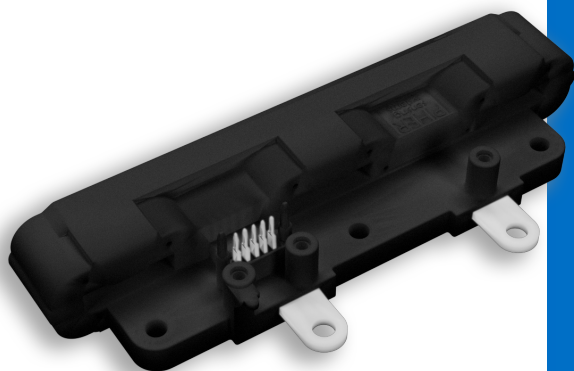


# HCSP-3BS

## Three-phase Open Loop Current Sensor - Busbar Mounting



### KEY FEATURES

- ▶ Open loop current transducer based on Hall effect
- ▶ Measured current values up to  $\pm 1.200\text{ A}$
- ▶ 3-phase busbar mounting
- ▶ 3 simple analog ratiometric outputs
- ▶ Non-intrusive technology
- ▶ Galvanic separation between power and control
- ▶ Full compatibility with Infineon HybridPack
- ▶ Press fit contacts to eliminate soldering
- ▶ Operating temperature from  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

### DESCRIPTION

Piher Sensing Systems' HCSP3BS is a three-phase open loop current sensor that 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

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

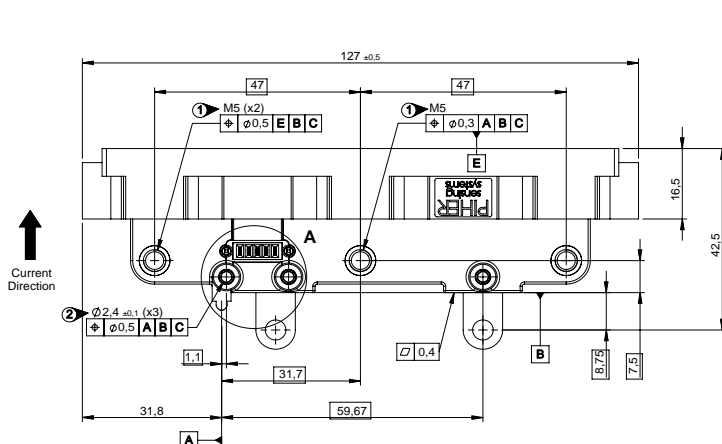
### SPECIFICATIONS

Parameter	Unit	Min.	Typ.	Max.
Supply voltage	V	4,5	5	5,5
Supply current	mA	33	42	48
Output voltage	V	0,5		4,5
Offset voltage	V		2,5	
Frequency bandwidth	kHz	70		250
Operating temperature	$^{\circ}\text{C}$	-40		+125
Typical error (at $25^{\circ}\text{C}$ ; $V_{cc} = 5\text{V}$ )	%	0,65		2,5
Max. error (at $-40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ ; $V_{cc} = 5\text{V}$ )	%	1		3,5

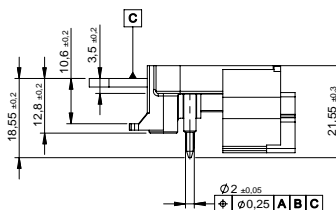
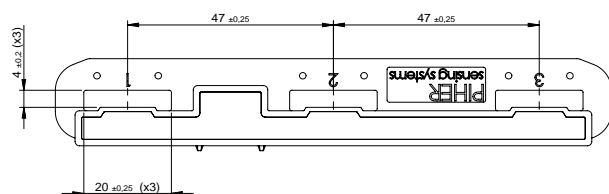
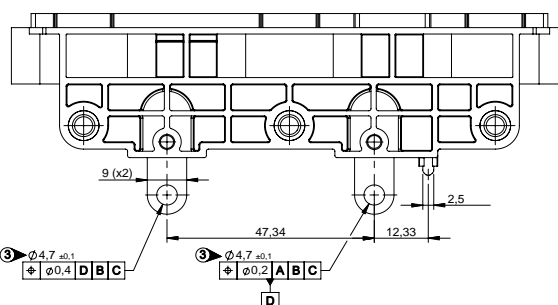
Other specification on request

## Three-phase Open Loop Current Sensor - Busbar Mounting

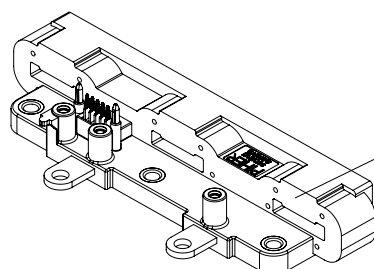
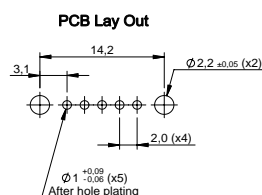
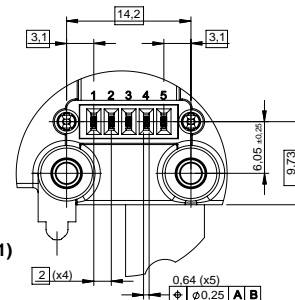
**DIMENSIONS (IN MM)**



- ① (x3) M5 screws (not included)
- ② (x3) Recommended screws for 3 fixing holes: DELTA PT® Ø3
- ③ (x2) M4 screws (not included)



**PCB Connection**  
5 pressfit pins for pads  
dimension refer to IEC  
60352-5 standard



Laser mark surface

Example:

**HCSP-3BS-0800**

**0800**: Current Variant  
from 800-1200

**O40 xxxxx**

**O**: Year (O=2024 / P=2025 /  
**40**: Week number

**xxxxx**: Universal Correlative  
part number for all current  
sensor

CONNECTION PIN OUT	
Pin 1	Supply Voltage
Pin 2	GND
Pin 3	Output 1 (Phase 1)
Pin 4	Output 3 (Phase 3)
Pin 5	Output 2 (Phase 2)

**ORDER CODE**

HCSP-3BS-_____	0800	0900	1000	1100	1200
Current measuring range	±800 A	±900 A	±1000 A	±1100 A	±1200 A
Sensitivity*	2,5 mV/A	2,22 mV/A	2 mV/A	1,81 mV/A	1,67 mV/A
Sensitivity error*	± 0,6 %				
Electrical offset voltage*	± 3 mV				

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

Please always use the latest updated datasheets published on our website.

**Disclaimer:**

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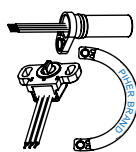
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## CONTACT

## Piher Sensing Systems

Polígono Industrial Municipal

Vial T2. N°22

31500 Tudela

Spain

sales@piher.net

+34 948 820 450

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