Current Transducer HNC-050P 50A-50mA I_{PN} = 50 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	± 75	A
V_C	Supply voltage (± 5 %)	± 15	V
I_C	Current consumption	15mA+(I_{PN}/1000)mA	
V_d	Rms voltage for AC isolation test, 50Hz, 1min	2.5	kV
R_{IS}	Isolation resistance @ 500 VDC	> 500	MΩ
I_{OUT}	Output current @ ± I_{PN}, R_L = 80 Ω, T_A = 25°C	50	mA
R_L	Load resistance	80	Ω

Accuracy-Dynamic performance data

X	Accuracy @ I_{PN}, T_A = 25°C (excluding offset)	< ± 1	%
ε_L	Linearity error [1] (0 .. ± I_{PN})	< ± 0.5	% of I_{PN}
I_{OE}	Electrical offset current @ T_A = 25°C, I_P = 0	< ± 0.2	mA
I_{OH}	Hysteresis offset current @ I_P = 0; after an excursion of 1 x I_{PN}	< ± 0.15	mA
TCI_{OE}	Temperature coefficient of I_{OE} @ T_A = - 5 .. + 70 °C	< ± 0.005	mA/K
TCI_{OUT}	Temperature coefficient of I_{OUT} (% of reading) @ T_A = -5..+70°C	< ± 0.04	%/K
t_r	Response time to 90% of I_{PN} step	< 1	µs

General data

T_A	Ambient operating temperature	- 10 .. + 80	°C
T_S	Ambient storage temperature	- 15 .. + 85	°C
m	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

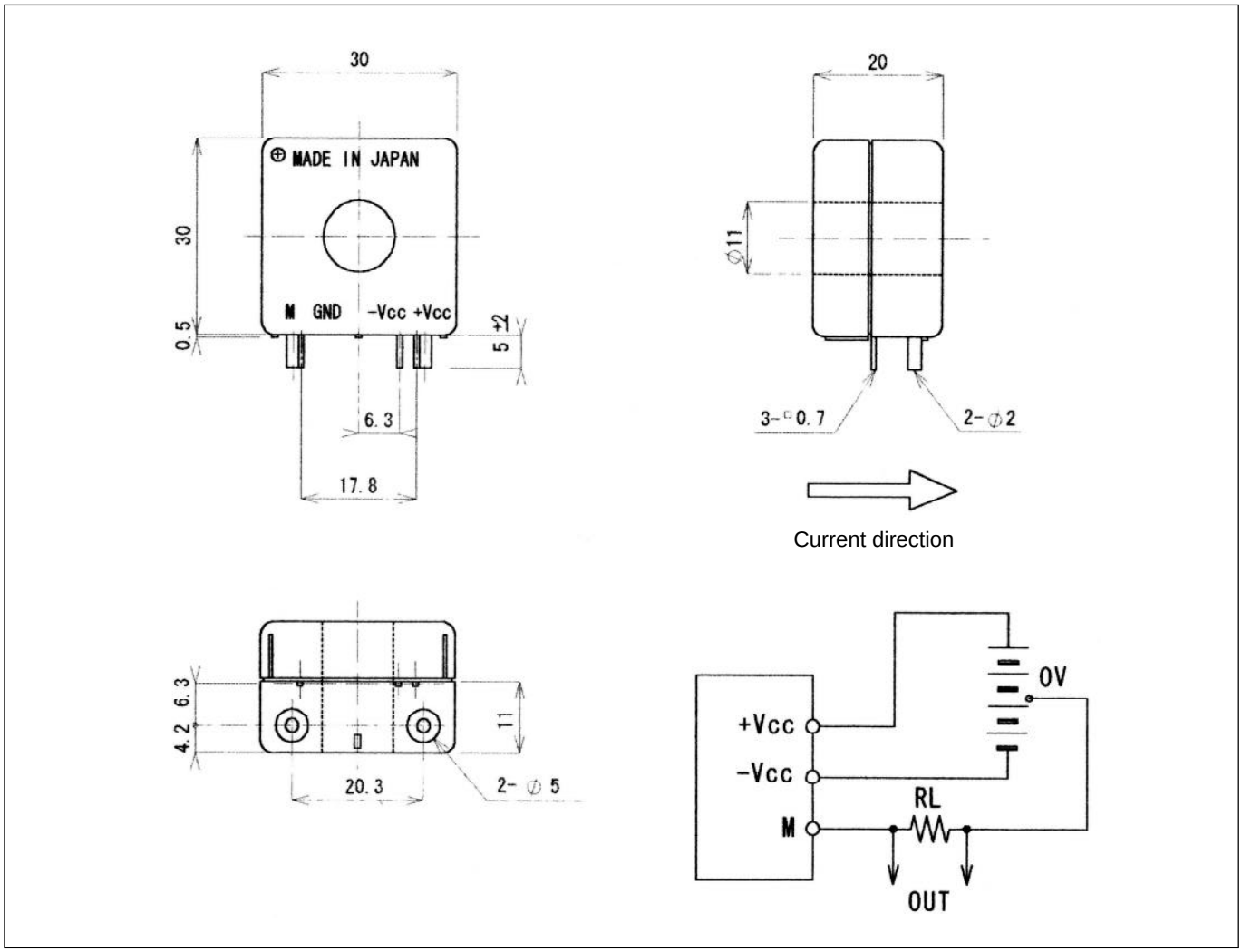
- DC motor drives
- Switched Mode Power Supplies (SMPS)
- AC variable speed drives
- Uninterruptible Power Supplies (UPS)
- Battery supplied applications
- Power supplies for welding applications

Application domain

- Industrial

Note : [1] Linearity data exclude the electrical offset.

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



Mechanical characteristics

- General tolerance ± 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.