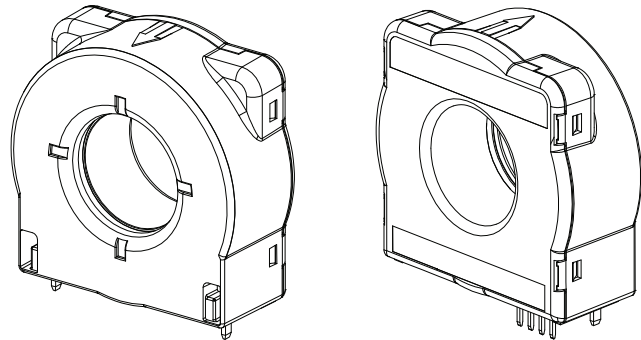


# Current Transducer CTSR 1-P

$I_{PRN} = 1A$

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  $\pm 30 A$  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

**Absolute maximum ratings**

Parameter	Symbol	Unit	Value
Supply voltage	$V_C$	V	7
Primary conductor temperature		°C	110
Impulse overload (100 $\mu$ s, 500 A/ $\mu$ s)		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 $\mu$ s	$\hat{V}_w$	kV	10.1	
Partial discharge extinction voltage @ 10 pC (rms)	$V_e$	kV	1.65	
Clearance distance (pri. - sec.)	<b>dCl</b>	mm	11	Shortest distance through air
Creepage distance (pri. - sec.)	<b>dCp</b>	mm	11	Shortest path along device body
Comparative tracking index	<b>CTI</b>	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	<b>m</b>	g		28		
Standards	EN 50178, IEC 61010-1					