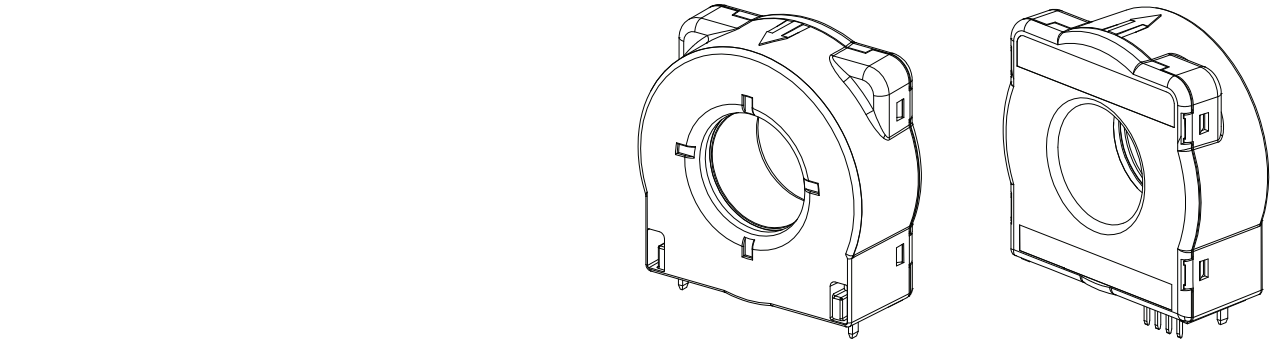
Current Transducer CTSR 1-P

I_{PRN} = 1A

For the electronic measurement of current: DC, AC, pulsed..., with galvanic isolation between the primary (high power) and the secondary circuit (electronic circuit).



Features

- Closed loop (compensated) current transducer
- Voltage output
- Single supply voltage
- Isolated plastic case material recognized according to UL 94-V0
- PCB mounting

Advantages

- High accuracy
- Very low offset drift over temperature
- Wide aperture (20.1 mm)
- High overload capability
- High isolation capability
- Reference pin with two modes, Ref In and Ref Out
- Degauss and test functions

Applications

- Residual current measurement
- Leakage current measurement in transformerless PV inverters
- First human contact protection of PV arrays
- Failure detection in power sources
- Symmetrical fault detection (e.g. after motor inverter)
- Leakage current detection in stacked DC sources
- Single phase or three phase nominal current measurement up to ± 30 A per wire (DC or AC)

Standards

- EN 50178
- IEC 61010-1 (safety)

Application Domain

- Industrial
- Suitable to fulfil VDE 0126-1-1 and UL 1741

LEM reserves the right to carry out modifications on its transducers, in order to improve them, without prior notice.

Absolute maximum ratings

Parameter	Symbol	Unit	Value
Supply voltage	V_C	V	7
Primary conductor temperature		°C	110
Impulse overload (100 µs, 500 A/µs)		A	3300

Stresses above these ratings may cause permanent damage. Exposure to absolute maximum ratings for extended periods may degrade reliability.

Isolation characteristics

Parameter	Symbol	Unit	Value	Comment
RMS voltage for AC isolation test 50/60Hz/1 min	V_d	kV	5.4	
Impulse withstand voltage 1.2/50 µs	$\hat{V}_w$	kV	10.1	
Partial discharge extinction voltage @ 10 pC (rms)	V_e	kV	1.65	
Clearance distance (pri. - sec.)	**dCl**	mm	11	Shortest distance through air
Creepage distance (pri. - sec.)	**dCp**	mm	11	Shortest path along device body
Comparative tracking index	**CTI**	V	600	
Application example	-	-	1000 V CAT III PD2	Basic isolation, non uniform field according to EN 50178
Application example	-	-	600 V CAT III PD3	Basic isolation, non uniform field according to EN 50178, IEC 61010
According to UL 508: primary potential involved in Volt rms AC or DC	-	V	600	For use in a pollution degree 3 environment
Primary conductor shall be connected after an overvoltage device or system evaluated by standard UL 1449.				

Environmental and mechanical characteristics

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Ambient operating temperature	T_A	°C	-40		105	
Ambient storage temperature	T_S	°C	-50		105	
Mass	***m***	g		28		
Standards	EN 50178, IEC 61010-1					

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