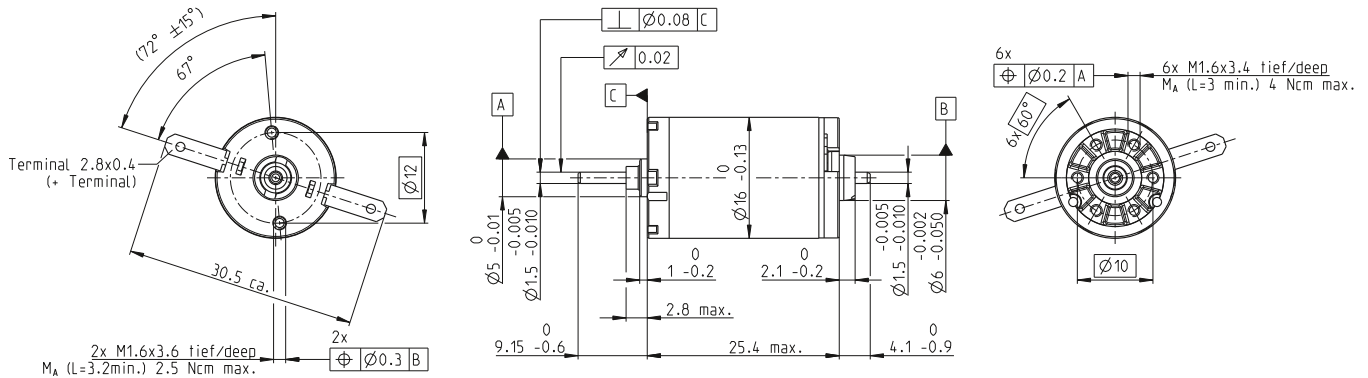


# DC-max 16 S $\varnothing$ 16 mm, graphite brushes, DC motor



Key data: 3/4.7 W, 4.8 mNm, 11000 rpm

DC-max



M 1:1

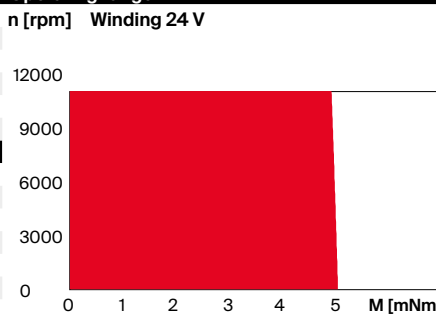
### Motor data

1_	Nominal voltage	V	6	12	24
2_	No load speed	rpm	9870	9860	9920
3_	No load current	mA	67.3	33.6	16.8
4_	Nominal speed	rpm	6770	6200	6580
5_	Nominal torque	mNm	3.71	4.31	4.76
6_	Nominal current (max. continuous current)	A	0.720	0.413	0.227
7_	Stall torque	mNm	12.1	11.9	14.4
8_	Stall current	A	2.15	1.05	0.64
9_	Max. efficiency	%	68	68	71
10_	Terminal resistance	$\Omega$	2.79	11.4	37.5
11_	Terminal inductance	mH	0.086	0.343	1.37
12_	Torque constant	mNm/A	5.62	11.2	22.5
13_	Speed constant	rpm/V	1700	849	424
14_	Speed/torque gradient	rpm/mNm	843	858	707
15_	Mechanical time constant	ms	8.85	8.92	8.57
16_	Rotor inertia	gcm <sup>2</sup>	1.00	0.993	1.16

### Thermal data

17_	Thermal resistance housing-ambient	K/W	29.8
18_	Thermal resistance winding-housing	K/W	5.5
19_	Thermal time constant winding	s	5.35
20_	Thermal time constant motor	s	288
21_	Ambient temperature	$^{\circ}$ C	-30...+85
22_	Max. winding temperature	$^{\circ}$ C	125

### Operating range



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

### Mechanical data ball bearings

23_	Max. speed	rpm	11000
24_	Axial play	mm	0.05...0.15
	Preload	N	0
25_	Radial play	mm	0.025
26_	Max. axial load (dynamic)	N	2.2
27_	Max. force for press fits (static) (shaft supported)	N	30
28_	Max. radial load [mm from flange]	N	200
		N	7.8 [5]

### Mechanical data sleeve bearings

23_	Max. speed	rpm	11000
24_	Axial play	mm	0.05...0.15
	Preload	N	0
25_	Radial play	mm	0.012
26_	Max. axial load (dynamic)	N	0.8
27_	Max. force for press fits (static) (shaft supported)	N	35
28_	Max. radial load [mm from flange]	N	200
		N	1.4 [5]

### Other specifications

29_	Number of pole pairs		1
30_	Number of commutator segments		7
31_	Weight of motor	g	23.1

### Modular system

Gear	Stages [opt.]	Sensor
381_GPX 16 A/C	1-2 [3-4]	498_ENX 13 GAMA
382_GPX 16 LN/LZ	1-2 [3-4]	502_ENX 16 IMR
386_GPX 19 A/C	3-4	507_ENX 10 QUAD
387_GPX 19 LN/LZ	3-4	507_ENX 10 EASY

Details on catalog page 40

Motor Control
550_ESCON Module 24/2
550_ESCON 36/2 DC
557_ESCON2 Nano 24/2
563_EPOS4 Micro 24/5
564_EPOS4 Module 24/1.5
565_EPOS4 Compact 24/5 3-axes
566_EPOS4 Compact 24/1.5

### Configuration

Bearing: Sleeve bearings/ball bearings  
 Commutation: Precious metal brushes with CLL/Graphite Brushes  
 Shaft front/back: Length  
 Electric connection: Terminals/cable