

## Current Transducer HY7-P

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



$I_{PN} = 7.5 A$



### Electrical data

Primary nominal r.m.s. current $I_{PN}$ (A)	Primary current measuring range $I_p$ (A)	Primary conductor (mm)	Type
7.5	$\pm 22.5$	$\varnothing 1.0$	HY 7-P

$V_C$	Supply voltage ( $\pm 5\%$ )	$\pm 15$	V
$I_C$	Current consumption	$\pm 10$	mA
$\hat{I}_P$	Overload capability (1 ms)	$50 \times I_{PN}$	
$V_d$	R.m.s. voltage for AC isolation test, 50/60Hz, 1 min	2.5	kV
$V_b$	R.m.s. rated voltage, safe separation	500 <sup>1)</sup>	V
$R_{IS}$	Isolation resistance @ 500 VDC	$> 1000$	M $\Omega$
$V_{OUT}$	Output voltage @ $\pm I_{PN}$ , $R_L = 10 k\Omega$ , $T_A = 25^\circ C$	$\pm 4$	V
$R_{OUT}$	Output internal resistance	100	$\Omega$
$R_L$	Load resistance	$> 1$	k $\Omega$

### Accuracy - Dynamic performance data

$X$	Accuracy @ $I_{PN}$ , $T_A = 25^\circ C$ (without offset)	$< \pm 1$	%
$\epsilon_L$	Linearity <sup>2)</sup> ( $0 \dots \pm I_{PN}$ )	$< \pm 1$	% of $I_{PN}$
$V_{OE}$	Electrical offset voltage, $T_A = 25^\circ C$	$< \pm 40$	mV
$V_{OH}$	Hysteresis offset voltage @ $I_p = 0$ ; after an excursion of $1 \times I_{PN}$	$< \pm 15$	mV
$V_{OT}$	Thermal drift of $V_{OE}$	typ. $\pm 1.5$ max. $\pm 3$	mV/K mV/K
$TCE_G$	Thermal drift of the gain (% of reading)	$< \pm 0.1$	%/K
$t_r$	Response time @ 90% of $I_p$	$< 3$	$\mu s$
$di/dt$	di/dt accurately followed	$> 50$	A/ $\mu s$
$f$	Frequency bandwidth <sup>3)</sup> (-3 dB)	DC .. 50	kHz

### General data

$T_A$	Ambient operating temperature	- 10 .. + 80	$^\circ C$
$T_S$	Ambient storage temperature	- 25 .. + 85	$^\circ C$
$m$	Mass	$< 14$	g
	Standards <sup>4)</sup>	EN 50178	

### Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 2500 V~
- Compact design for PCB mounting
- Low power consumption
- Extended measuring range ( $3 \times I_{PN}$ )
- Insulated plastic case recognized according to UL 94-V0.

### Advantages

- Easy mounting
- Small size and space savings
- Only one design for wide current ratings range
- High immunity against external interference

### Applications

- General purpose inverters
- Switched-Mode Power Supplies (SMPS)
- AC motor speed control
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Power supplies for welding applications.

Notes : <sup>1)</sup> Pollution class 2, overvoltage category III

<sup>2)</sup> Linearity data exclude the electrical offset.

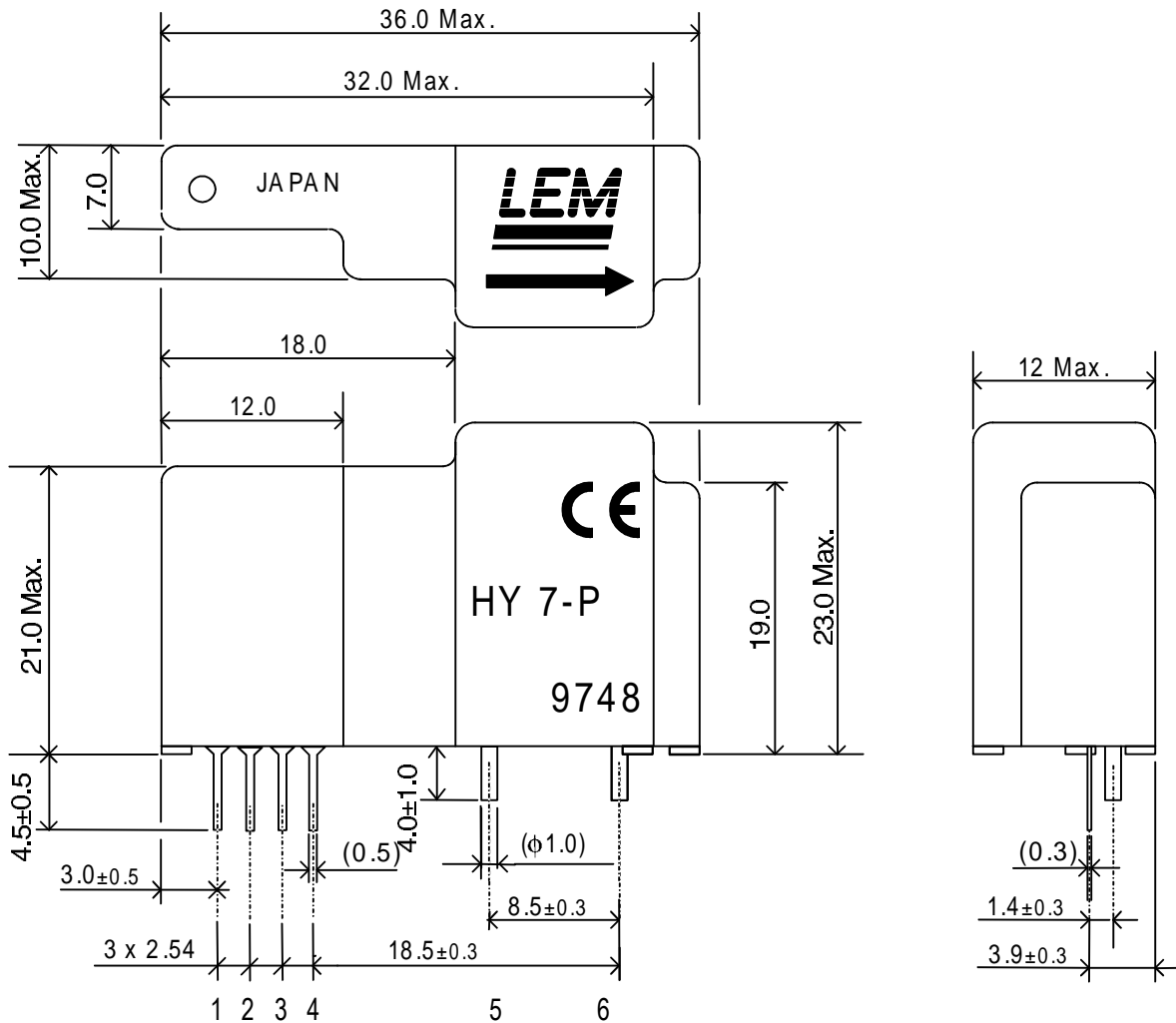
<sup>3)</sup> Please refer to derating curves in the technical file to avoid excessive core heating at high frequency

<sup>4)</sup> Please consult characterisation report for more technical details and application advice.

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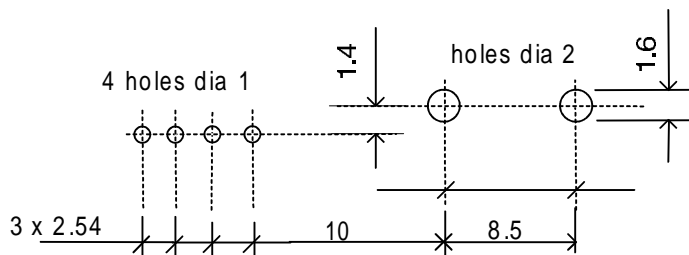
# HY 7-P

## Dimensions (in mm)



### PCB MOUNTING DIMENSIONS (in mm ±0.1, hole -0, +0.2)

#### HY 7-P



### PIN ARRANGEMENT

- 1 +15V
- 2 -15V
- 3 OUTPUT
- 4 0V
- 5 PRIMARY IN
- 6 PRIMARY OUT