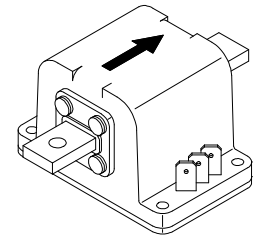


# Current Transducer LT 100-T/SP43

$$I_{PN} = 100 \text{ A}$$

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

$I_{PN}$	Primary nominal r.m.s. current	100	A			
$I_P$	Primary current, measuring range	0 .. $\pm 200$	A			
$R_M$	Measuring resistance	$R_{Mmin}$	$R_{Mmax}$			
				with $\pm 15 \text{ V}$	@ $\pm 100 \text{ A}_{max}$	5
			@ $\pm 200 \text{ A}_{max}$	5	35	$\Omega$
		with $\pm 24 \text{ V}$	@ $\pm 100 \text{ A}_{max}$	50	170	$\Omega$
	@ $\pm 200 \text{ A}_{max}$	50	70	$\Omega$		
$I_{SN}$	Secondary nominal r.m.s. current	100	mA			
$K_N$	Conversion ratio	1 : 1000				
$V_C$	Supply voltage ( $\pm 10 \%$ )	$\pm 15 \dots 24$	V			
$I_C$	Current consumption	$30 (@ \pm 24 \text{ V}) + I_S$	mA			
$V_d$	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	5	kV			

## Features

- Closed loop (compensated) current transducer using the Hall effect
- Insulated plastic case recognized according to UL 94-V0.

## Special features

- $V_C = \pm 15 \dots 24 (\pm 10 \%) \text{ V}$
- $T_A = -25^\circ\text{C} \dots +70^\circ\text{C}$
- Potted
- Electronic circuit accessible for fault analysis
- Railway equipment.

## Accuracy - Dynamic performance data

$X_G$	Overall accuracy @ $I_{PN}, T_A = 25^\circ\text{C}$	$\pm 0.5$	%
$e_L$	Linearity	$< 0.1$	%
$I_O$	Offset current @ $I_P = 0, T_A = 25^\circ\text{C}$	Typ	Max
$I_{OT}$	Thermal drift of $I_O$ - $25^\circ\text{C} \dots +70^\circ\text{C}$	$\pm 0.4$	$\pm 0.7$ mA
$t_r$	Response time <sup>1)</sup> @ 90 % of $I_{Pmax}$	$< 1$	$\mu\text{s}$
$di/dt$	di/dt accurately followed	$> 50$	A/ $\mu\text{s}$
$f$	Frequency bandwidth (-1 dB)	DC .. 150	kHz

## Advantages

- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capability.

## General data

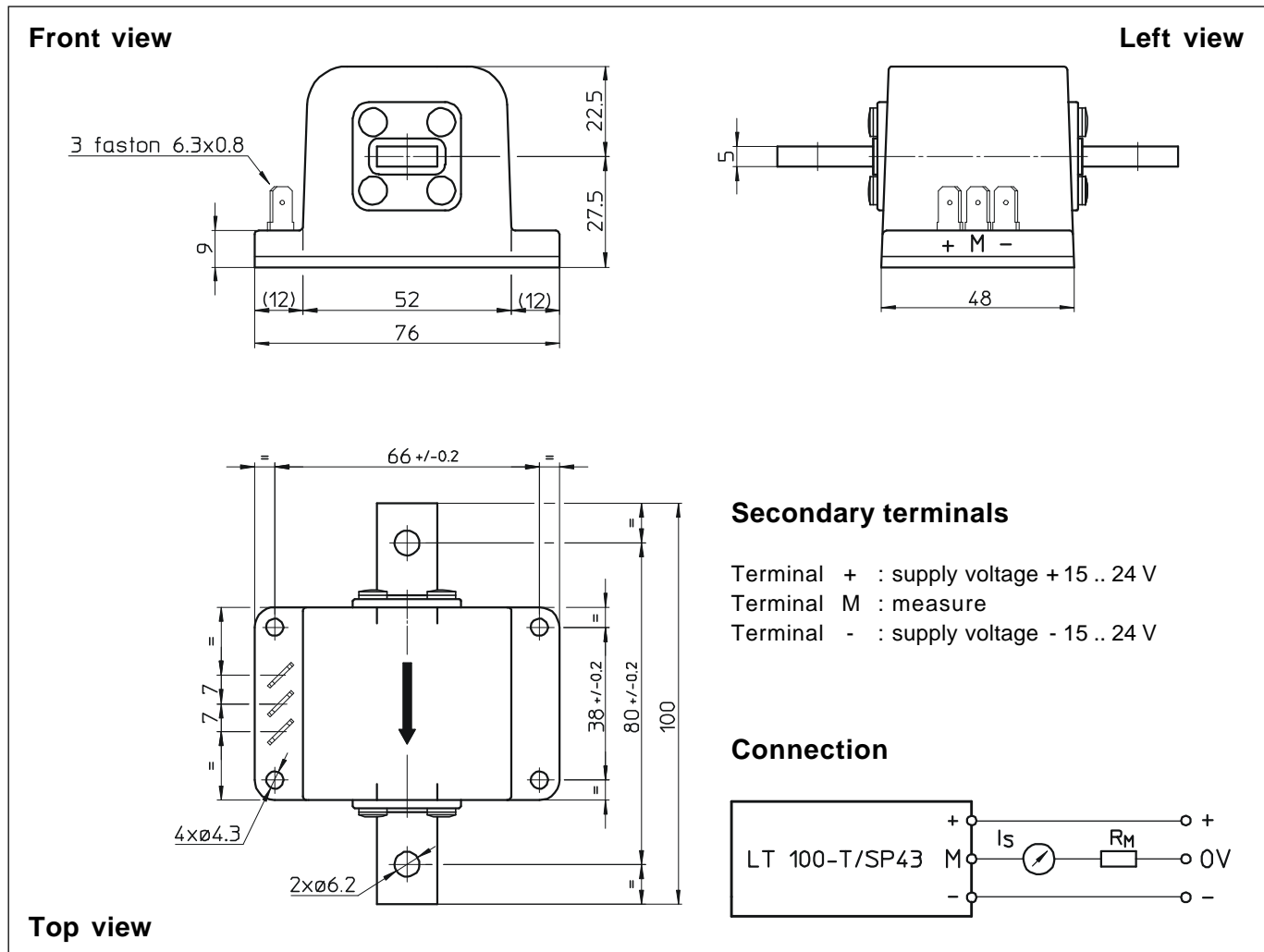
$T_A$	Ambient operating temperature	- 25 .. + 70	$^\circ\text{C}$
$T_S$	Ambient storage temperature	- 40 .. + 85	$^\circ\text{C}$
$R_S$	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	25	$\Omega$
$m$	Mass	290	g
	Standards	EN 50155	

## Applications

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

Note : <sup>1)</sup> With a di/dt of 100 A/ $\mu\text{s}$ .

## Dimensions LT 100-T/SP43 (in mm. 1 mm = 0.0394 inch)



### Mechanical characteristics

- General tolerance  $\pm 0.5$  mm
- Fastening 4 holes  $\varnothing 4.3$  mm or by the primary bar
- Connection of primary 2 holes  $\varnothing 6.2$  mm
- Connection of secondary Faston 6.3 x 0.8 mm

### Remarks

- $I_s$  is positive when  $I_p$  flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed 100°C.