

PCB Mounted, Open Loop, Hall Effect Current Sensor

The **HOS-AP** Series of PCB mounted, open loop, Hall Effect current sensors are designed for application requiring the measurement of DC current and current pulses.

The HOS-AP open loop, Hall Effect current sensor design is based upon the principle that a magnetic field applied perpendicular to an electric current will create a proportional Hall voltage perpendicular to the two fields. The technology allows;

- Contactless, non-intrusive current sensing and
- Current sensing of DC current, current pulses and AC electric current.

The Hall Effect technology features high accuracy, high primary to secondary electrical isolation and extended frequency detection bandwidth.



Features:

- Rated Primary: 5A, 10A, 15A, 20A, or 25A.
- Output: ± 4 V at rated current input.

Specifications:

- Frequency: 0 to 20kHz.
- Dielectric withstand voltage between Primary and Secondary: 2,500V RMS @ 50HZ for 1 minute.
- Load resistance: > 10 kOhms .
- Operating Temperature: -10°C to $+70^{\circ}\text{C}$.
- Storage Temperature: -15°C to $+90^{\circ}\text{C}$.
- Supply Voltage: $\pm 12\text{V} \dots 15\text{V}$ ($\pm 5\%$).
- Supply Consumption: 25mA.

- Construction:
 - Epoxy encapsulated housing.
 - Case material – Nylon, UL flame retardant rating 94 V-0.
- RoHS compliant.



Performance:

- Accuracy: $\pm 1\%$ of I_{nominal}
- Linearity: $\leq 1\%$
- Response Time: $\leq 10\mu\text{Second}$
- Offset Voltage (@ $+25^{\circ}\text{C}$): $\pm 30\text{mV}$ maximum for primary current $I_n = 0$.
- Temperature Drift: $\pm 1\text{mV}/^{\circ}\text{C}$ maximum (-10°C to $+70^{\circ}\text{C}$)

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Configuration Options:

Model	Rated Current (RMS)	Measurement Range
HOS-5AP	5A	0 to $\pm 7.5A$
HOS-10AP	10A	0 to $\pm 15.0A$
HOS-15AP	15A	0 to $\pm 22.5A$
HOS-20AP	20A	0 to $\pm 30.0A$
HOS-25AP	25A	0 to $\pm 37.5A$

Typical Performance – HOS-___AP:**ZIBO YUANXING Electronics Co., LTD**

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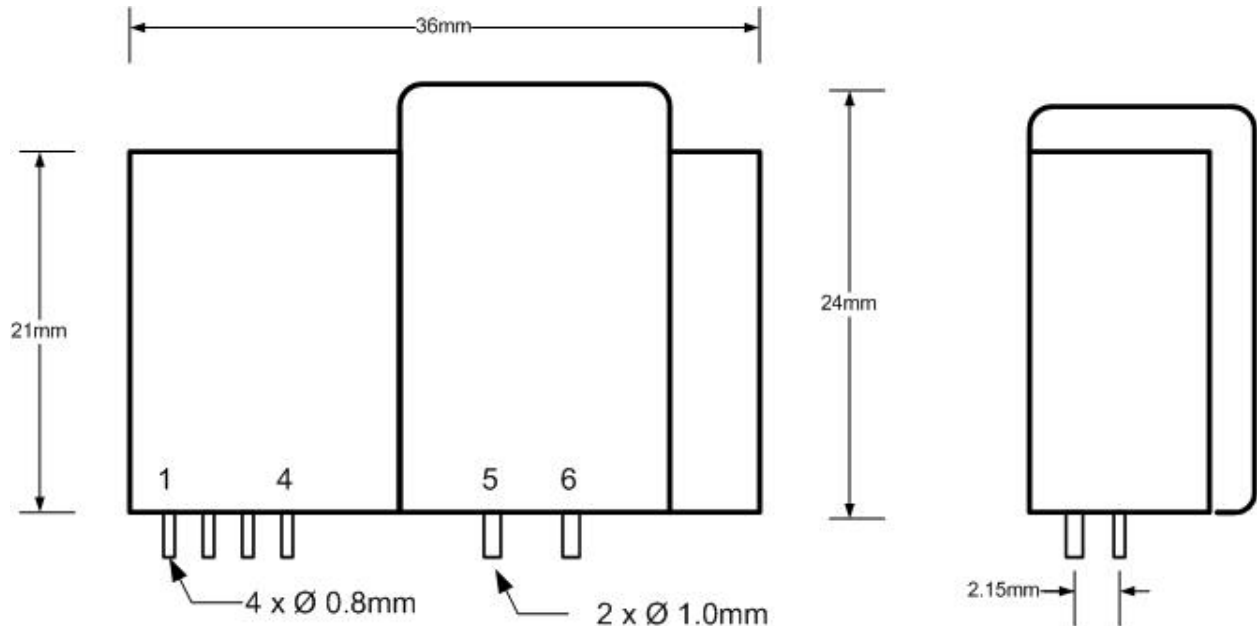
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Outline Drawing:



CONNECTION DEFINITIONS:

- **Pin #1:** Power supply input - +15VDC
- **Pin #2:** Power supply input - -15VDC
- **Pin #3:** Secondary signal out
- **Pin #4:** Secondary signal ground/ return
- **Pin #5:** Primary input
- **Pin #6:** Primary input

NOTE: Secondary output is positive when direction of primary flow is from Pin #5 to Pin #6 (direction of arrow).

Custom Hall Effect current sensor designs are available to meet the specific application requirements. For a no obligation technical evaluation, please provide the specific performance requirements to engineering@tichenassociates.com or the address below.

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