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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MANUAL SETTING TYPE MAGNETIC ENCODERS

RMS20

FEATURES

RoHS compliant

- High resolution of 256 P/R and fine setting
- Lower consumption of electric power (15 mA maximum) due to magnetic method
- Long life for 10^5 times continuous run due to contactless & magnetic method
- Square wave output (with Amp.)
- Smooth rotation for setting
- RoHS compliant

PART NUMBER DESIGNATION

RMS20 - 250 - 201 - 1

- Series name
- Resolution (P/R): 100, 250, 256
- Output phase: 2 : "A" & "B"
- Output connection: 1 : Cable wire

LIST OF PART NUMBERS

Resolution / Item	Input voltage	Part number
100 (P/R)	5 V	RMS20-100-201-1
250 (P/R)		RMS20-250-201-1
256 (P/R)		RMS20-256-201-1

※Verify the above part numbers when placing orders.

STANDARD SPECIFICATIONS

Electrical characteristics

Input voltage		DC5 V ± 5 %		
Input current		15 mA maximum (No load)		
Output wave form		Square wave		
Output phases		A, B		
(P/R) Resolution		100	250	256
Phase difference of outputs A & B		90° ± 45°		
Maximum frequency response		5 kHz		
Output signal	"1 (High)"	+ 4.5 V minimum		
	"0 (Low)"	+ 0.5 V maximum		
Sensor		Magnetoresistive element		

Mechanical characteristics

Rotational torque		4.90 mN·m {50 gf·cm} maximum
Inertia		3 g·cm^2 maximum
Shaft loading (When mounting)	Radial	9.81 N {1 kgf} maximum
	Axial	9.81 N {1 kgf} maximum
Rotational life		10^5 revolution
Net weight		Approx. 20 g
Strength of tighten screw		0.49 N·m {5 kgf·cm} maximum

Environmental characteristics

Operating temp. range	– 10 ~ 60 °C
Storage temp. range	– 40 ~ 70 °C
Protection grade	IP40

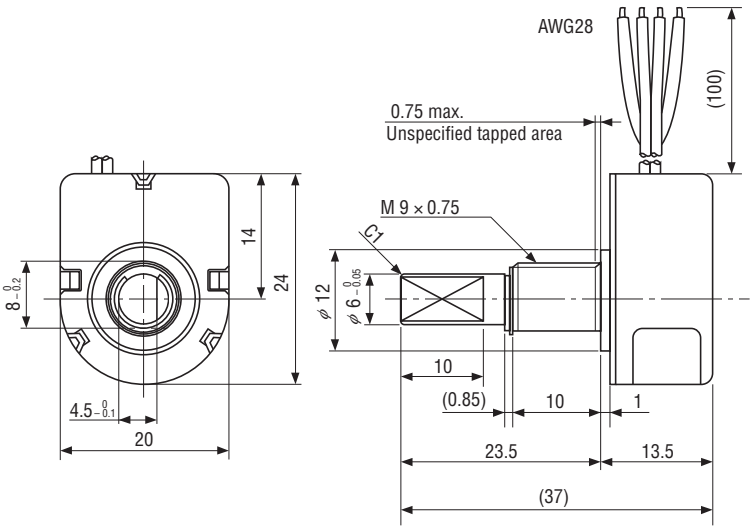
RELIABILITY TEST

The output shall satisfy the criteria below after the following tests.

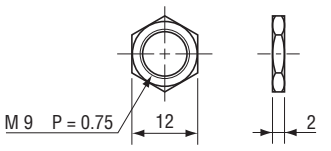
Test item		Test conditions	
Vibration	Power OFF	Amplitude : 1.52 mm or 98.1 m/s^2 (10 G) whichever is smaller. 10 ~ 500 Hz excursion 15 min/cycle, 8 cycles each for X, Y, Z, directions.	
Shock	Power OFF	3 times each in directions (X, Z) at 490 m/s^2 (50 G), 11 ms.	
High temperature exposure	Power OFF	70 °C 96 h	(To be measured after leaving samples for 1 h at normal temperature and humidity after the test.)
	Power ON	60 °C 96 h	
Low temperature exposure	Power OFF	– 40 °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 10 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、– 40 °C 0.5 h	

OUTLINE DIMENSIONS

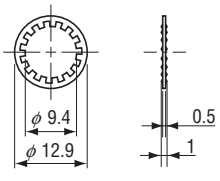
Unless otherwise specified, tolerance: ± 0.4 (Unit: mm)



〈Accessories〉



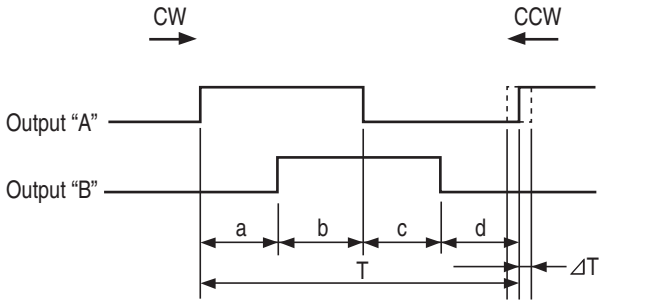
1. Nut



2. Washer

RMS20
MAGNETIC ENCODERS

OUTPUT

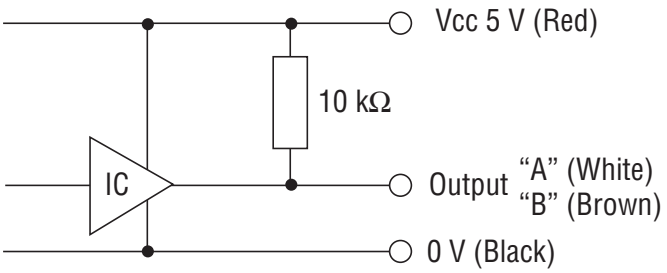


a, b, c, d = T/4±T/8
⊿T = ±T/8

ELECTRICAL WIRING

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

OUTPUT CIRCUIT



Sink current 1 mA maximum (at 25 ℃)