Current Transducer HTA 100..1000-S

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

<table>
<thead>
<tr>
<th>Primary nominal current rms measuring range</th>
<th>Type</th>
<th>RoHS since date code</th>
</tr>
</thead>
<tbody>
<tr>
<td>I_PN (A)</td>
<td>I_PM (A)</td>
<td>HTA 100-S</td>
</tr>
<tr>
<td>100</td>
<td>± 300</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>± 600</td>
<td>HTA 200-S</td>
</tr>
<tr>
<td>300</td>
<td>± 900</td>
<td>HTA 300-S</td>
</tr>
<tr>
<td>400</td>
<td>± 1000</td>
<td>HTA 400-S</td>
</tr>
<tr>
<td>500</td>
<td>± 1000</td>
<td>HTA 500-S</td>
</tr>
<tr>
<td>600</td>
<td>± 1000</td>
<td>HTA 600-S</td>
</tr>
<tr>
<td>1000</td>
<td>± 1000</td>
<td>HTA 1000-S</td>
</tr>
</tbody>
</table>

- Overload capability: 30,000 A
- Output voltage (Analog) @ ± I_PN: ± 4 V
- Load resistance: T_A = 0 .. +70°C: > 1 kΩ, T_A = -25 .. +85°C: > 3 kΩ
- Supply voltage @ ± 5%: ± 15 V
- Current consumption: < 25 mA
- Rated isolation voltage rms: 500 V
- Rms voltage for AC isolation test, 50 Hz, 1 min: 3 kV
- Isolation resistance @ 500 V: > 500 MΩ
- Accuracy: @ I_PN, T_A = 25°C, @ ± 15 V: ± 1 %
- Linearity error: (0 .. ± I_PN): ± 0.5 %
- Electrical offset voltage @ I_p = 0, T_A = 25°C: < ± 10 mV
- Hysteresis offset voltage @ I_p = 0, after an excursion of 3 x I_PN: < ± 10 mV
- Temperature coefficient of V_OE, T_A = -25 .. +85°C: < ± 1 mV/K
- Temperature coefficient of V_OUT, T_A = -25 .. +85°C: < ± 0.05 %/K
- Response time to 90 % of I_PN step: < 3 μs
- di/dt: di/dt accurately followed: > 50 A/μs
- Frequency bandwidth (-3 dB): DC .. 50 kHz

General data

- Ambient operating temperature: -25 .. + 85 °C
- Ambient storage temperature: -25 .. + 85 °C
- Mass: 230 g
- Deviation in output when tested to EN 61000-4-3: < 25 % of I_PN

Notes:
1) Overvoltage Category III, Pollution Degree 2
2) Excludes the electrical offset
3) Refer to derating curves in the technical file to avoid excessive core heating at high frequency

LEM reserves the right to carry out modifications on its transducers, in order to improve them, without prior notice.

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Dimensions HTA 100..1000-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 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.

Remarks
• $V_{out}$ 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 (supply voltages, secondary connections, unidirectional measurements, operating temperatures, etc.) please contact us.

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

Mechanical characteristics
- General tolerance: ± 0.5 mm
- Primary through-hole: Ø 32 mm
- Connection of secondary: Molex 5045-04A

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