

HCSP-1BS

Automotive Open Loop Current Sensor - Busbar Mounting



KEY FEATURES

- ▶ Open loop current transducer based on Hall effect
- ▶ Busbar mounting
- ▶ Simple analog ratiometric output
- ▶ Measured current value from ± 200 A to ± 1.500 A
- ▶ Non-intrusive technology
- ▶ Galvanic separation between power and control
- ▶ Operating temperature from -40°C to $+125^{\circ}\text{C}$

DESCRIPTION

Piher Sensing Systems' HCSP1BS 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

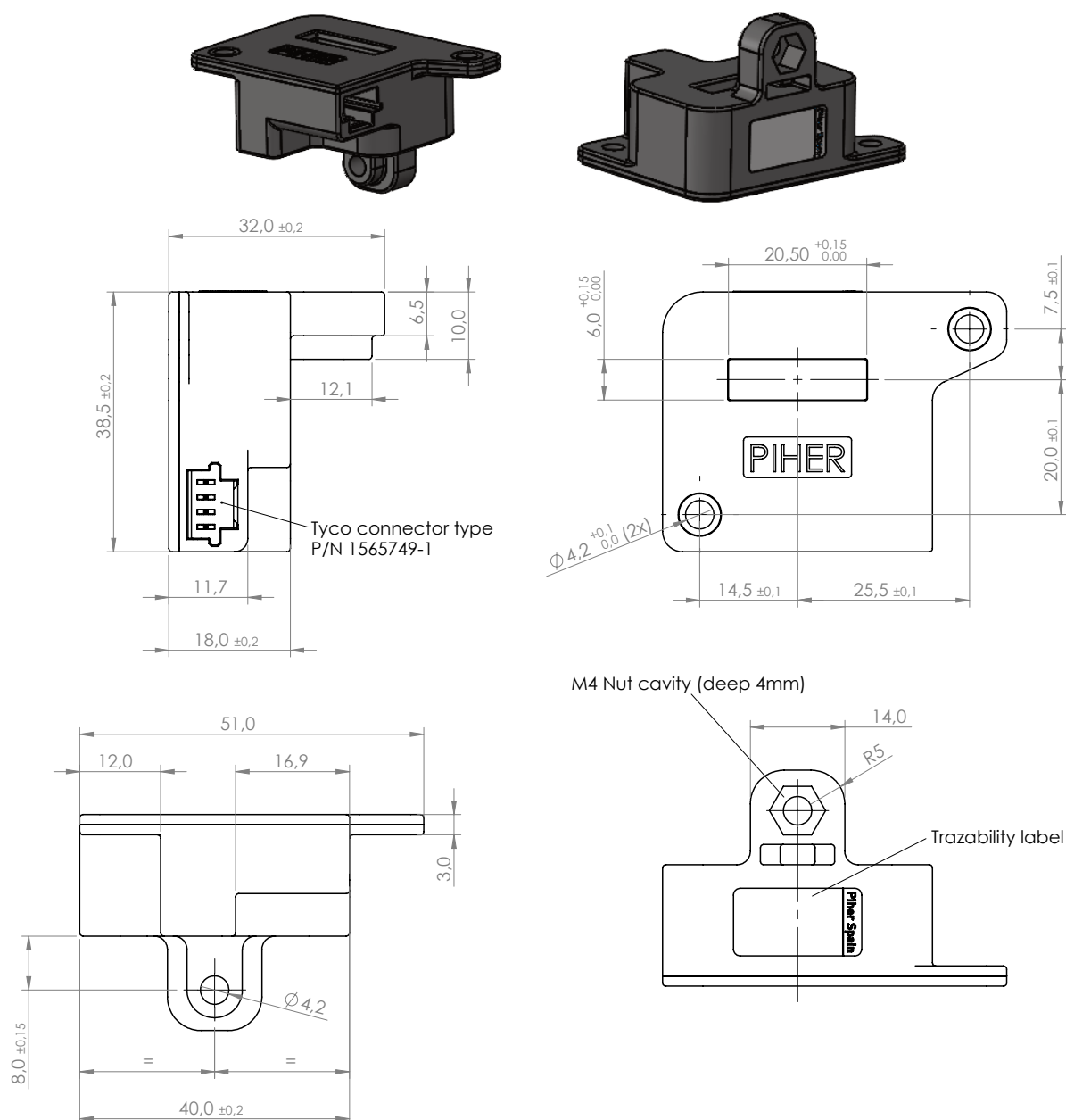
Parameter	Unit	Min.	Typ.	Max.
Supply voltage	V	4,5	5	5,5
Supply current	mA	9	12	14
Output voltage	V	0,5		4,5
Offset voltage	V		2,5	
Response time	μsec			3
Frequency bandwidth	kHz	70		250
Operating temperature	$^{\circ}\text{C}$	-40		+125
Typical error (at 25°C ; $V_{cc} = 5\text{V}$)	%	0,65		2,5
Max. error (at -40°C to $+125^{\circ}\text{C}$; $V_{cc} = 5\text{V}$)	%	1		3,5

Other specification on request

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DIMENSIONS (IN MM)



MOUNTING AND CONNECTIONS

Connections		Mounting Recommendation	
Mating connector	TYCO 1473672-1	-M4 screw -Spring washer -M4 nut (acc. to ISO 4032) -Max Torque: 2Nm	
1	Signal output		
2	Ground		
3	Supply voltage		
4	n/c		

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PERFORMANCE DATA

HCSP-1BS-_____	0200	0300	0400	0500	0600	0700	0800
Current measuring range	±200 A	±300 A	±400 A	±500 A	±600 A	±700 A	±800 A
Current nominal value	±200 A	±300 A	±400 A	±500 A	±600 A	±700 A	±800 A
Sensitivity*	10 mV/A	6,66 mV/A	5 mV/A	4 mV/A	3,33 mV/A	2,85 mV/A	2,5 mV/A
Sensitivity error*	± 0,6 %						
Electrical offset voltage*	± 3 mV						

HCSP-1BS-_____	0900	1000	1100	1200	1300	1400	1500
Current measuring range	±900 A	±1.000 A	±1.100 A	±1.200 A	±1.300 A	±1.400 A	±1.500 A
Current nominal value	±900 A	±1.000 A	±1.100 A	±1.200 A	±1.300 A	±1.400 A	±1.500 A
Sensitivity*	2,22 mV/A	2 mV/A	1,81 mV/A	1,67 mV/A	1,53 mV/A	1,42 mV/A	1,33 mV/A
Sensitivity error*	± 0.6 %						
Electrical offset voltage*	± 3 mV						

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

ORDER CODE (e.g. HCSP-1BS-0300)

Family

HCSP

- Phase		
1	Single	
3*	Triple	
Mounting		
B	Busbar	
Output		
S	Simple	
- Measuring Range		
-----		0200 to 1.500 A
D*	Dual	
- Measuring Range		
1 st Output	2 nd Output	
----- - -----		0200 to 1.500 A

*on request



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