

Premo presents HCT-A05 series AC/DC current transducer. This new current transducer has been developed by applying magnetic modulation principle, which gives good stability at low current. HCT-A05 provides high insulation between primary and secondary and can be used in a variety of applications.



Features

- Closed 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 compliant.
- UL certified.



1. Electrical parameters

	Symbol	Min	Typ	Max	Unit
Nominal current HCT-25A05 HCT-35A05	I_{PN}		25 35		A A
Measuring range HCT-25A05 HCT-35A05	I_p	-50 -70		50 70	A A
Rated output current HCT-25A05 HCT-35A05	I_s		25 35		mA mA
Supply voltage ($\pm 5\%$)	V_{CC}	± 12		± 18	V
Turns ratio HCT-25A05 HCT-35A05	N_s		1:1000 ¹⁾ 1:1000 ¹⁾		
Current consumption ($I_{pn} = 0$ A)	I_{CC}	± 15			mA
Secondary resistance HCT-25A05 HCT-35A05	R_c		45 35		Ω

¹⁾See connection configuration table for more details

2. Performance parameters

	Symbol	Min	Typ	Max	Unit
Accuracy (measured at I_{pn})		± 0.5			%
Linearity (measured at full scale)	ϵ_{LLR}			0.2	%
Offset current	I_{OS}	-0.15		0.15	mA
Offset current drift (starting at -40 °C)	KI_{OS}	-0.5		0.5	mA
Response time	T_R			1	μs
di/dt		50			A/ μs
Bandwidth (-3 dB)	F_C	0		150	kHz

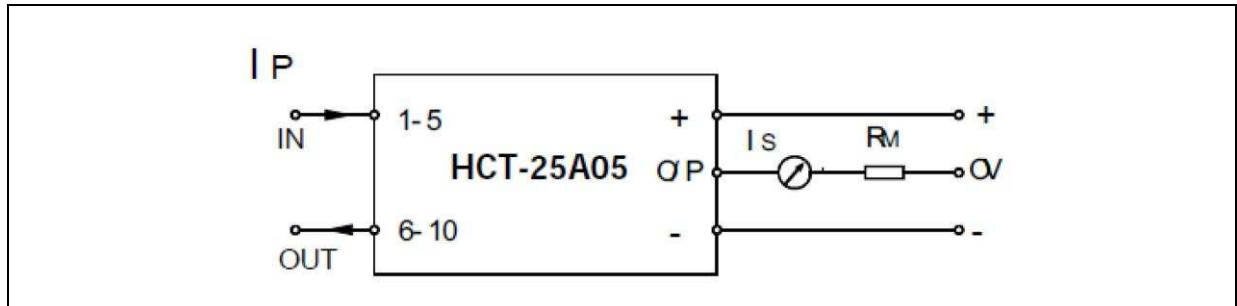
3. Isolation parameters

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

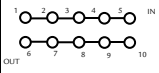
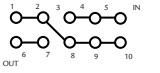
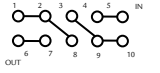
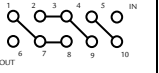
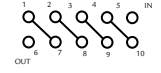
4. General parameters

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

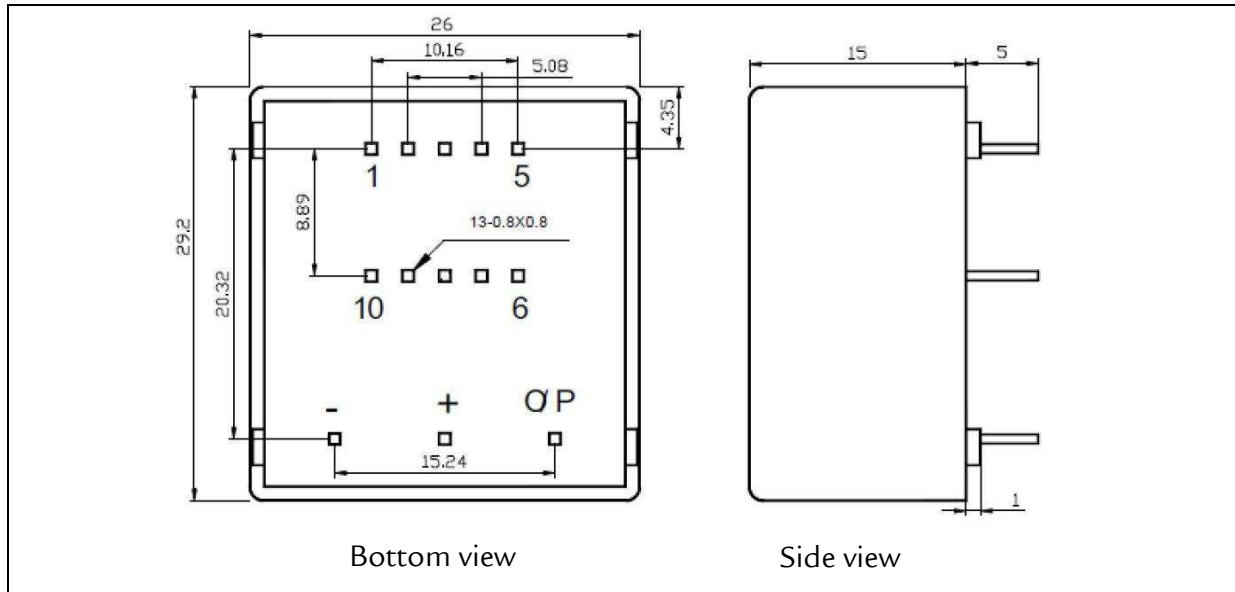
5. Electrical connexion



Connection configuration

		Turns				
	Unit	1	2	3	4	5
Rated Current	A					
HCT-25A05		25	12	8	6	5
HCT-35A05		35	17.5	12	9	7
Measuring range	A					
HCT-25A05		±50	±24	±16	±12	±10
HCT-35A05		±70	±35	±24	±18	±14
Output current	mA					
HCT-25A05		25	24	24	24	25
HCT-35A05		35	35	36	36	35
Secondary turns		1:1000	2:1000	3:1000	4:1000	5:1000
Primary resistance	mΩ	0.3	1.1	2.5	4.4	6.3
Primary inductance	μH	0.023	0.09	0.21	0.37	0.58
Connection point						

6. Dimensions



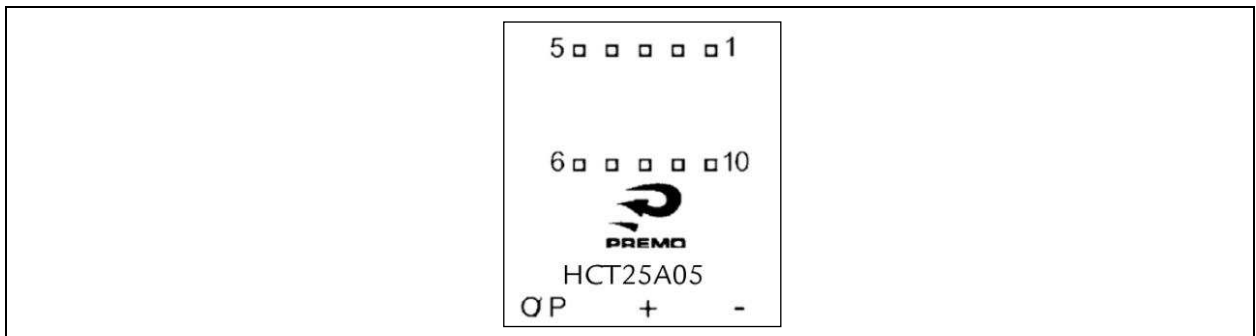
Pin description

Pin	Value
1	+IN
2	+IN
3	+IN
4	+IN
5	+IN
6	-IN
7	-IN
8	-IN
9	-IN
10	-IN
-	-Vcc
+	+Vcc
O/P	Output

Mechanical notes

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

7. Marking



(HCT-25A05 marking example)

Marking notes

1. Component is marked on the top side.