Current Transducer LT 1005-T/SP4

I_{PN} = 1000 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).

16152

Electrical data

I_{PN}	Primary nominal r.m.s. current			1000			A
I_P	Primary current, measuring range @ + 24 V			0 .. + 2000			A
R_M	Measuring resistance @		T_A = 70°C		T_A = 85°C		
			$R_{M\,min}$	$R_{M\,max}$	$R_{M\,min}$	$R_{M\,max}$	
	avec ± 15 V	@ ± 1000 A $_{max}$	0	24	0	21	Ω
		@ ± 1500 A $_{max}$	0	7	0	4	Ω
	avec ± 24 V	@ ± 1000 A $_{max}$	5	58	10	55	Ω
		@ ± 2000 A $_{max}$	5	16	10	13	Ω
I_{SN}	Secondary nominal r.m.s. current			250			mA
K_N	Conversion ratio			1 : 4000			
V_C	Supply voltage (± 5 %)			± 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			12			kV

Accuracy - Dynamic performance data

X_G	Overall accuracy @ I_{PN} , T_A = 25°C		± 0.4		%
ε_L	Linearity		< 0.1		%
			Typ	Max	
I_O	Offset current @ I_P = 0, T_A = 25°C			± 0.50	mA
I_{OT}	Thermal drift of I_O	- 25°C .. + 85°C	± 0.25	± 0.70	mA
		- 40°C .. - 25°C		± 0.80	mA
t_r	Response time [1] @ 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		- 40 .. + 95	°C
R_S	Secondary coil resistance @	T_A = 70°C	26	Ω
		T_A = 85°C	29	Ω
m	Mass		1.2	kg
	Standards		EN 50155	

Notes : [1] 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

- V_C = ± 15 .. 24 (± 5 %) V
- K_N = 1 : 4000
- V_d = 12 kV
- T_A = - 40°C .. + 85°C
- Potted
- Connection to secondary circuit on 3 M4 threaded studs.
- Railway equipment.

Advantages

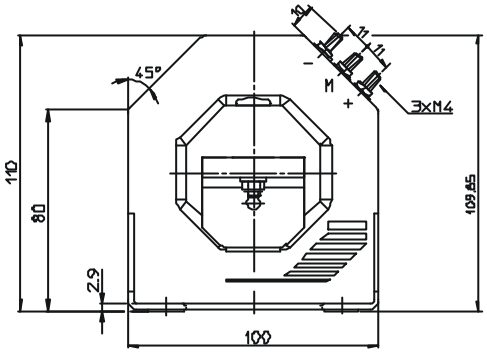
- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capability.

Applications

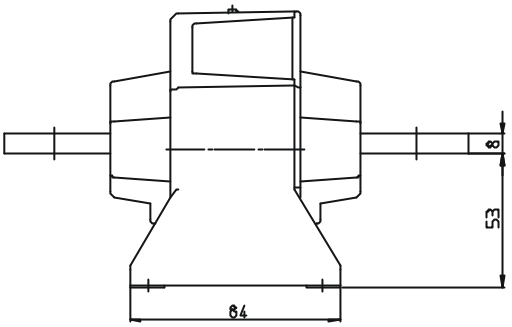
- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

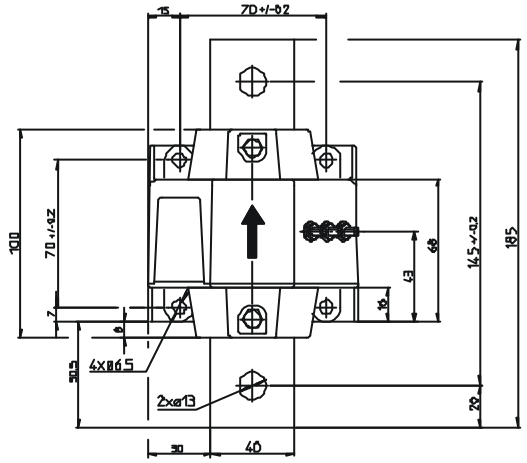
Dimensions LT 1005-T/SP4 (in mm. 1 mm = 0.0394 inch)

Front view



Left view



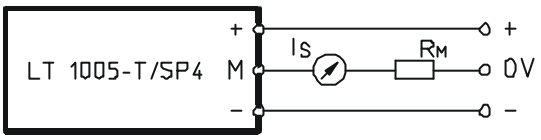


Top view

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 secondary	M4 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.

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