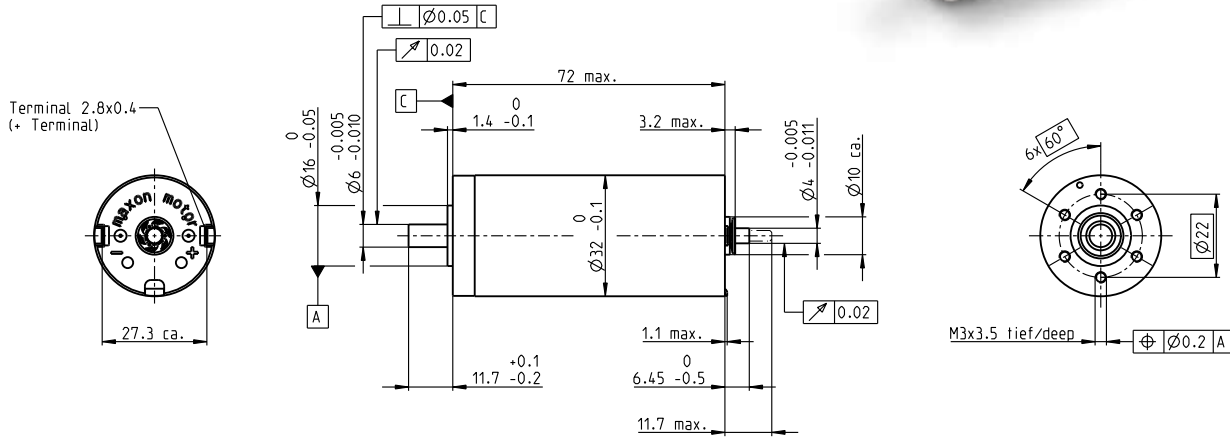


# DCX 32 L Ø32 mm, graphite brushes, DC motor

Key Data: 70/110 W, 128 mNm, 11300 rpm



DCX



M 1:2

### Motor Data

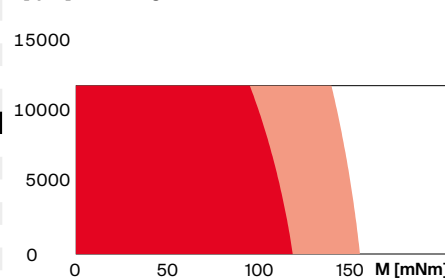
1_ Nominal voltage	V	12	18	24	36	48	60
2_ No load speed	rpm	7120	8630	8270	7940	7780	5840
3_ No load current	mA	274	234	164	103	75.2	41.6
4_ Nominal speed	rpm	6560	8070	7710	7410	7260	5290
5_ Nominal torque	mNm	89.4	101	108	119	123	128
6_ Nominal current (max. continuous current)	A	6.00	5.42	4.12	2.87	2.17	1.35
7_ Stall torque	mNm	1730	2120	1980	2020	2000	1420
8_ Stall current	A	111	109	72.5	47.1	34.2	14.5
9_ Max. efficiency	%	85	88	88	90	90	89
10_ Terminal resistance	Ω	0.108	0.165	0.331	0.764	1.40	4.12
11_ Terminal inductance	mH	0.034	0.053	0.103	0.254	0.473	1.31
12_ Torque constant	mNm/A	15.6	19.5	27.3	42.9	58.5	97.5
13_ Speed constant	rpm/V	612	490	350	223	163	97.9
14_ Speed/torque gradient	rpm/mNm	4.24	4.15	4.24	3.96	3.92	4.14
15_ Mechanical time constant	ms	3.44	3.30	3.24	3.19	3.11	3.11
16_ Rotor inertia	gcm <sup>2</sup>	77.6	75.9	72.8	76.8	75.9	71.7

### Thermal data

17_ Thermal resistance housing-ambient	K/W	7.28
18_ Thermal resistance winding-housing	K/W	2.3
19_ Thermal time constant winding	s	42.2
20_ Thermal time constant motor	s	837
21_ Ambient temperature	°C	-40...+100
22_ Max. winding temperature	°C	155

### Operating Range

n [rpm] Winding 36 V



- Continuous operation
- Continuous operation with reduced thermal resistance R<sub>th2</sub> 50%
- Intermittent operation

### Mechanical data ball bearings

23_ Max. speed	rpm	11 300
24_ Axial play	mm	0..0.1
Preload	N	7
25_ Radial play	mm	0.02
26_ Max. axial load (dynamic)	N	7
27_ Max. force for press fits (static) (static, shaft supported)	N	22.6
28_ Max. radial load [mm from flange]	N	65.3 [5]

### Other specifications

29_ Number of pole pairs		1
30_ Number of commutator segments		11
31_ Weight of motor	g	325
32_ Typical noise level	dBA	47

### Modular System

<b>Gear</b>	Stages [opt.]
383_GPX 32 A/C	1-2 [3]
384_GPX 32 LN/LZ	1-2 [3]
385_GPX 32 HP	2-3 [4]
386_GPX 32 UP	1-4
387_GPX 37 A	3
388_GPX 37 LN/LZ	3

### Sensor

473_ENX 10 EASY
473_ENX 10 QUAD
474_ENX 10 EASY XT
475_ENX 16 EASY
476_ENX 16 EASY XT
477_ENX 16 EASY Abs.
478_ENX 16 EASY Abs. XT
486_ENX 16 RIO
517_ENC AEDL 5810
518_ENC 30 HEDS 5540
524_ENC 30 HEDL 5540

### Details on catalog page 36

<b>Motor Control</b>
533_ESCON Module 50/5
534_ESCON Module 50/8 HE
535_ESCON 50/5
535_ESCON 70/10
541_EPOS4 Micro 24/5
542_EPOS4 Module 50/5
543_EPOS4 Compact 24/5 3-axes
543_EPOS4 Module 50/8
545_EPOS4 Compact 50/5
545_EPOS4 Compact 50/8
547_EPOS4 50/5
547_EPOS4 70/15
548_EPOS4 Disk 60/8
549_EPOS4 Disk 60/12

### Configuration

Bearing: Ball bearings preloaded  
 Commutation: Graphite brushes  
 Flange front/back: Standard flange/configurable flange/  
 no flange  
 Shaft front/back: Length/diameter/flat face  
 Electric connection: Terminals or cable/  
 alignment of connection/cable length/connector type