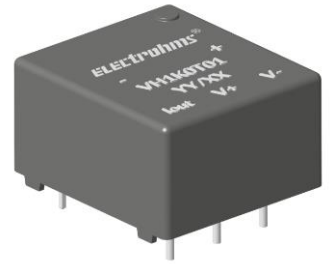


$I_{pn} = 10\text{mA}$ 

Features

- Bipolar and isolated measurement up to 1500V
- Current output.
- PCB mountable

Advantage

- Compact design
- Excellent accuracy (offset, sensitivity, linearity)
- Good response time
- Low temperature drift

Applications

- Single or three phase inverters
- Propulsion and braking chopper
- Auxiliary converter
- High power drives
- Substations

Application domain

- Traction
- Industrial

Standards

- EN 50178
- UL508

Insulation characteristics

Parameters	Symbol	Value	Units
Dielectric strength between primary and secondary terminals, 50Hz, 60seconds	V_d	4.2	kV
Comparative tracking index	CTI	250	V
Insulation resistance	R_{is}	≥ 100	$M\Omega$
Creepage distance		19.50	mm
Clearance distance		19.50	mm

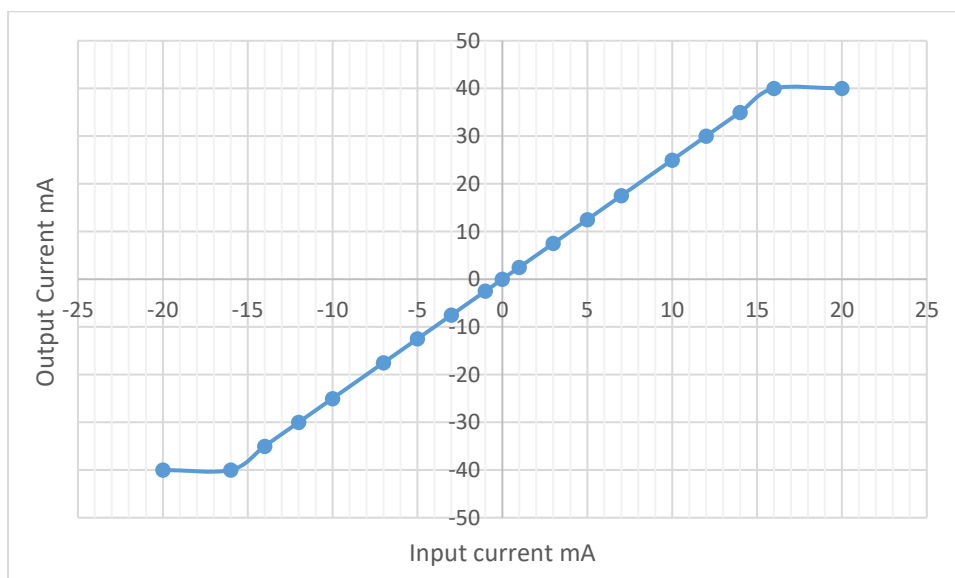
Specifications (Unless otherwise specified temperature is 25°C)

Parameters	Symbol	Condition	Min	Typ	Max	Units
Input current nominal	I_{pn}			10		mA
Input current measuring range	I_p		-14		+14	mA
Burden resistance	R_b	with $\pm 15V$ at $I_{pn} = \pm 10mA$	100		340	Ω
		with $\pm 15V$ at $I_{pn} = \pm 14mA$	100		180	Ω
Resistance of secondary winding	R_s			45		Ω
Resistance of primary winding	R_p			190		Ω
Output offset current at $I_{PN} = 0$	I_{off}			± 0.20		mA
Output current at I_{PN}	I_{out}			25		mA
Turns ratio	k			2500:1000		
Supply voltage ($\pm 5\%$)	V_s			± 15		V
Current consumption	I_c	at $\pm 15 V$		12 +Iout		mA
Variation of Ioff wrt temperature	I_{ot}	-25 to 85 °C		≤ 0.80		mA
Linearity error	Σ_L			< 0.2		%
Accuracy at I_{PN} (See note 1)	X_G			± 0.8		%
Response time 90% of V_{PN}				< 25.0		μS
Ambient operating temperature	T_A		-25		+85	°C
Ambient storage temperature	T_s		-40		+90	°C
Mass	m			30		g

Note:

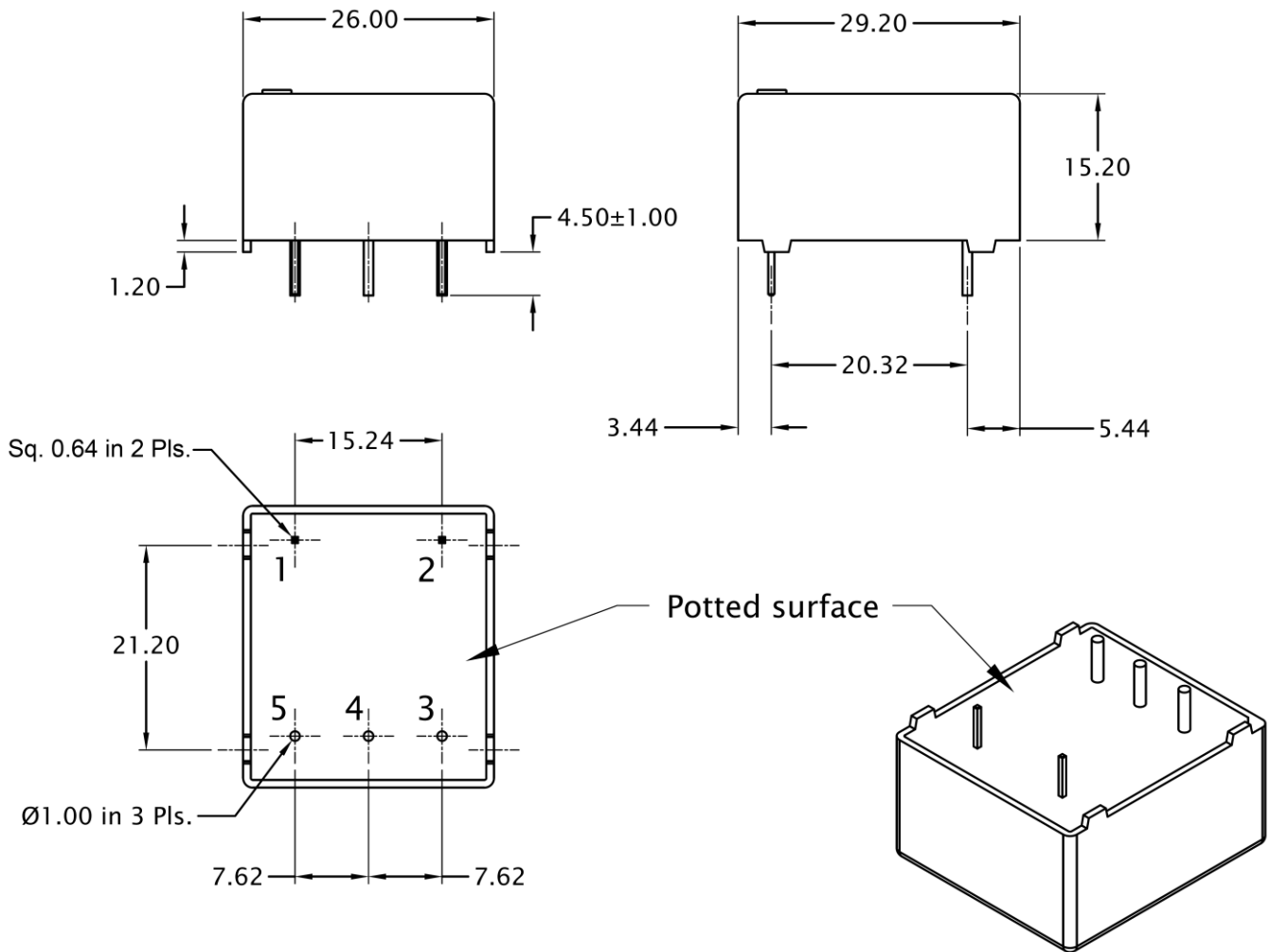
- The resistors R1, R2, R3 & R4 are to be connected externally. For example: If the nominal voltage to be measured is 1000V, then the current will be 10mA for which the corresponding resistance will be 100k Ω R1 = R2 = R3 = R4 = 25k Ω , 10 watts each. If voltage to be measured is 500V, to drive 10mA current into the sensor, the corresponding resistance will be 50k Ω . In which use only resistors R1 & R2 of value R1 = R2 = 25k Ω , 10 watts each.
- For any other input voltage please contact Electrohms if necessary. The overall accuracy of the sensor will depend on the external resistors tolerance & temperature characteristics.
- The sensor accuracy is optimum when operating at nominal input current (I_{pn}). Hence external input resistor should be selected such that, current should be I_{pn} (10mA) corresponding to nominal measuring voltage.

Input Output Characteristics

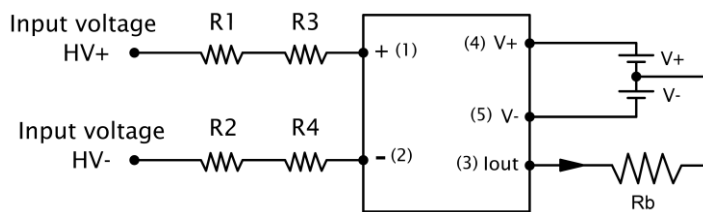


Mechanical dimensions

GENERAL TOL. ±0.5 mm	
ALL DIMENSIONS ARE IN 'mm'	SCALE -NTS



Connection Diagram



- Sensor mounting: PCB mountable.
- I_{out} is positive when V_p is applied to + HV terminal.
- Power supply and output terminal is not protected against polarity reversal.

Safety



- This Current Transformer 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 Sensor, 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.
- A protective housing or additional shield could be used.
- Disconnecting the main power must be possible
- Over voltage ($\gg V_{PN}$) or missing of the power supply voltage can cause an additional remaining magnetic offset.
- This Sensors may only be used in electrical or electronic systems which fulfil the relevant regulations (Standards, EMC Requirements)
- Pay attention to protect non-isolated high-voltage current carrying parts against direct contact (e.g. with a protective housing)
- When installing the sensor, ensure that the safe separation (between primary circuit and secondary circuit) is maintained over the whole circuits and their connections.

General information:

Electrohms reserves the right to make modifications on products for improvements without prior notice.