



Hall Current Sensor CYHCS012

Electrical Data/Input

Primary Nominal RMS Current I_r (A)	Primary Current Measuring Range I_p (A) at $V_{cc}=\pm 15V (\pm 12V)$	Primary Conductor \varnothing (mm)	Part number
3	$\pm 9 (\pm 6)$	0.6	CYHCS-L0030
5	$\pm 15 (\pm 10)$	0.8	CYHCS-L0050
10	$\pm 30 (\pm 20)$	1.0	CYHCS-L0100
15	$\pm 45 (\pm 30)$	1.6	CYHCS-L0150
20	$\pm 60 (\pm 40)$	1.6	CYHCS-L0200
25	$\pm 75 (\pm 50)$	1.6	CYHCS-L0250
30	$\pm 90 (\pm 60)$	2.0	CYHCS-L0300
35	$\pm 105 (\pm 70)$	2.0	CYHCS-L0350
40	$\pm 120 (\pm 80)$	2.0	CYHCS-L0400
45	$\pm 135 (\pm 90)$	2.0	CYHCS-L0450
50	$\pm 150 (\pm 100)$	2.0	CYHCS-I0500

Supply Voltage
Current Consumption
RMS Voltage for 2.5kV AC isolation test, 50/60Hz, 1min,
Isolation Resistance at 500V DC

$V_{cc} = \pm 15V (\pm 12V) \pm 5\%$
 $I_c < 20mA$
 $V_{is} < 10mA$
 $R_{is} > 500 M\Omega$

Electrical Data/Output

Output Voltage at I_r , $T_A=25^\circ C$:
Output Impedance:
Load Resistor:

$V_{out} = 4V$
 $R_{out} < 150\Omega$
 $R_L > 10k\Omega$

Accuracy

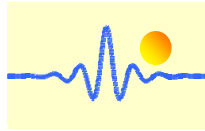
Accuracy at I_r , $T_A=25^\circ C$ (without offset),
Linearity from 0 to I_r , $T_A=25^\circ C$,
Electric Offset Voltage, $T_A=25^\circ C$,
Magnetic Offset Voltage ($I_r \rightarrow 0$)
Thermal Drift of Offset Voltage,
Thermal Drift ($-10^\circ C$ to $50^\circ C$),
Response Time at 90% of I_P ($f=1kHz$)
Frequency Bandwidth (-3dB),

$X < 1.0\%$
 $E_L < 1.0\%$
 $V_{oe} < 40mV$
 $V_{om} < 15mV$
 $V_{ot} < 1.5mV/^\circ C$
T.C. $< \pm 0.1\% /^\circ C$
 $t_r < 3\mu s$
 $f_b = 50 kHz$

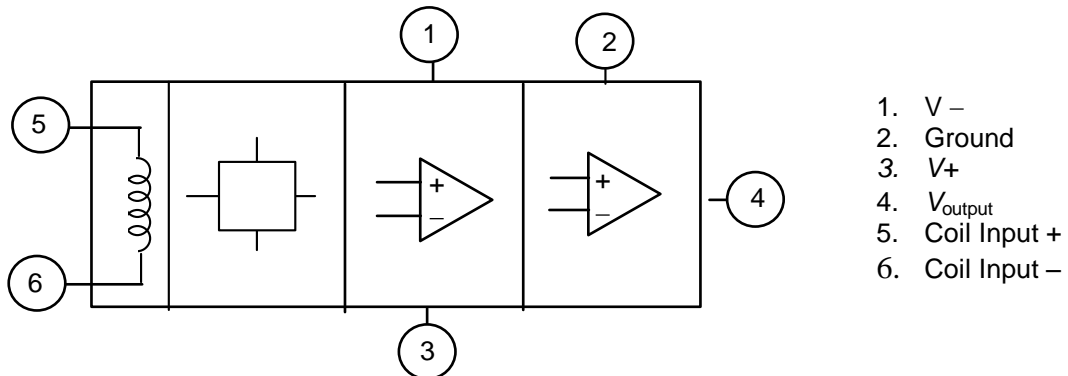
General Data

Ambient Operating Temperature,
Ambient Storage Temperature,

$T_A = -10^\circ C \sim +80^\circ C$
 $T_S = -25^\circ C \sim +85^\circ C$



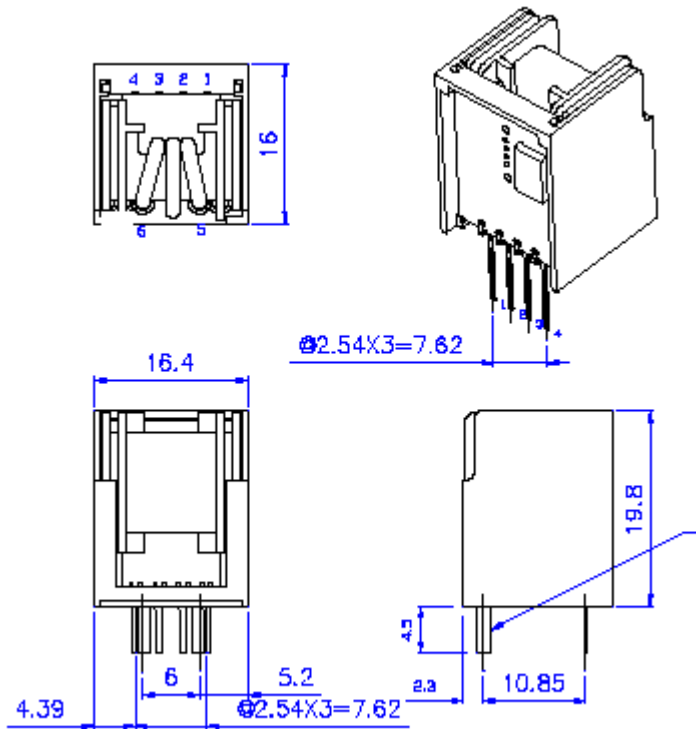
Functional Block Diagram



1. V -
2. Ground
3. V+
4. V_{output}
5. Coil Input +
6. Coil Input -

PIN Definition

Dimensions (mm) Tolerance: ±0.3mm



Terminal PIN Definition

1. V-
2. Ground
3. V+
4. Output
5. Coil Input +
6. Coil Input -

Primary Conductor Terminal

CYHCS-L0030	Ø 0.6
CYHCS-L0050	Ø 0.8
CYHCS-L0100	Ø 1.0
CYHCS-L0150	Ø 1.6
CYHCS-L0200	Ø 1.6
CYHCS-L0250	Ø 1.6
CYHCS-L0300	Ø 1.6
CYHCS-L0350	Ø 1.6x2
CYHCS-L0400	Ø 1.6x2
CYHCS-L0450	Ø 1.6x2
CYHCS-L0500	Ø 1.6x2

