

Current Transducers HTC 1000..3000-S

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

$$I_{PNDC} = \pm 1000..3000 \text{ A}$$

$$V_{OUT} = \pm 10 \text{ V}$$



Electrical data

Primary continuous direct current (nominal)	Primary current measuring range	Type
I_{PNDC} (A)	I_{PM} (A)	
1000	± 1100	HTC 1000-S
2000	± 2200	HTC 2000-S
3000	± 3300	HTC 3000-S

V_C	Supply voltage ($\pm 3\%$)	± 15	V
I_C	Current consumption	$< \pm 20$	mA
R_{IS}	Insulation resistance @ 500 VDC	> 500	M Ω
V_{out}	Output voltage (Analog) @ $\pm I_{PNDC}$, $R_L=2k\Omega$, $T_A=25^\circ\text{C}$	± 10	V
R_{OUT}	Output internal resistance	< 100	Ω
V_d	Rms voltage for AC isolation test, 50 Hz, 1min	2.5	kV
R_L	Load resistance	≥ 2	k Ω

Features

- Hall effect measuring principle
- Galvanic insulation between primary and secondary circuit
- Insulated plastic case recognized according to UL 94-V0

Advantages

- Easy installation
- Compact
- High immunity to external interference
- Low power consumption

Application

- Traction

Accuracy-Dynamic performance data

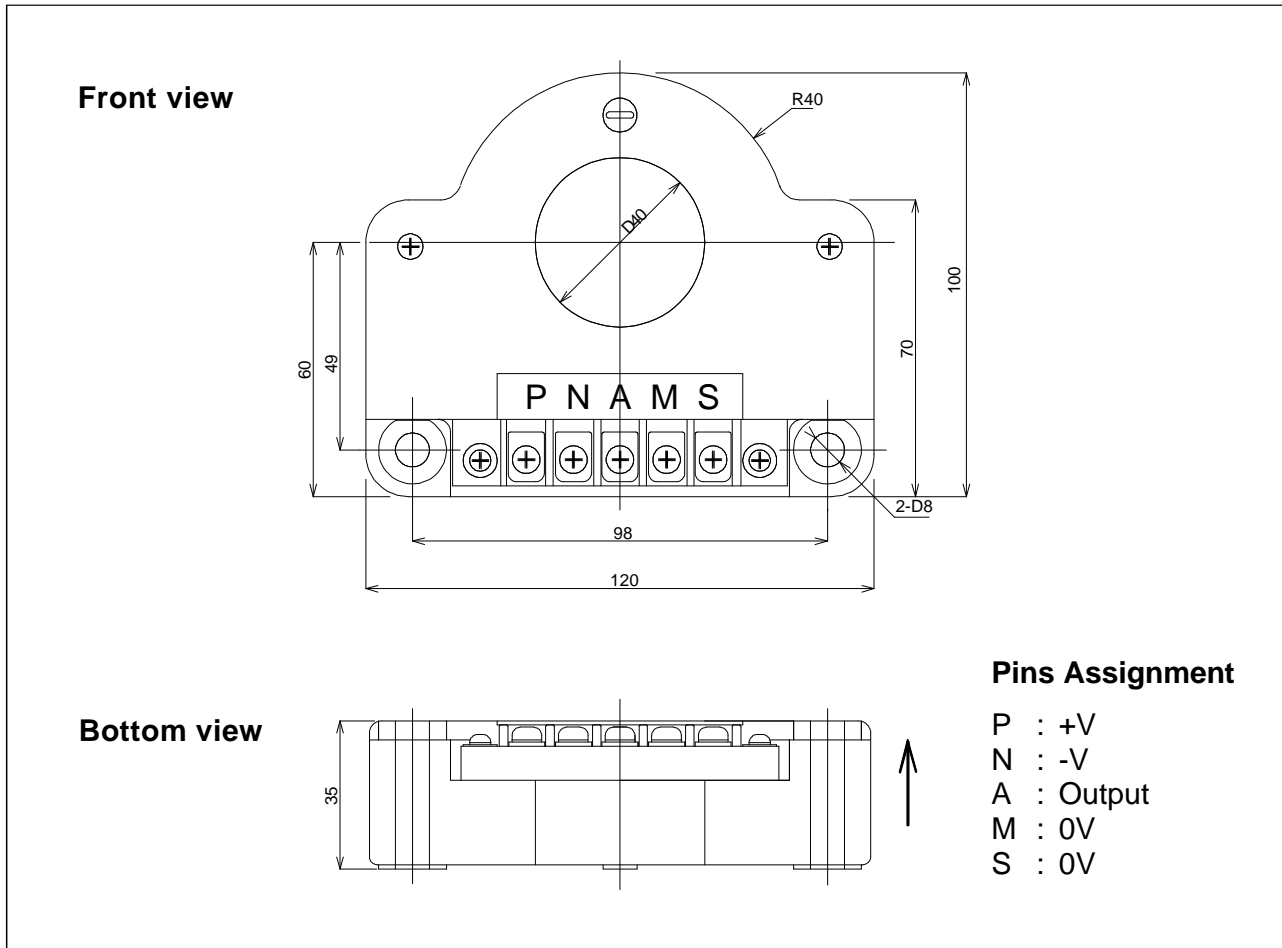
X	Accuracy @ I_{PNDC} , $T_A = 25^\circ\text{C}$	$< \pm 1$	% of I_{PNDC}
e_L	Linearity error ($0 \dots \pm I_{PNDC}$)	$< \pm 1$	% of I_{PNDC}
V_{OE}	Electrical offset voltage @ $T_A = 25^\circ\text{C}$	$< \pm 30$	mV
V_{OH}	Hysteresis offset voltage @ $I_p = 0$, after an excursion of $1 \times I_{PNDC}$	$< \pm 50$	mV
TCV_{OE}	Temperature coefficient of V_{OE}	$< \pm 1.0$	mV/K
TCV_{OUT}	Temperature coefficient of V_{OUT}	$\leq \pm 0.1$	%/K
t_r	Response time to 90% of I_{PNDC} step @ $di/dt = 100\text{A}/\mu\text{s}$	≤ 10	μs
BW	Frequency bandwidth (-3dB)	DC .. 10	kHz

General data

T_A	Ambient operating temperature	- 40 .. + 85	$^\circ\text{C}$
T_S	Ambient storage temperature	- 40 .. + 85	$^\circ\text{C}$
m	Mass	450	g
	Standards ¹⁾	EN 50155	

Note :

¹⁾ Specification according to IEC 61000-4-3 are not guaranteed between 260 and 290 MHz (value higher by 5% than the specification).

Dimensions HTC 1000..3000-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 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.