



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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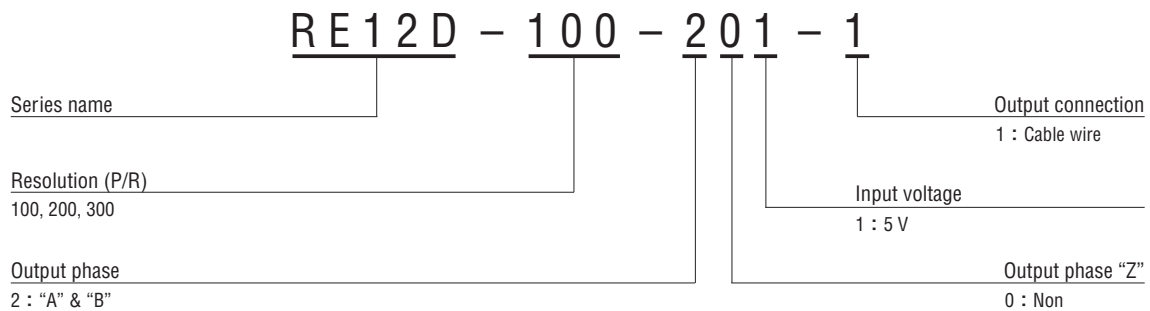
FEATURES

- ϕ 12 mm, 2 phases square wave
- High resolution 100 to 300 P/R
- Low torque, low inertia
- Cost effective
- RoHS compliant

RoHS compliant



PART NUMBER DESIGNATION



LIST OF PART NUMBERS

Resolution	Item	Part number
100 (P/R)		RE12D-100-201-1
200 (P/R)		RE12D-200-201-1
300 (P/R)		RE12D-300-201-1

※ Verify the above part numbers when placing orders.

MECHANICAL CHARACTERISTICS

Starting torque	0.05 mN·m {0.5 gf·cm} maximum	
Inertia	0.01 g·cm ²	
Shaft loading (When mounting)	Radial	1.96 N {200 gf} maximum
	Axial	1.96 N {200 gf} maximum
Net weight	10 g	

ELECTRICAL CHARACTERISTICS

Input voltage	DC5 V \pm 5 %	
Input current	50 mA maximum	
Output wave form	Square wave	
Output phases	A, B	
Resolution (P/R)	100, 200, 300	
Phase difference of A & B outputs	90° \pm 45°	
Maximum frequencies response	10 kHz	
Output signal	"1 (High)"	+ 4.5 V minimum
	"0 (Low)"	+ 0.5 V maximum
Output impedance	1 k Ω	
Light source	LED	

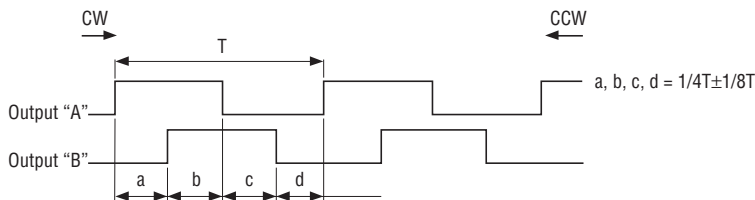
Environmental characteristics

Operating temp. range	0 ~ 50 °C	
Storage temp. range	- 20 ~ 80 °C	
Protection grade	IP40	

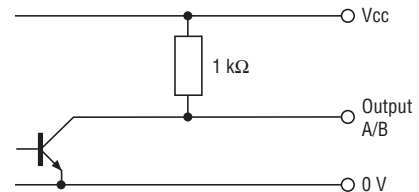
RELIABILITY TEST

Test item		Test conditions
Vibration	Power OFF	Amplitude : 1.52 mm or 98.1 m/s ² (10 G) whichever is smaller. 10 ~ 500 Hz excursion 5 min/cycle, 1 hour each for X, Y, Z, directions.
Shock	Power OFF	1 time each in 6 directions (X, Y, Z) at 490 m/s ² (50 G), 11 ms.
High temperature exposure	Power OFF	80 °C 96 h
	Power ON	50 °C 96 h
Low temperature exposure	Power OFF	- 20 °C 96 h
	Power ON	0 °C 96 h
Humidity	Power OFF	40 °C Relative humidity 90 ~ 95 % 96 h (To be measured after wiping out moisture and leaving samples for 1 h at normal temperature and humidity after the test.)
Thermal shock	Power OFF	To be done 5 cycles with the following condition (To be measured after leaving samples for 1 h at normal temperature and humidity after the test.) 70 °C 0.5 h、-20 °C 0.5 h

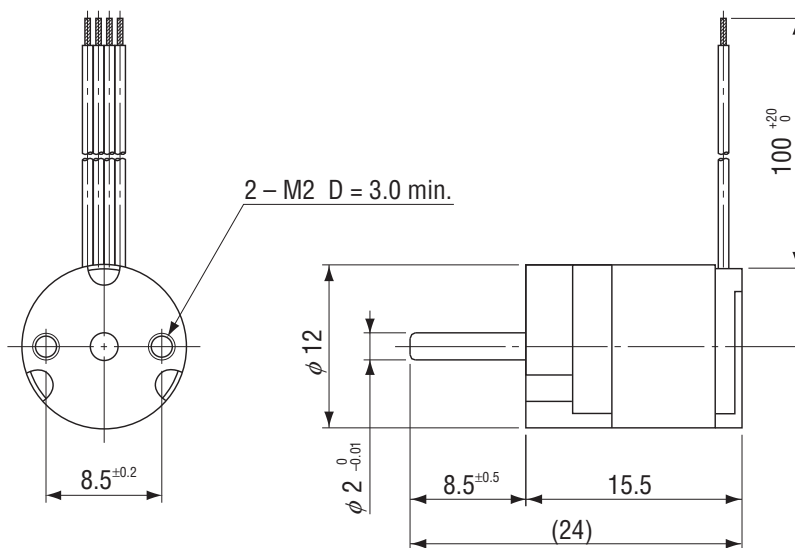
OUTPUT



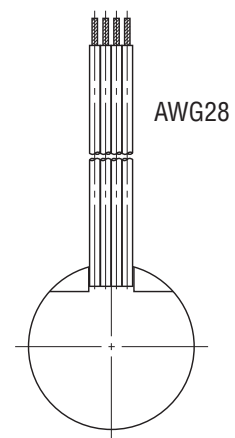
OUTPUT CIRCUIT



OUTLINE DIMENSIONS



Unless otherwise specified, tolerance : ± 0.4 (Unit : mm)



ELECTRICAL WIRING

Red	Power ⊕
Black	Power 0 (V)
White	Output "A"
Green	Output "B"