



**THE DATASHEET OF
RMS20-100-201-1**

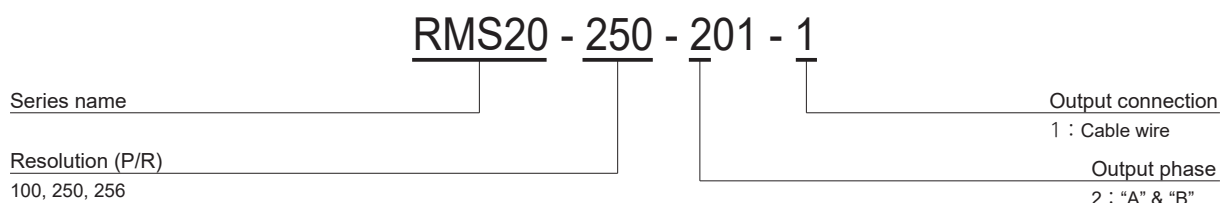


FEATURES

- 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



PART NUMBER DESIGNATION



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(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	Magneto-resistive 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

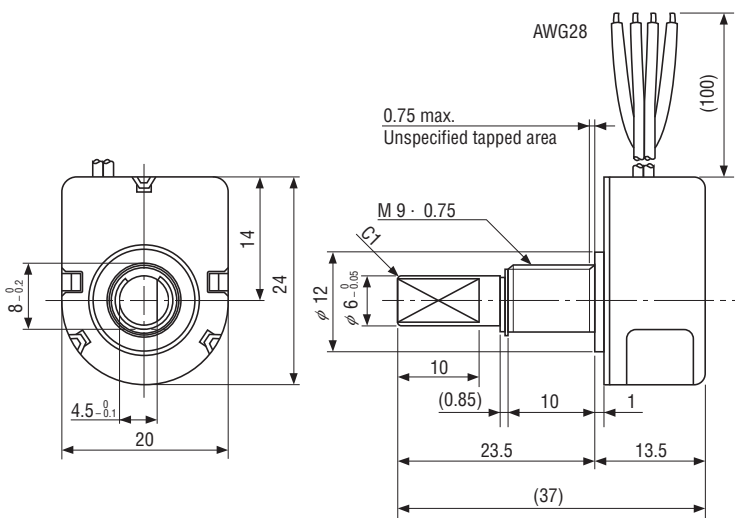
RELIABILITY TEST

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

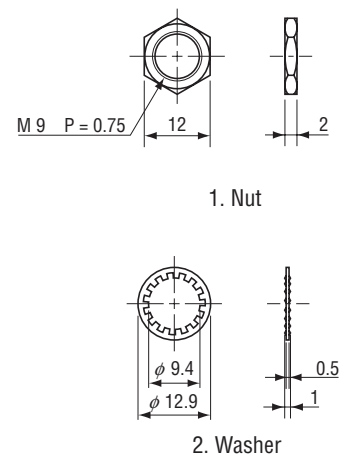
Test item		Test conditions	
Vibration	Power OFF	Amplitude : 1.52 mm or 98.1 m/s ² (10 G) whichever is smaller. 10 ~ 500 Hz excursion 15 min/cycle, 8 cycles each for X, Y, Z, directions.	
Shock	Power OFF	3 times each in directions (X, Z) at 490 m/s ² (50 G), 11 ms.	
High temperature exposure	Power OFF	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)



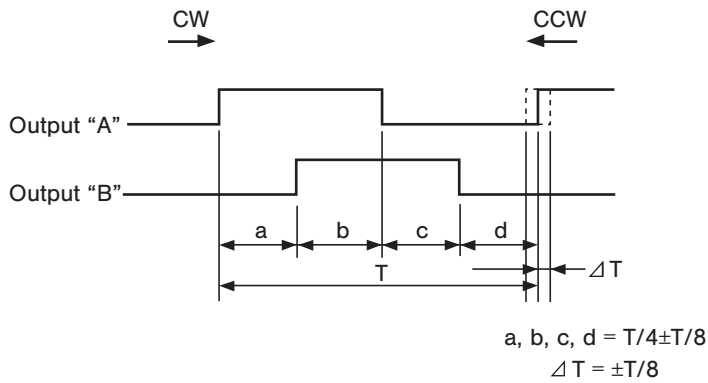
<Accessories>



RMS20

MAGNETIC ENCODERS

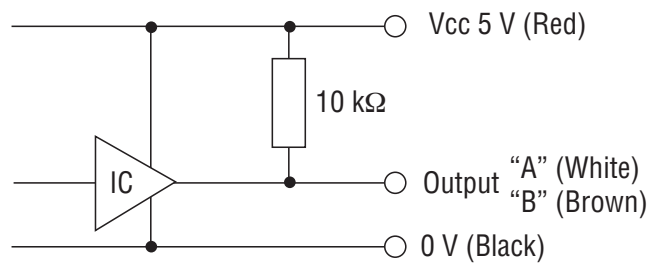
OUTPUT



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 knob are sold separately as an optional item. (Ref. P.314)

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View RMS20-100-201-1 on WIN SOURCE](#)
-  [Nidec Copal Electronics Information](#)

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