Current Transducer LT 505-T/SP28

I_{PN} = 720 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).

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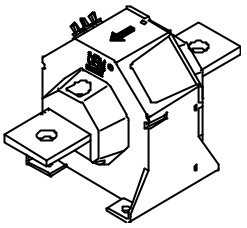

Electrical data

I_{PN}	Primary nominal r.m.s. current			720			A
I_P	Primary current, measuring range			0 .. ± 1400			A
R_M	Measuring resistance @		T_A = 70 °C		T_A = 85 °C		
			$R_{M\ min}$	$R_{M\ max}$	$R_{M\ min}$	$R_{M\ max}$	
	with ± 15 V	@ ± 720 A_{max}	0	40	0	38	Ω
		@ ± 1000 A_{max}	0	15	0	13	Ω
	with ± 24 V	@ ± 720 A_{max}	10	100	15	98	Ω
		@ ± 1400 A_{max}	10	26	15	24	Ω
I_{SN}	Secondary nominal r.m.s. current			144			mA
K_N	Conversion ratio			1 : 5000			
V_C	Supply voltage (± 10 %)			± 15 .. 24			V
I_C	Current consumption			30 (@ ± 24 V) + I_S			mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn			6			kV
V_b	R.m.s. rated voltage [1], safe separation			1750			V
	basic isolation			3500			V

Accuracy - Dynamic performance data

X_G	Overall accuracy @ I_{PN}, T_A = 25 °C		± 0.5		%
ε_L	Linearity		< 0.1		%
			Typ	Max	
I_O	Offset current @ I_P = 0, T_A = 25 °C			± 0.4	mA
I_{OT}	Thermal drift of I_O	- 25 °C .. + 70 °C	± 0.2	± 0.3	mA
		- 40 °C .. + 85 °C		± 0.8	mA
t_r	Response time [2] @ 90 % of I_{PN}		< 1		µs
di/dt	di/dt accurately followed		> 50		A/µs
f	Frequency bandwidth (- 1 dB)		DC .. 150		kHz

General data

T_A	Ambient operating temperature		- 40 .. + 85	°C
T_S	Ambient storage temperature		- 50 .. + 90	°C
R_S	Secondary coil resistance @	T_A = 70 °C	51	Ω
		T_A = 85 °C	53	Ω
m	Mass		1.4	kg
	Standards		EN 50155	

Notes : [1] Pollution class 2. With a non insulated primary bar which fills the through-hole
[2] With a di/dt of 100 A/µs.

Features

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

Special features

- I_{PN} = 720 A
- I_P = 0 .. ± 1400 A
- T_A = - 40 °C .. + 85 °C
- Connection to secondary circuit on UNC 8-32 threaded studs
- Railway equipment.

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.

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.

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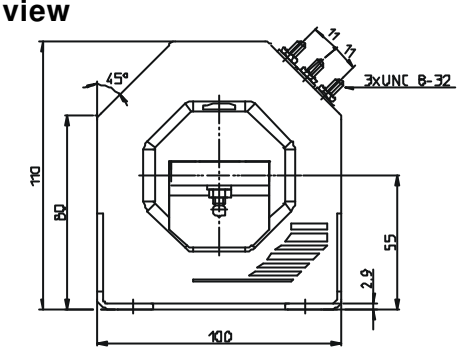
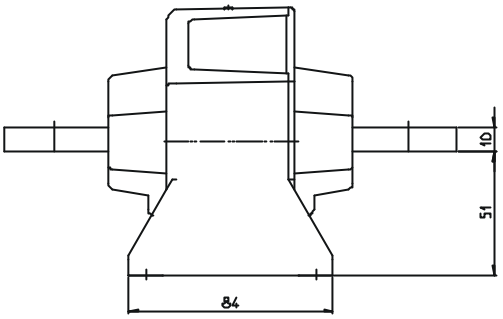
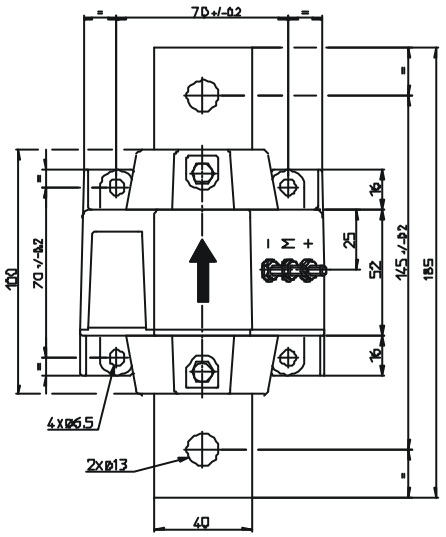
Dimensions LT 505-T/SP28 (in mm. 1 mm = 0.0394 inch)

Front view



Left view



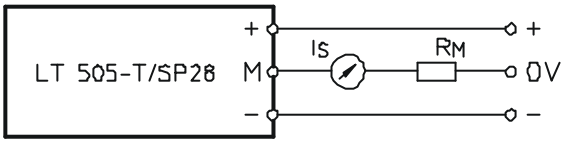


Top view

Secondary terminals

Terminal + : supply voltage + 15 .. 24 V
Terminal M : measure
Terminal - : supply voltage - 15 .. 24 V

Connection



Mechanical characteristics

• General tolerance	± 0.5 mm
• Fastening	4 holes ∅ 6.5 mm or by the primary bar
• Connection of primary	2 holes ∅ 13 mm
• Connection of secondary	UNC 8-32 threaded studs
Fastening torque	1.2 Nm or .88 Lb - Ft

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.