

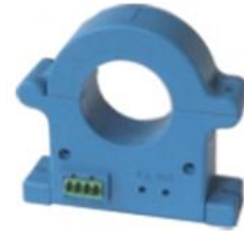
## Panel Mounted, Split-core, Open Loop, Hall Effect Current Sensor

The **HOS-xxxQ4** Series of panel mounted, split-core, open loop, Hall Effect current sensors are designed for application requiring the measurement of DC current and current pulses.

The HOS-xxxQ4 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, 800A or 1000A.
- Output:  $\pm 4$  V at rated current input.

### Specifications:

- Frequency: 0 to 20kHz.
- Dielectric withstand voltage between Primary and Secondary: 2,500V RMS @ 50HZ for 1 minute.
- Isolation Voltage: 5 kV.
- Load resistance: > 10 kOhms .
- Operating Temperature: -10°C to +85°C.
- Storage Temperature: -15°C to +90°C.
- Power Supply Voltage:  $\pm 12$ V,  $\pm 15$ V, +12V, +15V, +24VDC ( $\pm 5\%$ ).
- Power Supply Consumption: 25mA.

- Opening: 50mm (1.97")
- Construction:
  - Epoxy encapsulated housing.
  - Case material – Nylon, UL flame retardant rating 94 V-0.
- RoHS compliant.



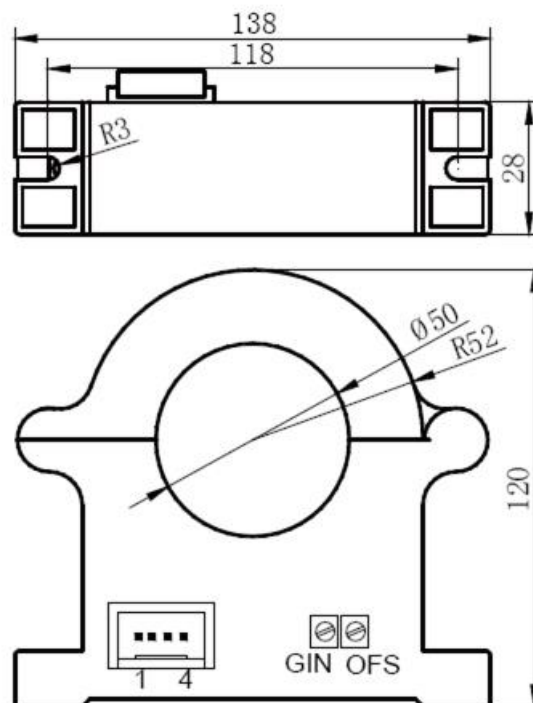
### Performance:

- Accuracy:  $\pm 1\%$  of  $I_{\text{nominal}}$  @ 25° C
- Linearity:  $\leq 1\%$
- Response Time:  $\leq 10\mu\text{Second}$
- Offset Voltage (@ +25°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 +85 °C)

**Configuration Options:**

Model	Rated Current (RMS)	Measurement Range
HOS-100Q4	100A	0 to $\pm 150A$
HOS-200Q4	200A	0 to $\pm 300A$
HOS-400Q4	400A	0 to $\pm 600A$
HOS-600Q4	600A	0 to $\pm 900A$
HOS-800Q4	800A	0 to $\pm 1200A$
HOS-1000Q4	1000A	0 to $\pm 1500A$

**Outline Drawing (mm):**

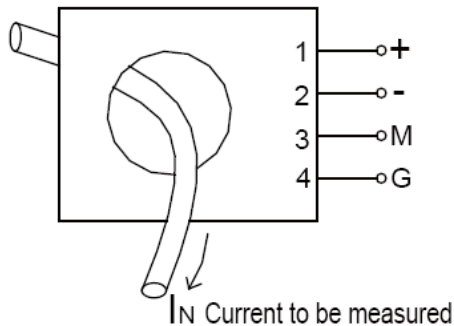


**CONNECTION DEFINITIONS:**

<b>PIN 1</b>	<b>PIN 2</b>	<b>PIN 3</b>	<b>PIN 4</b>
Power supply input	Power supply input	Secondary signal output (positive or negative value is dependent upon direction of primary current)	Secondary signal
+12VDC	-12VDC	Signal output	Ground/ Return
+15VDC	-15VDC	Signal output	Ground/ Return
+12VDC	NC	Signal output	Ground/ Return
+15VDC	NC	Signal output	Ground/ Return
+24VDC	NC	Signal output	Ground/ Return

**NOTE:**

1. Secondary signal output is positive when direction of primary flow is in the direction of the arrow.



2. **OFS:** Offset adjustment
3. **GIN:** Gain adjustment
4. **Power supply options:**  $\pm 12V$ ,  $\pm 15V$ ,  $+12V$ ,  $+15V$ ,  $+24V$  (power supply option to be used should be specified at time of purchase).

**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](mailto:engineering@tichenassociates.com) or the address below.