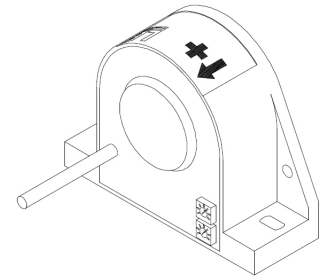


## Current Transducer HTA 1000-S/SP9

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

$I_{PN} = 1000 \text{ A}$



### Electrical data

$\hat{I}_{PN}$	Primary nominal current peak	1000	A
$I_{PM}$	Primary current, measuring range	0 .. $\pm 1000$	A
$V_{OUT}$	Output voltage (Analog) @ $\pm I_{PN}$	$\pm 10$	V
$R_L$	Load resistance	$> 2$	k $\Omega$
$V_C$	Supply voltage ( $\pm 10 \%$ )	$\pm 15$	V
$I_C$	Current consumption	$< 25$	mA
$R_{IS}$	Isolation resistance @ 500 V <sub>DC</sub>	$> 500$	M $\Omega$

### Accuracy - Dynamic performance data

<b>X</b>	Accuracy <sup>1)</sup> @ $I_p = 1000 \text{ A}$ , $T_A = 25^\circ\text{C}$ , @ $\pm 15 \text{ V}$	$\pm 1$	%
$\epsilon_L$	Linearity error <sup>1)</sup>	$\pm 0.5$	%
$V_{OE}$	Electrical offset voltage, @ $I_p = 0$ , $T_A = 25^\circ\text{C}$	$< \pm 10$	mV
$V_{OM}$	Magnetic offset voltage @ $I_p = 0$ , after an overload of $3 \times I_{PN}$	$< \pm 25$	mV
$TCV_{OE}$	Temperature coefficient of $V_{OE}$	$< \pm 1$	mV/K
$TCV_{OUT}$	Temperature coefficient of $V_{OUT}$	$< \pm 0.05$	%/K
$t_r$	Response time to 90 % of $I_{PN}$ step	$< 3$	$\mu\text{s}$
<b>di/dt</b>	di/dt accurately followed	$> 50$	A/ $\mu\text{s}$
<b>BW</b>	Frequency bandwidth (-3 dB) <sup>2)</sup>	DC .. 50	kHz

### General data

$T_A$	Ambient operating temperature	- 25 .. + 70	$^\circ\text{C}$
$T_S$	Ambient storage temperature	- 25 .. + 85	$^\circ\text{C}$
<b>m</b>	Mass	300	g
	Standards	EN 50178:1994	
$\gamma$	Vibration	IEC77 (3.1.3)	

### Features

- Open loop transducer using Hall effect
- Panel mounting-Horizontal or Vertical
- Isolated plastic case recognized according to UL 94-V0.

### Special feature

- 4 core screened cable 2m long.

### Advantages

- Very good linearity
- Very good accuracy
- Low temperature drift
- Wide frequency bandwidth
- Very low insertion losses
- High immunity to external interference
- Current overload capability
- Low power consumption.

### Applications

- AC variable speed drives and servo motor drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Power supplies for welding applications.

### Application domain

- Industrial.

Notes: <sup>1)</sup> Excludes the electrical offset

<sup>2)</sup> Refer to derating curves in the technical file to avoid excessive core heating at high frequency.

## Current Transducer HTA 1000-S/SP9

### Isolation characteristics

$V_d$	Rms voltage for AC isolation test <sup>1)</sup> , 50 Hz, 1 min	4.0	kV
$\hat{V}_w$	Impulse withstand voltage 1.2/50 $\mu$ s	> 7.3	kV
		Min	
<b>dCp</b>	Creepage distance	7.2	mm
<b>dCI</b>	Clearance distance	7.2	mm
<b>CTI</b>	Comparative Tracking Index (group I)	600	

### Applications examples

According to EN 50178 and IEC 61010-1 standards and following conditions:

- Over voltage category III
- Pollution degree PD2
- Non-uniform field

	EN 50178	IEC 61010-1
<b>dCp, dCI, <math>\hat{V}_w</math></b>	Rated insulation voltage	Nominal voltage
Basic insulation	600 V	600 V
Reinforced insulation	300 V	300 V

Note: <sup>1)</sup> With the primary conductor located in the upper half of the aperture.

### Safety



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 (eg. primary busbar, power supply).

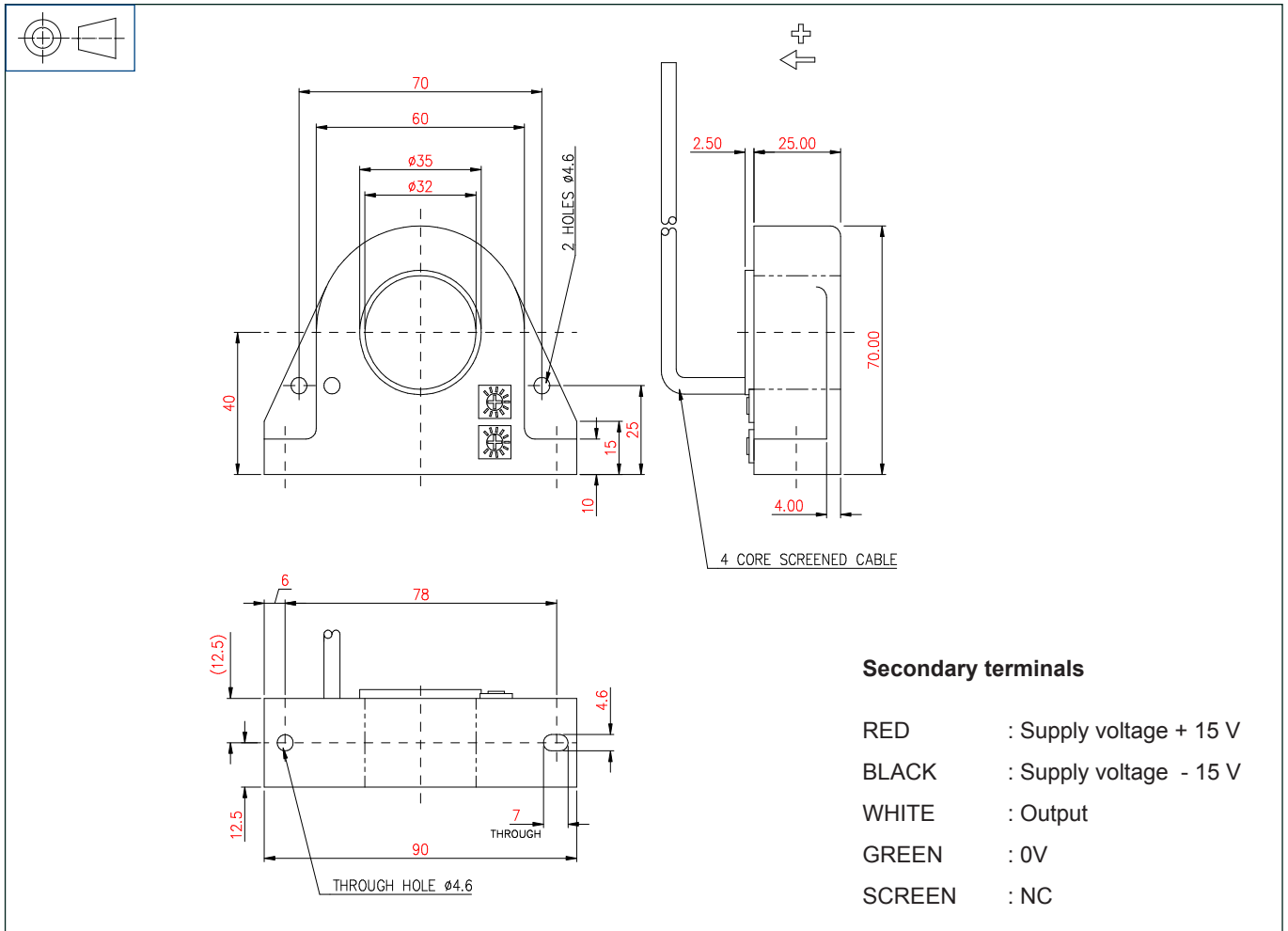
Ignoring this warning can lead to injury and/or cause serious damage.

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 HTA 1000-S/SP9 (in mm)



### Mechanical characteristics

- General tolerance  $\pm 0.5$  mm
- Primary through-hole  $\phi 32$  mm
- Connection of secondary via 4 core screened Halogen free cable  $2^{+0.1/0}$  m in length

### Remarks

- $V_{OUT}$  is positive when  $I_p$  flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed  $90^\circ\text{C}$ .