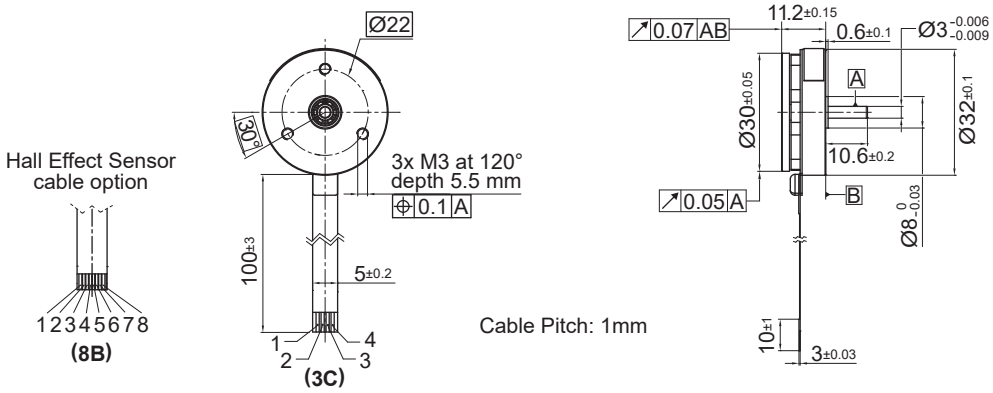
32BF nuvoDisc™

Ø 32 mm • 8-pole • 40 W



Dimensions in mm

Electrical Data	Symbol	32BF 3C-K.11 32BF 8B-10	Unit
1 Nominal Voltage	U_N	12	Volt
2 Optimization Direction	-	Symmetrical	-
3 No-Load Speed	n_0	13,600	rpm
4 Typical No-Load Current	I_0	100.0	mA
5 Max Continuous Mechanical Power (@25°C)	P_{max}	40.0	W
6 Max Continuous Current	$I_{e\,max}$	1.5	A
7 Max Continuous Torque	$M_{e\,max}$	13 (1.85)	mNm (oz-in)
8 Back EMF Constant	k_E	0.87	V/1000 rpm
9 Torque Constant	k_M	8.3	mNm/A
10 Motor Regulation	R/k^2	57.5	10^3/Nms
11 Motor Regulation	$k/R^{½}$	4.2 (0.6)	mNm/W^{½} (oz-in/W^{½})
12 Internal Resistance - phase to phase	R_l	3.95	ohms
13 Line to Line Resistance at Connectors	R_L	3.95	ohms
14 Inductance Phase to Phase	L	0.12	mH
15 Mechanical Time Constant	τ_m	64.9	ms
16 Electrical Time Constant	τ_e	0.03	ms
General Data			
17 Maximum Motor Speed	n_{max}	30,000	rpm
18 Ambient Working Temperature Range	-	-30 to +80 (-22 to +176)	°C (°F)
19 Ambient Storage Temperature Range	-	-40 to +80 (-40 to +176)	°C (°F)
20 Ball Bearings Preload	-	7	N
21 Axial Static Force w/o Shaft Support (max)	-	27.0	N
22 Maximum Winding Temperature	-	125 (257)	°C (°F)
23 Thermal Resistance	R_{th}	13.0	°C/W
24 Thermal Time Constant	τ_w	550	s
25 Weight	-	27 (0.96)	g (oz)
26 Rotor Inertia	J	11.300	g-cm^2
27 Hall Sensor Electrical Phasing*	-	120	Electrical °

*Also available without Hall sensors

Wire	Description
1	Phase 1
2	Phase 2
3	Phase 3
4	3.5 to 24V DC
5	GND
6	Sensor 1
7	Sensor 2
8	Sensor 3
with hall effect sensor (8B)	

Wire	Description
1	center point of Y winding
2	Phase 1
3	Phase 2
4	Phase 3
sensorless (3C)