

Current Transducer CT 100-S

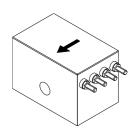
For very accurate measurements of currents: DC, AC, pulsed..., with a galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).





Provisional

$I_{PN} = 100 A$



Electrical data

I _{PN}	Primary nominal r.m.s. current	100	Α
I _P	Primary current, measuring range	0 ± 150	Α
\mathbf{V}_{OUT}	Analog output voltage	5	V
K _N	Conversion ratio	100 A / 5 V	
$R_{\scriptscriptstyle L}$	Load resistance	> 500	Ω
C	Capacitance loading	£ 5	nF
t _c	Output short-circuit duration 1)	∞	S
V _c	Supply voltage (± 5 %)	± 15	V
Ic	Current consumption	$90 + V_{OUT}/R_{\perp}$	mΑ
V _d	R.m.s. voltage for AC isolation test, 50 Hz, 1 mn	6	kV

Accuracy - Dynamic performance data

\mathbf{X}_{G}	Overall accuracy @ I _{PN}	- 25°C + 70°C	± 0.15		%
\mathbf{v}_{\circ}	Offset voltage @ I _p = 0	T _A = 25°C - 25°C + 70°C	Тур	Max ± 0.4 ± 0.6	mV mV
t _r di/dt f	Response time $^{2)}$ @ 90 % de \mathbf{I}_{PN} di/dt accurately followed Frequency bandwidth (- 3 dB) @ 1	0 % of I _{PN}	400 60 DC 2	250	ns A/µs kHz

General data

T_A	Ambient operating temperature	- 25 + 70	°C
$T_{\rm s}$	Ambient storage temperature	- 40 + 85	°C
m	Mass	670	g
	Standards	EN 50178 : 199	7

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

Features

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

Advanced features

- $\mathbf{f} = 250 \text{ kHz}$
- $X_G = \pm 0.15 \%$ (- 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

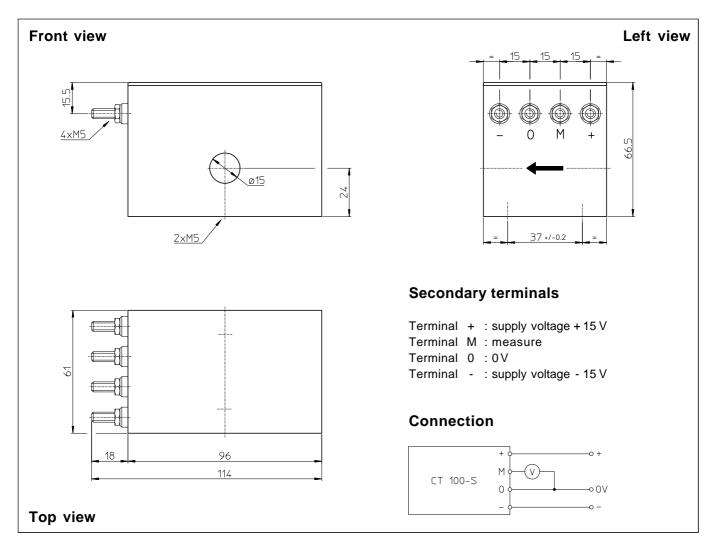
- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

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²⁾ With a di/dt of 60 A/µs.



Dimensions CT 100-S (in mm. 1 mm = 0.0394 inch)



Mechanical characteristics

- General tolerance
- Fastening
- Primary through-hole
- Connection of secondary Fastening torque
- ± 0.3 mm
- 2 x M5 screws
- Ø 15 mm
- M5 threaded studs
- 2.2 Nm or 1.62 Lb Ft

Remarks

- V_{OLIT} is positive when I_P flows in the direction of the arrow.
- This transducer induces into the primary circuit a square wave of 3.5 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.