Current Transducer CTSR series

I_{PRN} = 300, 600 mA

Ref: CTSR 0.3-P, CTSR 0.6-P

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

Features

- Closed loop (compensated) current transducer
- Voltage output
- Single supply voltage
- PCB mounting.

Advantages

- High accuracy
- Very low offset drift over temperature
- Wide aperture
- High overload capability
- High insulation 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: 1997
- IEC 61010-1: 2010
- UL 508: 2010.

Application Domain

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

Absolute maximum ratings

Parameter	Symbol	Unit	Value
Supply voltage	U_C	V	7
Primary conductor temperature	T_B	°C	110
Impulse overload (100 µs, 500 A/µs)	$\hat{I}_P$	A	3300

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

UL 508: Ratings and assumptions of certification

File # E189713 Volume: 2 Section: 3

Standards

- CSA C22.2 NO. 14-10 INDUSTRIAL CONTROL EQUIPMENT - Edition 11 - Revision Date 2011/08/01
- UL 508 STANDARD FOR INDUSTRIAL CONTROL EQUIPMENT - Edition 17 - Revision Date 2010/04/15

Ratings

Parameter	Symbol	Unit	Value Version P	Value Version TP
Primary involved potential*		V AC/DC	600	1000
Max surrounding air temperature	T_A	°C	105	
Primary current	I_P	A	According to series primary currents	
Secondary supply voltage	U_C	V DC	7	
Output voltage	V_{out}	V	0 to 7	

* Enviromental: For use in Pollution degree 3.

Conditions of acceptability

When installed in the end-use equipment, consideration shall be given to the following:

1 - A suitable enclosure shall be provided in the end-use application.

2 - The insulation between the primary and the secondary sensing circuits were evaluated with 4250 V AC for CTSR 0.6-TP/SP and 2200 V AC for CTSR 0.6-P in dielectric voltage withstand test.

5 - CTSR series is intended to be mounted on the printed wiring board of the end-use equipment.

7 - The uninsulated live parts of primary feeder and secondary circuit clearance spacing of Model CTSR XX-P series shall maintain at least 5.5 mm apart.

8 - Primary feeder of the devices shall be connected after an overvoltage device or system which has been evaluated by the Standard for Transient Voltage Surge Suppressors, UL 1449.

Marking

Only those products bearing the UL or UR Mark should be considered to be Listed or Recognized and covered under UL's Follow-Up Service. Always look for the Mark on the product.