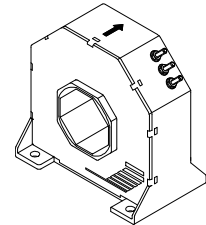


Current Transducer LT 2005-S

$$I_{PN} = 2000 \text{ A}$$

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	2000	A
I_P	Primary current, measuring range @ $\pm 24 \text{ V}$	0 .. ± 3000	A
R_M	Measuring resistance	$R_{M \min}$ $R_{M \max}$	
	with $\pm 15 \text{ V}$	@ $\pm 2000 \text{ A}_{\max}$	0 7.5 Ω
		@ $\pm 2200 \text{ A}_{\max}$	0 4 Ω
	with $\pm 24 \text{ V}$	@ $\pm 2000 \text{ A}_{\max}$	5 27.5 Ω
		@ $\pm 3000 \text{ A}_{\max}$	5 10 Ω
I_{SN}	Secondary nominal r.m.s. current	400	mA
K_N	Conversion ratio	1 : 5000	
V_C	Supply voltage ($\pm 5 \%$)	$\pm 15 \dots 24$	V
I_C	Current consumption	20 (@ $\pm 24 \text{ V}$) + I_S	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	6	kV

Accuracy - Dynamic performance data

X_G	Overall accuracy @ I_{PN} , $T_A = 25^\circ\text{C}$	± 0.3	%
e_L	Linearity	< 0.1	%
I_O	Offset current @ $I_P = 0$, $T_A = 25^\circ\text{C}$	Typ ± 0.8	mA
I_{OT}	Thermal drift of I_O $0^\circ\text{C} \dots +70^\circ\text{C}$	Max ± 0.3	mA
t_r	Response time ¹⁾ @ 90 % of $I_{P \max}$	< 1	μs
di/dt	di/dt accurately followed	> 50	A/ μs
f	Frequency bandwidth (-1 dB)	DC .. 100	kHz

General data

T_A	Ambient operating temperature	0 .. +70	$^\circ\text{C}$
T_S	Ambient storage temperature	-25 .. +85	$^\circ\text{C}$
R_S	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	25	Ω
m	Mass	1.5	kg
	Standards ²⁾	EN 50178	

Features

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

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

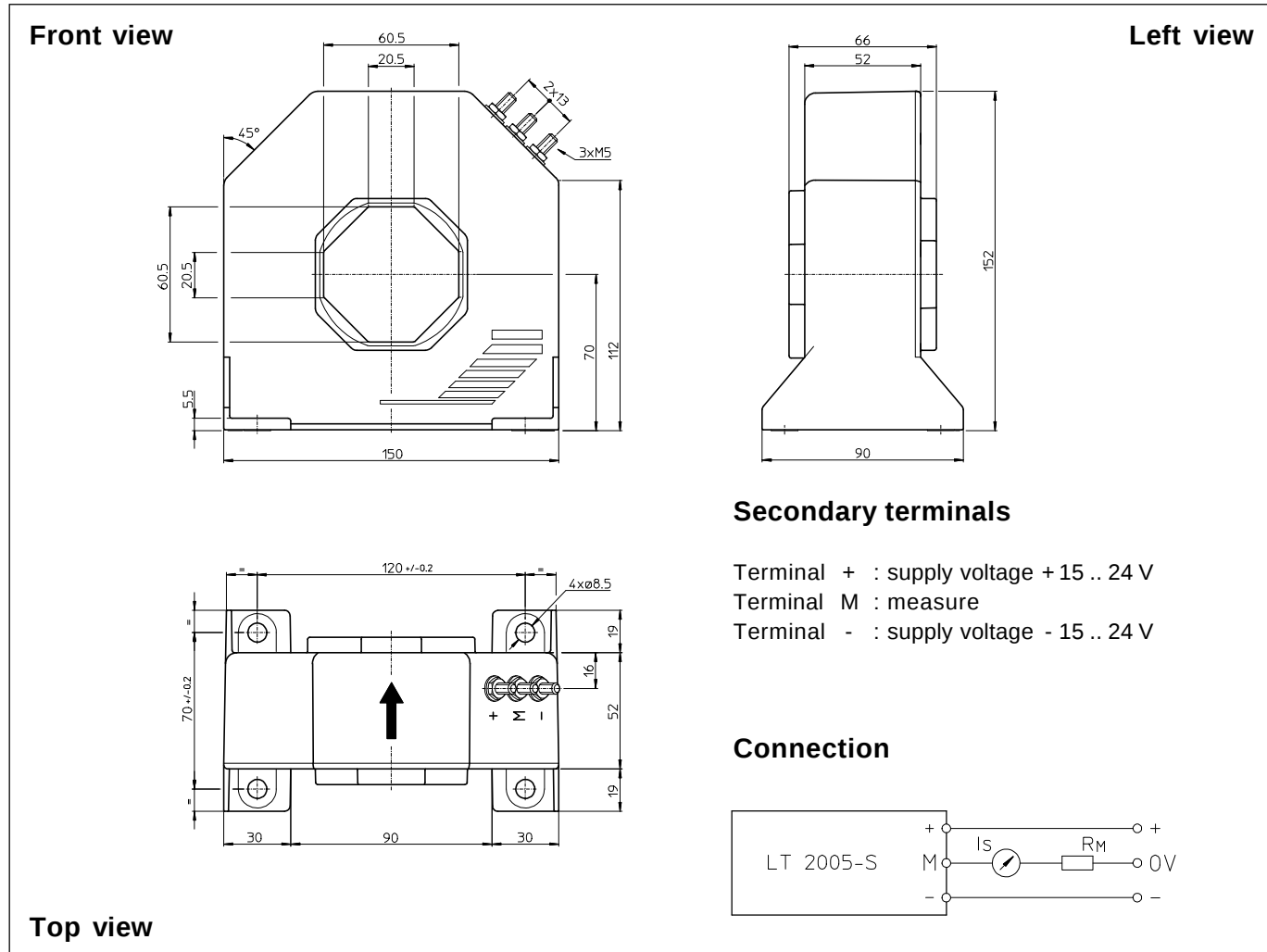
- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

Notes : ¹⁾ With a di/dt of 100 A/ μs

²⁾ A list of corresponding tests is available

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Dimensions LT 2005-S (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- | | |
|---------------------------|------------------------------|
| • General tolerance | ± 0.5 mm |
| • Fastening | 4 holes $\varnothing 8.5$ mm |
| • Primary through-hole | 60.5 x 60.5 mm |
| • Connection of secondary | M5 threaded studs |
| Fastening torque | 2.2 Nm or 1.62 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.
- Dynamic performances (di/dt and response time) are best with a single bar completely filling the primary hole.
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.