



DATA SHEET

Hall Effect Voltage Sensor

PN: PTCHV_AL15D25

IPN=100~1000V

Feature

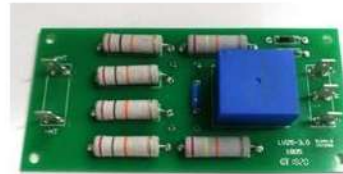
- Closed- loop (compensated) hall effect current mode voltage transducer
- The output from the voltage sensor can be expressed as a voltage by passing it through a resistor.
- Input voltage can be expressed as a current by passing it through a input resistor.
- It provides accurate electronic measurement of DC AC or pulse and pulsed voltage.
- Supply voltage: DC $\pm 12 \sim \pm 15$

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- High immunity to external interference
- Very good linearity
- Can be customized

Applications

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



RoHS

Electrical data: ($T_a=25^{\circ}\text{C}\pm 5^{\circ}\text{C}$, $V_c=+5\text{VDC}$)

Parameter	Ref	PTCHV100	PTCHV200	PTCHV300	PTCHV400	PTCHV500	PTCHV800	PTCHV1000
		AL15D25	AL15D25	AL15D25	AL15D25	AL15D25	AL15D25	AL15D25
Rated input voltage $V_{pn}(V)$		100	200	300	400	500	800	1000
Measuring range $V_p(V)$		0 ~ +200	0 ~ +400	0 ~ +600	0 ~ +800	0 ~ +1000	0 ~ +1600	0 ~ +2000
Turns ratio $N_p/N_S (T)$		5000:1000						
Rated input $I_{pn} (mA)$		5.0						
Rated output current $I_{sn}(mA)$		@ $V_p=\pm V_{pn}$		$\pm 25 \pm 0.5\%$				
Measure resistor (Ω) with $\pm 12V$		@ $\pm V_{pn} \text{ max}$		100(min) 300(max)				
		@ $\pm 2V_{pn} \text{ max}$		60(min) 150(max)				
Measure resistor (Ω) with $\pm 15V$		@ $\pm V_{pn} \text{ max}$		100(min) 360(max)				
		@ $\pm 2V_{pn} \text{ max}$		60(min) 180(max)				
Supply voltage $V_C(V)$		$\pm 12 \sim \pm 15 \pm 5\%$						



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Accuracy XG(%)	@IPN,T=25°C	<±0.5
Offset current IOE(mA)	@IP=0,T=25°C	≤±0.2
Offset drift (mA)	@ -40~+25°C ≤±0.6; @ 25°C~+85°C	≤±0.5
Linearity (%FS)	@Ip=0- ±Ipn	≤0.1
Response time tra(μs)		≤50
Current consumption IC(mA)		15+IpX(Np/Ns)
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	2.5

General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-40~ +125
Mass M(g)	75
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN60947-1:2004
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

5 Faston 6.3x0.8

1.6 17.5 $\langle 19 \rangle$

128 118 4xφ4.2 20.32 50 60 10 16 10 16

Secondary terminals

terminal + :supply voltage+12..15V

terminal M :measure

terminal - :supply voltage-12..15V

Connection

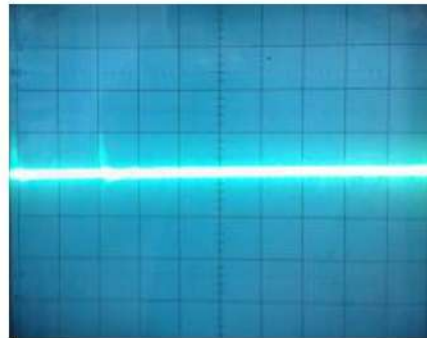
Remarks :

1. All dimensions are in mm.
2. General tolerance ±1mm



Characteristics chart:

Effects of Impulse Noise



← (Output voltage)

Remarks:

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
- Custom design is available for the different rated input current and the output voltage.

WARNING : Incorrect wiring may cause damage to the sensor.

