Current Transducers HTB 75..150-P

I_{PN} = 75 .. 150 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 current rms I_{PN} (A)	Primary current measuring range I_{PM} (A)	Type	RoHS since date code
75	± 225	**HTB 75-P**	46143
150	± 450	**HTB 150-P**	45220

V_C	Supply voltage (± 5 %) [1]	± 12 .. 15	V
I_C	Current consumption	< ± 15	mA
V_d	Rms voltage for AC isolation test, 50 Hz, 1 min	2.5	kV
R_{IS}	Isolation resistance @ 500 VDC	> 500	MΩ
V_{OUT}	Output voltage (Analog) @ ± 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 (excluding offset)		< ± 1	% of I_{PN}
ε_L	Linearity error (0 .. ± I_{PN})		< ± 1	% of I_{PN}
V_{OE}	Electrical offset voltage @ T_A = 25°C		< ± 30	mV
V_{OH}	Hysteresis offset voltage @ I_P = 0, after an excursion of 1 x I_{PN}		< ± 1	% of I_{PN}
TCV_{OE}	Temperature coefficient of V_{OE}	HTB 75-P	< ± 2.0	mV/K
		HTB 150-P	< ± 1.0	mV/K
TCV_{OUT}	Temperature coefficient of V_{OUT} (% of reading)		< ± 0.1	%/K
t_r	Response time to 90% of I_{PN} step		< 3	µs
BW	Frequency bandwidth (-3 dB) [2]		DC .. 50	kHz

General data

T_A	Ambient operating temperature	- 20 .. + 80	°C
T_S	Ambient storage temperature	- 25 .. + 85	°C
m	Mass	< 30	g
	2 pins of Ø2mm diameter are available on transducer for PCB soldering.		

Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 2500V
- Low power consumption
- Wide power supply: ±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.

Application domain

- Industrial

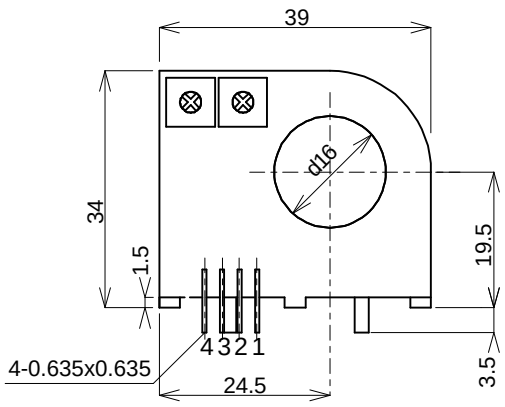
Notes :

[1] Operating at ±12V ≤ Vc < ±15V will reduce measuring range.

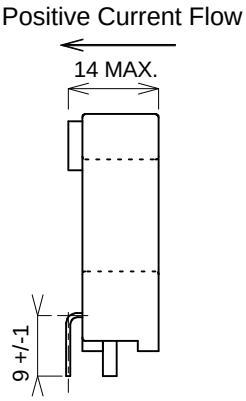
[2] Derating is needed to avoid excessive core heating at high frequency.

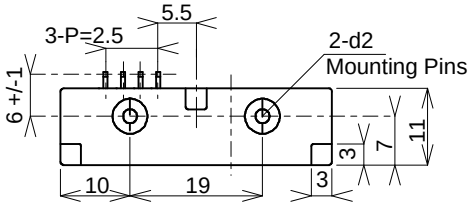
Dimensions HTB 75..150-P (in mm. 1 mm = 0.0394 inch)

Back view



Left view





Bottom view

Secondary Pin Identification

1 +Vc
2 -Vc
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.