

Stepper Motors

0,65 mNm

Two phase, 20 steps per revolution
PRECiStep® Technology

AM0820-ww-ee

ww =		A-0,225-7		V-3-18		V-5-56		Drive mode
1	Nominal current per phase (both phases ON) ¹⁾		Current 0,225	Voltage –	Current 0,15	Voltage –	Current 0,08	A
2	Nominal voltage per phase (both phases ON) ¹⁾		–	2	–	3	–	V DC
3	Phase resistance (at 20°C)		7,3		18		56	Ω
4	Phase inductance (1kHz)		1,4		3,9		12,6	mH
5	Back-EMF amplitude		0,8		1,3		2,4	V/k step/s
6	Holding torque (at nominal current in both phases)	0,65						mNm
7	Holding torque (at twice the nominal current)	1						mNm
8	Step angle (full step)	18						degree
9	Angular accuracy ¹⁾	± 10						% of full step
10	Residual torque, max.	0,17						mNm
11	Rotor inertia	2,75						·10 ⁻⁹ kgm ²
12	Resonance frequency (at no load)	170						Hz
13	Electrical time constant	0,21						ms
14	Ambient temperature range	–30 ... +70						°C
15	Winding temperature tolerated, max.	130						°C
16	Thermal resistance winding-ambient air	76						°C/W
17	Thermal time constant	180						s
18	Shaft bearings	sintered bronze sleeves (standard)			ball bearings, preloaded (optional)			
19	Shaft load, max.:							
	– radial (3 mm from bearing)	0,3			3,0			N
	– axial	0,2			1,5			N
20	Shaft play, max.:							
	– radial (0,2N)	15			12			μm
	– axial (0,2N)	140			–0			μm
21	Isolation test voltage	200						V DC
22	Weight	3,3						g

¹⁾ Relevant for 2 phases ON only. On PWM drivers with chopper (current mode), the current is set to the nominal value and the supply voltage is typically 3 to 5x higher than the nominal voltage.

²⁾ Curves measured with a load inertia of 6 · 10⁻⁹ kgm², in half-step mode for the “1 x nominal voltage” curve, in 1/4 micro-stepping mode for the other curves.

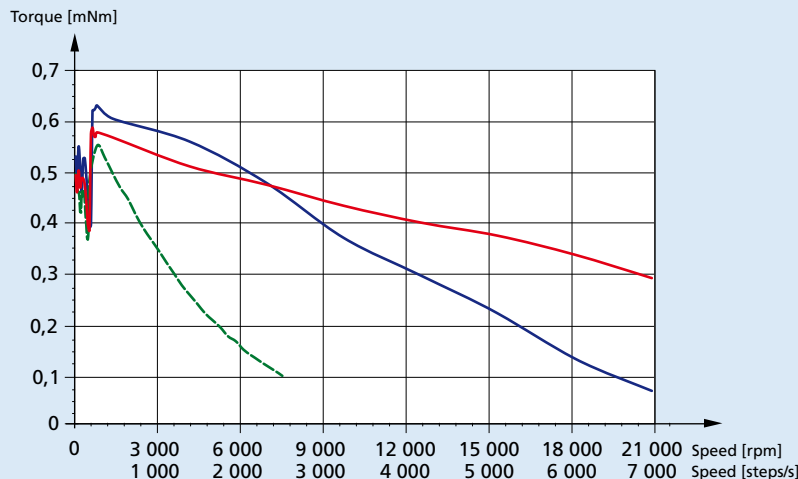
Driver settings ^{1) 2)}

5x nominal voltage *

2.5x nominal voltage *

1 x nominal voltage

* Current limited to its nominal value



	CW CCW			
	1	2	3	4
Phase A	+	–	–	+
Phase B	+	+	–	–

