

NEW

Stepper Motors

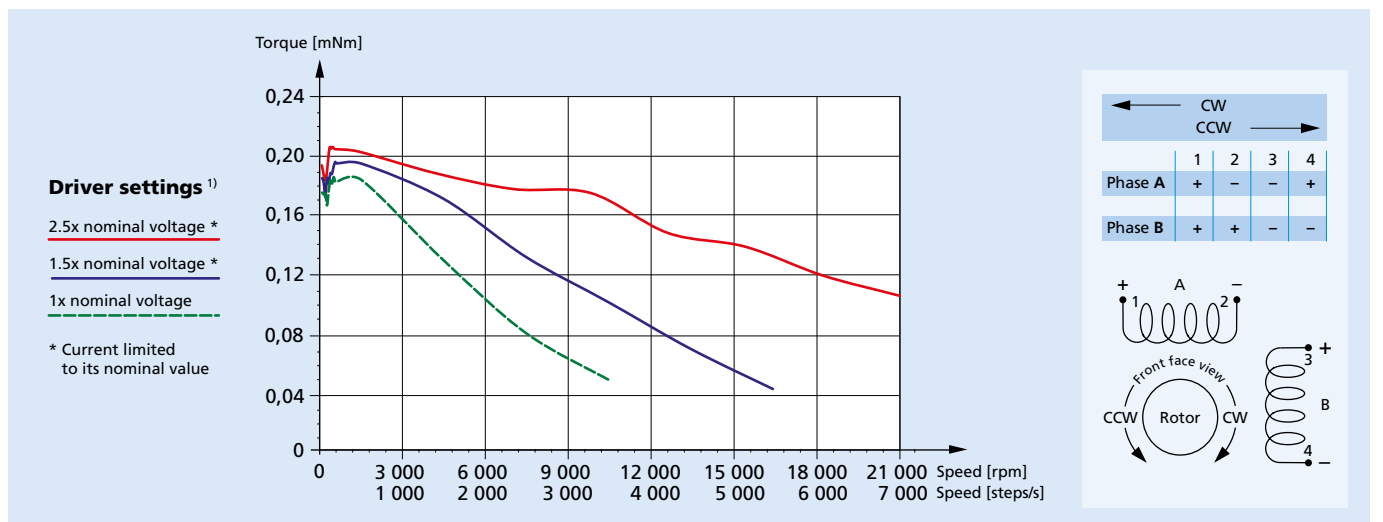
0,25 mNm

Two phase, 20 steps per revolution
PRECIstep® Technology

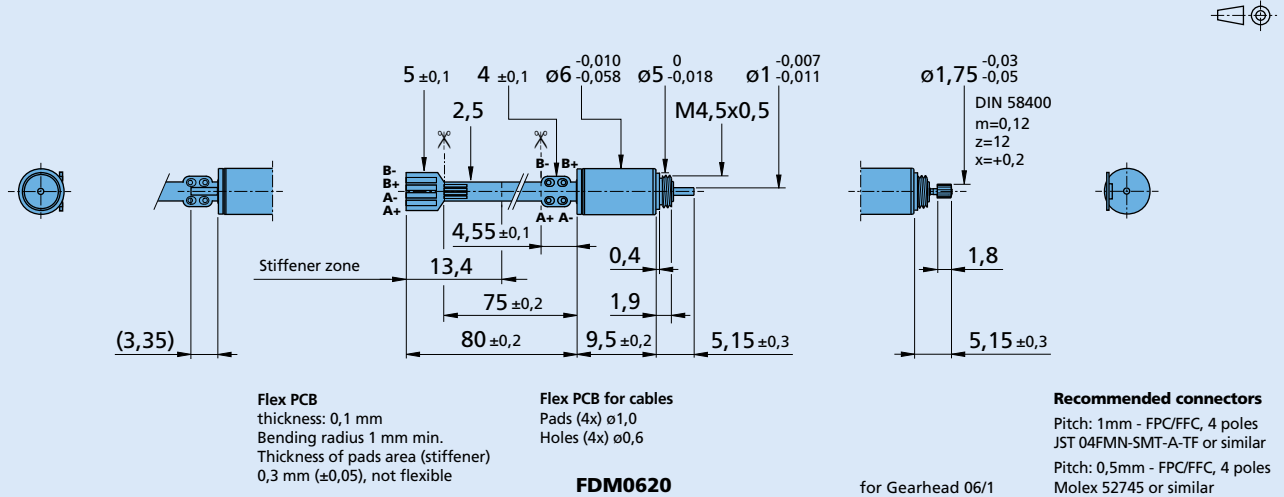
FDM0620-ww-ee

ww =		V3		
		Current	Voltage	Drive mode
1	Nominal current per phase (both phases ON)	0,08	-	A
2	Nominal voltage per phase (both phases ON)	-	3	V DC
3	Phase resistance (at 20°C)		30	Ω
4	Phase inductance (1kHz)		4,5	mH
5	Back-EMF amplitude		0,83	V/k step/s
6	Holding torque (at nominal current in both phases)	0,25		mNm
7	Holding torque (at twice the nominal current)	0,39		mNm
8	Step angle (full step)	18		degree
9	Angular accuracy	± 5		% of full step
10	Residual torque, max.	0,06		mNm
11	Rotor inertia	0,5		·10 ⁻⁹ kgm ²
12	Resonance frequency (at no load)	60		Hz
13	Electrical time constant	0,15		ms
14	Ambient temperature range	-35 ... +70		°C
15	Winding temperature tolerated, max.	130		°C
16	Thermal resistance winding-ambient air	165		°C/W
17	Thermal time constant	120		s
18	Shaft bearings	Sintered sleeve bearing (standard)	ball bearings (optional)	
19	Shaft load, max.:			
	- radial (3 mm from bearing)	0,3	3,0	N
	- axial	0,5	0,5	N
20	Shaft play, max.:			
	- radial (0,2N)	20	12	µm
	- axial (0,2N)	~0	~0	µm
21	Isolation test voltage	100		V DC
22	Mass	1,1		g

¹⁾ On PWM drivers or chopper (current mode), the current is set to the nominal value and the supply voltage is typically 1 to 3x higher than the nominal voltage. Microstepping is recommended below 200 steps/s. Curves measured with a load inertia of 3.10-9 kgm².



Dimensional drawing



Combinations

Drive Electronics	Encoders	Cables	Gearheads / Lead screws
<p>Available on request</p>		<p>Complete list available on request</p>	<p>06/1 Lead screws M1,2 - M1,6</p>

Ordering information

Example: **FDM0620-2R-V3-10**

Motor type	Bearings (rr)	Winding (ww)	Motor execution (ee)		
FDM = Motor design 06 = Motor diameter (mm) 20 = Steps per revolution FDM0620	Special lubricant options available - (sleeve bearing) -2R (2 ball bearings)	-V3	Only front output shaft	With double output shaft	Front output shaft
			-31 (Flex PCB 80mm p=1mm)	-30 (Flex PCB 80mm p=1mm)	Plain shaft $\phi 1mm$
			-35 (Flex PCB 80mm p=1mm)	-36 (Flex PCB 80mm p=1mm)	Pinion 06/1
			-76 (Flex PCB 80mm p=1mm)	-75 (Flex PCB 80mm p=1mm)	Shaft $\phi 0.65mm$ for lead screw M1,2
			-78 (Flex PCB 80mm p=1mm)	-77 (Flex PCB 80mm p=1mm)	Shaft $\phi 0.8mm$ for lead screw M1,6

Note : Standard version is delivered with a flex PCB of 80mm that the user can cut himself as indicated on the drawing above. A version with pre-cut PCB is available on request.