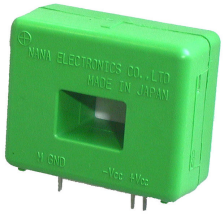
Current Transducer FA-050..100PV

$I_{PN\ DC}$ = 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 continuous direct current (nominal) $I_{PN\ DC}$ (A)	Primary current, measuring range I_{PM} (A)	Type	RoHS since date code
50	0 .. ± 70	**FA-050PV 50A-4V**	planned
100	0 .. ± 130	**FA-100PV 100A-4V**	46209

V_{OUT}	Output voltage (Analog) @ ± $I_{PN\ DC}$, R_L = 10kΩ, T_A = 25°C		± 4	V
I_C	Current consumption	FA-050PV	16 mA ± $I_{PN\ DC}$ / 1000A	
		FA-100PV	16 mA ± $I_{PN\ DC}$ / 2000A	
V_C	Supply voltage (± 5 %)		± 15	V
V_d	Rms voltage for AC isolation test, 50 Hz, 1min		2.5	kV

Accuracy-Dynamic performance data

X	Accuracy @ T_A = 25°C, + 15 V (+ 5 %)	< ± 1.5 % of $I_{PN\ DC}$	
ε_L	Linearity error (0 .. ± $I_{PN\ DC}$)	< ± 0.25% of $I_{PN\ DC}$	
V_{OE}	Electrical offset voltage @ I_P = 0, @ T_A = 25°C	< ± 0.016	V
V_{OH}	Hysteresis offset voltage @ I_P = 0; after an excursion of 1 x $I_{PN\ DC}$	< ± 0.012	V
TCV_{OE}	Temperature coefficient of V_{OE}	< ± 0.4	mV/K
TCV_{OUT}	Temperature coefficient of V_{OUT} (% of reading)	< ± 0.04	%/K
t_r	Response time to 90% of $I_{PN\ DC}$ step	< 1	µs

General data

T_A	Ambient operating temperature	- 10 .. + 70	°C
T_S	Ambient storage temperature	- 15 .. + 80	°C
m	Mass	25	g

Features

- Closed loop (compensation) current transducer using the Hall effect
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 2500 V~
- Compact design for PCB mounting
- Low power consumption

Advantages

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

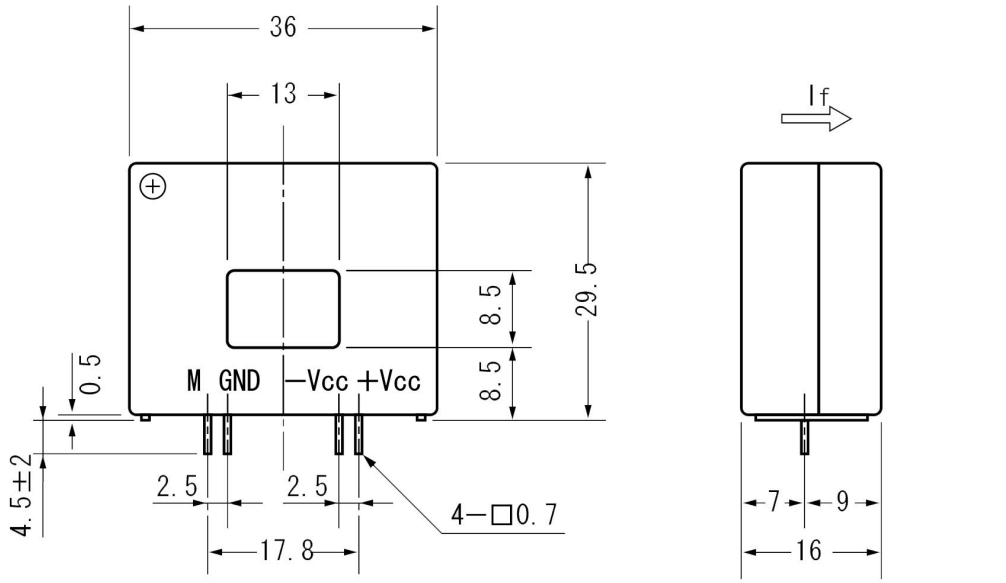
Applications

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

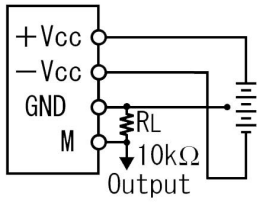
Application domain

- Industrial

Dimensions FA-050..100PV (in mm. 1 mm = 0.0394 inch)



Terminal Pin dentification



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.