

Current Transducer CD 100-S/SP18

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

$$I_{PN} = 2 \times 200 \text{ A}$$

$$I_{PRTh} = \pm 100 \text{ mA}$$



Electrical data

I_{PN}	Primary nominal RMS current	2×200	A
$\hat{I}_{Pmax}$	Maximum withstand primary peak current during 15 ms	8800	A
I_{PRM}	Primary residual current, measuring range	$0 \dots \pm 200$	mA
I_{PRTh}	Primary residual current, detection threshold ($-25^\circ\text{C} \dots +70^\circ\text{C}$)	± 100	mA
I_{outmax}	Maximum output current limitation	250	mA
U_C	Supply voltage ($-30\% / +25\%$)	48	V
I_{Cmax}	Maximum current consumption	< 70	mA

Accuracy - Dynamic performance data

ε_{tot}	Total error @ $T_A = -25^\circ\text{C} \dots +70^\circ\text{C}$	± 17	%
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General data

T_A	Ambient operating temperature	$-25 \dots +70$	$^\circ\text{C}$
T_{Ast}	Ambient storage temperature	$-40 \dots +90$	$^\circ\text{C}$
m	Mass	≈ 1000	g
	Standards	EN 50155: 2007 EN 50121-3-2: 2016	

Features

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

Special feature

- Output signal is intended to drive a relay.

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.

Application

- Leakage current detection.

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	110	mm
d_{cl}	Clearance	94.2	mm
CTI	Comparative tracking index (group III)	225	

Safety

This transducer must be used in limited-energy secondary circuits according to IEC 61010-1.



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

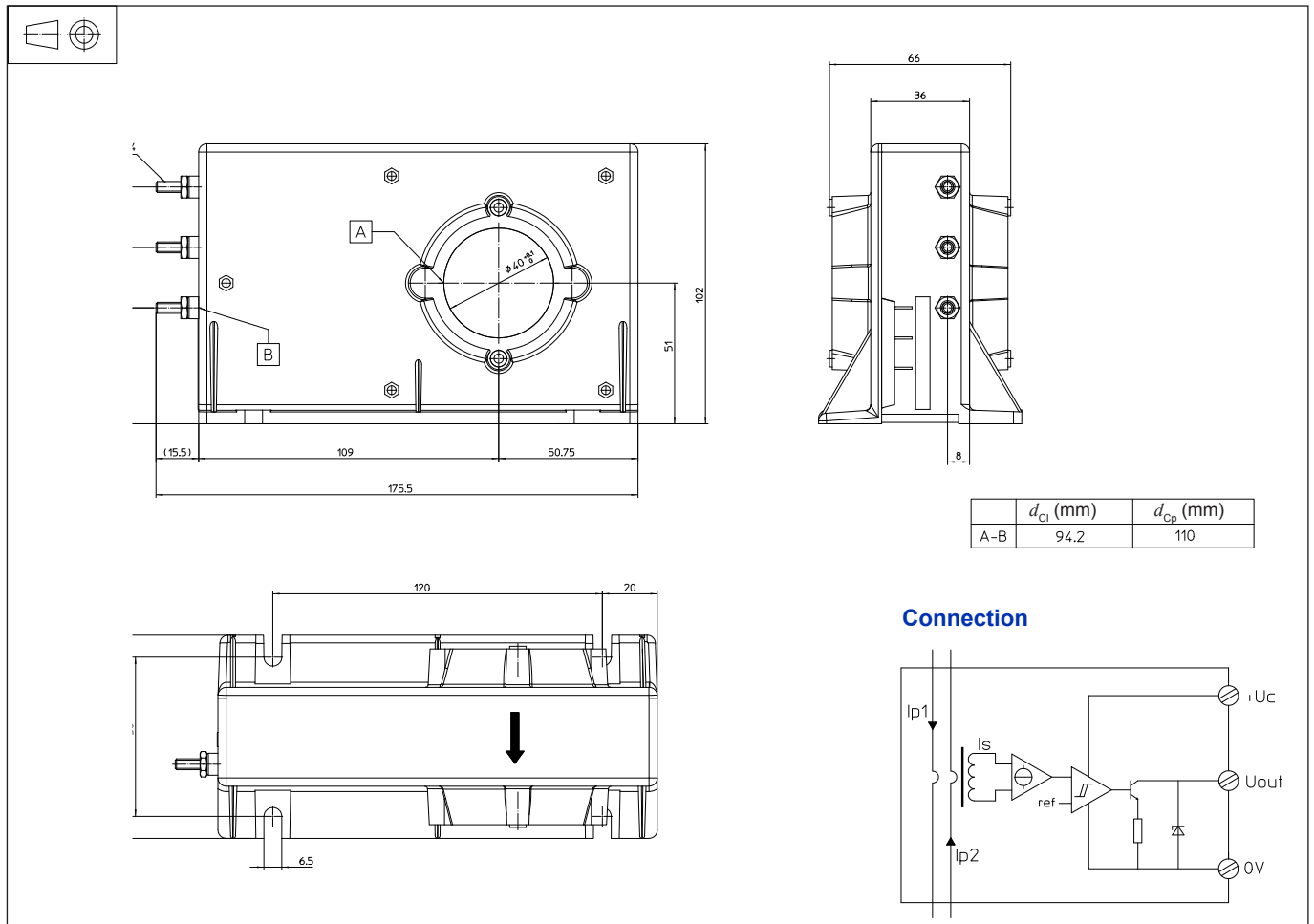
When operating the transducer, certain parts of the module can carry hazardous voltage (e.g. primary busbar, power supply).

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.

Dimensions CD 100-S/SP18 (in mm)



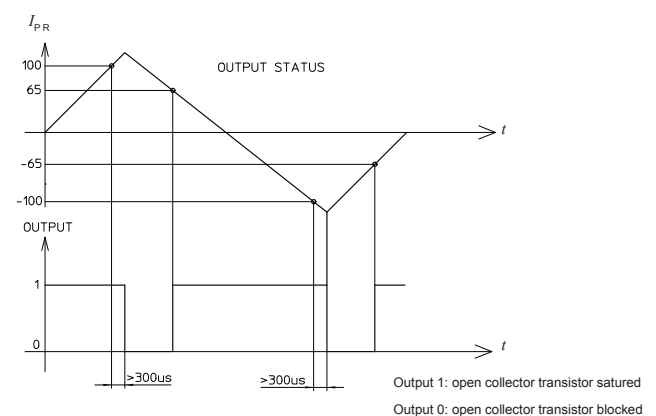
Mechanical characteristics

- General tolerance ± 0.5 mm
- Transducer fastening
 - 4 slots $\varnothing 6.5$ mm
 - 4 steel screws M6
- Recommended fastening torque 4.7 N·m
- Primary through-hole $\varnothing 40$ mm
- Connection of secondary 3 screws terminals M4
- Recommended fastening torque 1.2 N·m

Remarks

- The two primary conductors should be positioned so that their centers are separated by 20 mm maximum, to insure the indicated accuracy.
- Installation of the transducer must be done unless otherwise specified on the datasheet, according to LEM Transducer Generic Mounting Rules. Please refer to LEM document N°ANE120504 available on our Web site: <https://www.lem.com/en/file/3137/download/>.

Output transistor status



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