Catalogue

Hall Effect Voltage Sensors

Contact Address:

Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang.de
http://www.chenyang.de

Contents

Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang.de
http://www.chenyang.de

Hall Effect Voltage Sensors CYHVS025A, CYHVS10-20A, CYHVS5-25A and CYHVS025T

CYHVS025A, CYHVS10-20A, CYHVS5-25A and CYHVS025T are Hall Effect Voltage sensors, which are based on closed loop and magnetic compensation principle. These sensors can be used for measuring DC and AC voltage with different wave forms. They have high electric isolation.

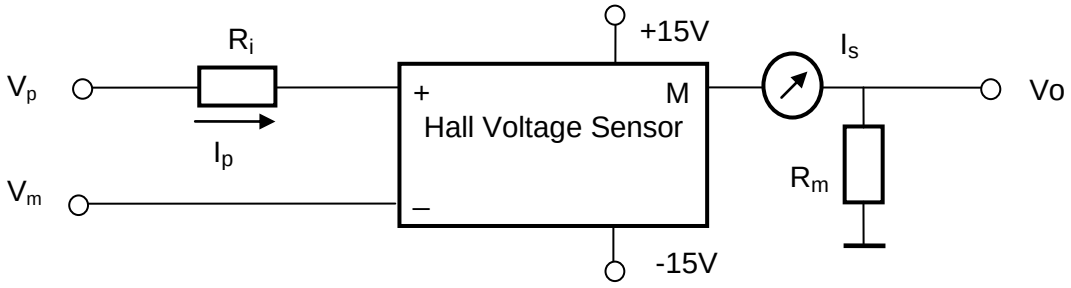
Features

- High electrical isolation
- High reliability
- Good overload capability
- Small sizes
- Insulated plastic case recognized according to UL94-V0
- Very good property-price ratio

Applications

- Switched Mode Power Supplies
- Uninterruptible power supplies (UPS)
- Overvoltage protection
- Feedback of control systems
- Electric power network monitoring
- AC frequency conversion servo-motors
- Various power supplies
- Power supply for welding applications

Measuring Principle



A magnetic field is generated by current I_p when a voltage (V_p-V_m) is applied on the input terminals of the sensor through the primary resistor R_i. This magnetic field is compensated with the reverse magnetic field caused by the current I_s in the secondary coil. The field compensation effect can be detected with a Hall Effect element. One obtains the following equation when the magnetic flux is zero:

$$N_p I_p = N_s I_s$$

where I_p: primary current; I_s: secondary current,
N_p: primary turns, N_s: secondary turns.

The secondary current I_s is considered as output current of the sensor. Therefore the voltage (V_p-V_m) can be measured in this way under using the measuring resistor R_m.

Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang.de
http://www.chenyang.de

Hall Effect Voltage Sensor CYHVS025A

Electrical Parameters

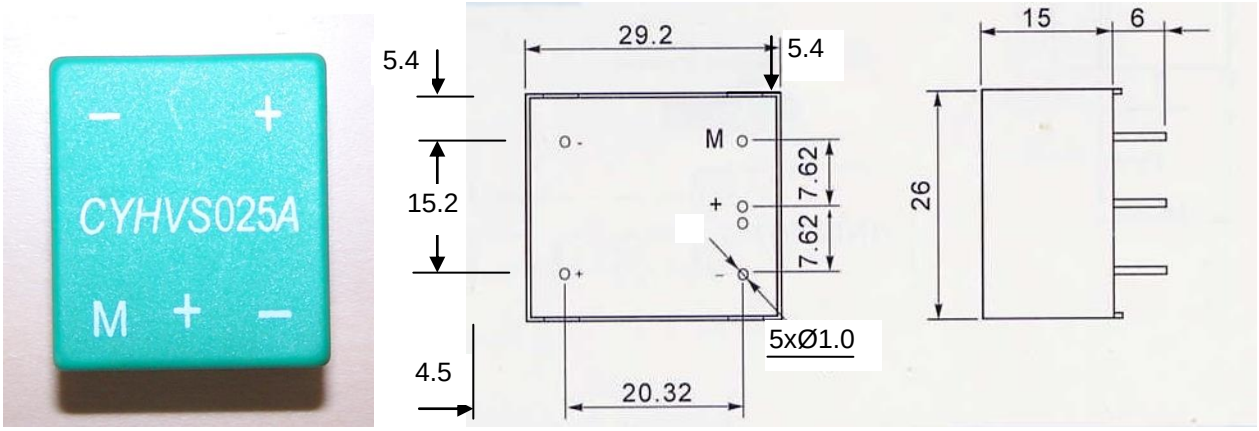
Parameters	Values			Unit
Rated input current (I_N)	±10			mA
Measuring range (I_P)	0~ ±14			mA
Rated measuring voltage	500			V
Max. measuring voltage	1000			V
Measuring resistance (R_M)		R_{Mmin}	R_{Mmax}	
	@±10mA	100	350	Ω
	@±14mA	100	190	Ω
Rated secondary current (I_S)	±25 (±0.5%)			mA
Power supply (V_c)	±15 (±5%)			V
Turns ratio (N)	2500 : 1000			
Current consumption (I_c)	15+Is			mA
Isolation voltage (Vd)	2.5kV/50Hz/1min			
Measuring accuracy (X_G)	±0.8% FS (see application note)			
Linearity (ε_L)	<0.2% FS			
Offset current (I_o)	±0.1			mA
Thermal drift of offset current Io (-40°C~+85°C)	±0.5			mA
Response time (t_r)	<40			µs
Ambient operating temperature (T_A)	- 40°C ~ +85°C			
Ambient storage temperature (T_S)	-40°C ~ +125°C			
Primary coil resistance (R_p)	@Ta=25°C, 200			Ω
Secondary coil resistance (R_s)	@Ta=25°C, 110			Ω

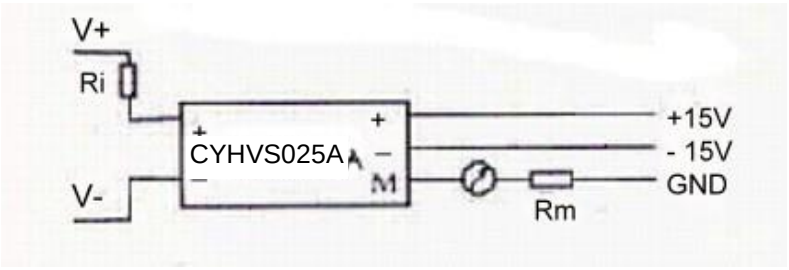
Polarity: output current I_s is positive when input current I_p is applied on the “+” terminal

Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang.de
http://www.chenyang.de

Case Style and Connection





Application Note

1) Determination of Primary Resistor R_i

The primary resistor R_i should be selected to enable the rated input current to be equal to 10mA in order to obtain an optimal measuring accuracy.

For instance, the resistor Ri is 25kΩ for a rated input voltage of 250V. Here is recommended resistor in dependence of the measuring voltage:

Rated input voltage (V)	Resistor Ri (kΩ)
10	1
50	5
100	10
200	20
300	30
400	40
500	50

2) Measuring accuracy

The measuring accuracy depends on the input current. For instance, for measuring voltage of 250V, the accuracy is as follows:

Accuracy =±1.6%	(Ta=+25°C)	Ri=50KΩ/5W, IP = 5mA
Accuracy =±0.8%	(Ta=+25°C)	Ri=25KΩ/10W, IP =10mA

3) Measuring Range

The sensors are suitable for measuring a voltage 0 ~ ±500V. The primary resistor should be considered when selecting the measuring range in order to keep the temperature heating to a possible low level and to guarantee the high electric isolation property.

.

Hall Effect Voltage Sensor CYHVS10-20A

Electrical Parameters

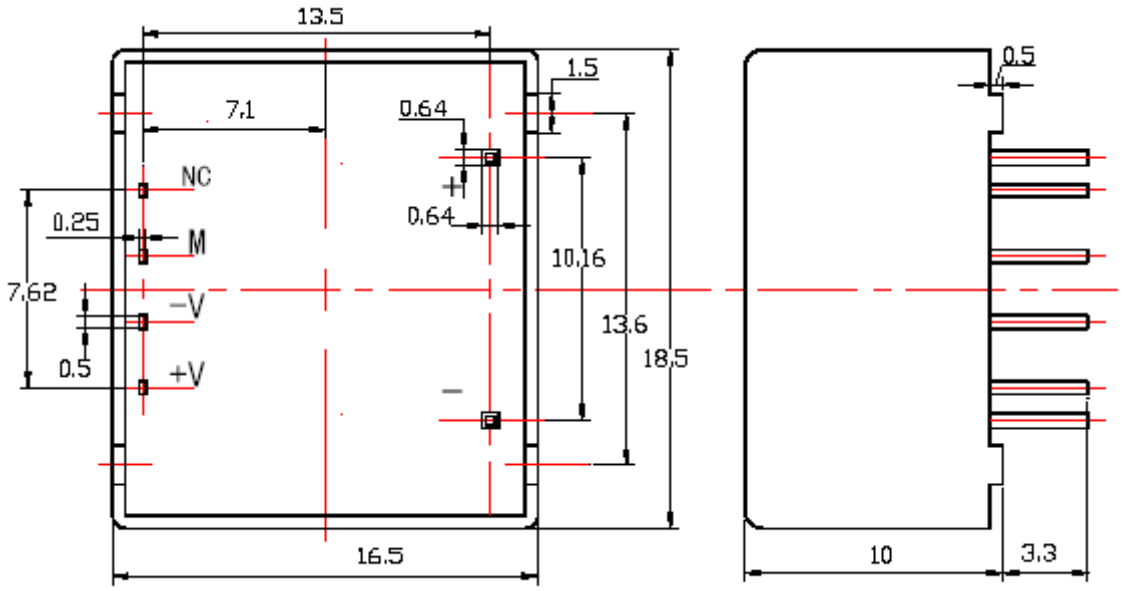
Parameters	Values			Unit
Rated input current (I_n)	±10			mA
Measuring range (I_P)	0~ ±20			mA
Rated measuring voltage	1000			V
Max. neasuring voltage	2000			V
Measuring resistance (R_M)		R_{Mmin}	R_{Mmax}	
	@±10mA	150	500	Ω
Rated secondary current (I_S)	±20 (±0.5%)			mA
Power supply (V_c)	±15 (±5%)			V
Turns ratio (N)	2000 : 1000			
Current consumption (I_c)	15+Is			mA
Isolation voltage (Vd)	2.5kV/50Hz/1min			
Measuring accuracy (X_G)	±0.8% FS (see application note)			
Linearity (ε_L)	<0.2% FS			
Offset current (I_o)	±0.15			mA
Thermal drift of offset current Io (-40°C~+85°C)	±0.6			mA
Response time (t_r)	<40			µs
Ambient operating temperature (T_A)	- 40°C ~ +85°C			
Ambient storage temperature (T_S)	-40°C ~ +125°C			
Primary coil resistance (R_p)	@Ta=25°C, 200			Ω
Secondary coil resistance (R_s)	@Ta=25°C, 100			Ω

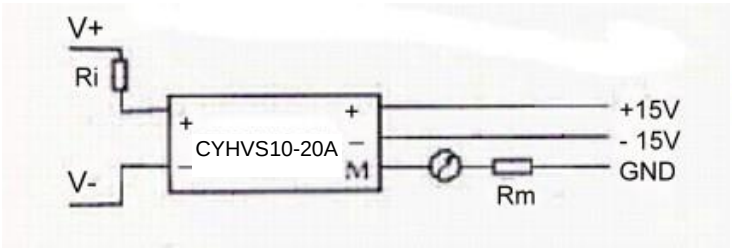
Polarity: output current I_s is positive when input current I_p is applied on the "+" terminal

Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang.de
http://www.chenyang.de

Case Style and Connection





Application Note

1) Determination of Primary Resistor R_i

The primary resistor R_i should be selected to enable the rated input current to be equal to 10mA in order to obtain an optimal measuring accuracy.

For instance, the resistor Ri is 50kΩ for a rated input voltage of 500V. Here is recommended resistor in dependence of the measuring voltage:

Rated input voltage (V)	Resistor Ri (kΩ)
100	10
200	20
500	50
600	60
700	70
800	80
900	90
1000	100

2) Measuring accuracy

The measuring accuracy depends on the input current. For instance, for measuring voltage of 250V, the accuracy is as follows:

Accuracy =±1.0%	(Ta=+25°C)	Ri=50KΩ/5W, IP = 5mA
Accuracy =±0.5%	(Ta=+25°C)	Ri=25KΩ/10W, IP =10mA

3) Measuring Range

The sensors are suitable for measuring a voltage 0 ~ ±1000V. The primary resistor should be considered when selecting the measuring range in order to keep the temperature heating to a possible low level and to guarantee the high electric isolation property.

.

Hall Effect Voltage Sensor CYHVS5-25A

Electrical Parameters

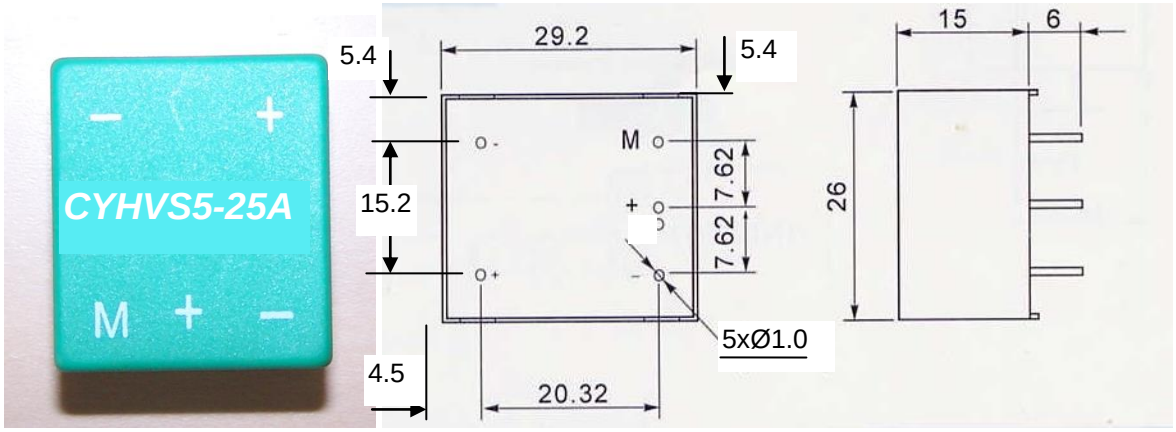
Parameters	Values			Unit
Rated input current (I_N)	±5			mA
Measuring range (I_P)	0~ ±7			mA
Rated measuring voltage	1500			V
Max. measuring voltage	2000			V
Measuring resistance (R_M)		R_{Mmin}	R_{Mmax}	
	@±5mA	100	350	Ω
	@±7mA	100	190	Ω
Rated secondary current (I_S)	±25 (±0.5%)			mA
Power supply (V_c)	±15 (±5%)			V
Turns ratio (N)	5000 : 1000			
Current consumption (I_c)	15+Is			mA
Isolation voltage (Vd)	2.5kV/50Hz/1min			
Measuring accuracy (X_G)	±0.8% FS (see application note)			
Linearity (ε_L)	<0.2% FS			
Offset current (I_o)	±0.1			mA
Thermal drift of offset current Io (-40°C~+85°C)	±0.5			mA
Response time (t_r)	<40			µs
Ambient operating temperature (T_A)	- 40°C ~ +85°C			
Ambient storage temperature (T_S)	-40°C ~ +125°C			
Primary coil resistance (R_p)	@Ta=25°C, 650			Ω
Secondary coil resistance (R_s)	@Ta=25°C, 110			Ω

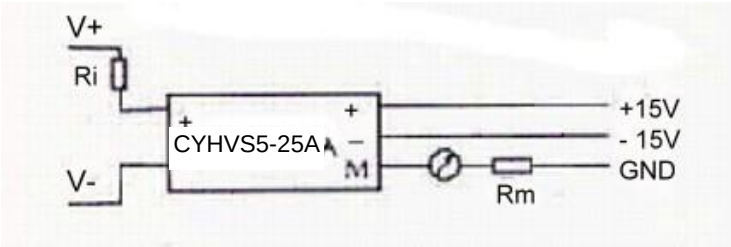
Polarity: output current I_s is positive when input current I_p is applied on the "+" terminal

Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang.de
http://www.chenyang.de

Case Style and Connection





Application Note

1) Determination of Primary Resistor R_i

The primary resistor R_i should be selected to enable the rated input current to be equal to 5mA in order to obtain an optimal measuring accuracy.

For instance, the resistor Ri is 100kΩ for a rated input voltage of 500V. Here is recommended resistor in dependence of the measuring voltage:

Rated input voltage (V)	Resistor Ri (kΩ)
100	20
500	100
600	120
700	140
800	160
900	180
1000	200
1500	300

2) Measuring accuracy

The measuring accuracy depends on the input current. For instance, for measuring voltage of 250V, the accuracy is as follows:

Accuracy =±1.6%	(Ta=+25°C)	Ri=100KΩ/5W, IP =2.5mA
Accuracy =±0.8%	(Ta=+25°C)	Ri=50KΩ/5W, IP =5mA

3) Measuring Range

The sensors are suitable for measuring a voltage 0 ~ ±1500V. The primary resistor should be considered when selecting the measuring range in order to keep the temperature heating to a possible low level and to guarantee the high electric isolation property.

.

Hall Effect Voltage Sensor CYHVS025T

Electrical Parameters

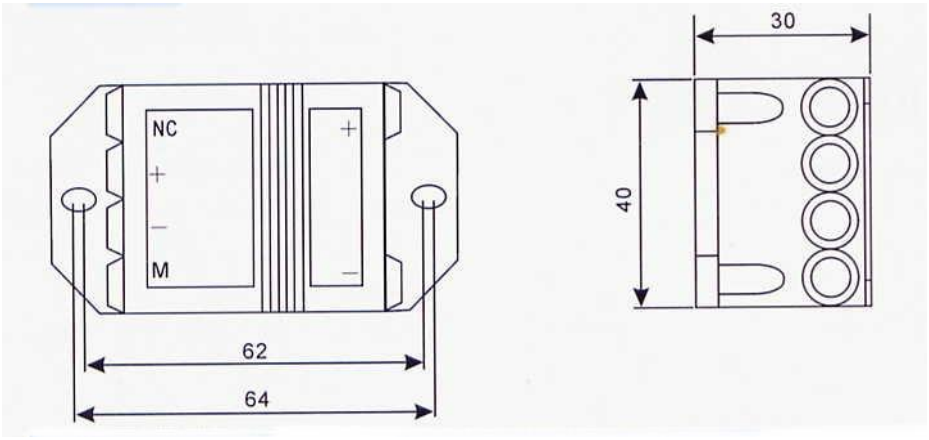
Parameters	Values			Unit
Rated input current (I_N)	±10			mA
Measuring range(I_P)	0~ ±14			mA
Measuring voltage range	100-2500			V
Measuring resistance (R_M)		R_{Mmin}	R_{Mmax}	
	@±10mA	100	300	Ω
Rated secondary current (I_S)	±25			mA
Power supply (V_c)	±15 (±5%)			V
Turns ratio (N)	2500 : 1000			
Current consumption (I_c)	10+Is			mA
Isolation voltage (Vd)	2.5kV/50Hz/1min			
Measuring accuracy (X_G)	±0.6% FS (Full Scale)			
Linearity (ε_L)	<0.2% FS			
Offset current (I_o)	typical	maximum		
	±0.1	±0.15		mA
Thermal drift of 0°C~70°C	±0.2	±0.3		mA
offset current Io -40°C~+85°C	±0.3	±0.6		mA
Response time (t_r)	<40			μs
Ambient operating temperature (T_A)	-10°C ~ +70°C			
Ambient storage temperature (T_S)	- 40°C ~ +85°C			
Primary resistance (R_i)	@Ta=25°C, 140			Ω
Secondary coil resistance (R_s)	@Ta=25°C, 40			Ω

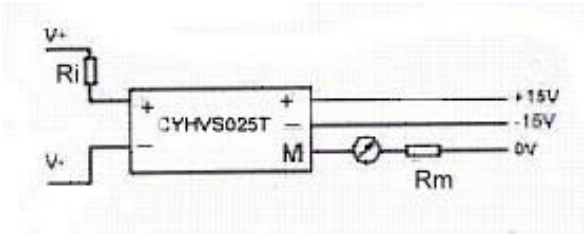
Polarity: output current I_s is positive when input current I_p is applied on the "+" terminal

Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang.de
http://www.chenyang.de

Case Style and Connection





Application Note

1) Determination of Primary Resistor R_i

The primary resistor R_i should be selected to enable the rated input current to be equal 10mA in order to obtain an optimal measuring accuracy.

For instance, the resistor Ri is 25kΩ for a rated input voltage of 250V. Here is recommended resistor in dependence of the measuring voltage:

Rated Input voltage (V)	Resistor Ri (kΩ)
100	10
200	20
500	50
1000	100
1500	150
2000	200
2500	250

2) Measuring Range

The sensors are suitable for measuring a voltage ±100 ~ ±2500V. The primary resistor should be considered when selecting the measuring range in order to keep the temperature heating to a possible low level and to guarantee the high electric isolation property.

Hall Effect Voltage Sensor CYHVS10-50LVA

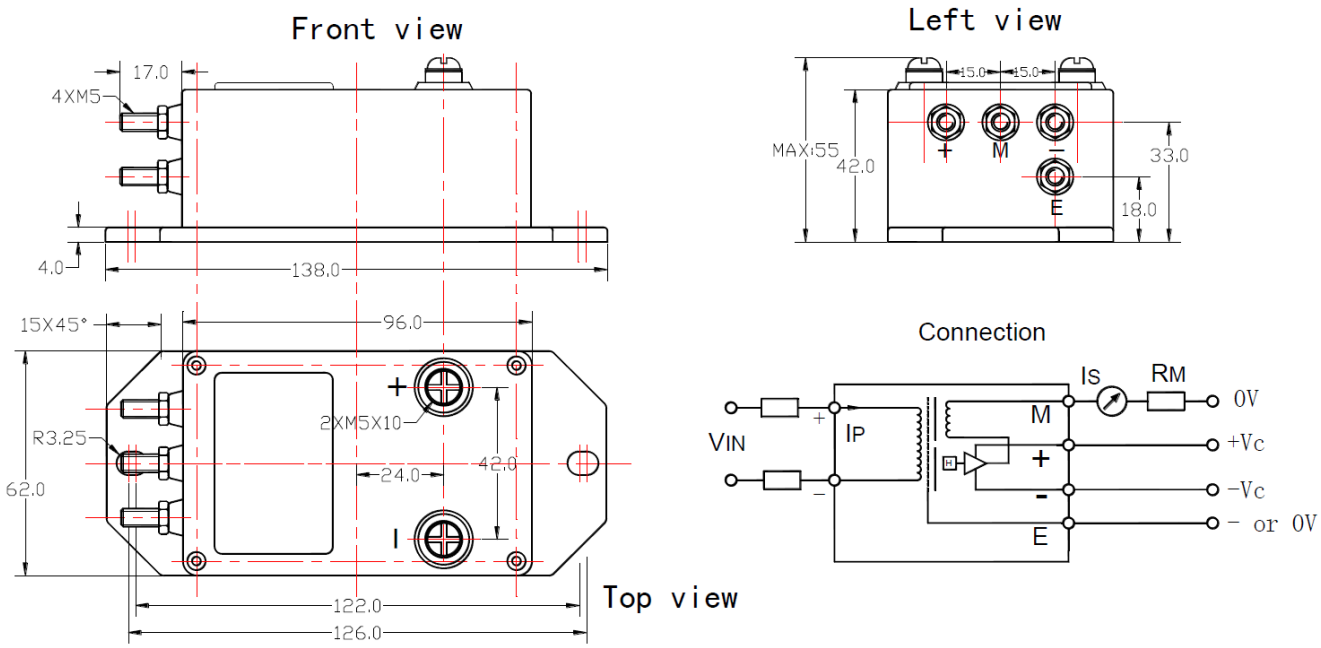
Technical Data

Parameters	Values			Unit
Rated input current (I_N)	±10			mA
Measuring range(I_P)	0~ ±20			mA
Measuring voltage range	100 – 2500 (possible maximum voltage 10000)			V
Measuring resistance (R_M)		R_{Mmin}	R_{Mmax}	Ω
	@ ±15V, I_N	50	200	
	@ ±15V, 2 x I_N	50	100	
	@ ±24V, I_N	100	330	
	@ ±24V, 2 x I_N	100	200	
Rated secondary current (I_S)	± 50 ± 0.5%			mA
Power supply (V_c)	±15 ~ ±24			V
Turns ratio (N)	5000 : 1000			
Current consumption (I_c)	20+Is			mA
Galvanic isolation Isolation voltage	@ 50Hz,AC,1min, between primary and secondary + shield: 12.0			kV
	@ 50Hz,AC,1min Between secondary and shield : 2.0			
Measuring accuracy (X_G)	±0.5% FS (Full Scale)			
Linearity (ε_L)	<0.1			% FS
Offset current (I_o)	@ Ip =0, ≤±0.2			mA
Thermal drift of offset current Io	@-40°C~+85°C ≤ ±0.5			mA
Response time (t_r)	≤200			µs
Ambient operating temperature (T_A)	-40 ~ +85			°C
Ambient storage temperature (T_S)	- 40 ~ +125			°C
Primary Impedance (Z_p)	1.5kΩ, 6H			
Secondary coil resistance (R_s)	@Ta=85°C, 55			Ω
Unit weight	450			g

Standards used for this sensor:

- UL94-V0.
- EN60947-1:2004
- IEC60950-1:2001
- EN50178:1998
- SJ 20790-2000

Case Style and Connection



Application Note

Determination of Primary Resistor R_i

The primary resistor R_i should be selected to enable the rated input current to be equal 10mA in order to obtain an optimal measuring accuracy.

For instance, the resistor Ri is 25kΩ for a rated input voltage of 250V. Here is recommended resistor in dependence of the measuring voltage:

Rated Input voltage (V)	Primary resistor Ri (kΩ) at input current of 10mA
100	10
200	20
300	30
400	40
500	50
600	60
700	70
800	80
900	90
1000	100
1500	150
2000	200
2500	250

-

With the selection of high power input resistors, the maximum possible measurement voltage is 10,000 V.

Measuring Range

The sensors are suitable for measuring a voltage ±100 ~ ±2500V. The primary resistor should be considered when selecting the measuring range in order to keep the temperature heating to a possible low level and to guarantee the high electric isolation property.

Hall Effect Voltage Sensor CYHVS100C

CYHVS100C is a new Hall Effect voltage sensor, which is based on Hall Effect closed loop and magnetic compensation principle. This sensor can be used for measuring and monitoring DC and AC voltages.

Features

- High electrical isolation
- High reliability
- Good overload capability
- Small sizes
- Insulated plastic case recognized according to UL94-V0

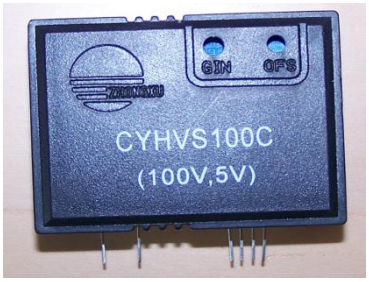
Applications

- Switched Mode Power Supplies
- Uninterruptible power supplies (UPS)
- Overvoltage protection
- Feedback of control systems
- Electric power network monitoring
- AC frequency conversion servo-motors
- Various power supplies

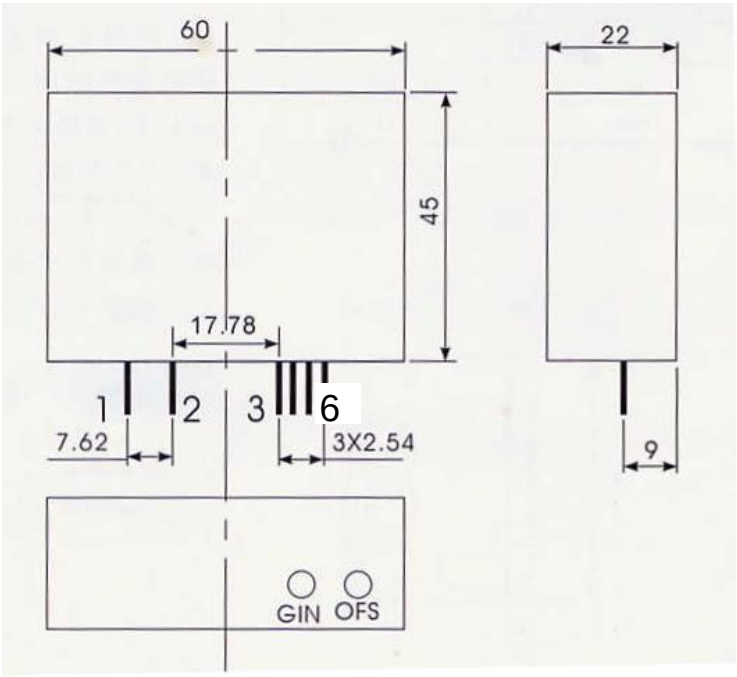
Electrical Parameters

Parameters	Typical	Maximum
Rated input voltage (V_N)	100V DC	
Measuring voltage range(V_{in})	0~200V DC	
Maximum measuring error (ε_M)	±0.5% FS	
Power supply (V_c)	±12V~±15V (±5%)	
Rated output voltage (V_o)	5 V DC	
Turns ratio (N)	4000 : 1000	
Isolation voltage (Vd)	2.5kV/50Hz/1min	
Linearity (ε_L)	±0.2% FS	±0.4% FS
Offset voltage (V_{os})	±10mV	±20mV
Thermal drift of 0°C~70°C	±0.5mV/°C	±1.0mV/°C
offset voltage V_{os} -40°C~+85°C	±1.0mV/°C	±2.0mV/°C
Frequency band width (f_b)	DC~ 10kHz (-3dB)	
Ambient Operating Temperature (T_A)	-10°C ~ +70°C	
Ambient Storage Temperature (T_S)	- 25°C ~ +85°C	
Input resistance (R_i)	@Ta=25°C, 21kΩ	

Case Style and Connection



1. Input +
2. Input –
3. Power supply +
4. Power supply –
5. GND
6. Output



Application Note

1) The sensor is connected according to the figure shown above. The output voltage can be detected at the output terminal when the measuring voltage is applied on the input terminal of the sensor. (Note: the sensor can be damaged by a incorrect connection)
2) Measuring voltage range of this sensor is 100V~200V.
3) OFS: adjustment of DC zero point;
   GIN: adjustment of the gain (amplitude of the output voltage)

Hall Effect Voltage Sensor CYHVS500T

CYHVS500T is a Hall Effect Voltage sensor, which is based on Hall Effect and magnetic compensation principle. This sensor can be used for measuring DC and AC voltage with different wave forms. It has high electric isolation.

Features

- High electrical isolation
- High reliability
- Good overload capability
- Small sizes
- Insulated plastic case recognized according to UL94-V0

Applications

- Switched Mode Power Supplies
- Uninterruptible power supplies (UPS)
- Overvoltage protection
- Feedback of control systems
- Electric power network monitoring
- AC frequency conversion servo-motors
- Various power supplies

Electrical Parameters

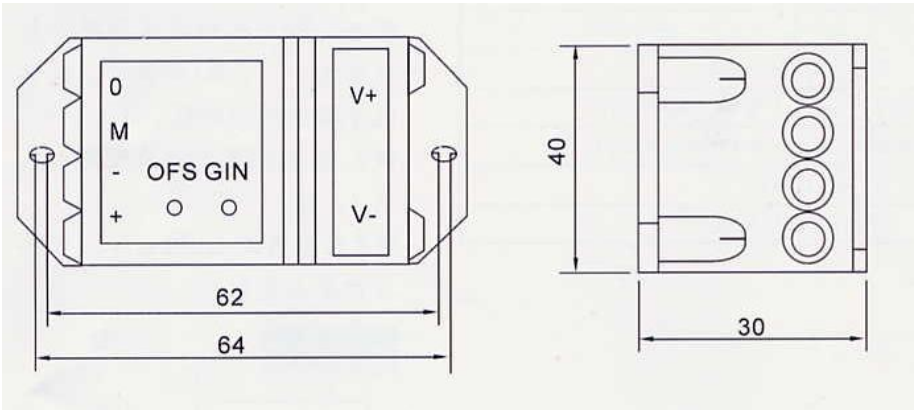
Parameters	Part number				
	CYHVS100T	CYHVS200T	CYHVS300T	CYHVS400T	CYHVS500T
Rated input voltage (V_N)	100V	200V	300V	400V	500V
Linear measuring range (V_{in})	0~150V	0~300V	0~450V	0~600V	0~750V
Rated output voltage V_{oN}	4V or 5V				
Power supply (V_c)	±12V~±15V (±5%)				
Offset voltage (V_{os})	≤ ±40mV				
Thermal drift of V_{os}	≤ ±1mV/°C				
Linearity (ε_L)	≤ ±1.0% FS				
Response time (t_r)	≤ 40μs				
Isolation voltage (V_d)	2.5kV/50Hz/1min				
Frequency band width (f_b)	DC~ 10kHz (-3dB)				
Current consumption (I_c)	< 25mA				
Measuring accuracy (X_G)	< ±1.0% FS (Full Scale)				
Ambient Operating Temperature (T_A)	-10°C ~ +70°C				
Ambient Storage Temperature (T_S)	- 25°C ~ +85°C				

Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang.de
http://www.chenyang.de

Case Style and Connection

CYHVS500T



"V+" Input +
"+" Power supply +
"O" GND

"V-" Input –
"-" Power supply –
"M" Output

Application Note

1) The sensor is connected according to the figure shown above. The output voltage can be detected at the output terminal M when the measuring voltage is applied on the input terminal of the sensor. (Note: the sensor can be damaged by a incorrect connection)
2) OFS: adjustment of DC zero point;
   GIN: adjustment of the gain (amplitude of the output voltage)

Hall Effect Voltage Sensor CYHVS5000LV

CYHVS5000LV is a Hall Effect Voltage sensor, which is based on closed loop and magnetic compensation principle. This sensor can be used for measuring DC and AC voltage with different wave forms. It has high electric isolation.

Features

- High electrical isolation
- High reliability
- Good overload capability
- Small sizes
- Insulated plastic case recognized according to UL94-V0
- Very good property-price ratio

Applications

- Battery supplied applications
- Uninterruptible power supplies (UPS)
- Variable speed drives
- Welding machine
- Electric power network monitoring
- AC frequency conversion servo-motors
- Electrochemical applications

Technical Data

Parameters	CYHCS-100LV	CYHCS-300LV	CYHCS-500LV	CYHCS-1000LV	CYHCS-2000LV	CYHCS-3000LV	CYHCS-4000LV	CYHCS-5000LV	Unit
Rated input Voltage (V_N)	100	300	500	1000	2000	3000	4000	5000	V
Measuring range(V_P)	200	600	1000	2000	4000	6000	6000	7500	V
Total input power consumption	1	1.5	3.125	2.5	5	5.625	10	8	W
Rated Input current (I_p)	10	5	6.25	2.5	2.5	1.875	2.5	1.6	mA
Turns ratio (N_p/N_s)	5000 : 1000	10000 :1000	8000 : 1000	20000 : 1000	20000 : 1000	26666 : 1000	20000 : 1000	30000 : 960	T
Secondary coil resistance (R_s)	@Ta=85°C, 55								Ω
Rated output current Is	@ Vp=±V_N, ±50 ± 0.5%								mA
Measuring resistance (R_M)	@ ±15V V_{PN} 50(min), 200(max)								Ω
	@ ±15V 2 x V_{PN} 50(min), 100(max)								Ω
	@ ±24V V_{PN} 100(min), 330(max)								Ω
	@ ±24V 2 x V_{PN} 100(min), 200(max)								Ω
Power supply (V_c)	±15 ~ ±24								V
Current consumption (I_c)	20+Is								mA
Galvanic isolation voltage	@ 50Hz,AC,1min, between primary and secondary + shield: 12.0								kV
	@ 50Hz,AC,1min Between secondary and shield : 2.0								
Measuring accuracy (X_G)	±0.5% FS (Full Scale)								
Linearity (ε_L)	@ Vp =0-±Vpn ≤0.1								% FS
Offset current (I_o)	@ Vp =0, ≤±0.2								mA
Thermal drift of offset current Io	@-40°C~+85°C ≤ ±0.6								mA
Response time (t_r)	≤200								µs

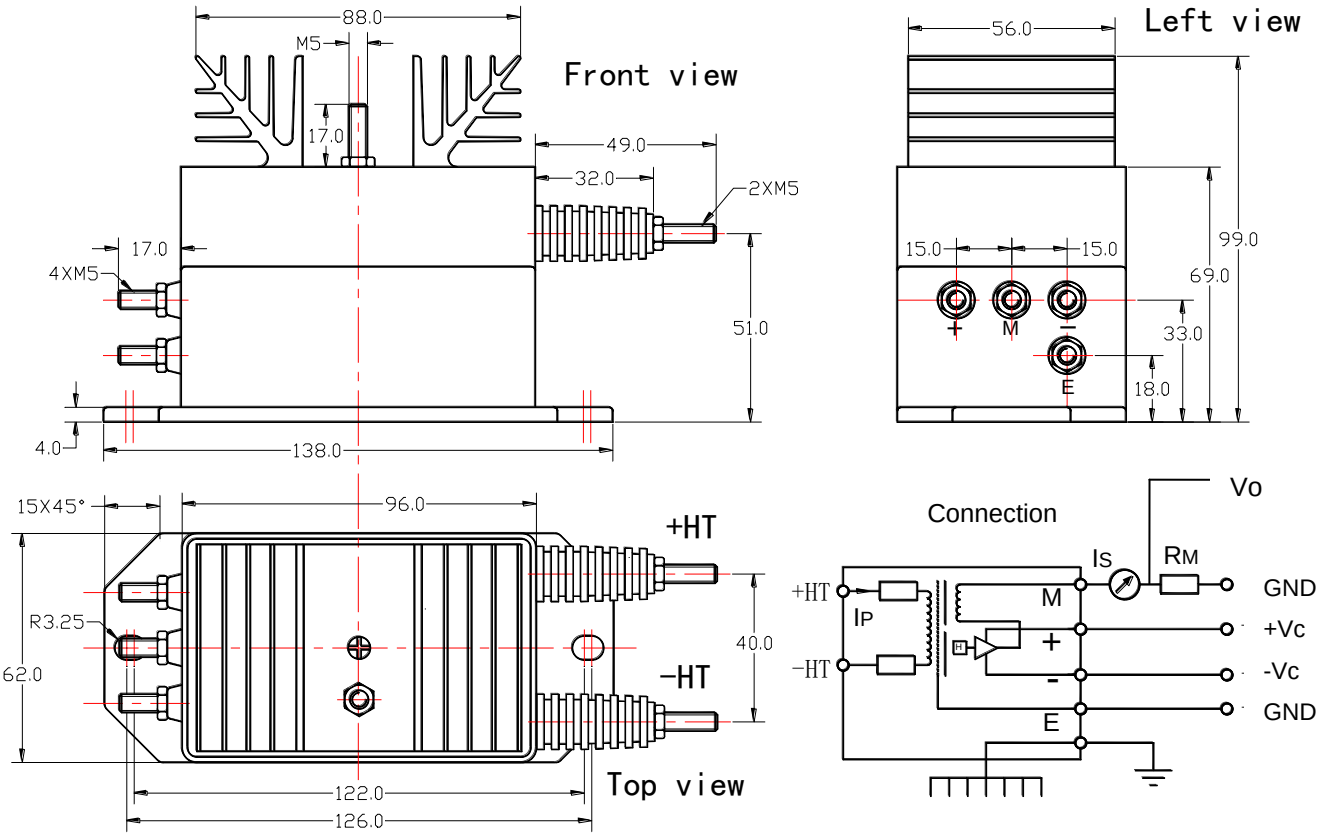
General Data

Ambient operating temperature (T_A)	-40 ~ +85	°C
Ambient storage temperature (T_S)	- 40 ~ +125	°C
Unit weight	850	g

Standards used for this sensor:

- UL94-V0.
- EN60947-1:2004
- IEC60950-1:2001
- EN50178:1998
- SJ 20790-2000

Case Style and Connection (all dimensions are in mm)



The output current Is is positive when the Ip is applied to the terminal +HT. Temperature of the primary conductor should not exceed 100℃.

AC/DC Hall Effect Voltage Sensors CYHVS800D and CYHVS800DA

CYHVS800D and CYHVS800DA are Hall Effect Voltage sensors, which are based on Hall Effect closed loop and magnetic compensation principle. These sensors can be used for measuring AC and DC voltage with different wave forms. They have high electric isolation.

Features

- High electrical isolation
- High reliability
- Good overload capability
- Small sizes
- Insulated plastic case recognized according to UL94-V0

Applications

- Switched Mode Power Supplies
- Uninterruptible power supplies (UPS)
- Overvoltage protection
- Feedback of control systems
- Electric power network monitoring
- AC frequency conversion servo-motors
- Various power supplies

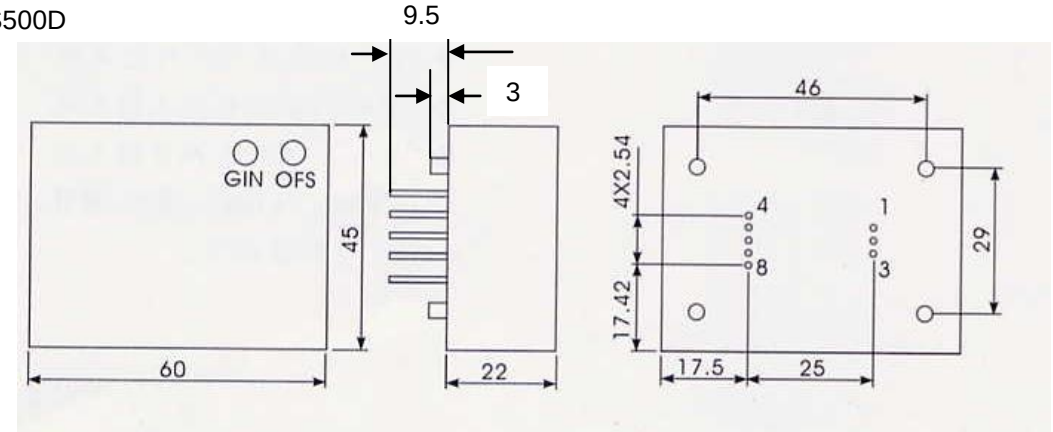
AC/DC Hall Effect Voltage Sensor CYHVS800D

Electrical Parameters

Parameter	Part Number				
	CYHVS50D	CYHVS200D	CYHVS400D	CYHVS500D	CYHVS800D
Rated input voltage (V_N)	±50V	±200V	±400V	±500V	±800V
Measuring voltage range(V_{in})	0~±100V	0~±400V	0~±800V	0~±1000V	0~±1000V
Rated output current (I_s)	20mA				
Turns ratio (N)	4000 : 1000				
Measuring Resistance (R_m)	Vc = ±15VDC, 54~360Ω				
Power supply (V_c)	±12V ~ ±15V DC				
Isolation voltage (Vd)	2.5kV/50Hz/1min				
Linearity (ε_L)	±0.2% FS				
Maximum measuring error (ε_M)	Ta=25°C, Vc=±15VDC ±0.8% FS				
Offset current (I_o)	Ta=25°C, ±0.2mA				
Thermal drift of offset current	Vp=0, Ta=-25°C ~ +85°C ±0.5mA				
Response time	100μs				
Frequency band width (f_b)	DC~ 5kHz (-3dB)				
Ambient Operating Temperature (T_A)	40°C ~ +85°C				
Ambient Storage Temperature (T_S)	-55°C ~ +125°C				
Input resistance (R_i)	Ta=25°C, 400kΩ				
Secondary coil resistance (R_s)	Ta=25°C, 50Ω				

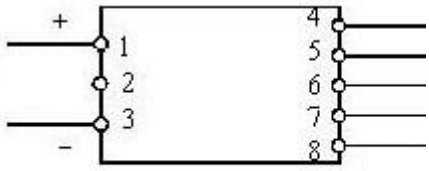
Case Style and Connection

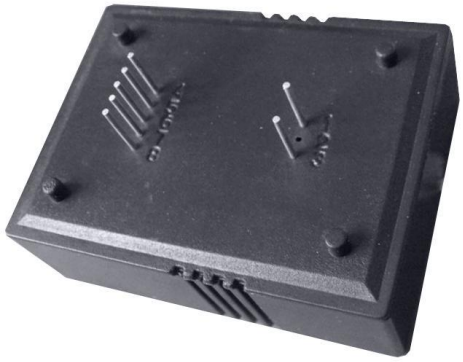
CYHVS500D

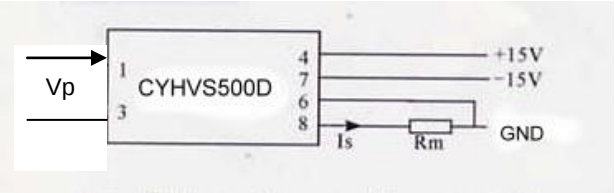


Markt Schwabener Str. 8
D-85464 Finsing
Germany

Tel: +49 (0)8121-2574100
Fax: +49 (0)8121-2574101
Email: info@chenyang.de
http://www.chenyang.de







1. Input +
2. NC
3. Input -
4. Power supply +
5. NC
6. GND
7. Power supply –
8. Output

Application Note

1) The sensor is connected according to the figure shown above. The output voltage can be detected at the output terminal when the measuring voltage is applied on the input terminal of the sensor. (Note: the sensor can be damaged by a incorrect connection)
2) Maximum measuring voltage range of this sensor is 1.5 times of the rated input voltage.
3) OFS: adjustment of DC zero point;
   GIN: adjustment of the gain (amplitude of the output voltage)

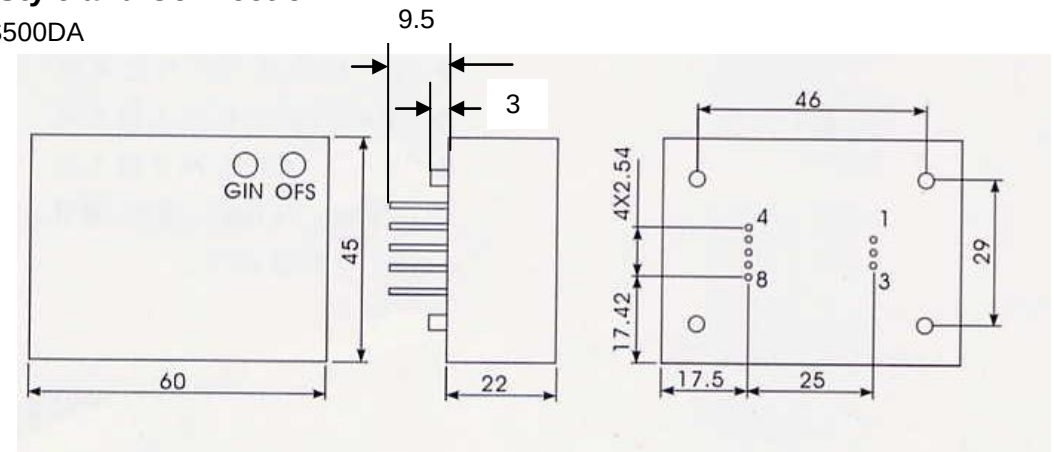
AC Hall Effect Voltage Sensor CYHVS800DA

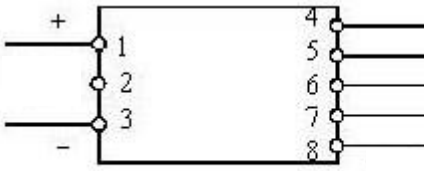
Electrical Parameters

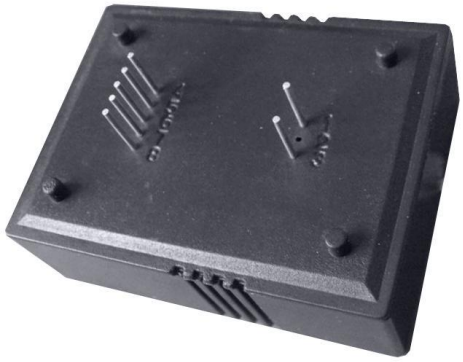
Parameter	Part number				
	CYHVS50DA	CYHVS200DA	CYHVS400DA	CYHVS500DA	CYHVS800DA
Rated input voltage (V_N)	50V AC	200V AC	400V AC	500V AC	800V AC
Measuring voltage range(V_{in})	100V AC	400V AC	800V AC	1000V AC	1000V AC
Rated output current (I_s)	0-20mADC				
Turns ratio (N)	4000 : 1000				
Measuring Resistance (R_m)	Vc = ±15VDC, 54~360Ω				
Power supply (V_c)	±12V ~ ±15V DC				
Isolation voltage (Vd)	2.5kV/50Hz/1min				
Linearity (ε_L)	±0.2% FS				
Maximum measuring error (ε_M)	Ta=25°C, Vc=±15VDC ±0.8% FS				
Offset current (I_o)	Ta=25°C, ±0.2mA				
Thermal drift of offset current	Vp=0, Ta=-25°C ~ +85°C ±0.5mA				
Response time	100ms				
Frequency band width (f_b)	20Hz ~ 5kHz (-3dB)				
Ambient Operating Temperature (T_A)	40°C ~ +85°C				
Ambient Storage Temperature (T_S)	-55°C ~ +125°C				
Input resistance (R_i)	Ta=25°C, 400kΩ				
Secondary coil resistance (R_s)	Ta=25°C, 50Ω				

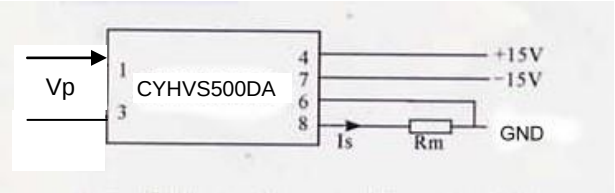
Case Style and Connection

CYHVS500DA









1. Input +
2. NC
3. Input -
4. Power supply +
5. NC
6. GND
7. Power supply –
8. Output

Application Note

1) The sensor is connected according to the figure shown above. The output voltage can be detected at the output terminal when the measuring voltage is applied on the input terminal of the sensor. (Note: the sensor can be damaged by a incorrect connection)
2) Maximum measuring voltage range of this sensor is 1.5 times of the rated input voltage.
3) OFS: adjustment of DC zero point;
   GIN: adjustment of the gain (amplitude of the output voltage)