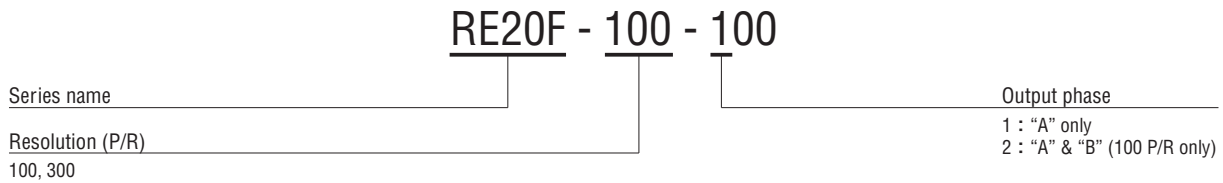


FEATURES

- Compact, dia.: 20 mm
- Low torque, low inertia
- RoHS compliant



PART NUMBER DESIGNATION



LIST OF PART NUMBERS

Resolution	Item	Output phases	Part number
100 (P/R)		"A" only	RE20F-100-100
300 (P/R)			RE20F-300-100
100 (P/R)		"A" & "B"	RE20F-100-200

※ Verify the above part numbers when placing orders.

STANDARD SPECIFICATIONS

Electrical characteristics

Item	Output phases	
	"A" only	"A" & "B"
Photo-sensor maximum current	45 mA maximum (at 25 °C)	
Output wave form	Quasi-sinusoidal	
Output phases	A	A, B
(P/R) Resolution	100, 300	100
Phase difference of outputs A & B	—	90° ± 45°
Maximum frequency response	—	12 kHz
Output signal	150 mVp-p minimum ※1	1 Vp-p minimum
Output signal amplitude variation ※2	40 % maximum	
Light source	LED	

※1 Measured at CP1 in the fig.A of 'MEASUREMENT CIRCUIT' on the following page.

※2 One phase only : Measured at CP2 in the fig.A of 'MEASUREMENT CIRCUIT' on the following page.

Mechanical characteristics

Starting torque	0.05 mN·m (0.5 gf·cm) maximum	
Inertia	0.2 g·cm ² maximum	
Shaft loading (When mounting)	Radial	1.96 N (200 gf) maximum
	Axial	4.9 N (500 gf) maximum
Net weight	Approx. 15 g	

Environmental characteristics

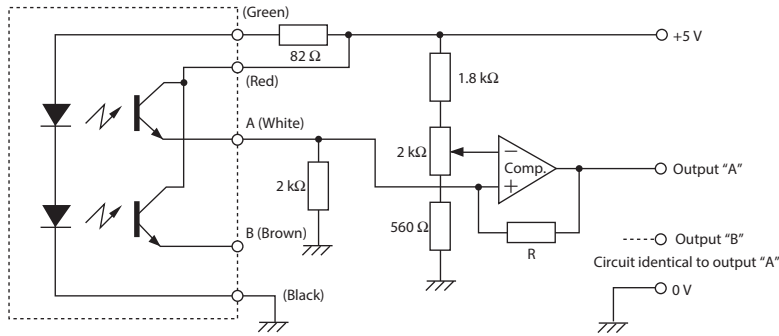
Operating temp. range	0 ~ 50 °C	
Storage temp. range	- 20 ~ 80 °C	
Protection grade	IP40	

RE20F

OPTICAL ENCODERS

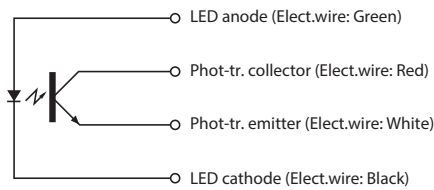
EXTERNAL SCHEMATICS

2 phase 100 P/R

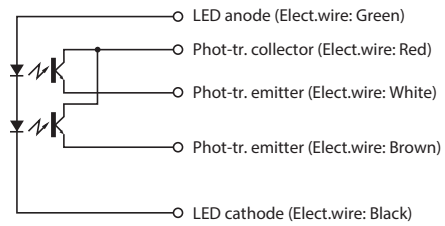


INTERNAL CIRCUIT

1 phase 100 · 300 P/R

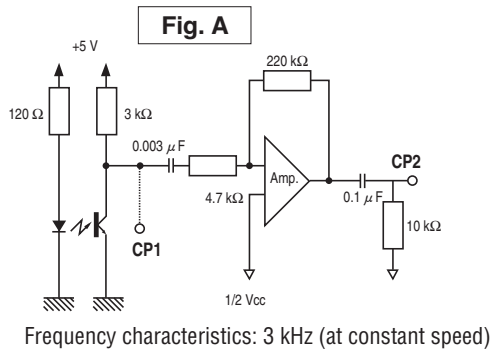


2 phases 100 P/R

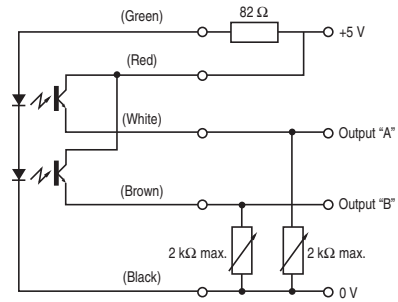


MEASUREMENT CIRCUIT

1 phase 100 · 300 P/R



2 phases 100 P/R



RATINGS

LED

(at 25 °C)

Maximum current	45 mA
Reverse voltage	4 V
Power dissipation (P _D)	75 mW
Temp. derating of P _D (25 ~ 60 °C)	-1.4 mW/°C

Photo-sensor

(at 25 °C)

Collector current	20 mA
Collector to emitter voltage (forward)	20 V
Collector to emitter voltage (reverse)	5 V
Collector dissipation (P _D)	75 mW
Temp. derating of P _D (25 ~ 60 °C)	-1.0 mW/°C