

Product Data sheet : Voltage Transducer - VH1K0T01

Date : 01.01.2016

Rev : 04

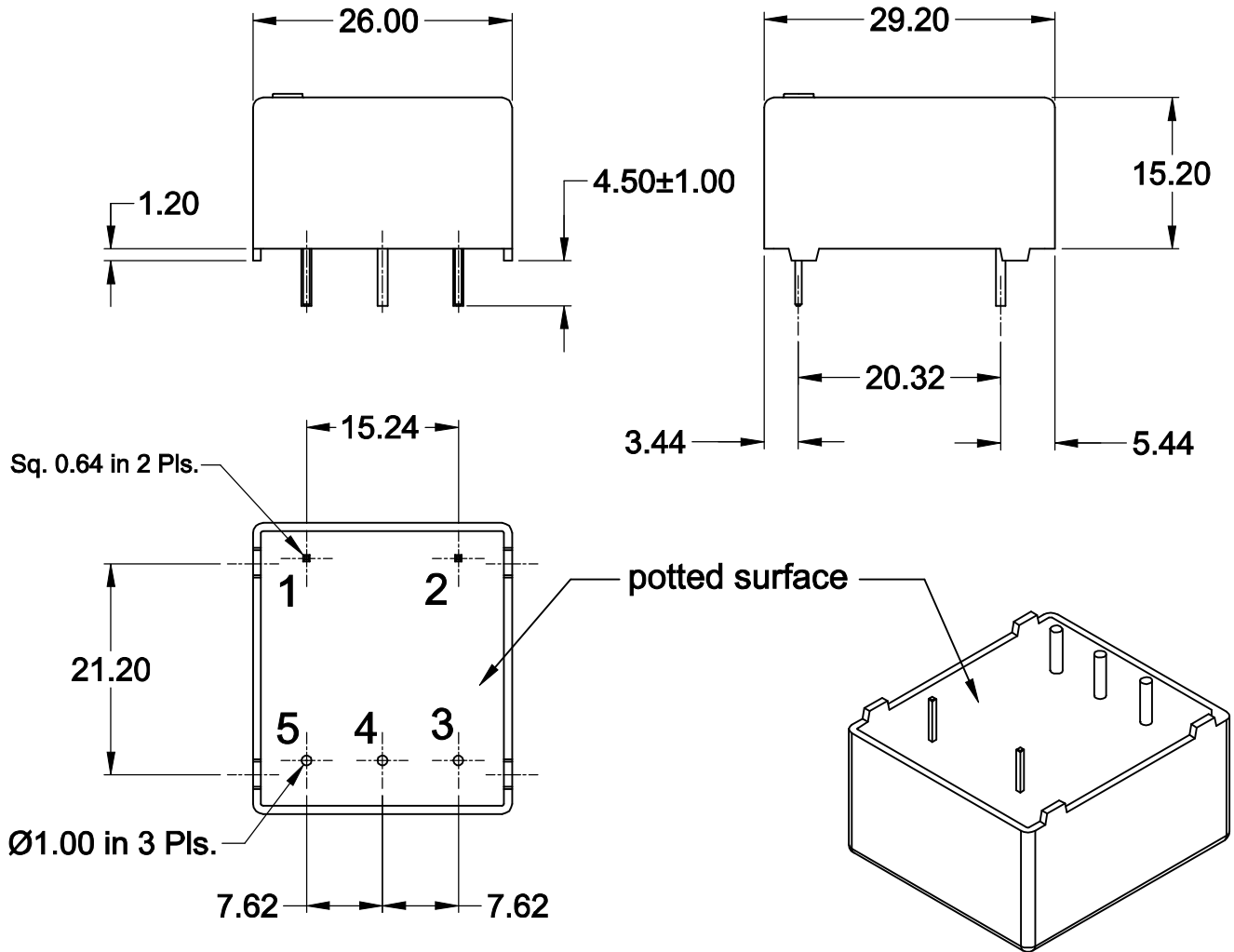
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Customer: ---

Customer part No.: ---

Pb RoHS Compliant
Pb solder exempt

● **MECHANICAL DIMENSIONS**



- Pin 1 : Input + Ve (See connection diagram for details)
- Pin 2 : Input - Ve (See connection diagram for details)
- Pin 3 : Output (Iout)
- Pin 4 : Supply Voltage (+Vcc)
- Pin 5 : Supply Voltage (-Vee)

● **APPLICATION :**

Used for measurement of electric voltage, AC, DC, Pulsed in electrical & electronic equipment.

● **FEATURES :**

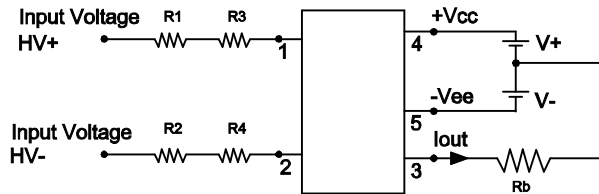
- Closed loop Voltage sensor.
- Through Hole PCB mounting type.
- Current output.
- Plastics compliant to UL94-V0.

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

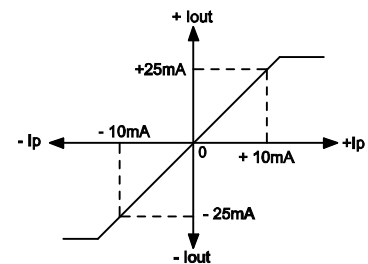
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● CONNECTIONS DIAGRAM



● INPUT & OUTPUT CHARACTERISTICS



I_{out} is positive when I_{pn} enters from HV + terminal

● SPECIFICATIONS @ 25° C **

PARAMETERS	VALUES	UNITS	
Input Nominal Current, I_{pn} (See note 1)	10	mA	
Input Current, measuring range (I_p)	0 to ± 14	mA	
Burden Resistance (R_b) @ $\pm 15V$	$I_{pn} = \pm 10$ mA $I_{pn} = \pm 14$ mA	100 to 340 100 to 180	Ω
Conversion Ratio (K)	2500 : 1000	—	
Current output @ I_{pn} (I_{out})	25	mA	
Supply Voltage ($V+$ / $V-$), $\pm 5\%$	± 15	V	
Current consumption @ $\pm 15V$ (I_c)	12 + I_{out}	mA	
Accuracy @ I_{pn} (See note 1)	± 0.8	%	
Linearity	< 0.2	%	
Output offset current @ $I_p = 0$, $T_a = 25^\circ C$	± 0.20 (Typical)	mA	
Offset current variation with respect to temperature (-40 to +85°C)	0.8 (max.)	mA	
Response time 90% of I_{pn}	25	μs	
Primary Coil Resistance	190 (Typical)	Ω	
Secondary Coil Resistance	46 (Typical)	Ω	
Dielectric Strength between input & output 50 Hz for 1 min.	4.2	kVrms	
Creepage distance	19.50	mm	
Clearance	19.50	mm	
Operating Temperature Range	-40 to +85	$^\circ C$	
Storage Temperature	-40 to +90	$^\circ C$	
Weight	30 (Typ.)	g	

** Specifications subject to change.

Note:

1. The resistors R_1 , R_2 , R_3 & R_4 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 . $R_1 = R_2 = R_3 = R_4 = 25K\Omega$, 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 R_1 & R_2 of value $R_1 = R_2 = 25K\Omega$, 10 watts each.
For any other input voltage please contact Electrohms if necessary. The over all accuracy of the sensor will depend on the external resistors tolerance & temperature characteristics.

2. 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.