

Current Transducer LA 200-SD/SP3

For the electronic measurement of currents: DC, AC, pulsed..., with galvanic separation between the primary circuit and the secondary circuit.

$$I_{PN} = 200 \text{ A}$$



Electrical data

I_{PN}	Primary nominal RMS current	200	A
I_{PM}	Primary current, measuring range	0 ... ± 500	A
R_M	Measuring resistance with $\pm 24 \text{ V}$	$R_{M \min}$ $R_{M \max}$ 0 350 0 55	Ω
I_{SN}	Secondary nominal RMS current	40	mA
N_P/N_S	Turns ratio	1 : 5000	
U_C	Supply voltage ($\pm 10 \%$)	± 24	V
I_C	Current consumption (± 1.5) @ 25°C	$34 + I_S$	mA

Accuracy - Dynamic performance data

ε_{tot}	Total error @ I_{PN} , $T_A = 25^\circ \text{C}$	± 1	%
ε_L	Linearity error	< 0.1	%
I_O	Offset current @ $I_P = 0$, $T_A = 25^\circ \text{C}$	Typ Max ± 0.2	mA
I_{OM}	Magnetic offset current @ $I_P = 0$ and specified R_M , after an overload of $3 \times I_{PN}$	± 0.2	mA
I_{OT}	Temperature variation of I_O referred to 25°C $-30^\circ \text{C} \dots +70^\circ \text{C}$	± 0.1 ± 0.3	mA
t_{D90}	Delay time to 90 % of the final output value for I_{PN} step ¹⁾	< 1	μs
BW	Frequency bandwidth (-3 dB)	DC ... 100	kHz

General data

T_A	Ambient operating temperature	$-30 \dots 70$	$^\circ \text{C}$
T_{As}	Ambient storage temperature	$-40 \dots 85$	$^\circ \text{C}$
R_S	Resistance of secondary winding @ $T_A = 70^\circ \text{C}$	120	Ω
m	Mass Standard ²⁾	1.55 EN 50155: 2007	kg

Notes: ¹⁾ For a $di/dt = 100 \text{ A}/\mu\text{s}$

²⁾ Standard IEC 61000-4-3 with criteria $< 10 \%$.

Features

- This transducer has a split core. It permits current measurement without cutting the primary circuit (high power)
- Closed loop (compensated) current transducer using the Hall effect
- Insulating plastic case recognized according to UL 94-V0.

Special features

- $I_{PM} = 0 \dots \pm 500 \text{ A}$
- $N_P/N_S = 1 : 5000$
- $U_C = \pm 24 (\pm 10 \%) \text{ V}$
- $T_A = -30 \dots 70^\circ \text{C}$
- Connection to secondary on AMP CPC 11/4 connector
- Base fastening.

Advantages

- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized delay time
- Wide frequency bandwidth
- No insertion losses
- High immunity to external interference
- Current overload capability.

Applications

- Single or three phase inverters
- Propulsion and braking choppers
- Propulsion converters
- Auxiliary converters
- Battery chargers.

Application Domain

- Railway (fixed installations and onboard).

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Insulation coordination

U_d	RMS voltage for AC insulation test, 50 Hz, 1 min	6	kV
		Min	
d_{cp}	Creepage distance	36.5	mm
d_{cl}	Clearance	36.5	mm
CTI	Comparative tracking index (group IIIa)	375	

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 (e.g. 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.

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