

Panel Mounted, Split-core, Open Loop, Hall Effect Current Sensor

The **HOS-AK1** Series of panel mounted, split-core, open loop, Hall Effect current sensors are designed for application requiring the measurement of DC current and DC current pulses.

The HOS-AK1 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: 100A, 200A, 400A, 600A, or 800A.
- Output: ± 4 V at rated current input.

Specifications:

- Frequency: 0 to 20kHz.
- Dielectric withstand voltage between Primary and Secondary: 5,000V RMS @ 50HZ for 1 minute.
- Load resistance: > 10 kOhms .
- Operating Temperature: -10°C to $+85^{\circ}\text{C}$.
- Storage Temperature: -25°C to $+85^{\circ}\text{C}$.
- Supply Voltage: $\pm 12\text{V} \dots 15\text{V}$ ($\pm 5\%$)
Optional: $+24\text{VDC}$.
- 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} @ 25°C
- 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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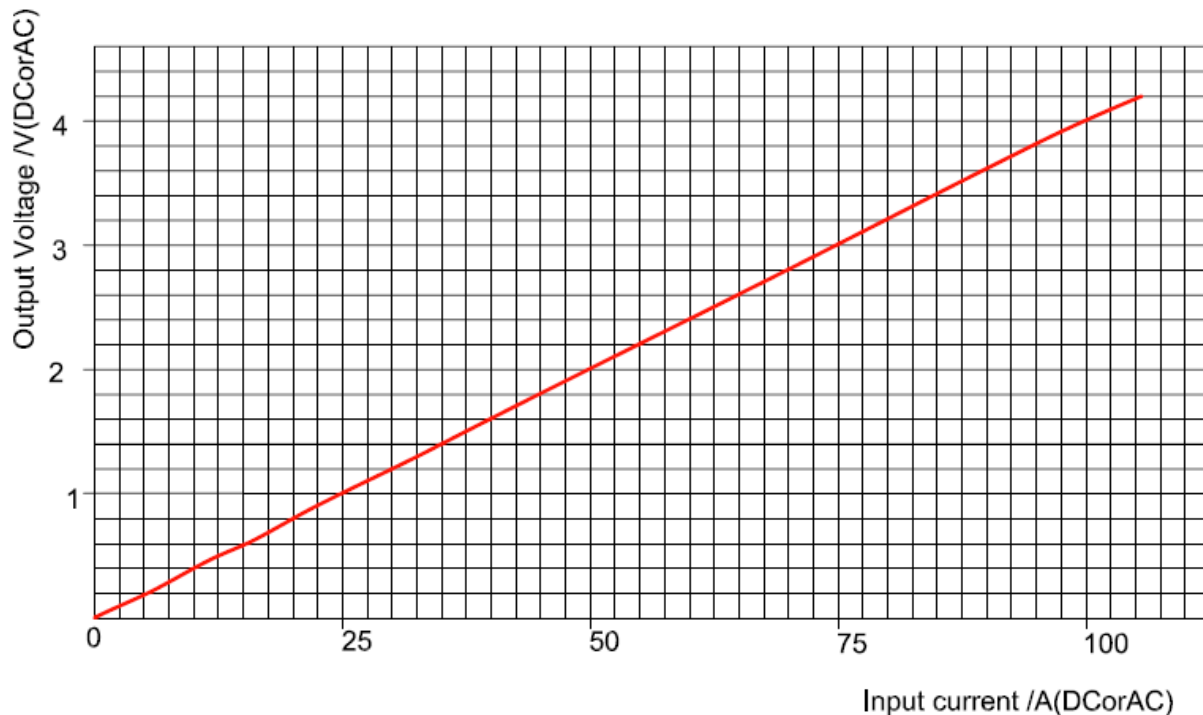
FAX: 206.350.6482

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Configuration Options:

Model	Rated Current (RMS)	Measurement Range
HOS-100AK1	100A	0 to $\pm 150A$
HOS-200AK1	200A	0 to $\pm 300A$
HOS-400AK1	400A	0 to $\pm 600A$
HOS-600AK1	600A	0 to $\pm 900A$
HOS-800AK1	800A	0 to $\pm 1200A$

Typical Performance – HOS-___AK1:



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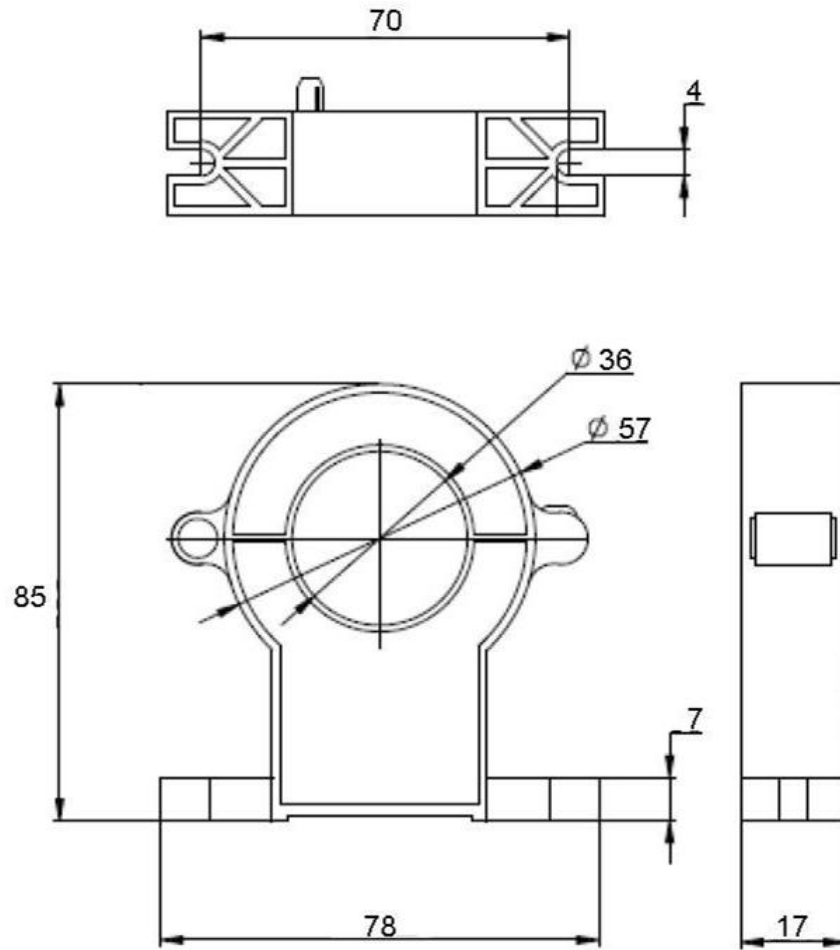
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Outline Drawing HOS-AK1-36:



Dimensions in mm

CONNECTION DEFINITIONS:

- **Terminal #1:** Power supply input - +12VDC ...+15VDC
- **Terminal #2:** Power supply input - -12VDC ...-15VDC
- **Terminal #3:** Secondary signal out
- **Terminal #4:** Secondary signal ground/ return

NOTE: Secondary output is positive when direction of primary flow is from side without terminals to side with terminals.

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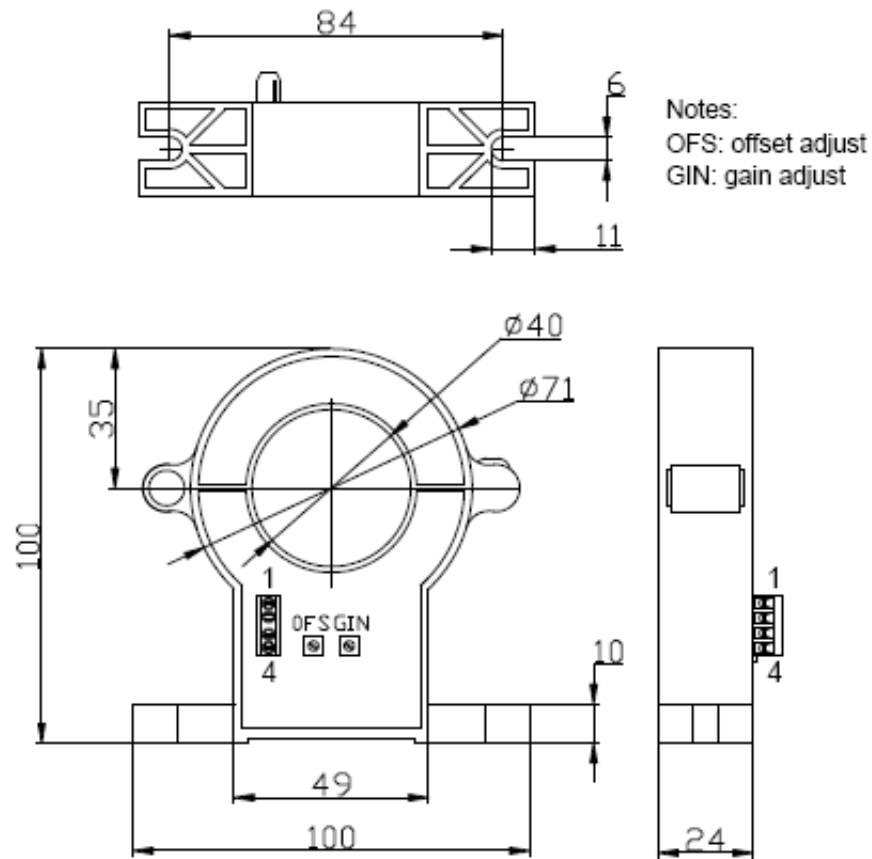
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Outline Drawing HOS-AK1-40:



Dimensions in mm

CONNECTION DEFINITIONS:

- **Terminal #1:** Power supply input - +12VDC ...+15VDC
- **Terminal #2:** Power supply input - -12VDC ...-15VDC
- **Terminal #3:** Secondary signal out
- **Terminal #4:** Secondary signal ground/ return

NOTE: Secondary output is positive when direction of primary flow is from side without terminals to side with terminals.

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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