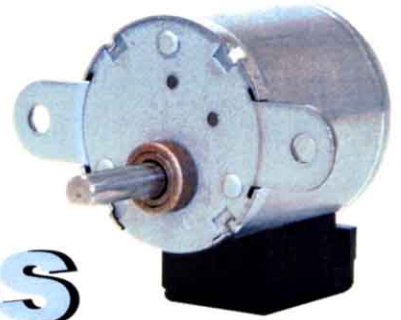


# NPM

## 2-phase stepper motor with compact reduction gear

# PFCU20 series



### Features

- Compact stepper motor with integrated reduction gear.
- A connector is installed for making the lead wire easy to assemble.
- Motors are also available with other specifications than those shown below, such as a different coil resistance or reduction ratio. (Please contact us for details)

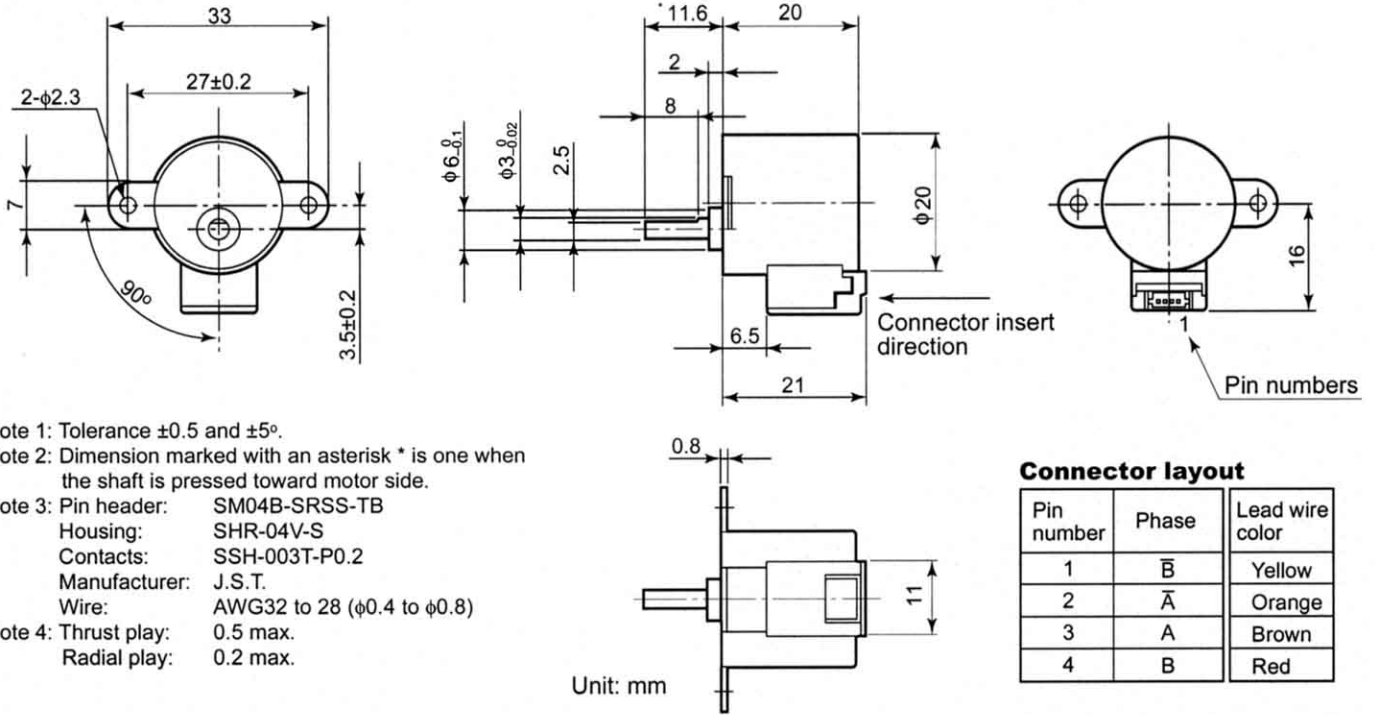
### Specifications

No.	Item	PFCU20-40S4GA2(1/10)-03
1	Winding resistance	160 ohm±7%
2	Winding inductance	59 mH (1 Vrms, 1kHz)
3	Power supply voltage	12 V
4	Terminal voltage	11 V
5	Number of phases	Permanent magnet, 2 phases
6	Excitation mode	2-2 phase
7	Gear ratio, backlash	1:10, 7° or less
8	Step angle	0.9°
9	Number of steps per revolution	400
10	Operating temperature range	-10 °C to +50 °C (ambient temperature)
11	Dielectric strength	500 VAC (for one minute)
12	Insulation resistance	100 M-ohm (500 VDC)
13	Insulation class	Type E
14	Maximum operating temperature	+100 °C (at the case)
15	Maximum starting pulse rate	650 pps (no load)
16	Maximum slewing pulse rate	800 pps (no load)
17	Holding torque	10 mN·m
18	Gear strength (ordinary)	10 mN·m
19	Gear strength (destruction)	30 mN·m
20	Temperature rise	70 K (0 pps, resistance method)
21	Mass	25 g
22	Ambient temperature range (operating)	Up to maximum operating temperature
23	Operating humidity	RH 85% (non dewdrop)
24	Ambient temperature range (storage)	-30 °C to +80 °C

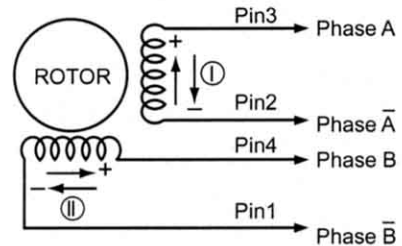
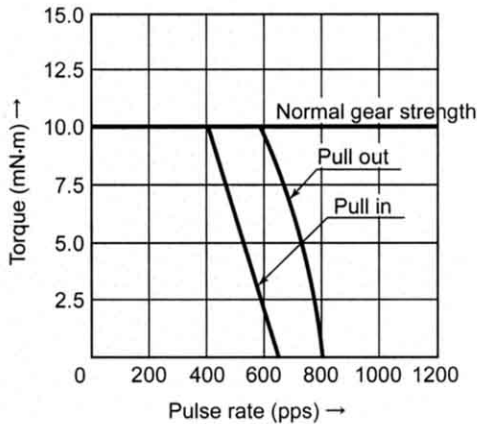
#### Remarks

- No. 1, 2 and 15 to 17 are tested at rated voltage (see above) ±2%, normal temperature (20°C±5°C), humidity (65%±20%). No. 20 is the value when saturated.
- No. 17 is the value restricted by gear strength (ordinary).
- No. 17 and dynamic torque characteristic are value measured with a torque meter.
- Drive mode bi-polar constant voltage.
- The terminal voltage is the value when power supply voltage is as above.
- Recommended driver: NP3775.

## Outline drawings



## Torque characteristics (pull in torque is calculated when JL = 0) Wiring diagram



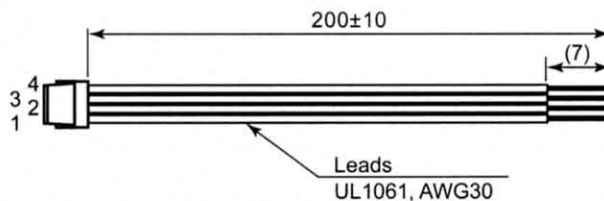
## Rotation direction (looking at the shaft from output axis side)

STEP	⓪	Ⓛ
1	+	+
2	-	+
3	-	-
4	+	-

← CW  
 ↑ CCW

## Options

### ● Leads



\* The lead length shown in the figure is the basic length of the optional item.  
 Since the leads are not attached to the motor, please order them separately.

\* The specifications may be changed for improvement without prior notice



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