

# Current Transducer HNC-050P 50A-50mA

**$I_{PN} = 50 \text{ A}$**

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).



45361

## Electrical data

$I_{PN}$	Primary nominal current rms	50	A
$I_{PM}$	Primary current, measuring range	$\pm 75$	A
$V_C$	Supply voltage ( $\pm 5 \%$ )	$\pm 15$	V
$I_C$	Current consumption	$15\text{mA} + (I_{PN}/1000)\text{mA}$	
$V_d$	Rms voltage for AC isolation test, 50Hz, 1min	2.5	kV
$R_{IS}$	Isolation resistance @ 500 VDC	> 500	M $\Omega$
$I_{OUT}$	Output current @ $\pm I_{PN}$ , $R_L = 80 \Omega$ , $T_A = 25^\circ\text{C}$	50	mA
$R_L$	Load resistance	80	$\Omega$

## Accuracy-Dynamic performance data

<b>X</b>	Accuracy @ $I_{PN}$ , $T_A = 25^\circ\text{C}$ (excluding offset)	$< \pm 1$	%
<b><math>e_L</math></b>	Linearity error <sup>1)</sup> ( $0 \dots \pm I_{PN}$ )	$< \pm 0.5$	% of $I_{PN}$
<b><math>I_{OE}</math></b>	Electrical offset current @ $T_A = 25^\circ\text{C}$ , $I_P = 0$	$< \pm 0.2$	mA
<b><math>I_{OH}</math></b>	Hysteresis offset current @ $I_P = 0$ ; after an excursion of $1 \times I_{PN}$	$< \pm 0.15$	mA
<b><math>TCI_{OE}</math></b>	Temperature coefficient of $I_{OE}$ @ $T_A = -5 \dots +70^\circ\text{C}$	$< \pm 0.005$	mA/K
<b><math>TCI_{OUT}</math></b>	Temperature coefficient of $I_{OUT}$ (% of reading) @ $T_A = -5 \dots +70^\circ\text{C}$	$< \pm 0.04$	%/K
<b><math>t_r</math></b>	Response time to 90% of $I_{PN}$ step	< 1	$\mu\text{s}$

## General data

<b><math>T_A</math></b>	Ambient operating temperature	- 10 .. + 80	$^\circ\text{C}$
<b><math>T_S</math></b>	Ambient storage temperature	- 15 .. + 85	$^\circ\text{C}$
<b><math>m</math></b>	Mass	20	g

## Features

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

## Advantages

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

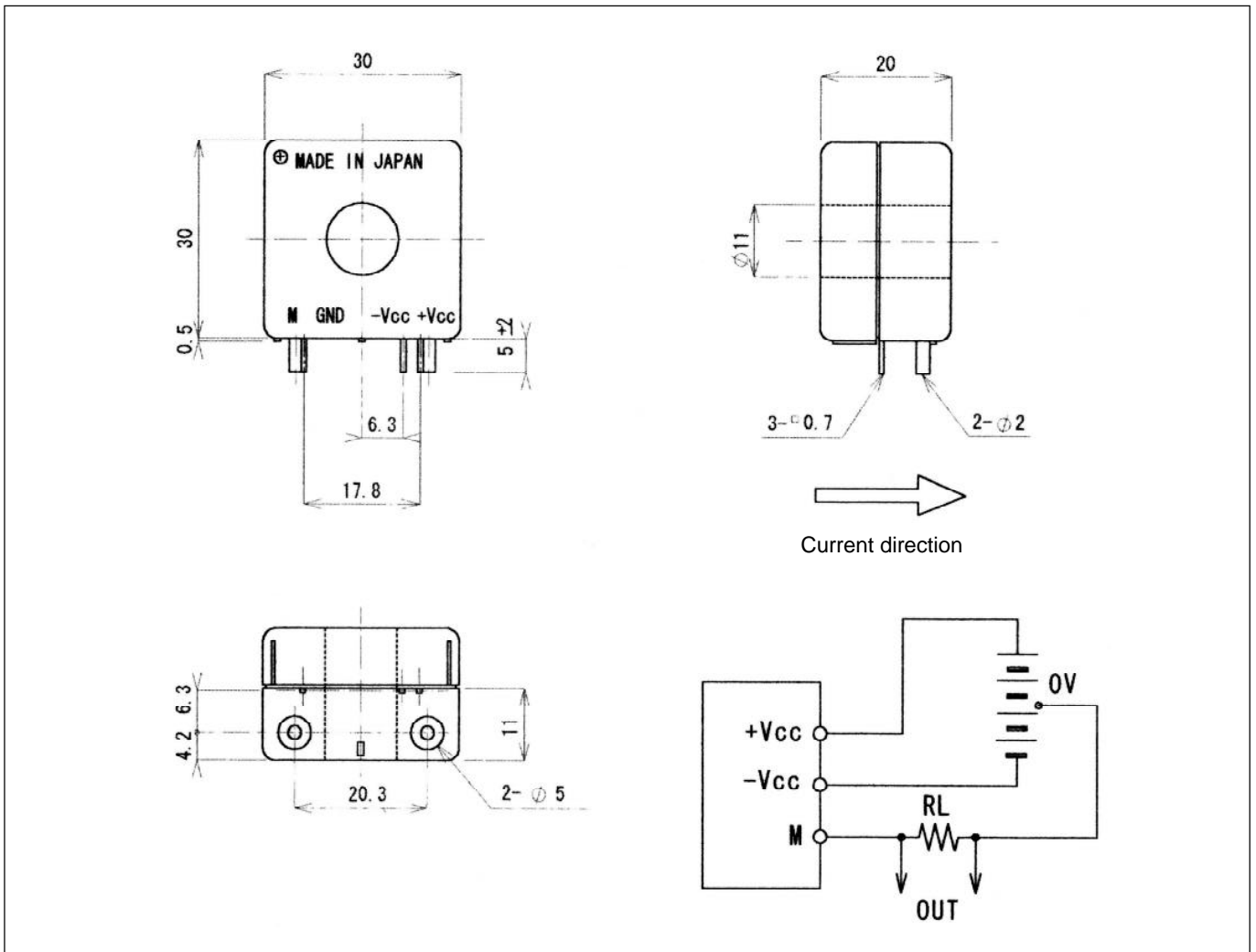
## Applications

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

## Application domain

- Industrial

**Note :** <sup>1)</sup> Linearity data exclude the electrical offset.

**Dimensions HNC-050P 50A-50mA** (in mm. 1 mm = 0.0394 inch)

**Mechanical characteristics**

- General tolerance  $\pm 1$  mm

**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.