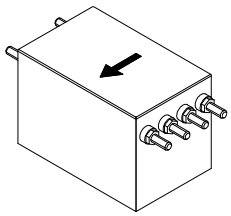
Current Transducer CT 10-T

I_{PN} = 10 A

For very accurate measurements of currents : DC, AC, pulsed..., with a galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).

Preliminary



Electrical data

I_{PN}	Primary nominal r.m.s. current	10	A
I_P	Primary current, measuring range	0 .. ± 15	A
V_{OUT}	Analog output voltage	5	V
K_N	Conversion ratio	10 A / 5 V	
R_L	Load resistance	> 500	Ω
C_L	Capacitance loading	£ 5	nF
t_C	Output short-circuit duration [1]	¥	s
V_C	Supply voltage (± 5 %)	± 15	V
I_C	Current consumption	90 + V_{OUT} / R_L	mA
V_d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	6	kV

Accuracy - Dynamic performance data

			Typ	Max	
X_G	Overall accuracy @ I_{PN}	- 25°C .. + 70°C		± 0.1	%
V_O	Offset voltage @ I_P = 0	T_A = 25°C		± 0.4	mV
		- 25°C .. + 70°C		± 0.6	mV
f	Frequency bandwidth (- 3 dB) @ 10 % of I_{PN}		DC .. 500		kHz

General data

T_A	Ambient operating temperature	- 25 .. + 70	°C
T_S	Ambient storage temperature	- 40 .. + 85	°C
m	Mass	670	g
	Standards [2]	EN 50178	

Features

- Closed loop (compensated) current transducer
- Insulated plastic case recognized according to UL 94-V0
- Patent pending.

Advanced features

- f = 500 kHz
- X_G = ± 0.1 % (- 25°C .. + 70°C).

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.

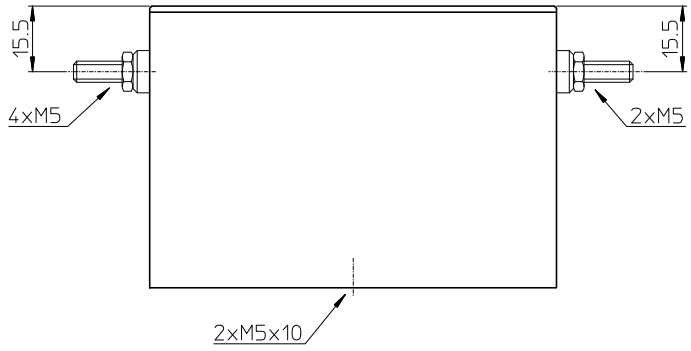
Notes : [1] If the short-circuit has a duration more than 1 s, the primary current of the supply voltage must be interrupted for a short time to restore the transducer to proper working order. The internal protection is done by PTC resistors

[2] A list of corresponding tests is available

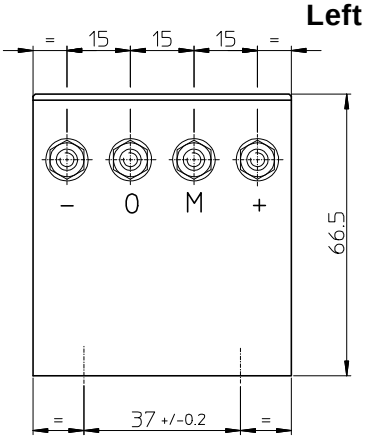
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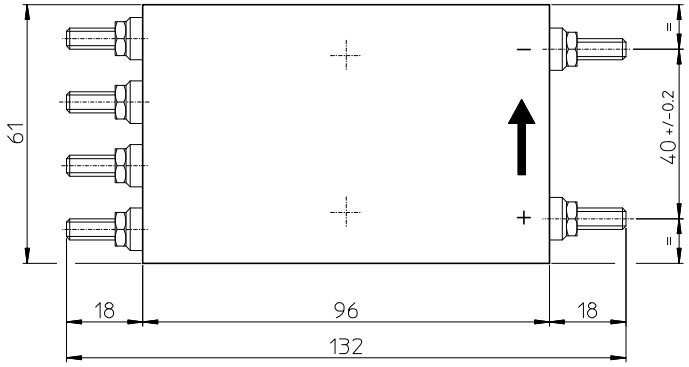
Dimensions CT 10-T (in mm. 1 mm = 0.0394 inch)

Front view



Left view



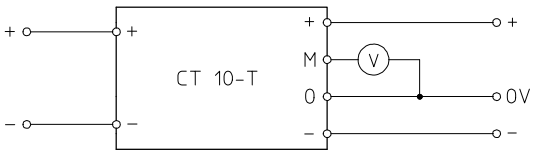


Top view

Secondary terminals

Terminal + : supply voltage + 15 V
Terminal M : measure
Terminal 0 : 0 V
Terminal - : supply voltage - 15 V

Connection



Mechanical characteristics

• General tolerance	± 0.3 mm
• Fastening	2 x M5 screws
• Connection of primary	M5 threaded studs
• Connection of secondary	M5 threaded studs
• Fastening torque	2.2 Nm or 1.62 Lb - Ft

Remarks

- $\mathbf{V}_{OUT}$ is positive when $\mathbf{I}_P$ flows in the direction of the arrow.
- This transducer induces into the primary circuit a square wave of 35 mV amplitude (frequency »220 Hz). This voltage can induce an AC current in the primary if the primary impedance is low.
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.

LEM reserves the right to carry out modifications on its transducers, in order to improve them, without previous notice.