



# Current Transducer HX 02..06-P

$$I_{PN} = 2 \dots 6 \text{ A}$$

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 nominal r.m.s. current $I_{PN}$ (A)	Primary current measuring range $I_P$ (A)	Primary Conductor Diameter x Turns (mm)	Type
2	±6	0.5d x 30T	HX 02-P
3	±9	0.6d x 20T	HX 03-P
4	±12	0.7d x 15T	HX 04-P
6	±18	1.0d x 10T	HX 06-P

$V_{OUT}$	Output voltage @ $\pm I_{PN}$ , $R_L = 10 \text{ k}\Omega$ , $T_A = 25^\circ\text{C}$	± 4	V
$R_{OUT}$	Output impedance	< 50	$\Omega$
$R_L$	Load resistance	≥ 10	k $\Omega$
$V_C$	Supply voltage ( $\pm 5 \%$ ) <sup>1)</sup>	± 15	V
$I_C$	Current consumption	< ± 15	mA
$V_d$	R.m.s. voltage for AC isolation test, 50/60Hz, 1 mn	> 3	kV
$V_e$	R.m.s. voltage for partial discharge extinction at 10pC	≥ 1	kV
	Impulse withstand voltage, 1.2/50 $\mu$ s	≥ 6	kV

## Accuracy-Dynamic performance data

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

## General data

$T_A$	Ambient operating temperature	- 25 .. + 85	$^\circ\text{C}$
$T_S$	Ambient storage temperature	- 25 .. + 85	$^\circ\text{C}$
$m$	Mass	8	g
	Min. internal creepage distance/clearance	≥ 5.5	mm
	Isolation material group	I	
	Standards	EN50178	

## Features

- Galvanic isolation between primary and secondary circuit
- Hall effect measuring principle
- Isolation voltage 3000V
- Low power consumption
- Extended measuring range ( $3 \times I_{PN}$ )
- Power supply from  $\pm 12\text{V}$  to  $\pm 15\text{V}$
- Material according to UL94-V0

## Advantages

- Low insertion losses
- Easy to mount with automatic handling system
- Small size and space saving
- Only one design for wide current ratings range
- High immunity to external interference.

## Applications

- Switched Mode Power Supplies (SMPS)
- AC variable speed drives
- Uninterruptible Power Supplies (UPS)
- Electrical appliances
- Battery supplied applications
- DC motor drives

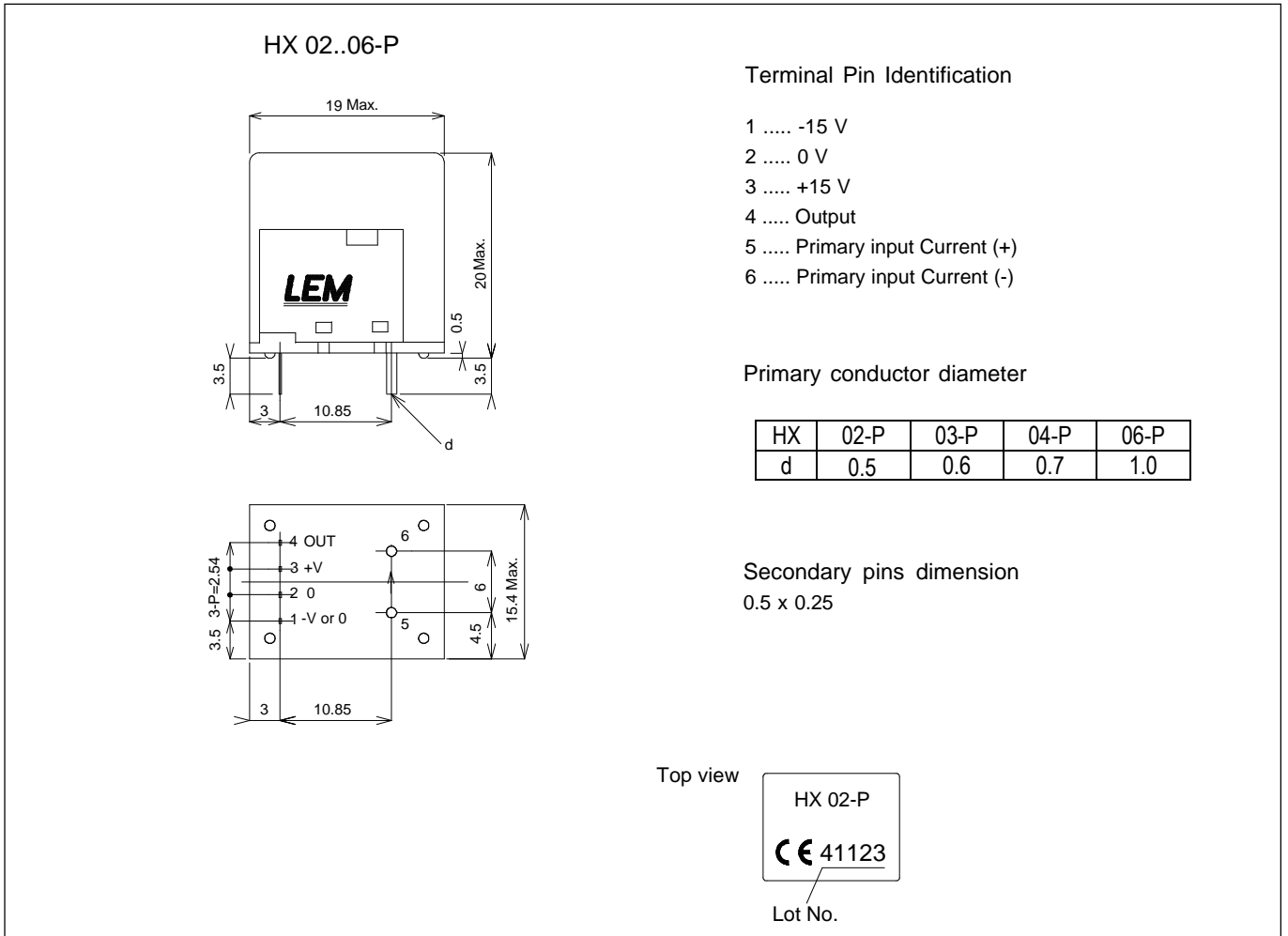
## Application Domain

- Industrial

Notes : <sup>1)</sup> Also operate at  $\pm 12\text{V}$  power supplies, measuring range reduced to  $\pm 2.5 \times I_{PN}$   
<sup>2)</sup> Small signal only to avoid excessive heating of the magnetic cores



## Dimensions HX 02..06-P (in mm. 1 mm = 0.0394 inch)



### 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.