

dimensions in mm
mass: 19 g

13BC 3C • 05

Connections

Color	Designation
white	phase 1
grey	phase 2
violet	phase 3

Winding Type

-E

-H

-K

-P

Coil Dependent Parameters

Phase/phase resistance	ohm	22.5	14.8	10.4	5.6
Phase/phase inductance	mH	0.68	0.44	0.31	0.17
Back-EMF constant	V/1000 rpm	0.84	0.69	0.58	0.46
Torque Constant	mNm/A (oz.-in/A)	8.02 (1.14)	6.59 (0.93)	5.54 (0.78)	4.39 (0.62)

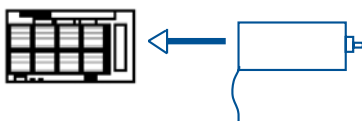
Dynamic Parameters

Rated Voltage	V	10	10	10	10
No-load Current	A	0.054	0.068	0.085	0.114
No-load Speed	rpm	9300	11600	14000	18200
Max. continuous stall torque	mNm (oz-in)	1.8 (0.3)	1.8 (0.3)	1.8 (0.3)	1.9 (0.3)
Max. continuous stall current	A	0.28	0.34	0.41	0.55
Max. continuous torque at 10 krpm	mNm (oz-in)	1.6 (0.2)	1.6 (0.2)	1.5 (0.2)	1.7 (0.2)
Max. continuous current at 10 krpm	A	0.25	0.31	0.36	0.49
Max. continuous power at 10 krpm	W	1.7	1.7	1.6	1.7

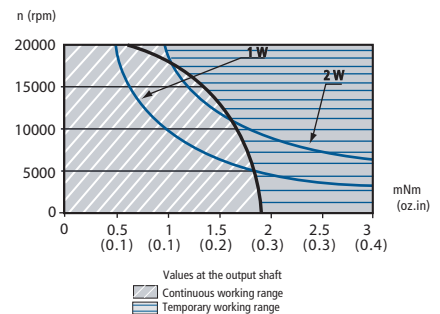
Intrinsic Parameters

Motor constant	mNm/W ^{1/2} (oz-in/W ^{1/2})	1.7 (0.2)	1.7 (0.2)	1.7 (0.2)	1.9 (0.3)
Rotor inertia	kgm ² 10 ⁻⁷	0.22	0.22	0.22	0.22
Mechanical time constant	ms	8	7	7	6
Electrical time constant	ms	0.03	0.03	0.03	0.03
Thermal resistance	°C/W	42	42	42	42

EBS 485 SI



The 13BC-3C is a sensorless motor with a delta-connected winding. It is intended to use with a sensorless driver such as the EBS 485 S I or a driver using, for instance, a chip of the Philips TDA family. If the winding center-point is needed, it can be generated by using three external resistors attached to the motor phases and Y-connected together.



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