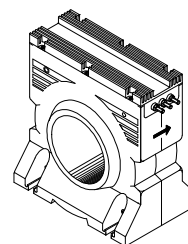


Current Transducer LT 4000-S/SP34

$$I_{PN} = 4000 \text{ A}$$

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	4000	A
I_P	Primary current, measuring range	0 .. ± 6000	A
R_M	Measuring resistance with ± 24 V		$R_{M \min}$ $R_{M \max}$
		@ ± 4000 A _{max}	0 10 Ω
		@ ± 6000 A _{max}	0 2 Ω
I_{SN}	Secondary nominal r.m.s. current	800	mA
K_N	Conversion ratio	1 : 5000	
V_C	Supply voltage (± 5 %)	± 24	V
I_C	Current consumption	35 + I_S	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	12	kV

Features

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

Special features

- $V_d = 12 \text{ kV}$
- Railway equipment.

Accuracy - Dynamic performance data

X_G	Overall accuracy @ I_{PN} , $T_A = 25^\circ\text{C}$	± 0.5	%
e_L	Linearity	< 0.1	%
I_O	Offset current @ $I_P = 0$, $T_A = 25^\circ\text{C}$	Typ Max	mA
I_{OT}	Thermal drift of I_O - 25°C .. + 70°C	± 0.6 ± 0.8	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

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	°C
T_S	Ambient storage temperature	- 40 .. + 85	°C
R_S	Secondary coil resistance @ $T_A = 70^\circ\text{C}$	15	Ω
m	Mass	6	kg
	Standards	EN 50155 EN 50178	

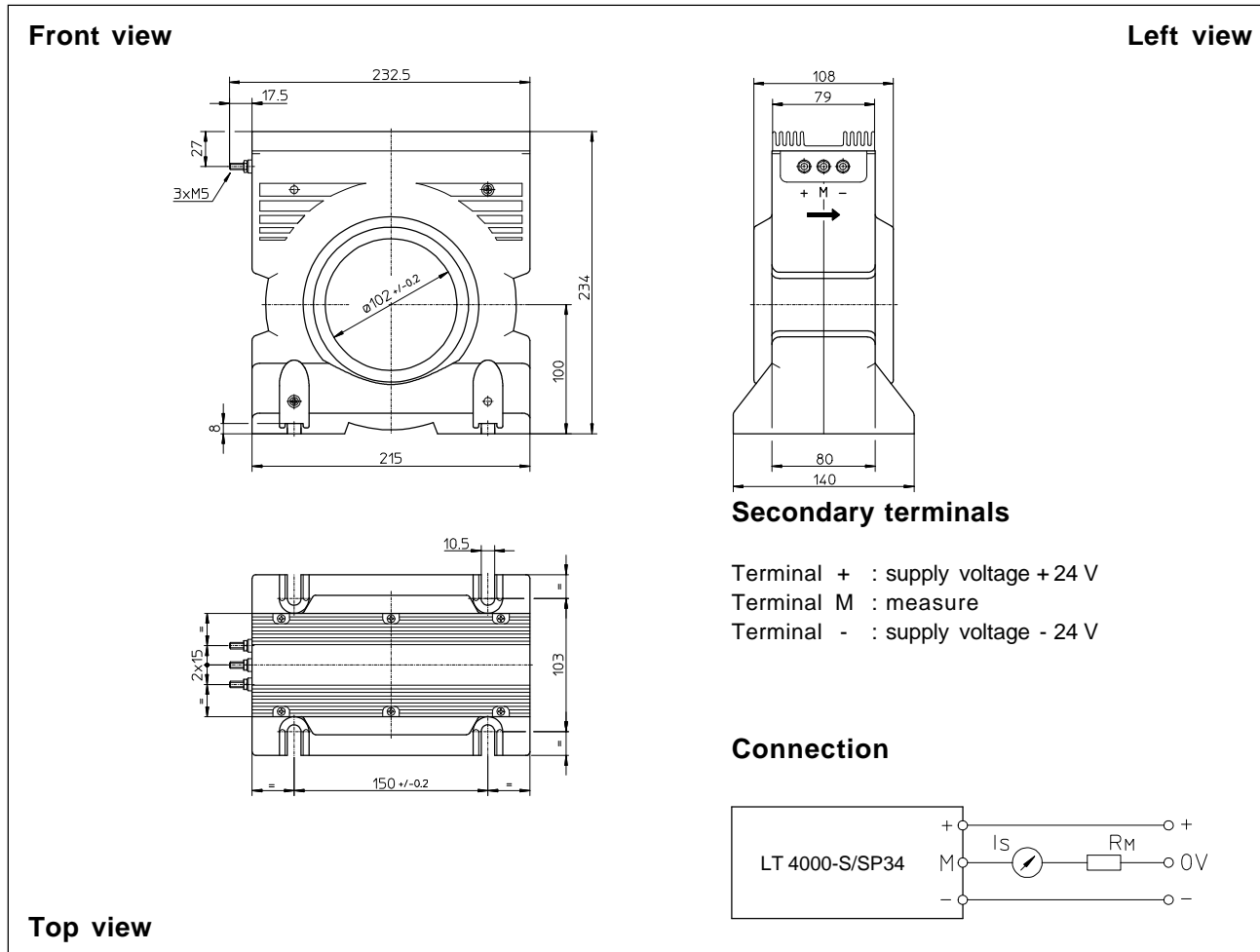
Applications

- 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: ¹⁾ With a di/dt of 100 A/µs.

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Dimensions LT 4000-S/SP34 (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance ± 1.0 mm
- Fastening 4 slots $\varnothing 10.5$ mm
- Primary through-hole $\varnothing 102$ mm
- Connection of secondary M5 threaded studs 2.2 Nm

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.