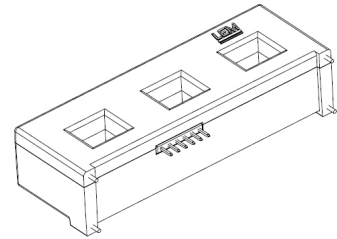


## Current Transducer HTT 100 ... 150-P

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



## $I_{PN} = 100 \dots 150 \text{ A}$



### Electrical data

Type	Primary nominal current rms $I_{PN}$ (A)	Primary current, measuring range $I_{PM}$ (A)		
HTT 100-P	100	300		
HTT 150-P	150	450		
$V_{OUT}$	Output voltage (Analog) @ $I_{PN}$ , $R_L=10 \text{ k}\Omega$ , $T_A=25^\circ\text{C}$		$\pm 4$	V
$R_{OUT}$	Output internal resistance approx.		100	$\Omega$
$R_L$	Load resistance		$\geq 10$	$\text{k}\Omega$
$V_C$	Supply voltage ( $\pm 5\%$ )		$\pm 12 \dots 15$	V
$I_C$	Current consumption		$\leq 40$	mA

### Accuracy - Dynamic performance data

$X$	Accuracy @ $I_{PN}$ , $T_A = 25^\circ\text{C}$ , without offset	$\pm 2.2$	%
$\epsilon_L$	Linearity error ( $0 \dots \pm I_{PN}$ )	$\pm 1$	% of $I_{PN}$
$V_{OE}$	Electrical offset voltage @ $I_p = 0$ , $T_A = 25^\circ\text{C}$	Typ: $\pm 20$ Max: $\pm 40$	mV
$V_{OM}$	Magnetic offset voltage @ $I_p = 0$ , after an overload of $3 \times I_{PN}$	Typ: $\pm 20$ Max: $\pm 30$	mV
$t_r$	Response time to 90 % of $I_{PN}$	$\leq 10$	$\mu\text{s}$
di/dt	di/dt accurately followed	100	A/ $\mu\text{s}$
$TCV_{OE}$	Temperature coefficient of $V_{OE}$	2	$\text{mV}/^\circ\text{C}$
$TCV_{OUT}$	Temperature coefficient of $V_{OUT}$	4	$\text{mV}/^\circ\text{C}$
<b>BW</b>	Frequency bandwidth ( -3 dB )	DC .. 10	kHz

### General data

$T_A$	Ambient operating temperature	- 10 .. + 75	$^\circ\text{C}$
$T_S$	Ambient storage temperature	- 15 .. + 85	$^\circ\text{C}$
$m$	Mass	67	g
	Standards	EN 50178: 1997	
	UL94 Classification	V0	

### Features

- Open loop transducer technology using Hall effect
- PCB mounting
- Galvanic isolation between the primary and secondary circuit
- Extended measuring range ( $3 \times I_{PN}$ )
- Three measurements in one device
- Isolation voltage: 2.5 kV rms / 50 Hz / 1 min.

### Advantages

- Only one design for wide current ratings range
- Small size and space saving
- Easy mounting
- Through-hole, no insertion losses.

### Application

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

### Application domain

- Industrial.

## Current Transducer HTT 100 ... 150-P

### Isolation characteristics

$V_d$	Rms voltage for AC isolation test, 50 Hz, 1 min	2.5	kV
$\hat{V}_w$	Impulse withstand voltage 1.2/50 us	> 6	kV
$V_e$	Rms voltage for partial discharge extinction @ 10pC	> 1.5	kV
<b>dCp</b>	Creepage distance <sup>1)</sup>	7.7	mm
<b>dCI</b>	Clearance distance <sup>2)</sup>	7.7	mm
<b>CTI</b>	Comparative Tracking Index (Group III a)	225	V

### Application examples

According to EN 50178 and IEC 61010-1 standards and following conditions :

- Over voltage category OV 3
- Pollution degree PD2
- Non-uniform field

	EN 50178	IEC 61010-1
dCp, dCI, $\hat{V}_w$	Rated isolation voltage	Nominal voltage
Single isolation	600 V	600 V
Reinforced isolation	300 V	300 V

Notes: <sup>1)</sup> On housing from pin to primary  $V_1$  hole  
<sup>2)</sup> On housing from pin to primary  $V_1$  hole.

### Safety



This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the 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).

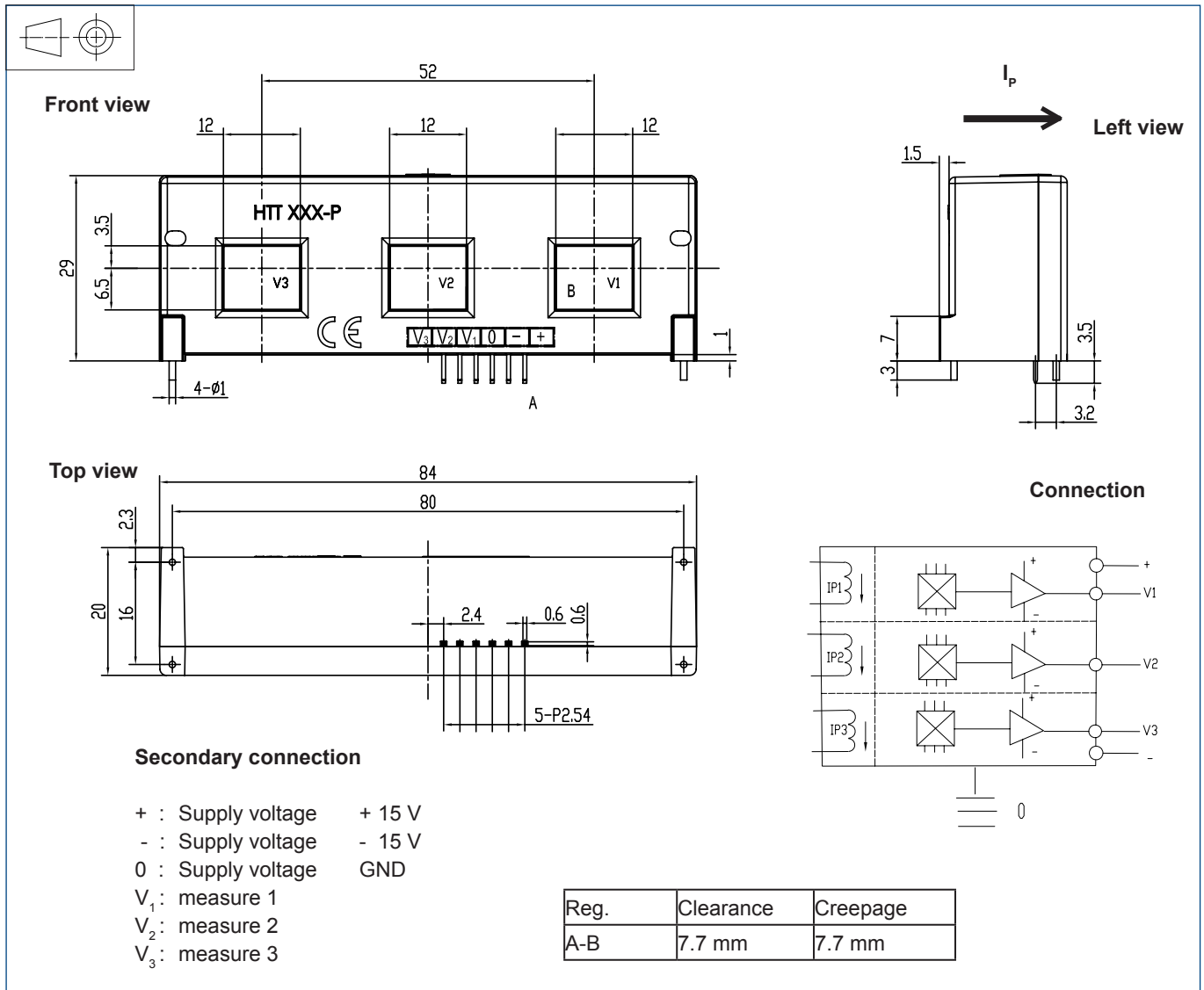
Ignoring this warning can lead to injury and/or cause serious damage.

This transducer is a build-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.

## Dimensions HTT 100 ... 150-P (in mm. 1 mm = 0.0394 inch)



### Mechanical characteristics

- General tolerance ± 0.2 mm
- Primary through-hole 12 x 10 mm
- Connection of secondary L-PIN 0.6 X 0.6 mm
- Recommended PCB holes for
  - Secondary connections 1.0 mm
  - Fixing pins 4 x 1.2 mm

### Remarks

- Terminals V<sub>1</sub>, V<sub>2</sub>, V<sub>3</sub> obtain the same voltage, when the primary current flows in the direction of arrow.
- The temperature of the primary busbar should not exceed 90°C.
- V<sub>OUT</sub> is positive when I<sub>p</sub> flows in the direction of the arrow.
- Dynamic performances (di/dt and response time) are best with a single bar completely filling the primary hole.