

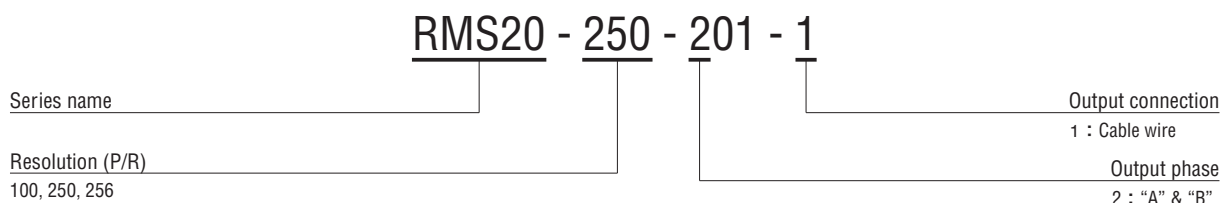
FEATURES

- High resolution of 256 P/R and fine setting
- Lower consumption of electric power (15 mA maximum) due to magnetic method
- Long life for 10⁵ times continuous run due to contactless & magnetic method
- Square wave output (with Amp.)
- Smooth rotation for setting
- RoHS compliant

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		
(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	Magneto-resistive 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		

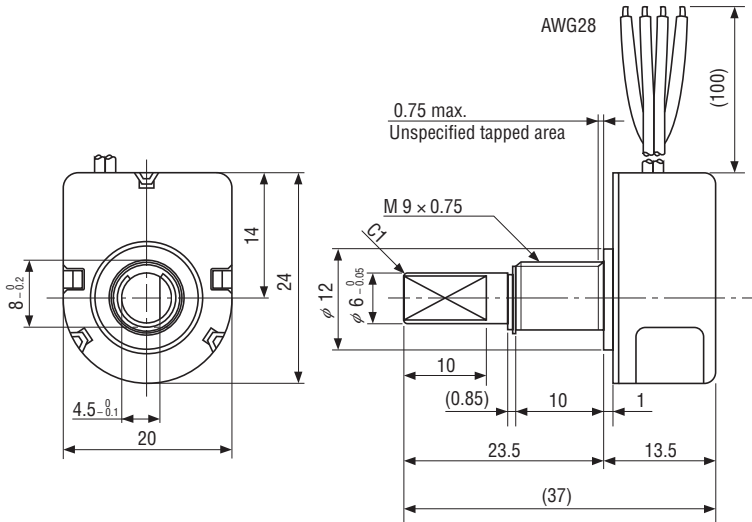
RELIABILITY TEST

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

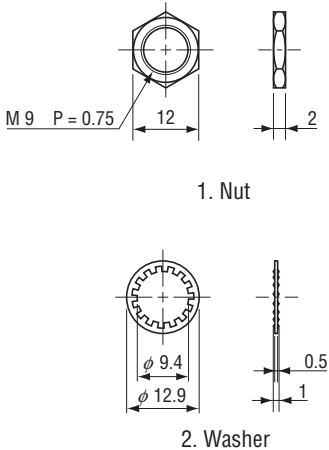
Test item		Test conditions	
Vibration	Power OFF	Amplitude : 1.52 mm or 98.1 m/s ² (10 G) whichever is smaller. 10 ~ 500 Hz excursion 15 min/cycle, 8 cycles each for X, Y, Z, directions.	
Shock	Power OFF	3 times each in directions (X, Z) at 490 m/s ² (50 G), 11 ms.	
High temperature exposure	Power OFF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



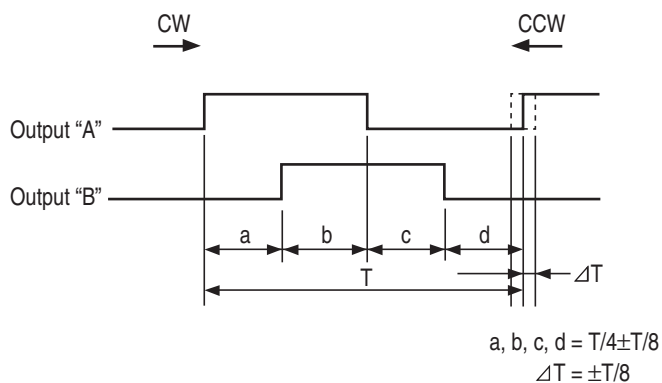
<Accessories>



RMS20

MAGNETIC ENCODERS

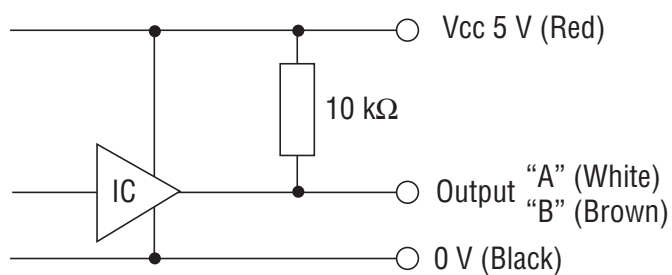
OUTPUT



ELECTRICAL WIRING

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

OUTPUT CIRCUIT



Sink current 1 mA maximum (at 25 °C)