

Premo presents HCT-SY series DC/AC current transducer, as a new current transducer developed by applying magnetic modulation principle, has good stability of low current and highly insulated primary and secondary, and can be used for measuring signal systems and circuit detection.



Features

- Close loop Hall Effect sensor.
- Bipolar power supply.
- High accuracy.
- Low power consumption.
- Isolated plastic case recognized according to UL94-V0.
- EN60947-1:2004, IEC60950-1:2001, EN50178:1998 compliant.
- UL certified.



Electrical parameters

	Symbol	Min	Typ	Max	Unit
Nominal current	I_{pn}				
HCT-10SY			10		A
HCT-15SY			15		A
HCT-20SY			20		A
HCT-25SY			25		A
HCT-50SY			50		A
Measuring range	I_p				
HCT-10SY		-30		30	A
HCT-15SY		-45		45	A
HCT-20SY		-60		60	A
HCT-25SY		-75		75	A
HCT-50SY		-150		150	A
Rated output	V_o	-4		4	V
Supply voltage ($\pm 5\%$)	V_{cc}	± 12		± 18	V
Internal resistor ($\pm 0.1\%$)	R_{IN}				
HCT-10SY			400		Ω
HCT-15SY			250		Ω
HCT-20SY			400		Ω
HCT-25SY			400		Ω
HCT-50SY			250		Ω
Turns ratio	N_s				
HCT-10SY			2:2000		
HCT-15SY			2:1875		
HCT-20SY			1:2000		
HCT-25SY			1:2500		
HCT-50SY			1:3125		
Current consumption ($I_{pn} = 0$ A)	I_{cc}	15			mA



Load resistance	R_L		1000		Ω
Capacitive loading	C_L		1000		pF



Performance parameters

	Symbol	Min	Typ	Max	Unit
Accuracy (measured at full scale)		±0.5			%
Linearity (measured at full scale)	ϵ_{LLR}			0.1	%
Offset voltage	V_{OS}	-20		20	mV
Offset voltage drift (starting at -40 °C)	KV_{OS}			±0.5	mV/°C
Response time	T_R			1	µs
di/dt		50			A/µs
Bandwidth (-3 dB)	F_C	0		150	kHz

Isolation parameters

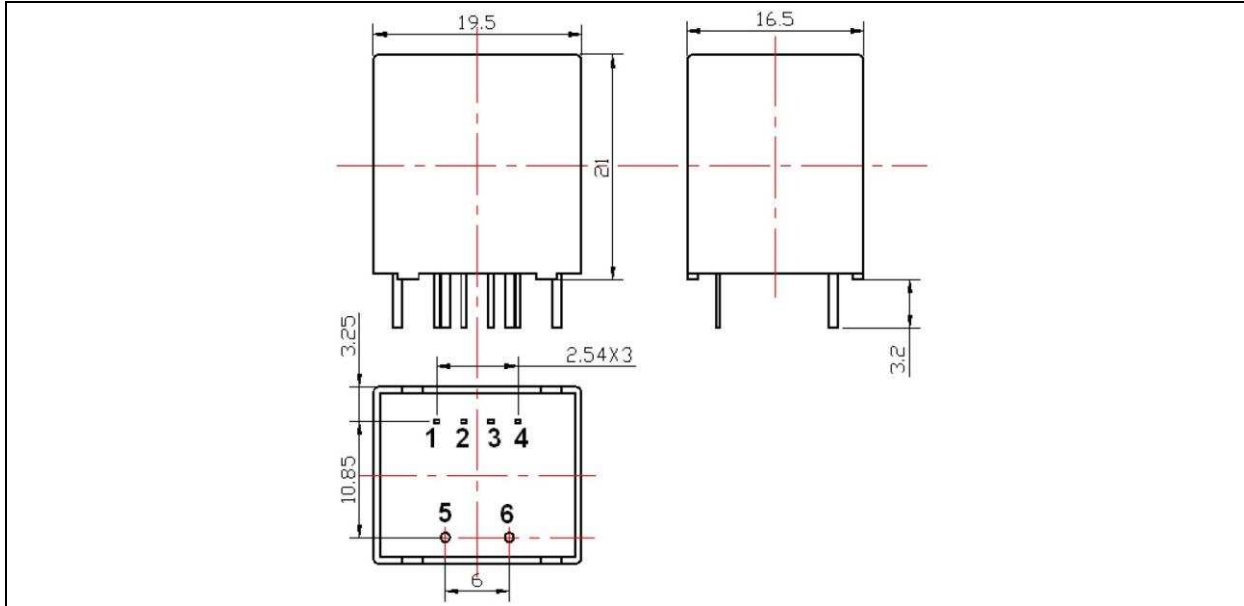
	Symbol	Min	Typ	Max	Unit
Galvanic isolation (50 Hz, 1 min)	V_I		3		kV

General parameters

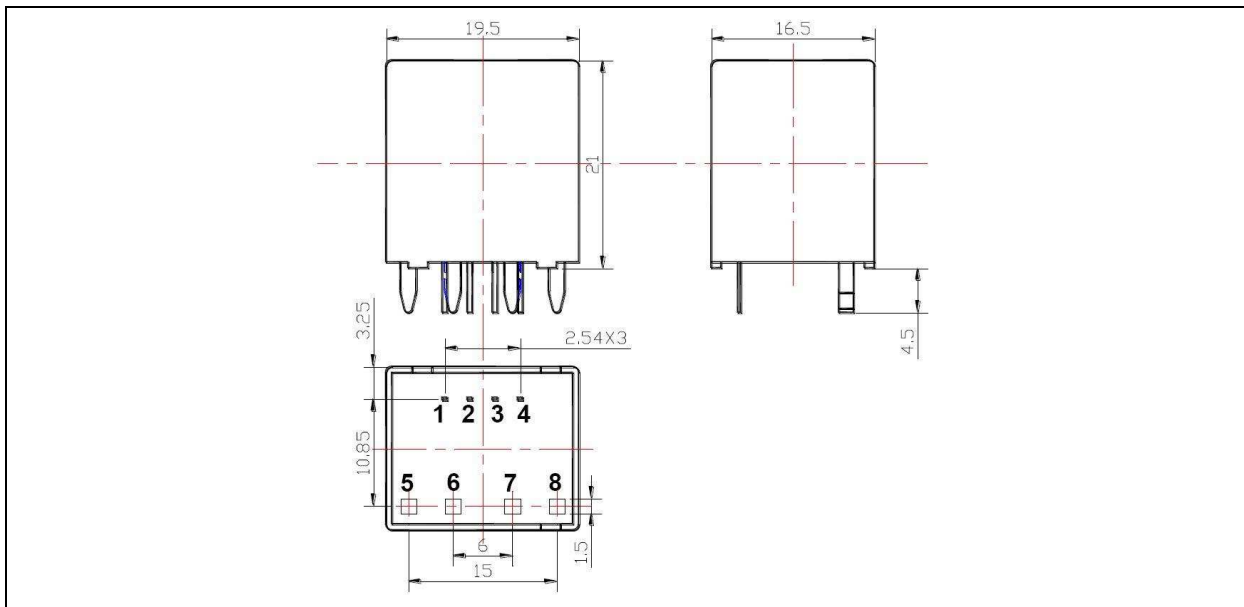
	Symbol	Min	Typ	Max	Unit
Operating temperature	T_A	-40		85	°C
Storage temperature	T_S	-40		125	°C
Mass	m		12		g

Dimensions

HCT-10SY, HCT-15SY, HCT-20SY, HCT-25SY



HCT-50SY





Pin description

Pin	Value
1	-Vcc
2	Ground
3	+Vcc
4	Output
5	+IN
6	-IN ¹⁾ +IN ²⁾
7	-IN ²⁾
8	-IN ²⁾

¹⁾HCT-10SY, HCT15SY, HCT-20SY, HCT-25SY

²⁾HCT-50SY only

Primary pins size

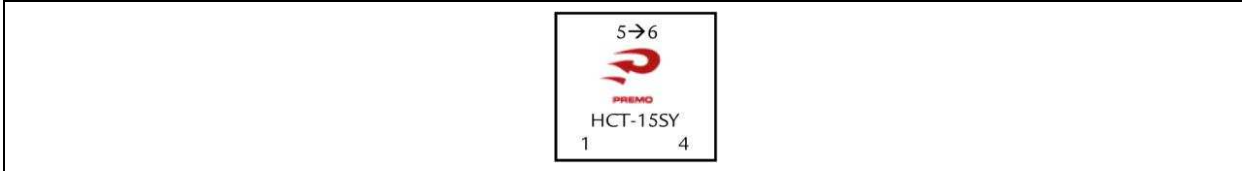
	Dimensions	Units
HCT-10SY	Ø 0.8	mm
HCT-15SY	Ø 1.0	mm
HCT-20SY	Ø 1.4	mm
HCT-25SY	Ø 1.4	mm
HCT-50SY	1.5x1.5	mm

Mechanical notes

1. All dimensions are in mm.
2. General tolerance according to ISO 2768-c

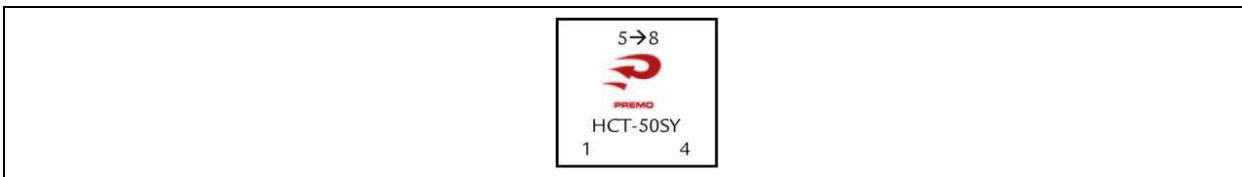
Marking

HCT-10SY, HCT-15SY, HCT-20SY, HCT-25SY



(HCT-15SY marking example)

HCT-50SY



Marking notes

1. Component is marked on the top side.
2. Arrow indicates direction of positive currents.