



DATA SHEET

Hall Effect Current Sensor

PN: CHK_EKA15D4

IPN=50-600A

Feature

- Open- loop
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC $\pm 12\sim 15V$
- Removable structure

Advantages

- Excellent accuracy
- Easy installation
- No insertion losses
- Low power consumption
- Wide current measuring range
- High immunity to external interference
- Very good linearity
- Can be customized

Applications

- Inverter applications
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Frequency drive control home appliances



RoHS



Electrical data: ($T_a=25^{\circ}C$, $V_c=\pm 15.0VDC$, $R_L=10K\Omega$)

Parameter	Ref	CHK50 EKA15D4	CHK100 EKA15D4	CHK200 EKA15D4	CHK300 EKA15D4	CHK400E KA15D4	CHK600 EKA15D4
Rated input $I_{pn}(A)$		50	100	200	300	400	600
Measuring range $I_p(A)$		0 \sim ± 150	0 \sim ± 300	0 \sim ± 600	0 \sim ± 900	0 \sim ± 900	0 \sim ± 900
Output voltage $V_o(V)$		$\pm 4.0*(IP/IPN)$					
Load resistance $R_L(K\Omega)$		>10					
Supply voltage $V_C(V)$		$(\pm 12\sim 15) \pm 5\%$					
Accuracy $XG(\%)$		@IPN, $T=25^{\circ}C$		$< \pm 1.0$			
Offset voltage $VOE(mV)$		@IP=0, $T=25^{\circ}C$		$< \pm 25$			
Temperature variation of VOE $VOT(mV/^{\circ}C)$		@IP=0, $-40 \sim +85^{\circ}C$		$< \pm 1.0$			
Hysteresis offset voltage $VOH(mV)$		@IP=0, after 1*IPN		$< \pm 25$			
Linearity error $\epsilon_r(\%FS)$		< 1.0					
Di/dt accurately followed ($A/\mu s$)		> 100					

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Response time $t_{ra}(\mu s)$	@90% of IPN	<5.0
Power consumption IC(mA)		15
Bandwidth Bw(KHZ)	@-3dB, IPN	DC-20
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	2.5

General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55~ +125
Mass M(g)	70
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

CHK-EKA15D4M	CHK-EKA15D4S	Connection
		<p>General tolerance</p> <p>General tolerance: <math>\leq \pm 0.5\text{mm}</math> Primary through-hole : $D21.0 \pm 0.15$ Connection of Secondary : CHK-EKA15D4M: 2510-04A (Instead of Molex 5045-04A) CHK-EKA15D4S: 15EDGK3.81-04P</p>

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.
- The dynamic performance is the best when the primary hole is fully filled with.
- The primary conductor should be <math>< 100^{\circ}\text{C}</math>.

WARNING : Incorrect wiring may cause damage to the sensor.



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