

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)			RMS20-100-201-1
250 (P/R)		5 V	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		DC 5 V ± 5 %		
Input current		15 mA maximum (No load)		
Output wave form		Square wave		
Output phases		A, B		
Resolution(P/R)	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

RMS20

MAGNETIC ENCODERS

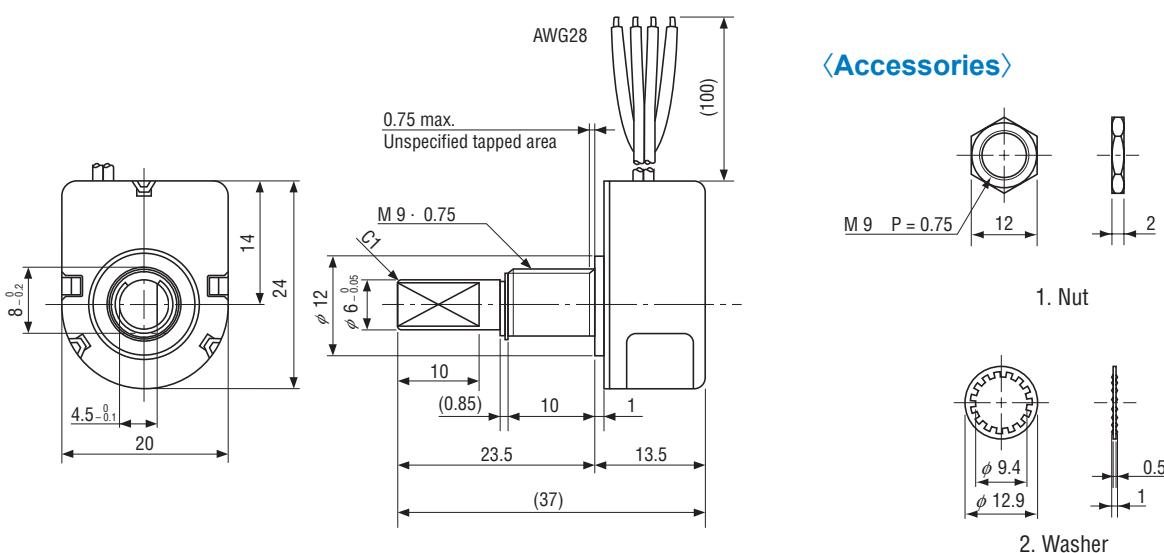
■ RELIABILITY TEST

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	To be measured after wiping out moisture and leaving samples for 1h 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

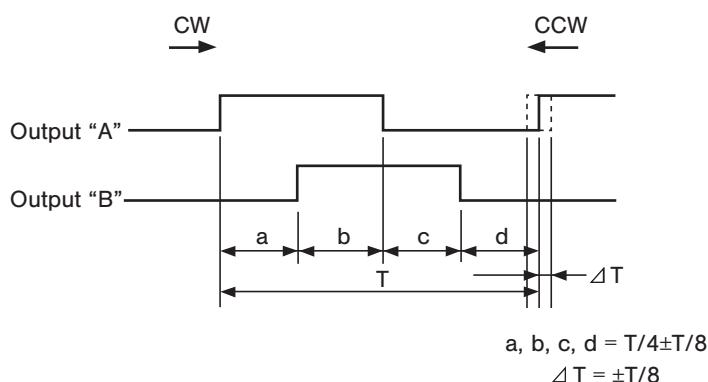
Unless otherwise specified, tolerance: ± 0.4 (Unit: mm)



RMS20

MAGNETIC ENCODERS

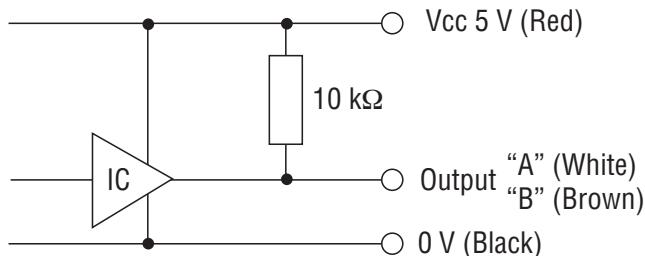
■ OUTPUT



■ ELECTRICAL WIRING

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

■ OUTPUT CIRCUIT



Sink current 1 mA maximum (at 25°C)

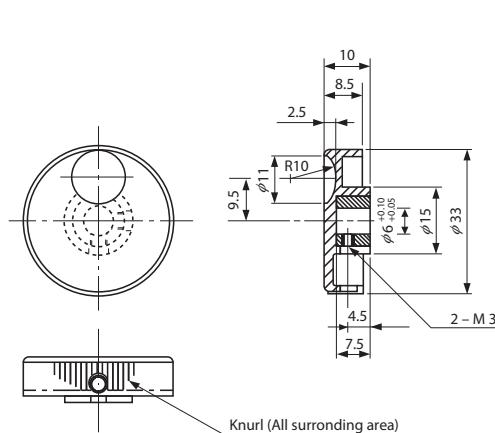
● KNOB FOR SETTING ENCODERS

The knobs are sold separately as an optional item.

You can choose gray or black color.

The hexagon socket head screws are attached. (2 pieces)

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



※ Use a hexagon wrench for 1.5 fastening.