Current Transducer HAW 03 .. 20-P

I_{PN} = 3 .. 20 A

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).

Preliminary

Electrical data

Primary nominal r.m.s. current I_{PN} (A)	Primary current measuring range I_P (A)	Primary Conductor Diameter (mm)	Type
3	± 7.5	0.8	**HAW 03-P**
5	± 13	0.9	**HAW 05-P**
10	± 25	1.1	**HAW 10-P**
15	± 38	1.4	**HAW 15-P**
20	± 50	1.6	**HAW 20-P**

V_C	Supply voltage (± 5 %)	± 15	V
I_C	Current consumption	<± 18	mA
V_d	R.m.s. voltage for AC isolation test, 50/60Hz, 1 mn	2.0	kV
R_{IS}	Isolation resistance @ 500 VDC	> 500	MΩ
V_{OUT}	Output voltage @ ± I_{PN}, R_L = 10 kΩ, T_A = 25°C	±4	V
R_{OUT}	Output internal resistance	100	Ω
R_L	Load resistance	>10	kΩ

Accuracy-Dynamic performance data

X	Accuracy @ I_{PN}, T_A = 25°C (without offset)		< ± 1	% of I_{PN}
ε_L	Linearity (0 .. ± I_{PN})		< ± 1	% of I_{PN}
V_{OE}	Electrical offset voltage, T_A = 25°C		< ± 40	mV
V_{OH}	Hysteresis offset voltage @ I_P = 0; after an excursion of 1 x I_{PN}		< ± 20	mV
V_{OT}	Thermal drift of V_{OE}	max.	± 1.5	mV/K
$TC\varepsilon_G$	Thermal drift of the gain (% of reading)		± 0.1	%/K
t_r	Response time @ 90% of I_P		< 3	µs
f	Frequency bandwidth (- 3 dB)[1]		DC .. 50	kHz

General data

T_A	Ambient operating temperature	- 10 .. + 75	°C
T_S	Ambient storage temperature	- 15 .. + 85	°C
m	Mass	12	g

Notes : EN 50178 approval pending

[1] Derating is needed to avoid excessive core heating at high frequency.

Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 2000 V
- Low power consumption
- Extended measuring range (2.5x I_{PN})

Advantages

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

Applications

- DC motor drives
- Switched Mode Power Supplies (SMPS)
- AC variable speed drives
- Uninterruptible Power Supplies (UPS)
- Battery supplied applications
- Inverters

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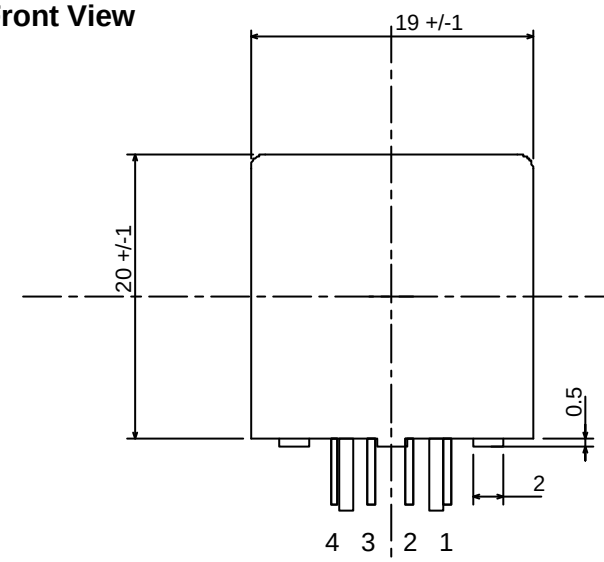
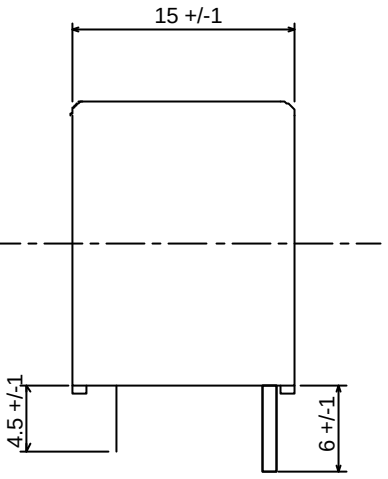
HAW 03 .. 20-P

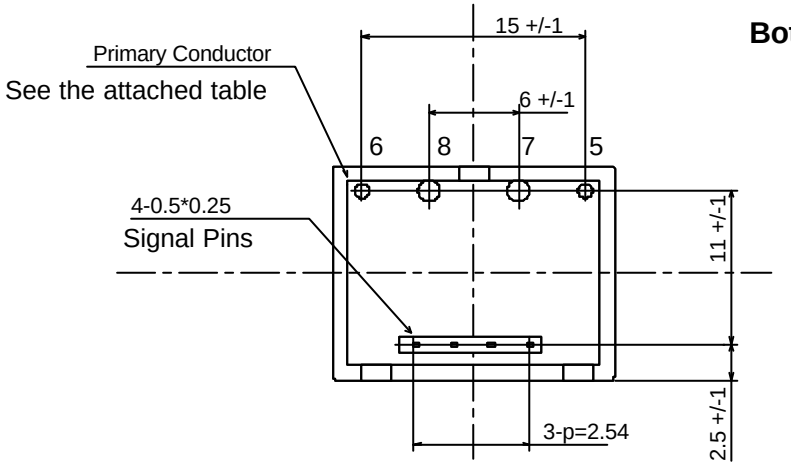
Front View



Right View



Bottom View



Terminal Pin Identification

Primary Conductor

Part No.	Pin No.	Diameter
HAW 03-P	5-6	0.8 d
HAW 05-P	5-6	0.9 d
HAW 10-P	7-8	1.1 d
HAW 15-P	7-8	1.4 d
HAW 20-P	7-8	1.6 d

Signal Pins

1	-Vcc
2	0V
3	+Vcc
4	Output

Direction of Current Flow

5 (+) → 6 (-)

7 (+) → 8 (-)

UNIT : mm