

# Current Transducer IT 405-S ULTRASTAB

$I_{PN} = 400 \text{ A}$

For ultra-high precision measurement of current: DC, AC, pulsed..., with galvanic separation between primary and secondary.



RoHS



## Features

- Wide operating temperature range of  $-40 \text{ }^{\circ}\text{C}$  to  $85 \text{ }^{\circ}\text{C}$
- Closed loop (compensated) current transducer using an extremely accurate zero flux detector
- Electrostatic shield between primary and secondary circuit
- 9-pin D-Sub male secondary connector
- Optically insulated output (photocoupler type) indicates transducer state
- LED indicator confirms normal operation.

## Advantages

- Very high accuracy
- Excellent linearity
- Extremely low temperature drift
- Wide frequency bandwidth
- High immunity to external fields
- No insertion losses
- Low noise on output signal
- Low noise feedback to primary conductor.

## Applications

- Feed back element in high performance gradient amplifiers for MRI
- Feedback element in high-precision, high-stability power supplies
- Calibration unit
- Energy measurement
- Medical equipment.

## Standards

- EN 61000-6-2: 2005
- EN 61000-6-3: 2007
- EN 61010-1: 2010.

## Application Domains

- Industrial
- Laboratory
- Medical.

**Insulation coordination**

Parameter	Symbol	Unit	Value	Comment
Rated insulation rms voltage, basic insulation	$U_b$	V	1600	IEC 61010-1 conditions - over voltage cat III - pollution degree 2
Rated insulation rms voltage, reinforced insulation	$U_b$	V	300	IEC 61010-1 conditions - over voltage cat III - pollution degree 2
Rated insulation rms voltage, basic insulation	$U_b$	V	1000	EN 50178 conditions - over voltage cat III - pollution degree 2
Rated insulation rms voltage, reinforced insulation	$U_b$	V	600	EN 50178 conditions - over voltage cat III - pollution degree 2
Rms voltage for AC insulation test, 50/60 Hz, 1 min	$U_d$	kV	4.6	Between primary and secondary + shield
Insulation voltage between secondary and shield		V DC	200	Between secondary and shield
Insulation voltage between secondary status output		V DC	500	Between secondary and status output
Impulse withstand voltage 1.2/50 $\mu$ s	$\hat{U}_w$	kV	8.5	
Clearance (pri. - sec.)	$d_{Cl}$	mm	9	Shortest distance through air
Creepage distance (pri. - sec.)	$d_{Cp}$	mm	9	Shortest path along device body
Comparative tracking index	$CTI$		600	

If insulated cable is used for the primary circuit, the voltage category could be improved with the following table (for single insulation) (IEC 61010-1 standard):

Cable insulated (primary)	Category
HAR03	1750 V CAT III
HAR05	1850 V CAT III
HAR07	1950 V CAT III

**Environmental and mechanical characteristics**

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Ambient operating temperature	$T_A$	°C	-40		85	
Ambient storage temperature	$T_S$	°C	-40		85	
Relative humidity	$RH$	%	20		80	Non-condensing
Dimensions						See drawing page 6
Mass	$m$	kg		1.08		