Current Transducer HAL 50..600-S

For the measurement of DC and complex waveform AC currents with a galvanic isolation is provided between the primary (measured) and the analogue output (control) signal.

<table>
<thead>
<tr>
<th>Primary nominal current rms $I_{pn}$ (A)</th>
<th>Primary current measuring range $I_{pm}$ (A)</th>
<th>Type</th>
<th>RoHS since date code</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>± 150</td>
<td>HAL 50-S</td>
<td>46180</td>
</tr>
<tr>
<td>100</td>
<td>± 300</td>
<td>HAL 100-S</td>
<td>46065</td>
</tr>
<tr>
<td>200</td>
<td>± 600</td>
<td>HAL 200-S</td>
<td>46090</td>
</tr>
<tr>
<td>300</td>
<td>± 900</td>
<td>HAL 300-S</td>
<td>46142</td>
</tr>
<tr>
<td>400</td>
<td>± 1000</td>
<td>HAL 400-S</td>
<td>46114</td>
</tr>
<tr>
<td>500</td>
<td>± 1000</td>
<td>HAL 500-S</td>
<td>planned</td>
</tr>
<tr>
<td>600</td>
<td>± 1000</td>
<td>HAL 600-S</td>
<td>46059</td>
</tr>
</tbody>
</table>

$I_{pn} = 50 .. 600$ A

Features
- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 3000 V
- Low power consumption
- Extended measuring range $3 \times I_{pn}$
- Insulated plastic case recognized according to UL 94-V0

Advantages
- Easy mounting
- Small size and space saving
- Only one design for wide current ratings range
- High immunity to external interference.

Applications
- AC variable speed drives
- DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications

Application Domain
- Industrial

Notes:
1) Overvoltage Category III, Pollution Degree 2
2) Excludes the electrical offset
3) Derating is needed to avoid excessive core heating at high frequency.
4) Please consult characterisation report for more technical details and application advice.
Dimensions HAL 50..600-S (in mm. 1 mm = 0.0394 inch)

**Safety**

This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the following manufacturer's operating instructions.

**Caution, risk of electrical shock**

When operating the transducer, certain parts of the module can carry hazardous voltage (e.g. primary busbar, power supply). Ignoring this warning can lead to injury and/or cause serious damage.

This transducer is a built-in device, whose conducting parts must be inaccessible after installation. A protective housing or additional shield could be used. Main supply must be able to be disconnected.

**Mechanical characteristics**

- General tolerance: ± 0.5 mm
- Primary through-hole: 20 mm x 15 mm
- Connection of secondary: Molex 5045-04-A

**Remarks**

- $V_{\text{out}}$ is positive when $I_p$ flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed 90°C.
- This is a standard model. For different versions please contact us.

**Secondary terminals**

- Terminal 1: supply voltage + 15 V
- Terminal 2: supply voltage - 15 V
- Terminal 3: output
- Terminal 4: 0V