Current Transducer HAS 50 .. 600-S

For the electronic measurement of currents: DC, AC, pulsed, mixed, with a galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).

### Electrical data

<table>
<thead>
<tr>
<th>Primary nominal current rms</th>
<th>Primary current, measuring range</th>
<th>Type</th>
<th>RoHS since date code</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>± 150</td>
<td>HAS 50-S</td>
<td>45217</td>
</tr>
<tr>
<td>100</td>
<td>± 300</td>
<td>HAS 100-S</td>
<td>45325</td>
</tr>
<tr>
<td>200</td>
<td>± 600</td>
<td>HAS 200-S</td>
<td>45166</td>
</tr>
<tr>
<td>300</td>
<td>± 900</td>
<td>HAS 300-S</td>
<td>45326</td>
</tr>
<tr>
<td>400</td>
<td>± 900</td>
<td>HAS 400-S</td>
<td>45333</td>
</tr>
<tr>
<td>500</td>
<td>± 900</td>
<td>HAS 500-S</td>
<td>45201</td>
</tr>
<tr>
<td>600</td>
<td>± 900</td>
<td>HAS 600-S</td>
<td>45260</td>
</tr>
</tbody>
</table>

- **Vc**: Supply voltage (± 5 %)\(^5\) ± 15 V
- **Ic**: Current consumption ± 15 mA
- **Ip**: Overload capability 30,000 A
- **Vr**: Rms voltage for AC isolation test, 50 Hz, 1 min 3 kV
- **Vs**: Rated isolation voltage rms, safe separation 500\(^1\) V
- **Ri**: Isolation resistance @ 500 VDC > 1000 MΩ
- **Vo**: Output voltage (Analogue)@ ± Ip, R L = 10 kΩ, T A = 25°C ± 4 V ± 40 mV
- **Rout**: Output internal resistance approx. 100 Ω
- **Rl**: Load resistance\(^6\) > 1 kΩ

### Accuracy - Dynamic performance data

- **X**: Accuracy @ Ip, T A = 25°C (without offset) < ± 1 %
- **Ei**: Linearity error\(^2\) (0 .. ± Ip) < ± 1 % of Ip
- **Voe**: Electrical offset voltage, T A = 25°C < ± 20 mV
- **Voh**: Hysteresis offset voltage @ Ip = 0 after an excursion of 1 x Ip = 10 kΩ, T A = 25°C ± 4 V ± 40 mV
- **TCVoe**: Temperature coefficient of V oe HAS 50-S < ± 2 mV/K
- **TCVout**: Temperature coefficient of V out (% of reading) < ± 0.1 %/K
- **t**: Response time to 90% of Ip step < 3 μs
- **di/dt**: di/dt accurately followed > 50 A/μs
- **BW**: Frequency bandwidth (- 3 dB)\(^3\) DC .. 50 kHz

### General data

- **Ta**: Ambient operating temperature - 10 .. + 80 °C
- **Ts**: Ambient storage temperature - 25 .. + 80 °C
- **m**: Mass approx. 60 g
- **EN 50178: 1997**

### Features
- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 3000 V–
- Low power consumption
- Extended measuring range (3 x I p)
- Insulated plastic case made of polycarbonate PBT 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
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

### Application Domain
- Industrial
Dimensions HAS 50..600-S (in mm. 1 mm = 0.0394 inch)

PINS ARRANGEMENT

1 ..... +15V
2 ..... -15V
3 ..... OUTPUT
4 ..... 0V

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 (eg. 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.