

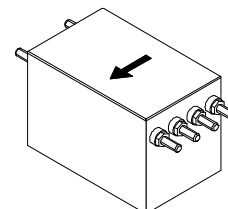
# Current Transducer CT 1-T

$$I_{PN} = 1 \text{ A}$$

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).



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## Electrical data

$I_{PN}$	Primary nominal r.m.s. current	1	A
$I_P$	Primary current, measuring range	0 .. $\pm 2$	A
$V_{OUT}$	Analog output voltage	5	V
$K_N$	Conversion ratio	1 A / 5 V	
$R_L$	Load resistance	> 500	$\Omega$
$C_L$	Capacitance loading	$\leq 5$	nF
$t_C$	Output short-circuit duration <sup>1)</sup>	$\infty$	s
$V_C$	Supply voltage ( $\pm 5\%$ )	$\pm 15$	V
$I_C$	Current consumption	$40 + V_{OUT}/R_L$	mA
$V_d$	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	6	kV

## Features

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

## Advanced features

- $f = 500 \text{ kHz}$
- $X_G = \pm 0.25\%$  ( $-25^\circ\text{C} \dots +70^\circ\text{C}$ ).

## Accuracy - Dynamic performance data

<b>X<sub>G</sub></b>	Overall accuracy @ I <sub>PN</sub>	- 25°C .. + 70°C	± 0.25	%						
<b>V<sub>O</sub></b>	Offset voltage @ I <sub>P</sub> = 0	T <sub>A</sub> = 25°C - 25°C .. + 70°C	<table><tr><td>Typ</td><td>Max</td></tr><tr><td></td><td>± 2.0</td></tr><tr><td></td><td>± 3.0</td></tr></table>	Typ	Max		± 2.0		± 3.0	mV
Typ	Max									
	± 2.0									
	± 3.0									
<b>f</b>	Frequency bandwidth (- 3 dB) @ 50 % of I <sub>PN</sub>		DC .. 500	kHz						

## General data

$T_A$	Ambient operating temperature	$-25 \dots +70$	$^\circ\text{C}$
$T_S$	Ambient storage temperature	$-40 \dots +85$	$^\circ\text{C}$
$m$	Mass	670	g
	Standards	EN 50178: 1997	

## 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.

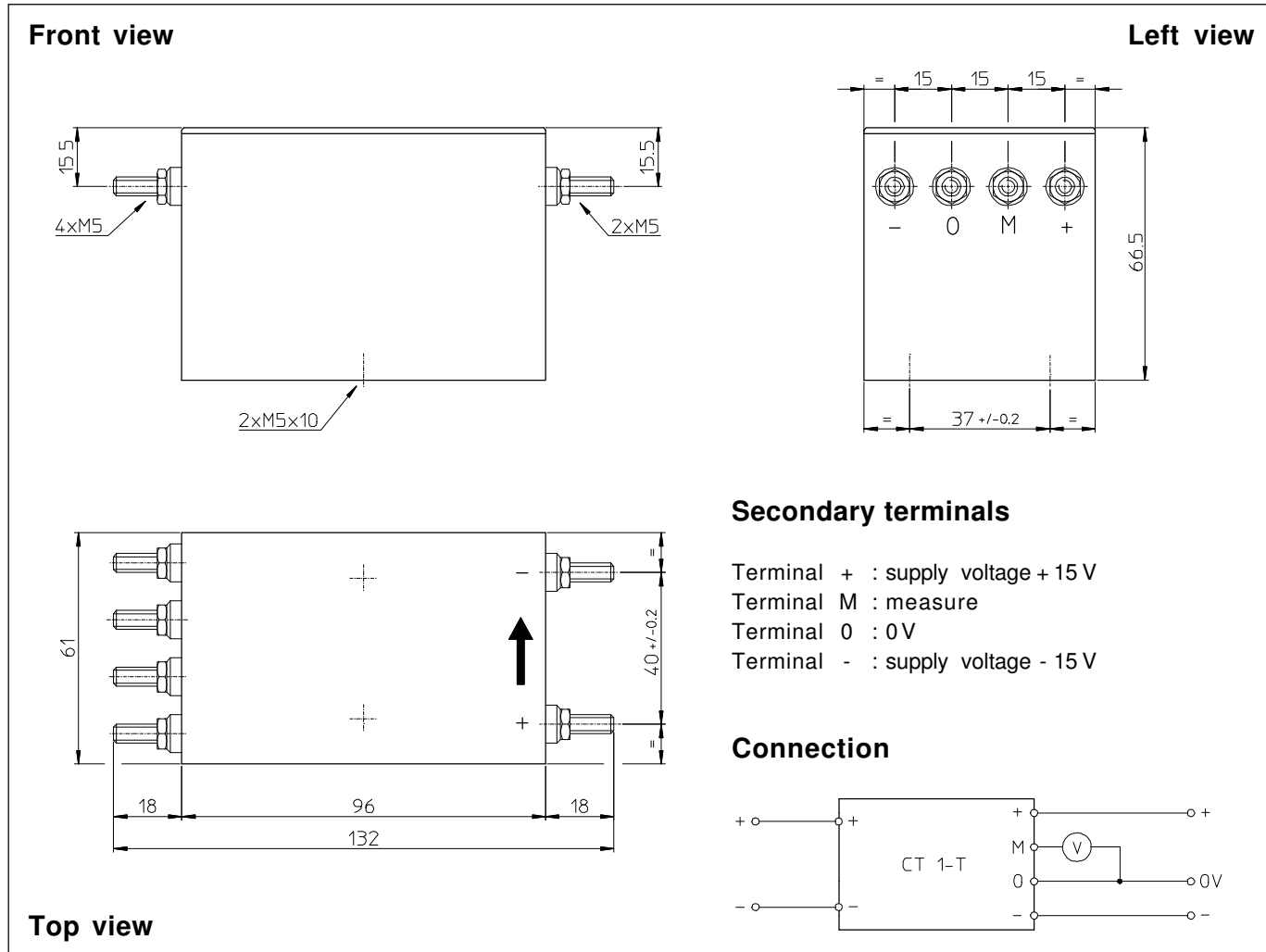
## Applications

- 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.

**Note :** <sup>1)</sup> 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.

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



## Mechanical characteristics

- General tolerance  $\pm 0.3$  mm
- Fastening 2 x M5 screws
- Connection of primary M5 threaded studs
- Connection of secondary M5 threaded studs
- Fastening torque max 2.2 Nm or 1.62 Lb - Ft

## Remarks

- $V_{OUT}$  is positive when  $I_p$  flows in the direction of the arrow.
- This transducer induces into the primary circuit a square wave of 70 mV amplitude (frequency  $\approx 220$  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.