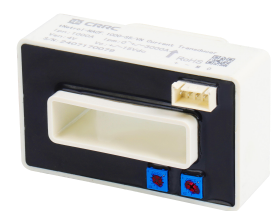


#Netrol-NACF.XXX-S5/VN Current Transducer

I_{PN} = 300, 600, 1000, 1500A

The #Netrol-NACF.XXX-S5/VN Current Transducer is for the electronic measurement of DC, AC or pulsed currents, with galvanic separation between the primary circuit and the secondary circuit.



Features

- Open loop multi-range current transducer
- Voltage output
- Bipolar supply voltage

Standards

- EN 45545-2:2020

Typical application

- Solar inverter
 - Frequency inverter
- Motor driver
 - Auto - control

Absolute rating

Parameter	Symbol	Unit	Specification			Conditions
			Min	Typical	Max	
Ambient storage temperature	T _S	°C	-40		105	
Ambient operating temperature	T _A	°C	-40		105	

Insulation coordination

Parameter	Symbol	Unit	Specification			Conditions
			Min	Typical	Max	
Dielectric withstand voltage	V _D	kV		5		RMS voltage for AC test 50Hz, 1min
Insulation resistance	R _{INS}	MΩ	1000			500V
Clearance distance	d _{Cl}	mm	9.5			Shortest distance through air
Creepage distance	d _{CP}	mm	15.5			Shortest path along device body

Electrical parameters

At T_A = 25°C, U_C = ±15 V, R_L = 10 kΩ, unless otherwise noted.

Parameter	Symbol	Unit	Specification				Conditions
Primary current, nominal range	I _{PN}	A	300	600	1000	1500	RMS current
Primary current measuring range	I _{PM}	A	±900	±1800	±3000	±3000	

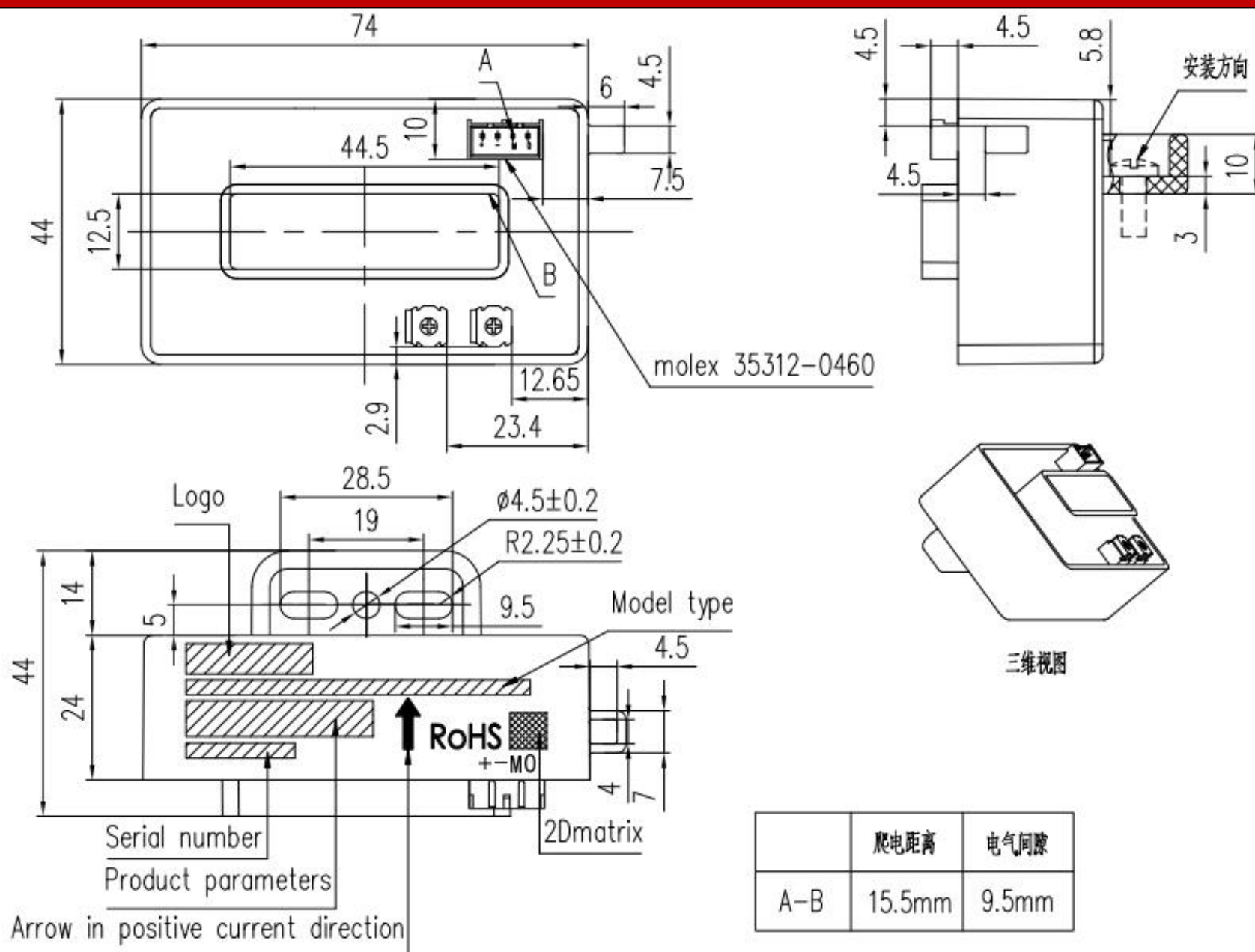
Parameter	Symbol	Unit	Specification			Conditions
			Min	Typical	Max	
Supply voltage ¹⁾	U _C	V	±12	±15		
Current consumption	I _C	mA			30+V _{out} /R _L	
Output voltage @I _{PN}	V _{out}	V		4		
Electrical offset voltage	V _{OE}	mV	-20		20	T _A = 25°C
Magnetic offset voltage	V _{OM}	mV	-10		10	I _p =0A, after an excursion of 1×I _{PN}
Linearity error	ε _L	% of I _{PN}	-0.5		0.5	0~I _{PN}
Step response time to 90 % I _{PN}	t _r	μs			5	90% of I _{PN} , di/dt ≥ 50 A/μs
Frequency bandwidth ²⁾	BW	kHz		25		±3 dB
Temperature coefficient of V _{out}	TCV _{out}	%/°C	-0.025		0.025	T _A = -40°C~+105°C
Temperature coefficient of V _{OE}	TCV _{OE}	mV/°C	-0.5		0.5	T _A = -40°C~+105°C

Accuracy(excluding offset) @I _{PN}	X	% of I _{PN}	-1		1	T _A = 25°C
Accuracy(excluding offset) @I _{PN}	X	% of I _{PN}	-3		3	T _A = -40°C~+105°C
Load resistance	R _L	kΩ	10			

Notes:

- 1) Operating U_c within the range of $\pm 12V$ to $\pm 15V$ reduces the measuring range.
- 2) Frequency bandwidth test applies to small-signal conditions.
- 3) Please contact CRRC if current transducer is applied in some extreme cases, for example: high frequency ripple, high temperature, larger operating frequency.....

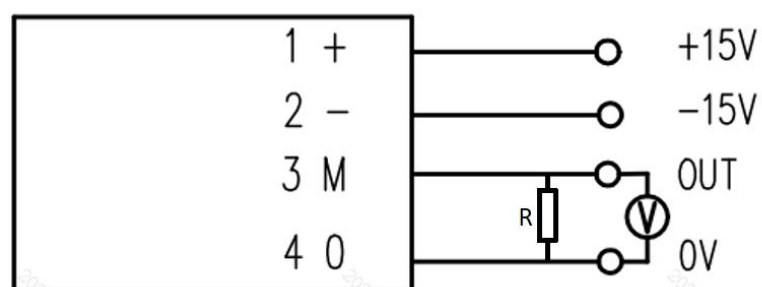
Dimensions (in mm)



Mechanical characteristics

- Mass: 190g
- General tolerance: $\pm 1\text{mm}$
- Transducer fastening: 1 hole and 2 notch $\varnothing 4.5\text{mm}$, M4 steel screws
- Recommended fastening torque*: 1.2 N·m
- Connection of secondary: Molex 35312-0460

Connection



Remarks

- It is advised to use a primary conductor (busbar) that fills transducer through-hole.
- Be aware of the influence of the external field if nearby transducers are too close (relay, capacitor, choke...).
- U_{out} is positive when I_p flows in the direction of the arrow.
- Product secondary side connecting line optimization shielding wire, cable shielding layer close to the product end can connect chassis, negative power or power 0V.

Comments:

- Items with “*” in this datasheet are recommended value for reference only. The final value must be determined by customer.
- CRRC reserves the right to carry out modifications on its transducers, in order to improve them.
- Product updates will not notified separately. The final version of the datasheet shall be confirmed through specific communication between both parties.