Current Transducers HTB 50 .. 400-P/SP5 and HTB 50 .. 100-TP/SP5

I_{PN} = 50 .. 400 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).

Electrical data

Primary nominal r.m.s. current I_{PN} (A)	Primary current measuring range I_P (A)	Type
50	±150	**HTB 50-P/SP5, HTB 50-TP/SP5**[1]
100	±300	**HTB 100-P/SP5, HTB 100-TP/SP5**[1]
200	±500	**HTB 200-P/SP5**
300	±600	**HTB 300-P/SP5**
400	±600	**HTB 400-P/SP5**

V_C	Supply voltage (±5 %)[2]	+12 .. +15	V
I_C	Current consumption	<15	mA
V_d	R.m.s. voltage for AC isolation test, 50/60 Hz, 1 mn	2.5	kV
R_{IS}	Isolation resistance @ 500 VDC	>500	MΩ
V_{OUT}	Output voltage @ ± I_{PN}, R_L = 10 kΩ, T_A = 25°C	V_{OE} ±1.667	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		Vc/2±30	mV
V_{OH}	Hysteresis offset voltage @ I_P = 0; after an excursion of 3 x I_{PN}		<±0.5	% of I_{PN}
V_{OT}	Thermal drift of V_{OE}	**HTB 50-(T)P/SP5**	<±1.0	mV/K
		HTB 100-(T)P..400-P/SP5	<±0.5	mV/K
$TC\varepsilon_G$	Thermal drift (% of reading)		<±0.05	%/K
t_r	Response time @ 90% of I_P		<3	µs
f	Frequency bandwidth (-3 dB)[3]		DC .. 50	kHz

General data

T_A	Ambient operating temperature	-25 .. +85	°C
T_S	Ambient storage temperature	-25 .. +85	°C
m	Mass (-TP version)	<30 (<36)	g

Notes : EN 50178 approval pending

[1] -TP version is equipped with a primary bus bar.

[2] Operating at +12V ≤ Vc < +15V will reduce measuring range.

[3] 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 2500V
- Low power consumption
- Primary bus bar option for 50A and 100A version for ease of connection

Special Features

- Single power supply from 12V to 15V

Advantages

- 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.

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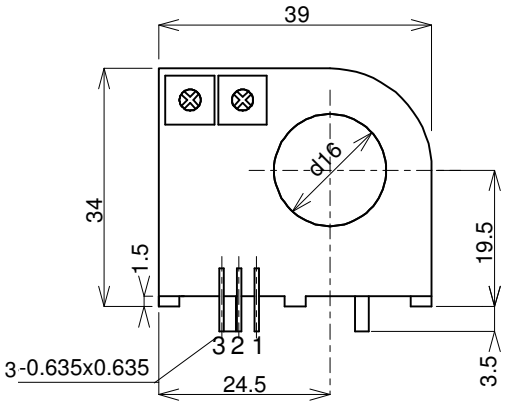
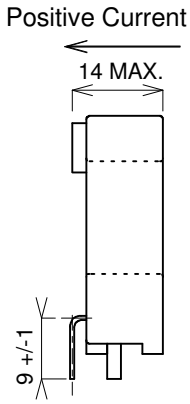
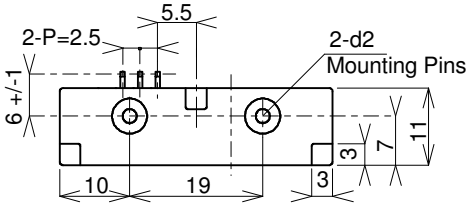
HTB 50 ... 400-P/SP5

Back view



Left view





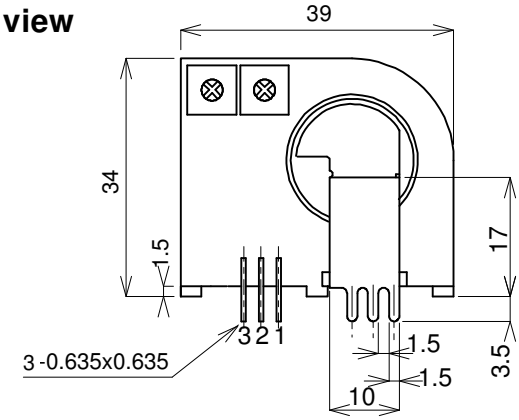
Bottom View

Secondary Pin Identification

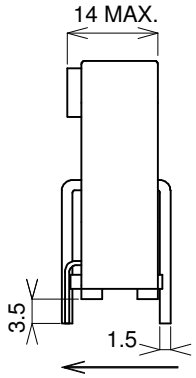
1 +Vc
2 0V
3 Output

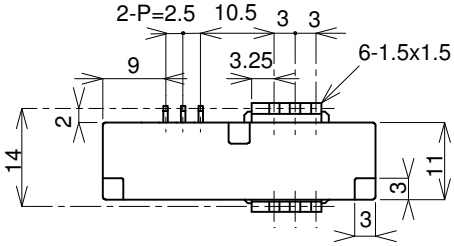
HTB 50 ... 100-TP/SP5

Back view



Left view





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