

## NA50-P

Current Transducer

Applications

**NA50-P** series high-precision current sensor is a closed loop device based on the measuring principle of the hall effect, with a galvanic isolation between primary and secondary circuit. It has strong anti-jamming ability and it provides accurate electronic measurement of DC, AC or pulsed currents.



Advantages	Applications	Standards
Excellent accuracy	Variable speed drives	UL 94-V0
Low temperature of offset	Battery supplied applications	EN 60947-1:2004
Small size	UPS Uninterruptible Power Supplies	EN50178:1998

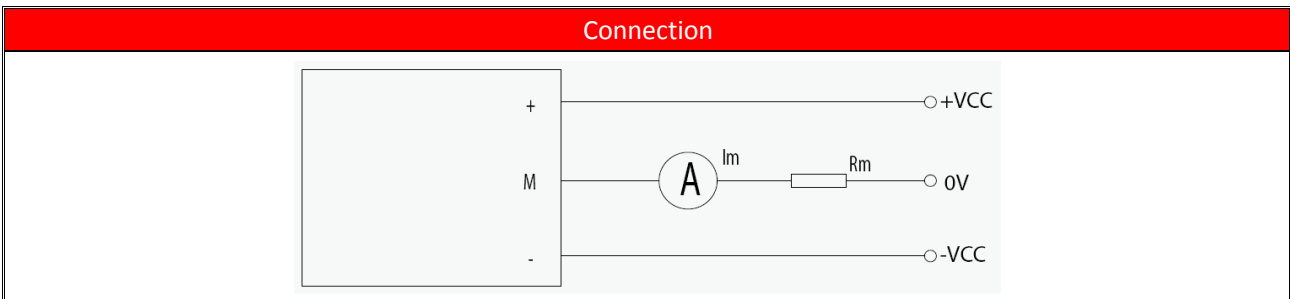
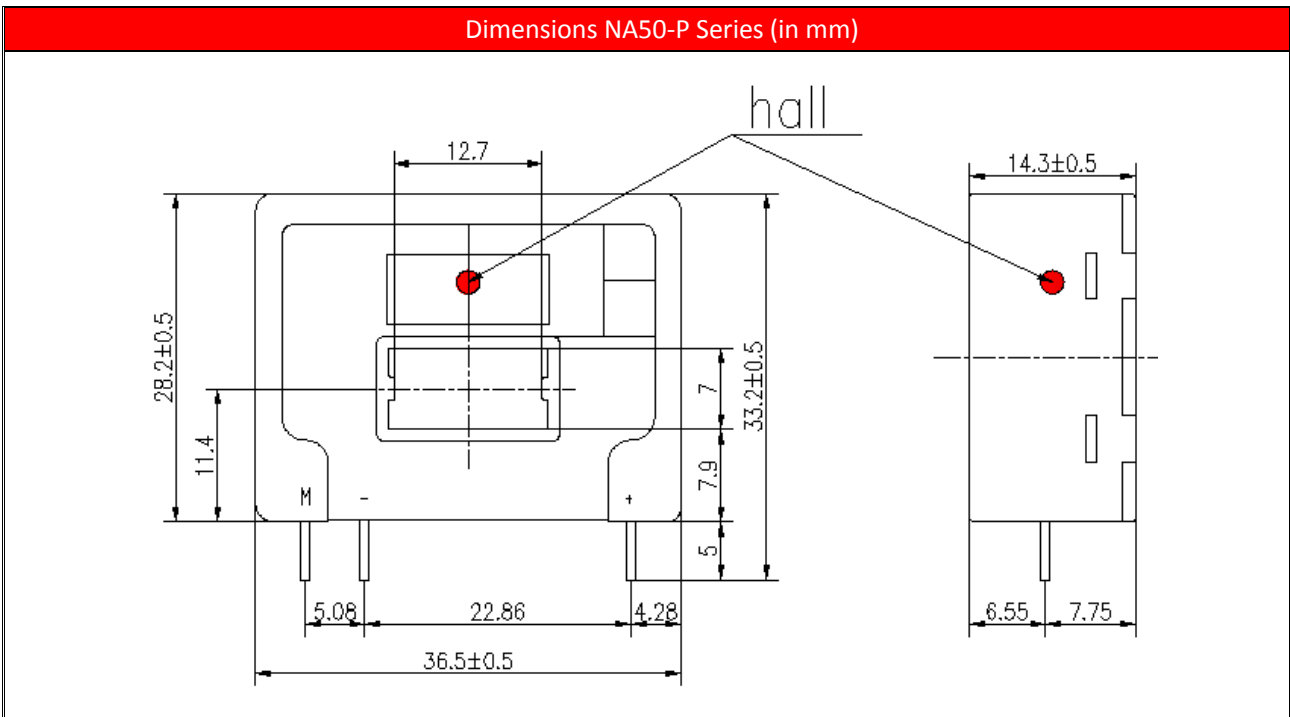
Main electrical data (At Ta=+25°C)		
$I_{PN}$	Primary nominal current rms	50A
$I_P$ (@ $V_C = \pm 15V$ )	Primary current measuring range	0 ~ ±70A
$V_C$	Supply voltage	±12V ~ ±15V × (1±5%)
K	Turns ratio	1:1000
$I_{SN}$	Secondary nominal current rms	50mA
$R_L$ (@ ±12V, ±50A)	Load resister (25°C)	10Ω ~ 95Ω
(@ ±12V, ±70A)		10Ω ~ 60Ω
(@ ±15V, ±50A)		50Ω ~ 155Ω
(@ ±15V, ±70A)		50Ω ~ 90Ω
$I_C$	Static Current consumption	≤ 10mA + $I_{SN}$

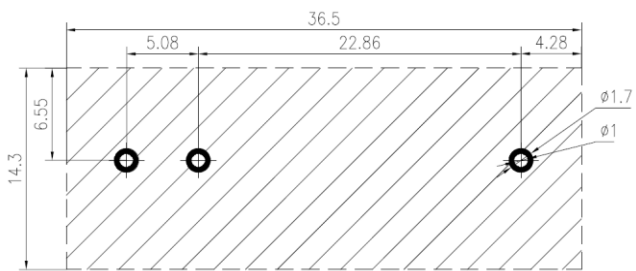
Accuracy - Dynamic performance data		
$\delta_i$ (@Ta=+25°C, $I_p = I_{PN}$ )	Overall Accuracy	≤ ±0.7%
$\delta_L$ (@Ta=+25°C, $I_p = I_{PN}$ )	Linearity error	≤ 0.2%
$\delta_z$ (Ta=+25°C)	offset current	≤ ±0.3mA

$\bar{\delta}_{zt}$ ( $T_a = -25^{\circ}\text{C} \sim +85^{\circ}\text{C}$ )	Temperature coefficient of $\bar{\delta}_{zt}$	$\leq \pm 0.5\text{mA}$ (@ $0^{\circ}\text{C} \sim +70^{\circ}\text{C}$ ) $\leq \pm 0.6\text{mA}$ (@ $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$ )
$t_r$ (@ $di/dt = 100\text{A}/\mu\text{s}$ , 90% $I_{PN}$ )	Step response time	$\leq 1\ \mu\text{s}$
BW (-3dB)	Frequency bandwidth (-3dB)	DC ~ 100 kHz

General data		
$T_a$	Ambient operating temperature	$-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$
$T_s$	Ambient storage temperature	$-40^{\circ}\text{C} \sim +90^{\circ}\text{C}$
	Mass	$\leq 25\text{g}$

Insulation data		
$U_d$ (@ 50Hz, 1min)	Rms voltage for AC insulation test	2.5KV
$R_{is}$ (@ 2500V)	Isolation resistance	$\geq 500\ \text{M}\Omega$



Mechanical characteristics	Remark
 <p>The drawing shows a cross-section of a component with a hatched area. The total width is 36.5. The distance from the left edge to the center of the first hole is 5.08. The distance between the two holes is 22.86. The distance from the center of the second hole to the right edge is 4.28. The total height is 14.3, with a top section of 6.55. The first hole has a diameter of 1.7, and the second hole has a diameter of 1. An arrowhead is shown on the right side of the component.</p>	<p>It will be in a forward direction when the <math>I_p</math> flows according to the direction of the arrowhead.</p>