Current Transducer HTY 50..100-P

I_{PN} = 50 .. 100 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
50	± 150	**HTY 50-P**	46115
75	± 225	**HTY 75-P**	46013
100	± 300	**HTY 100-P**	46067

V_C	Supply voltage (± 5 %)	± 15	V
I_C	Current consumption	< ± 20	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_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}	< ± 15	mV
TCV_{OE}	Temperature coefficient of V_{OE}	typ. ± 2.0	mV/K
		max. ± 3.0	mV/K
TCV_{OUT}	Temperature coefficient of V_{OUT} (% of reading)	< ± 0.1	%/K
t_r	Response time to 90% of I_{PN} step	< 7	µs
BW	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	30	g

Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 2500 V
- Low power consumption
- Extended measuring range (3 x I_{PN})

Advantages

- Easy installation
- 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

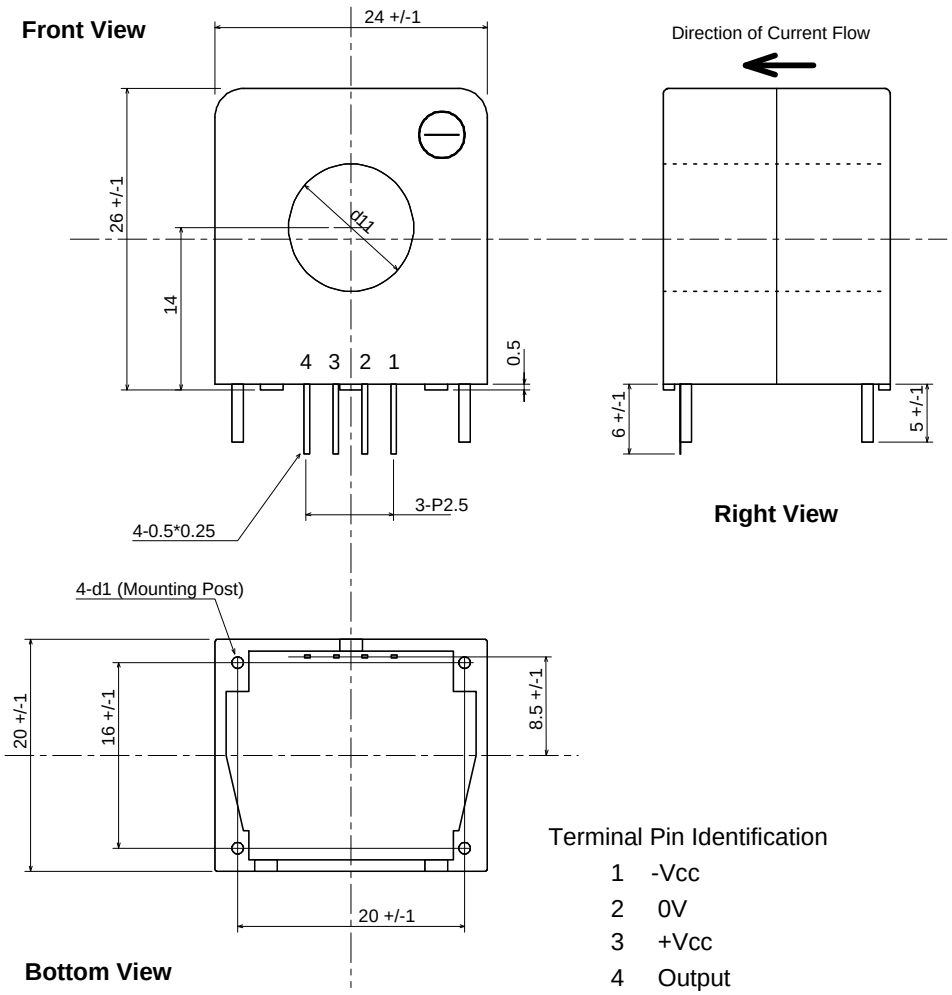
Application domain

- Industrial

Note :

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

Dimensions HTY 50..100-P (in mm. 1 mm = 0.0394 inch)



Terminal Pin Identification

1 -Vcc
2 0V
3 +Vcc
4 Output

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.