

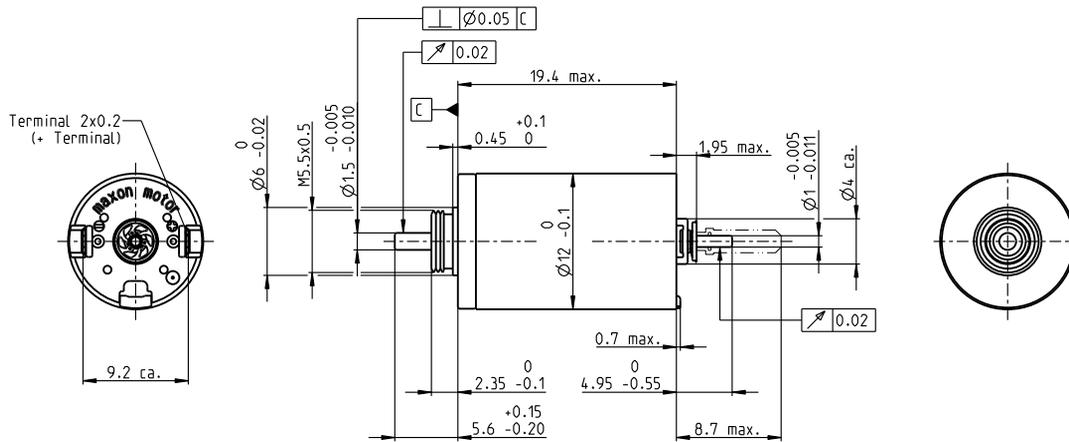
DCX 12 S Precious Metal Brushes

DC motor $\varnothing 12$ mm



DCX

Key Data: 1.6/2 W, 2.0 mNm, 13 000 rpm



M 3:2

Motor Data

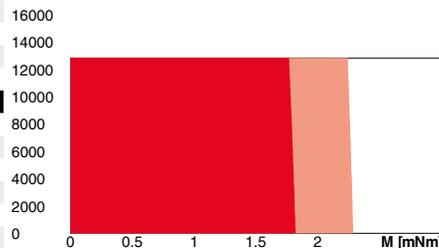
	V	3	4.5	6	9	12
1. Nominal voltage	V	3	4.5	6	9	12
2. No load speed	rpm	9090	9000	9100	9010	9020
3. No load current	mA	31.8	20.9	15.9	10.5	7.88
4. Nominal speed	rpm	3760	3620	3870	3700	3620
5. Nominal torque (max. continuous torque)	mNm	1.92	1.9	1.95	1.92	1.88
6. Nominal current (max. continuous current)	A	0.655	0.427	0.332	0.216	0.159
7. Stall torque	mNm	3.35	3.25	3.46	3.33	3.21
8. Stall current	A	1.09	0.701	0.566	0.36	0.261
9. Max. efficiency	%	69	69	70	69	69
10. Terminal resistance	Ω	2.74	6.42	10.6	25	46
11. Terminal inductance	mH	0.0724	0.166	0.29	0.664	1.17
12. Torque constant	mNm/A	3.06	4.63	6.12	9.26	12.3
13. Speed constant	rpm/V	3120	2060	1560	1030	775
14. Speed/torque gradient	rpm/mNm	2800	2860	2700	2780	2890
15. Mechanical time constant	ms	8.37	8.32	8.31	8.33	8.33
16. Rotor inertia	gcm ²	0.286	0.278	0.293	0.286	0.275

Thermal data

17. Thermal resistance housing-ambient	K/W	35
18. Thermal resistance winding-housing	K/W	14.4
19. Thermal time constant winding	s	718
20. Thermal time constant motor	s	146
21. Ambient temperature ball bearings	$^{\circ}$ C	-40...+85
21. Ambient temperature sleeve bearings	$^{\circ}$ C	-30...+85
22. Max. winding temperature	$^{\circ}$ C	100

Operating Range

n [rpm] Winding 4.5 V



- Continuous operation
- Continuous operation with reduced thermal resistance R_{th2} 50%
- Intermittent operation

Mechanical data ball bearings

23. Max. speed	rpm	13 000
24. Axial play	mm	0...0.1
Preload	N	0.5
25. Radial play	mm	0.015
26. Max. axial load (dynamic)	N	0.5
27. Max. force for press fits (static)	N	8.8
(static, shaft supported)	N	120
28. Max. radial load [mm from flange]	N	1.5 [5]

Mechanical data sleeve bearings

23. Max. speed	rpm	13 000
24. Axial play	mm	0...0.15
Preload	N	0
25. Radial play	mm	0.015
26. Max. axial load (dynamic)	N	0.1
27. Max. force for press fits (static)	N	30
(static, shaft supported)	N	120
28. Max. radial load [mm from flange]	N	0.8 [5]

maxon Modular System

maxon gear	Stages [opt.]
324_GPX 12 A/C	1-4
325_GPX 12 LN/LZ	1-4
326_GPX 12 HP	2-4
328_GPX 14 A/C	3-4
329_GPX 14 LN/LZ	3-4
330_GPX 14 HP	4

maxon sensor
433_ENX 10 EASY
433_ENX 10 QUAD
434_ENX 10 EASY XT

Details on catalog page 32

maxon motor control
486_ESCON Module 24/2
486_ESCON 36/2 DC
498_EPOS4 Mod./Comp. 24/1.5

Other specifications

29. Number of pole pairs		1
30. Number of commutator segments		7
31. Weight of motor	g	11
32. Typical noise level	dBA	40

Configuration

Bearing: Sleeve bearings/ball bearings preloaded
 Commutation: Precious metal brushes with or without CLL
 Flange front/back: Standard flange/Flange with thread holes/no flange
 Shaft front/back: Length
 Electric connection: Terminals or cable/cable length/connector type