

PC20

COLOR WHEEL MOTORS

FEATURES

- Long life by air bearing structure
- Considerably silent by combination of coreless structure
- Compatible with high temperature environment by oil-less bearing
- Accessible to high rotation field
- RoHS compliant



* PC20 is sold as a single piece of motor.
(Please prepare color wheels by yourself.)

APPLICATIONS

- Color wheel driving for rear projection TV
- Color wheel driving for front projector

PART NUMBER DESIGNATION

PC20 - 3000

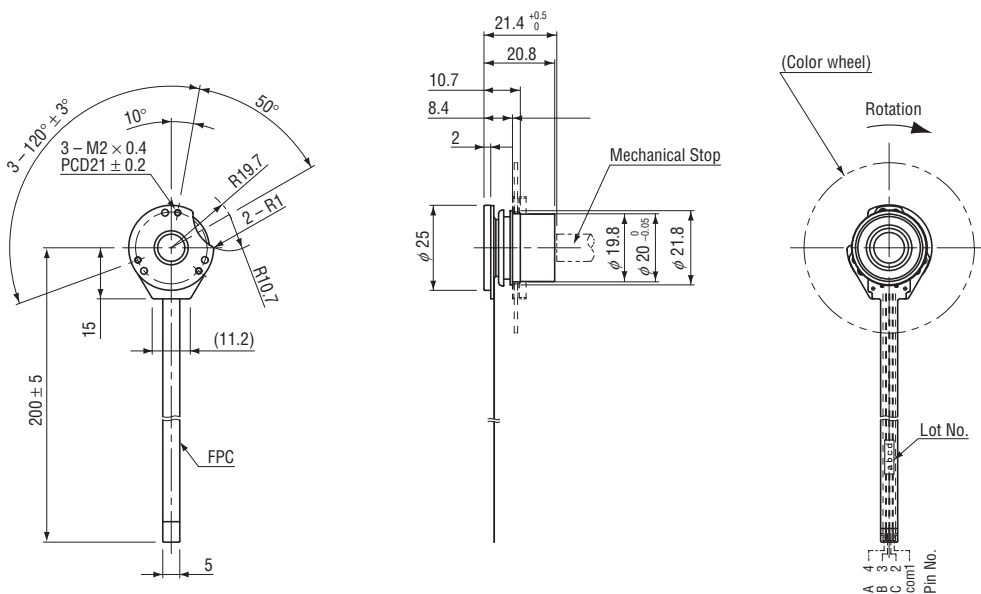
Series name

Dash number

Standard : FPC Length 200 mm Terminal Tin-plated

OUTLINE DIMENSIONS

(Unit: mm)



Pin No.	Description
1	Common
2	C
3	B
4	A

Lot production is required. Please consult us for ordering.

STANDARD SPECIFICATIONS

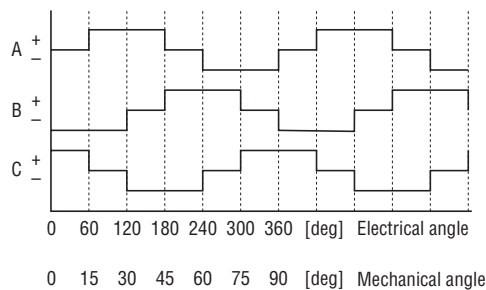
Item	PC20-3000	Remarks
Type	3-phase, 8-pole, sensorless brushless motor	
Net weight	Approx. 27 g	Motor only
Color wheel (Recommended)	Dia. : ϕ 50 mm ~ ϕ 60 mm (t = 0.7 mm) Internal dia. : ϕ 20 mm (Attachment) ※	Typical dimension To be discussed later
Speed	7,200 to 14,400 r/min	Typical value (In use of IC from Allegro)
Direction of rotation	CW	
Power source	DC12 V \pm 2 %	
Starting current	1.2 A maximum	
Lifetime	Start and Stop : 300,000cycles min. Continuous Running : 50,000hours min.	Brake actuated during OFF.
Operating temp. range	0 °C ~ 90 °C	Non-condensing The temperature range is from 5 deg.C to 60 deg.C.
Operating humidity range	10 %R.H. ~ 80 %R.H.	

※ PC20 is sold as a single piece of motor.
(Please prepare color wheels by yourself.)

Note 1 : Measured at room conditions unless otherwise specified.
Note 2 : All values are measured with our company standard measurement equipments.

TIMING CHART

● Direction of rotation : CW



■ REGARDING WHISKER

Regarding the FPC interface, COPAL ELECTRONICS will not be held responsible for any defects caused by whisker.

■ INSTRUCTIONS FOR USE

- (1) Please make air holes around the compartment where the motor is installed.
- (2) Please provide a mechanical stopper so that the rotor (color wheel) does not pull off during transportation.
- (3) Please do not remove the rotor from the stator.
- (4) Please provide a “retrial” circuit in the starting circuit to overcome the initial starting failure.
- (5) Motor shall not be gyrated during the operation.
- (6) Please apply a braking function to stop the motor.
- (7) When you mount your color wheel on our PC20-3000 motor, please adjust inbalance to below 0.03 g-cm.
- (8) In case you attach color wheel in mounting fixture, please hold a motor base plate and tighten the 3 screws by 0.196 N·m to 0.245 N·m.