

	CUSTOMER	CUSTOMER CODE		Current transducer 700 A	
	INTERNAL CODE DCT-700A	DATE 16/12/2010	EDITION 2	DOCUMENT NAME EDCT700A_2.DOC	PAGE 1/6

C/Severo Ochoa 33 - Parque Tecnológico de Andalucía. 29590 Campanillas .Málaga (Spain) **Phone** +34 951 231 320 Fax +34 951 231 321
E-mail: info@grupopremo.com Web <http://www.grupopremo.com>



CURRENT TRANSDUCER

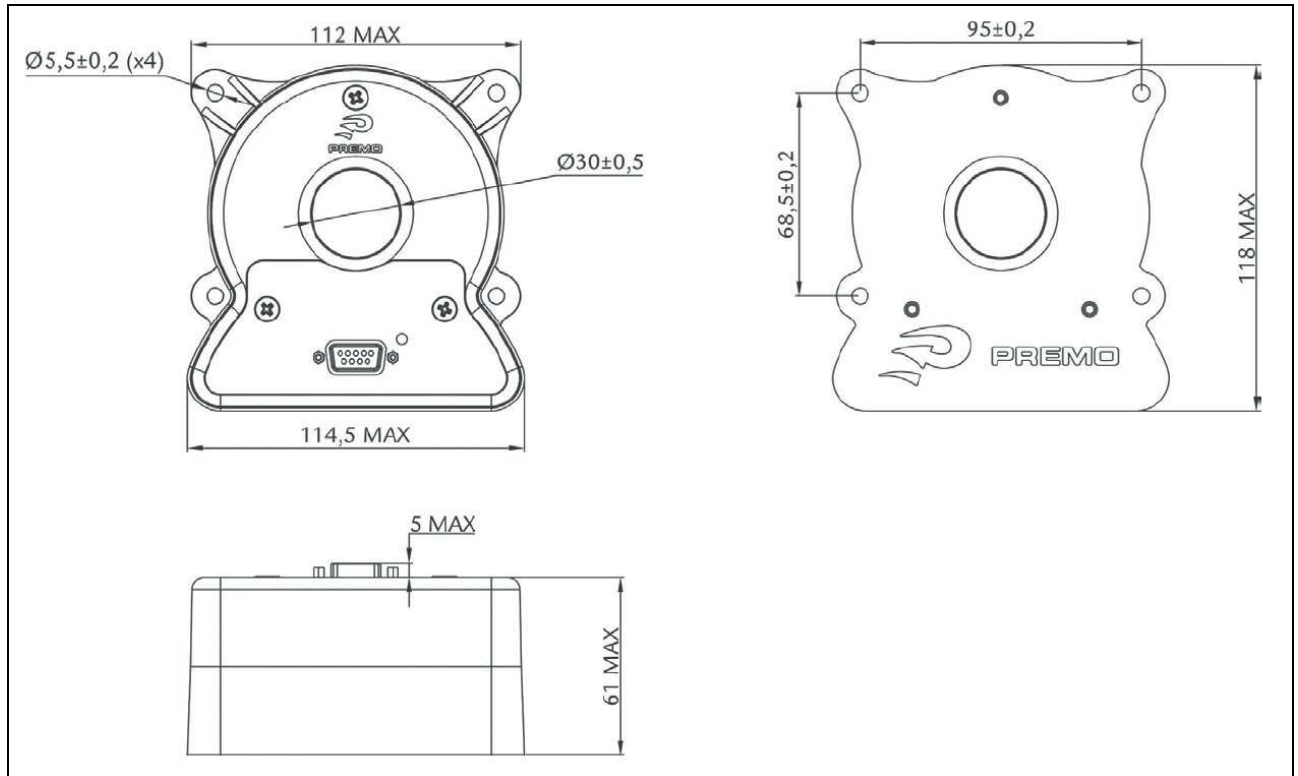
DCT-700A: Current sensor -700 to + 700 A

NOTES	
Critical characteristics marked with (*)	
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1. - DIMENSIONS



Notes:

1. All dimensions are in mm.
2. Box colour is red.

NOTES

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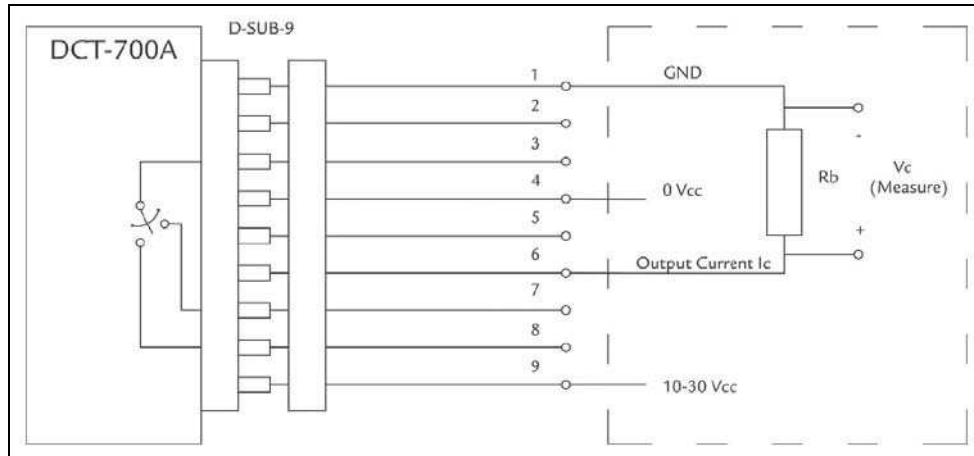
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1.2.- ELECTRICAL CONNECTION



DCT-700A output connector is a standard 9 pole D-SUB. Pins description follows.

Pin	Description
1	Connected to GND internally
2	For factory use only
3	Input to normally open switch
4	0 V
5	Earth connection
6	Output Current + (current direction F to B)
7	Output to normally open switch (1A DC MAX)
8	Output to normally closed switch (1A DC MAX)
9	Vcc

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2. - CHARACTERISTICS

2.1.- ELECTRICAL PARAMETERS

Parameter	Min	Typ	Max	Units	Symbol
Primary current	0		700	A	I_{PN}
Input voltage ($\pm 10\%$)	10		30	V	V_{CC}
Measuring range ($V_{CC} = 10\text{ V}$)	-700		700	A	I_P
Overload condition (100 ms)		± 2000		A	I_{OV}
Burden Resistor ($I_P = 700\text{ A}$, $V_{CC} = 12\text{ V}$)	1			Ω	R_B
Secondary nominal current		700		mA	I_S
Conversion ratio		1:1000			
Current consumption ($V_{CC} = 12\text{ V}$)		$200 + I_S$		mA	I_{CC}

2.2.- ACCURACY

Parameter	Min	Max	Units	Symbol
Accuracy at I_{PN} ($T = 25\text{ }^\circ\text{C}$)		0.5	%	
Linear error (between 400 to 700 A) ($V_{CC} = 15\text{ V}$ @ $R_B = 1\text{ }\Omega$)		5	ppm	ϵ_{LFR}
Linear error (between 150 to 400 A) ($V_{CC} = 15\text{ V}$ @ $R_B = 5\text{ }\Omega$)		10	ppm	ϵ_{LMR}
Linear error (between 0.1 to 150 A) ($V_{CC} = 15\text{ V}$ @ $R_B = 20\text{ }\Omega$)		100	ppm	ϵ_{LLR}
Offset current		20	μA	I_{OS}
Offset current temperature drift		5	ppm/ $^\circ\text{C}$	KI_{OS}
Time response (10 % to 90 % of I_P)		1	μs	T_R
di/dt	100		A/ μs	
Bandwith (-3 dB)	DC	100	kHz	F_C

NOTES

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2.3.- GENERAL DATA

Parameter	Min	Typ	Max	Symbol
Operating temperature	-20 °C		70 °C	T _A
Storage temperature	-20 °C		85 °C	T _S
Weight		800 g		
Basic insulation (50Hz @ 1')		3500 Vac		V _I
Primary diameter hole		30 mm		

2.4.- OUTPUT CONNECTOR

Parameter	Value	Symbol
Connector	DB-9 Standard type (female)	
Fault Operation Control (led power off)	I _p > 120 %	
Compensation winding maximum resistance (T = 70 °C)	10 Ω	R _C
Length two wire cable to R burden (connected between pin 1 and 3)	50 cm	
Maximum Switching Current (pins 3 to 8 and pin 3 to 7)	1 A	
Máximum Switching Voltage (pins 3 to 8 and pin 3 to 7)	30 Vdc/120 Vac	

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3. - EDITION CONTROL

Edition	Date	Change description	Made by
1 st		Preliminary edition.	V. Repecho
2 nd		Dynamic performance parameters updated	G. de Diego

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