Direct drive stepper motors

➜ 7.5° 5 Watts

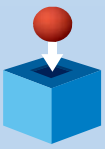
- 48 steps/revolution (7.5°)
- Absorbed power : 5 W
- 2 or 4 phase versions available



Specifications

	4 phases	4 phases	4 phases
Type	82 910 0	82 910 0	82 910 0
Electronic controller used	Unipolar	Unipolar	Unipolar
Bearings			
Sintered bronze	●	●	●
Plastic	●	●	●
General characteristics			
Electronic controller used	Unipolar	Unipolar	Unipolar
Resistance per phase (Ω)	15.5	15.5	15.5
Inductance per phase (mH)	8	8	8
Current per phase (A)	0.4	0.4	0.4
Holding torque (mN.m)	20	20	20
Voltage at motor terminals (V)	6.2	6.2	6.2
Absorbed power (W)	5	5	5
Step angle (°)	7.5	7.5	7.5
Positioning accuracy (mm)	5	5	5
Inertia of rotor (gcm^2)	4.9	4.9	4.9
Max. detent torque (mN.m)	3	3	3
Max. coil temperature (°C)	120	120	120
Storage temperature (°C)	-40 → +80	-40 → +80	-40 → +80
Thermal resistance of coil - ambient air (°C/W)	14	14	14
Insulation resistance (at 500 Vcc) (MΩ) following NFC 51200 standard	> 10^3	> 10^3	> 10^3
Insulation voltage (50 Hz, 1 minute) (V) following NFC 51200 standard	> 600	> 600	> 600
Wires length (mm)	250	250	250
Weight (g)	90	90	90
Protection rating	IP 40	IP 40	IP 40

Product adaptations



- Special output shafts
- Special supply voltages
- Special cable lengths
- Special connectors

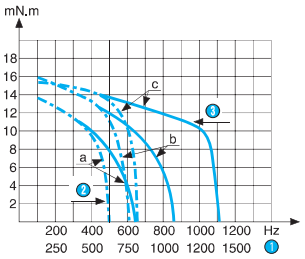
To order, see page 13

Curves

Inertia of measuring chain : 1.5 g.cm²
a = constant voltage controller with Rs (resistance in series) = 0
b = constant voltage controller with Rs (resistance in series) = R motor
c = constant voltage controller with Rs (resistance in series) = 2R motor
d = constant voltage controller with Rs (resistance in series) = 3R motor

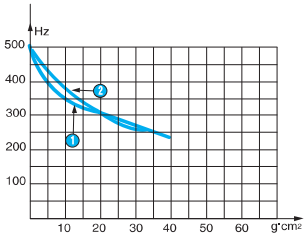
The measurements are made with full stepping, 2-phases energised.

4 phases



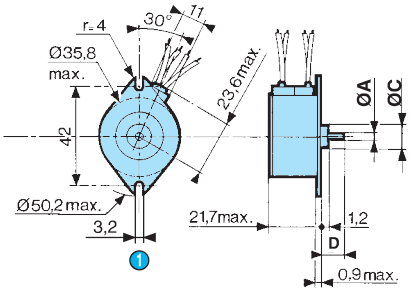
1. RPM
2. Max. stopping-starting curves
3. Max. operating curves

Max. stopping-starting frequency curves as a function of the external inertia load at zero antagonistic torque.Tests at constant U.



1. 2 phases
2. 4 phases

Dimensions



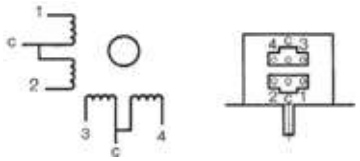
1. 2 fixing holes Ø 3.2

Axe version	Ø A	Ø C	D
Version 1	2 $^{-0,002}_{-0,006}$	9 $^{-0,010}_{-0,060}$	9
Version 2	2 $^{-0,002}_{-0,006}$	10 $^{-0,010}_{-0,060}$	9
Version 3	3,17 $^{0}_{-0,006}$	9,52 $^{-0,010}_{-0,060}$	9

Connections

4 phases

		1	2	3	4
1	1	-		-	
	2	-			-
	3		-		-
	4		-	-	
	5	-		-	



1. Step

Energisation sequence for clockwise rotation : 2 phases energised (viewed from shaft end, front forward).
Commons connected to positive.