

Premo presents HCT-DS5 series AC/DC 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

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



## 1. Electrical parameters

	Symbol	Min	Typ	Max	Unit
Nominal current	$I_{PN}$				
HCT-06DS5			6		A
HCT-15DS5			15		A
HCT-25DS5			25		A
HCT-50DS5			50		A
Measuring range	$I_p$				
HCT-06DS5		-19.2		19.2	A
HCT-15DS5		-48		48	A
HCT-25DS5		-80		80	A
HCT-50DS5		-150		150	A
Reference voltage	$V_O$			2.5	V
Rated output	$V$	-0.625		0.625	V
Supply voltage ( $\pm 5\%$ )	$V_{CC}$			5	V
Number of turns					
HCT-06DS5			960		
HCT-15DS5			1200		
HCT-25DS5			2000		
HCT-50DS5			2000		
Current consumption	$I_{CC}$		$15 + I_s$		mA
Internal resistor ( $\pm 0.1\%$ )	$R_C$				
HCT-06DS5			100		$\Omega$
HCT-15DS5			50		$\Omega$
HCT-25DS5			50		$\Omega$



## AC/DC Current transducers HCT-DS5 series

Email: [info@grupopremo.com](mailto:info@grupopremo.com)  
Web: <http://www.grupopremo.com>

HCT-50DS5			25		$\Omega$
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### 2. Performance parameters

	Symbol	Min	Typ	Max	Unit
Accuracy (measured at full scale)		$\pm 0.5$			%
Linearity (measured at full scale)	$\varepsilon_{LLR}$			0.1	%
Offset voltage drift (starting at -40 °C)	$KV_{OS}$			$\pm 0.5$	mV/°C
Response time	$T_R$			500	ns
di/dt		50			A/ $\mu$ s
Bandwidth (-1 dB)	$F_C$	0		200	kHz

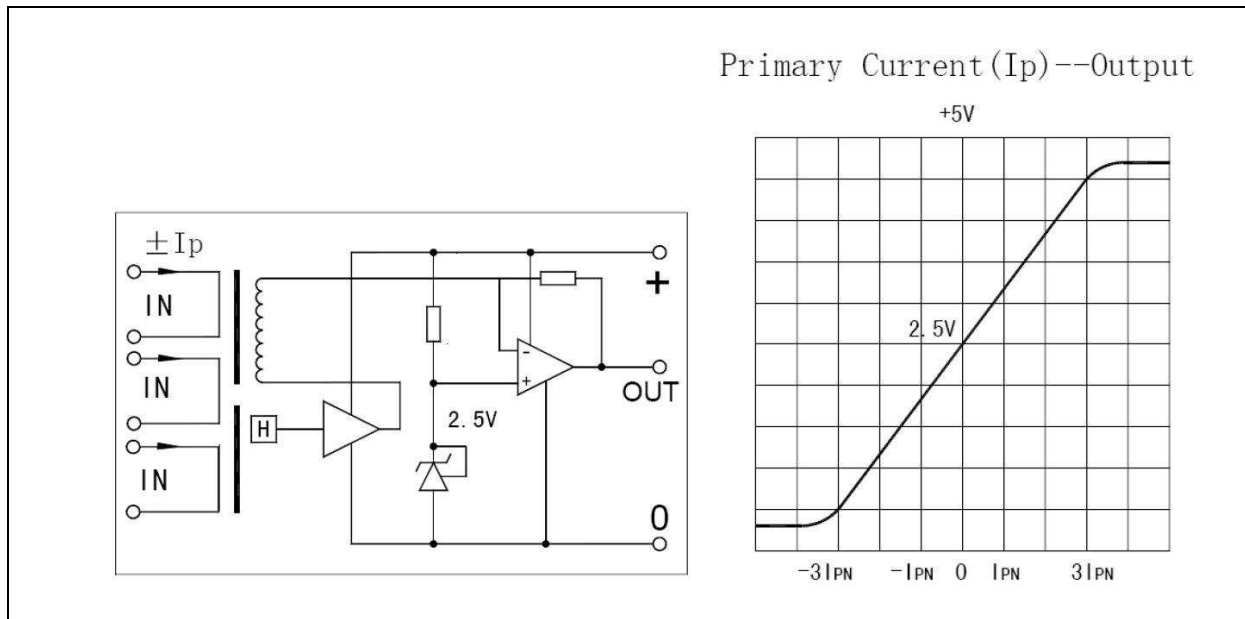
### 3. Isolation parameters

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

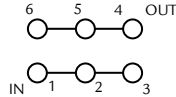
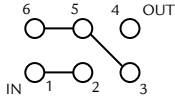
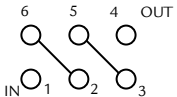
### 4. General parameters

	Symbol	Min	Typ	Max	Unit
Operating temperature	$T_A$	-40		85	°C
Storage temperature	$T_S$	-40		125	°C
Mass	m		10		g

## 5. Electrical connexion

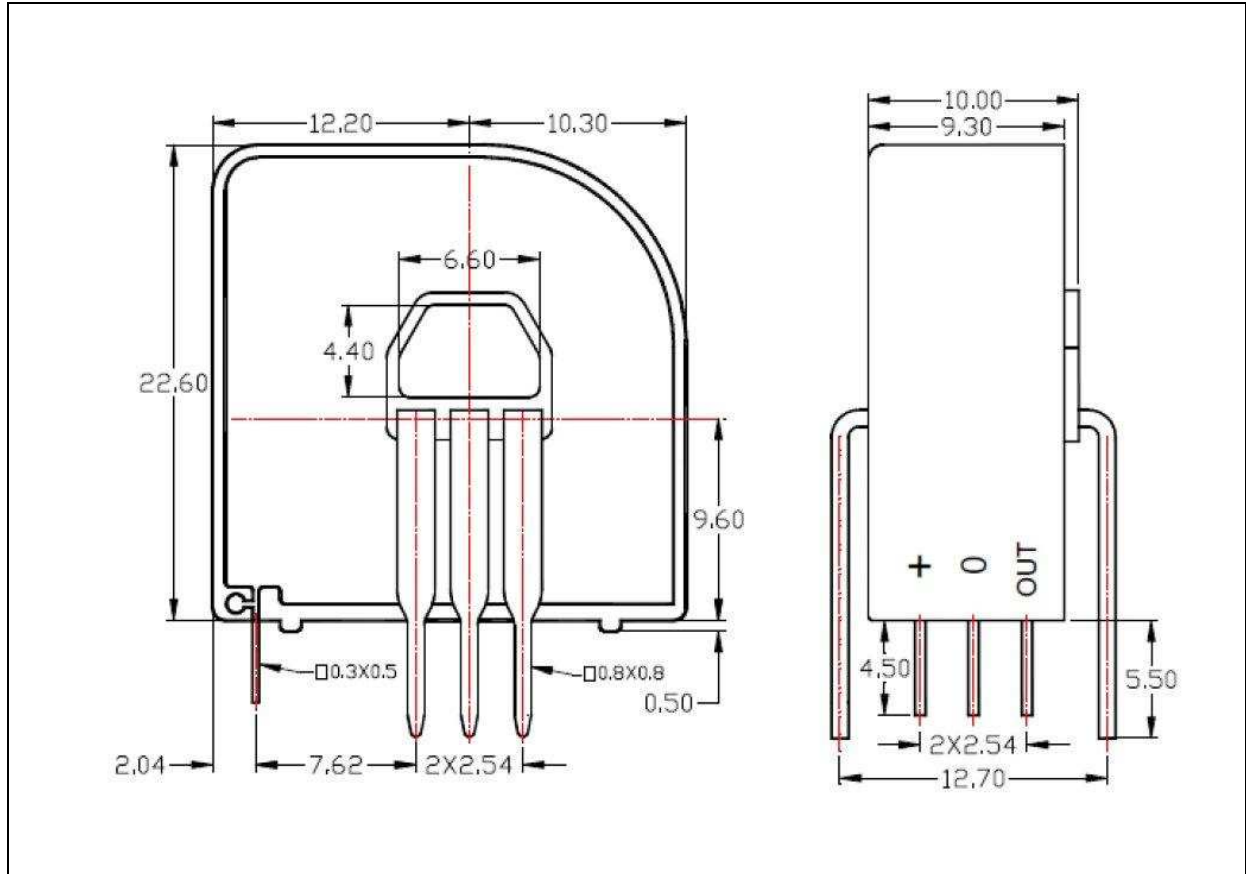


### Connection configuration

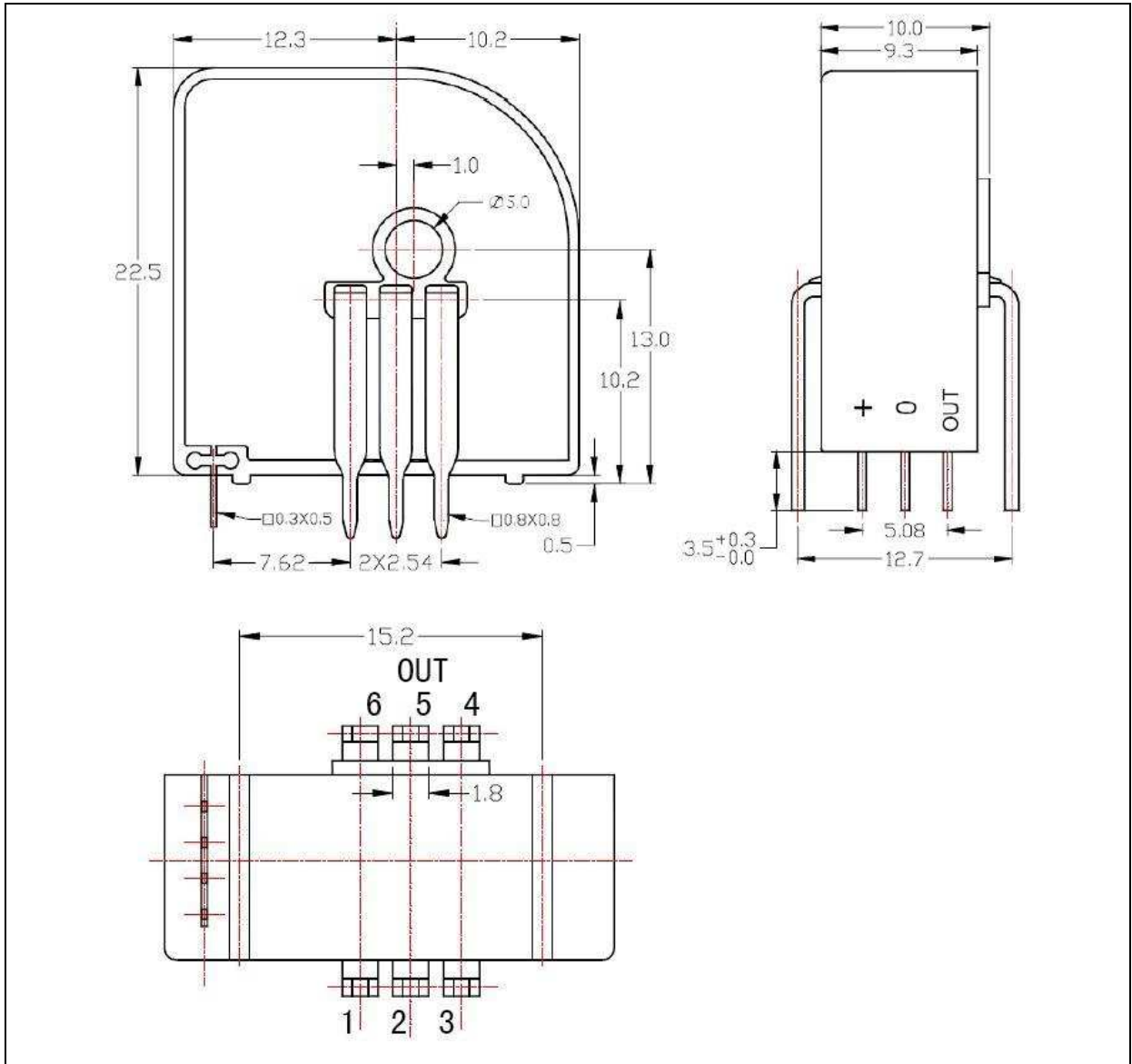
	Units	Turns		
		1	2	3
$I_{pn}$	A			
HCT-06DS5		6	3	2
HCT-15DS5		15	7.5	5
HCT-25DS5		25	12.5	8.3
HCT-50DS5		50	25	16.6
$V_o$	V	$2.5 \pm 0.625$		
Primary winding impedance	m $\Omega$	0.18	0.81	1.62
Primary winding inductance	mH	0.013	0.05	0.12
Connection points				

## 6. Dimensions

HCT-50DS5



HCT-06DS5, HCT-15DS5, HCT-25DS5



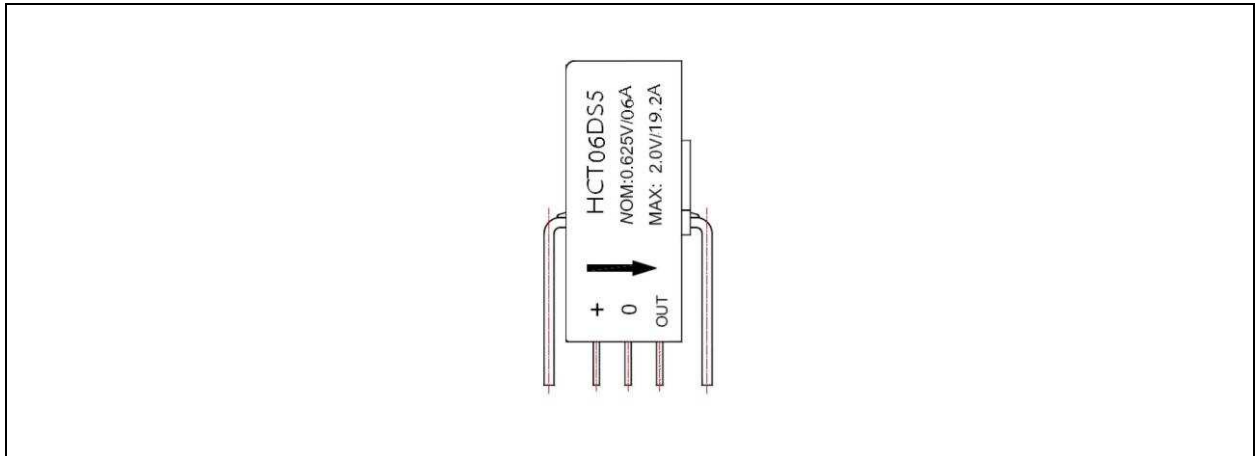
*Pin description*

Pin	Value
+	+Vcc
0	Ground
OUT	Output

### *Mechanical notes*

1. All dimensions are in mm.
2. General tolerances are  $\pm 0.5$  mm.
3. All dimensions and mechanical fixations could be changed upon user needs or PREMO transducer development.

## 7. Marking



(HCT-06DS5 marking example)

### *Marking notes*

1. Component is marked in the lateral side.
2. Arrow indicates direction of positive currents.