

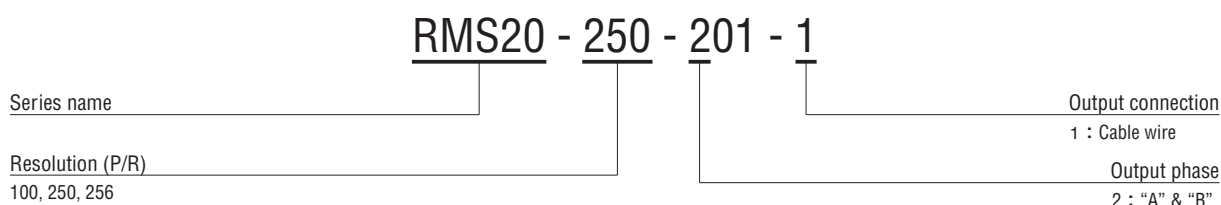
FEATURES

- 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		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

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	

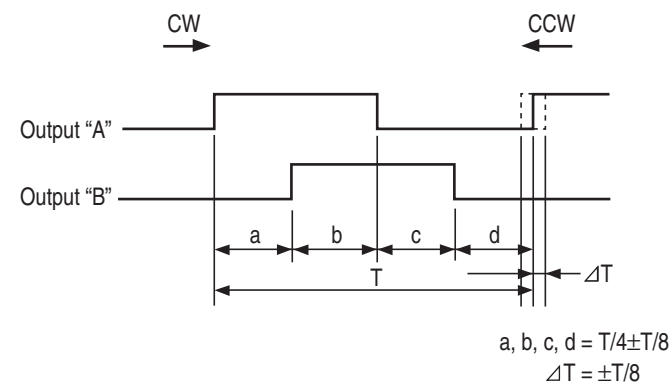
Unless otherwise specified, tolerance: ± 0.4 (Unit: mm)



RMS20

MAGNETIC ENCODERS

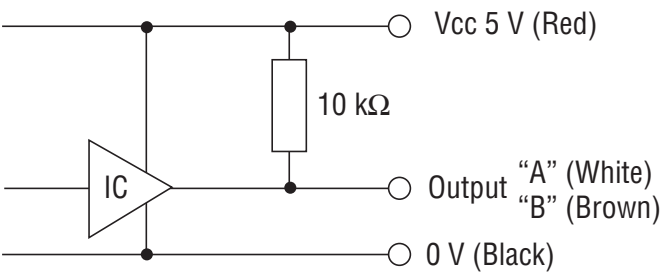
OUTPUT



ELECTRICAL WIRING

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

OUTPUT CIRCUIT



Sink current 1 mA maximum (at 25 °C)