

Current Transducer CD 100-S/SP5

For the detection of a differential current between two primary conductors carrying opposite currents, with galvanic isolation between the primary circuit and the secondary circuit.





E	lectrical data		
	Primary nominal current rms	2 x 1000	А
I _{PRM}	Primary residual current, measuring range	0 ± 2	Α
VOUT	Output voltage (Analog) @ I _{PR max}	± 5	V
V	Supply voltage (± 5 %)	± 15	V
I _c	Current consumption	60	mA
Ř	Load resistance	> 1	kΩ

Accuracy - Dynamic performance data				
X _G	Overall accuracy @ $\mathbf{T}_A = -40 + 85^{\circ}C$	(2.0 A) (1.0 A) (0.06 A)	± 2.5 ± 4.0 ± 25.0	% %
τ вw	Time constant @ 63 % Frequency bandwidth (- 3 dB) @ I _{PR} = 2	(± 20 %) A (± 20 %)	100 DC 5	μs kHz

General data

T _A	Ambient operating temperature	- 40 + 85	°C
T _a	Ambient storage temperature	- 40 + 100	°C
m	Mass Standards	1 EN 50155: 1995	kg

$I_{PN} = 2 \times 1000 \text{ A}$ I_{PRM}= 0..±2A

Features

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

Special features

- I_{PN} = 2 x 1000 A
- \mathbf{T}_{A} = -40.. + 85°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

- Single or three phase inverter
- Propulsion and braking chopper
- Propulsion converter
- Auxiliary converter
- Railway security system.

Application Domain

• Traction.

Page 1/3



Current Transducer CD 100-S/SP5

Isolation characteristics

V _d	Rms voltage for AC insulation test ¹⁾ , 50 Hz, 1 min	6	kV
dCp	Creepage distance	58.1	mm
dCl	Clearance	44.4	mm
СТІ	Comparative Tracking Index (group III)	225	

Note: ¹⁾ Between primary and secondary.

Safety



This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the manufacturer's operating instructions.



Caution, risk of electrical shock

When operating the transducer, certain parts of the module can carry hazardous voltage (eg. primary busbar, power supply).

Ignoring this warning can lead to injury and/or cause serious damage.

This transducer is a build-in device, whose conducting parts must be inaccessible after installation.

A protective housing or additional shield could be used.

Main supply must be able to be disconnected.



Dimensions CD 100-S/SP5 (in mm)



Mechanical characteristics

- General tolerance
- ± 0.5 mm
- Transducer fastening
- 4 slots Ø 7 mm
- 4 M6 steel screws
- Recommanded fastening torque 4.7 Nm
- Primary through-hole
- Connection of secondary • Recommanded fastening torque 1.2 Nm
- Ø 40 mm M4 threaded studs

Remarks

- $\mathbf{V}_{_{\rm OUT}}$ is positive when $\mathbf{I}_{_{\rm PR}}$ flows in the direction of the arrow. •
- The two primary conductors should be positioned so • that their centers are separated by 20 mm maximum, to insure the indicated accuracy.
- When the differential current is high (> 2 A), the magnetic • measuring cores are saturated and the output signal is maintained at "+" or "-" by a memory. The sign corresponds normally to the direction of the differential current, except upon rapid current inversion.