

FEATURES

- High Torque Stepper Motors
- Hybrid technologies
- Permanent magnet

RS PRO Hybrid, Permanent Magnet Stepper Motor, 2.8 V, 5mm Shaft Diameter

RS Stock No.: 535-0467



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

High Torque Hybrid Stepper Motors are motion systems allowing to have a high positioning precision. With their high power already at low speed, their stall torque and the possibility to divide the steps in micro steps, stepper motors can provide direct and precise motions in a small volume

General Specifications

Stepper Motor Type	Hybrid, Permanent Magnet Stepper
Step Angle	1.8°
Step Angle Accuracy (Full Step, No Load)	±5%
Holding Torque	0.22Nm
Detent Torque	72mNm
Output Speed	186rpm
Number of Pole Pairs	1
Applications	Floppy disk drives, flatbed scanners, computer printers, plotters, slot machines
Number Of Leads	4

Electrical Specifications

Voltage Rating	2.8V
Current Per Phase	1.33A
Number Of Wires	4
Winding Arrangement	Bipolar; Parallel; Series; Unipolar; Unparallel
Resistance Per Phase	2.10hm
Resistance Accuracy	±10%
Inductance Per Phase	4.2mH
Inductance Accuracy	±20%
Rotor Inertia	35g-cm ²
Insulation Resistance	100MOhm min. 500VDC
Dielectric Strength	500VAC for one minute
Insulation Class	B

Mechanical Specifications

Shaft Diameter	5mm
Shaft Length	22mm
Depth	33mm
Frame Size	28mm x 28mm
Weight	0.22kg
Shaft Radial Play	0.02 Max. (450G Load)
Shaft Axial Play	0.08 Max. (450G Load)
Maximum Radial Force	28N (20mm from front flange)
Maximum Axial Force	10N

Operation Environment Specifications

Maximum Temperature Rise	80°C
Ambient Temperature	-20°C to 50°C
Ambient Humidity	85% Max. (No Condensation)

Protection Category

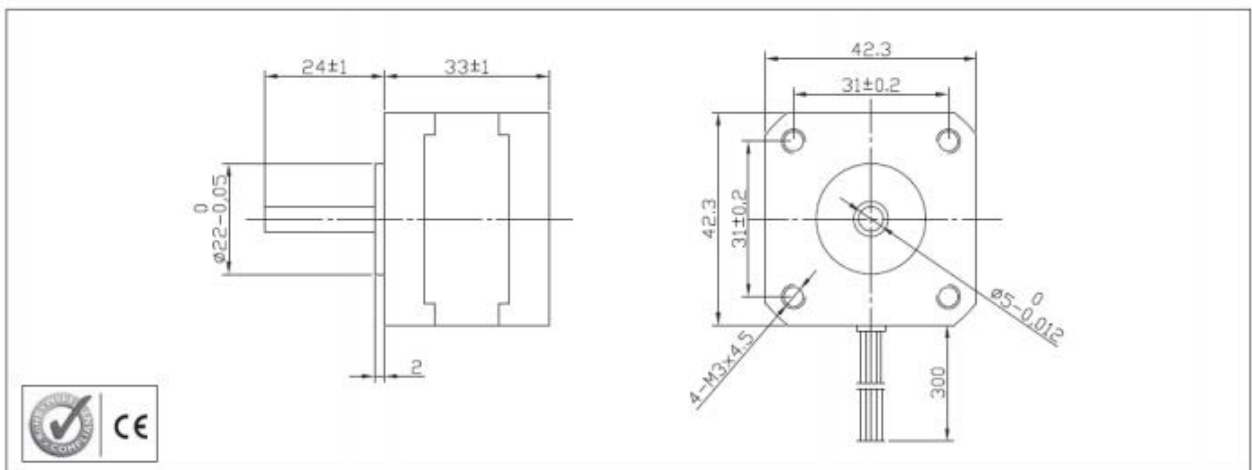
IP Rating	IP65; IP54
-----------	------------

Approvals

Compliance/Certifications	CE / CSA / UL94-V0
Standards Met	NEMA-17, RoHS Compliant



Model		42SH33-1AM	42SH33-2AM	42SH33-3AM	42SH33-4AM	
1	RATED VOLTAGE	V	4	6	12	2,8
2	CURRENT/PHASE	A	0,95	0,6	0,31	1,33
3	RESISTANCE/PHASE	Ω	4,2	10	38,5	2,1
4	INDUCTANCE/PHASE	MH	4	9,5	33	4,2
5	HOLDING TORQUE	NM	0,158	0,158	0,158	0,22
6	ROTOR INERTIA	G-CM ²	35	35	35	35
7	WEIGHT	KG	0,22	0,22	0,22	0,22
8	NUMBER OF LEADS	N°	6	6	6	4



Characteristics

STEP ANGLE	1,8°
STEP ANGLE ACCURACY	± 5%
INSULATION CLASS	B
AMBIENT TEMPERATURE	-20°C +50°C
TEMP. RISE	80°C MAX (RATED CURRENT, 2 PHASE ON)
INSULATION RESISTANCE	100 M OHM MIN. 500 VDC
DIELECTRIC STRENGTH	500 VAC FOR ONE MINUTE
SHAFT RADIAL PLAY	0,02 MAX (450 G LOAD)
SHAFT AXIAL PLAY	0,08 MAX. (450 G LOAD)
MAX RADIAL FORCE	28 N (20 MM FROM FRONT FLANGE)
MAX AXIAL FORCE	10 N

Connection

LEAD N°	COLOR	GAUGE	FUNCTION
1	BLACK	UL1430 AWG26	PHASE A
2	GREEN	UL1430 AWG26	PHASE A-
3	RED	UL1430 AWG26	PHASE B
4	BLUE	UL1430 AWG26	PHASE B-
UNIPOLAR MOTOR			
5	YELLOW	UL1430 AWG26	COM PHASE A
6	WHITE	UL1430 AWG26	COM PHASE B

