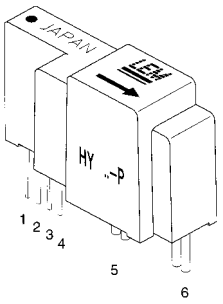
Current Transducer HY30-P

I_{PN} = 30 A

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).



Electrical data

Primary nominal r.m.s. current I_{PN} (A)	Primary current measuring range I_P (A)	Primary conductor (mm)	Type
30	± 90	2 x ∅1.5 [1]	**HY 30-P**

V_C	Supply voltage (± 5 %)		± 15	V
I_C	Current consumption		± 10	mA
$\hat{I}_P$	Overload capability (1 ms)		50 x I_{PN}	
V_d	R.m.s. voltage for AC isolation test, 50/60Hz, 1 mn		2.5	kV
V_b	R.m.s. rated voltage, safe separation		500[2]	V
R_{IS}	Isolation resistance @ 500 VDC		> 1000	MΩ
V_{OUT}	Output voltage @ ± I_{PN}, R_L = 10 kΩ, T_A = 25°C± 4		V	
R_{OUT}	Output internal resistance		100	Ω
R_L	Load resistance		> 1	kΩ

Accuracy - Dynamic performance data

X	Accuracy @ I_{PN}, T_A = 25°C (without offset)		< ± 1	%
ε_L	Linearity [3] (0 .. ± I_{PN})		< ± 1	% of I_{PN}
V_{OE}	Electrical offset voltage, T_A = 25°C		< ± 40	mV
V_{OH}	Hysteresis offset voltage @ I_P = 0; after an excursion of 1 x I_{PN}		< ± 15	mV
V_{OT}	Thermal drift of V_{OE}	typ.	± 1.5	mV/K
		max.	± 3	mV/K
$TC\varepsilon_G$	Thermal drift of the gain (% of reading)		< ± 0.1	%/K
t_r	Response time @ 90% of I_P		< 3	µs
di/dt	di/dt accurately followed		> 50	A/µs
f	Frequency bandwidth [4] (- 3 dB)		DC .. 50	kHz

General data

T_A	Ambient operating temperature	- 10 .. + 80	°C
T_S	Ambient storage temperature	- 25 .. + 85	°C
m	Mass	< 14	g
	Standards [5]	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 x 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 : [1] Conductor terminals are soldered together.
[2] Pollution class 2, overvoltage category III.
[3] Linearity data exclude the electrical offset.
[4] Please refer to derating curves in the technical file to avoid excessive core heating at high frequency.
[5] Please consult characterisation report for more technical details and application advice.

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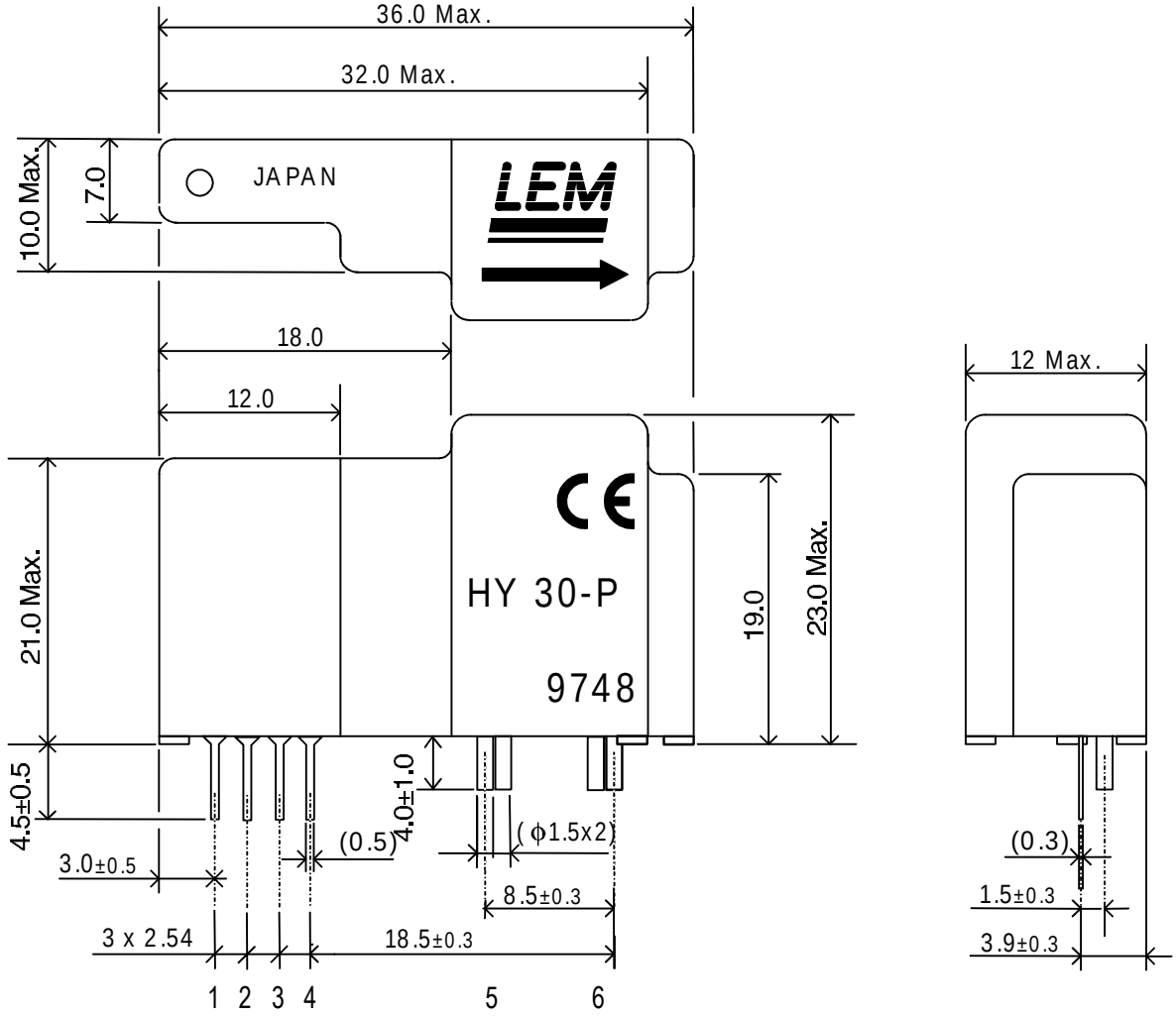
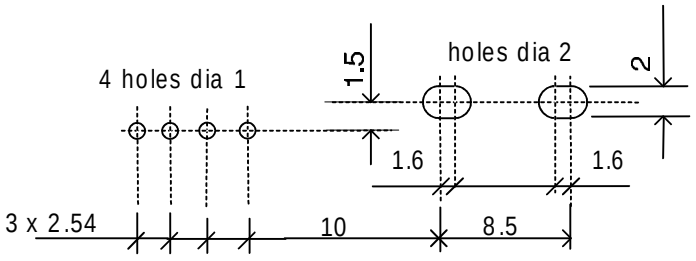
HY 30-P
Dimensions (in mm)



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

HY 30-P



PIN ARRANGEMENT

1 +15V
2 – 15V
3 OUTPUT
4 0V

5 PRIMARY IN
6 PRIMARY OUT