ _ _ _ _							
	Current measuring range (Amp)	025	030	040	050	075	100	
	Sensitivity (mV/A)*	80	66.666	50	40	26.666	20	
	Sensitivity error*	± 0,6 %						
Electrical offset voltage*	± 3 mV							
HIGH	HCSO-1WD- _ _ _ _ - _ _ _ _ _							
	Current measuring range (Amp)	200	350	500	600	750	800	1000
	Sensitivity (mV/A)*	10	5.714	4	3.333	2.666	2.5	2
	Sensitivity error*	± 0.6 %						
Electrical offset voltage*	± 3 mV							

*at 25°C / Vcc = 5V; Other specification on request

ORDER CODE (e.g. HCSO-1WD-025-0200)

Family

HCSO-

- Phase	
1	Single
Mounting	
W	Cable mount
Output	
D	Dual
- Measuring Range (low)	
---	025 to 100 A
- Measuring Range (high)	
----	0200 to 1000 A

* on request

 check inventory



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