

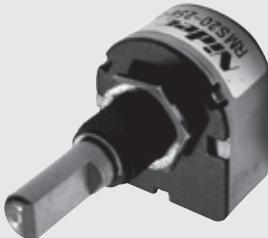
MANUAL SETTING TYPE MAGNETIC ENCODERS

RMS20

■ FEATURES

- 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

RoHS compliant



■ PART NUMBER DESIGNATION

RMS20 - 250 - 201 - 1

Series name

Resolution (P/R)

100, 250, 256

Output connection

1 : Cable wire

Output phase

2 : "A" & "B"

■ 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					
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						
Output Sink Current	1 mA maximum						

● 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

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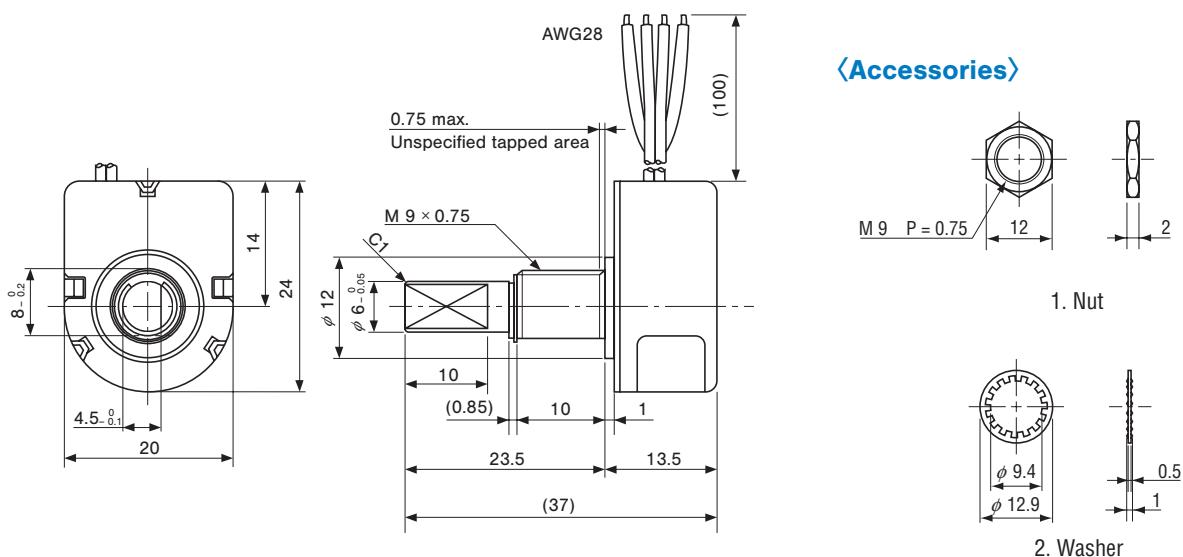
RELIABILITY TEST

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

Test item		試験条件 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
	Power ON	60 °C 96 h
Low temperature exposure	Power OFF	- 40 °C 96 h (To be measured after leaving samples for 1 h at normal temperature and humidity after the test.)
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

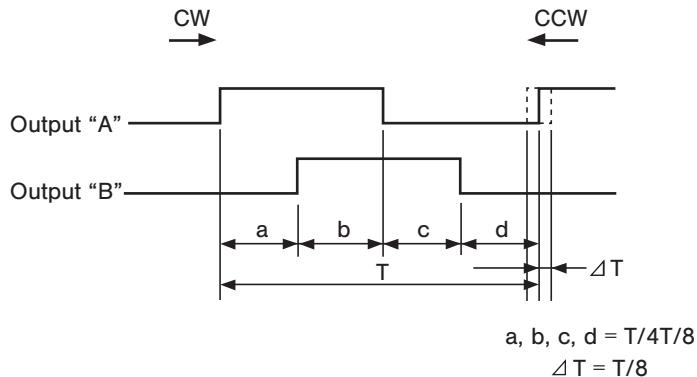
Unless otherwise specified, tolerance: ± 0.4 (Unit: mm)



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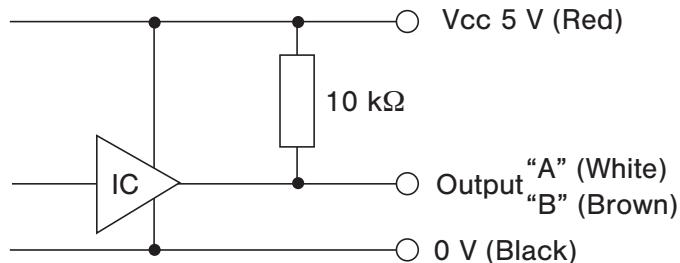
■ OUTPUT



■ ELECTRICAL WIRING

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

■ OUTPUT CIRCUIT



Sink current 1 mA maximum (at 25 °C)