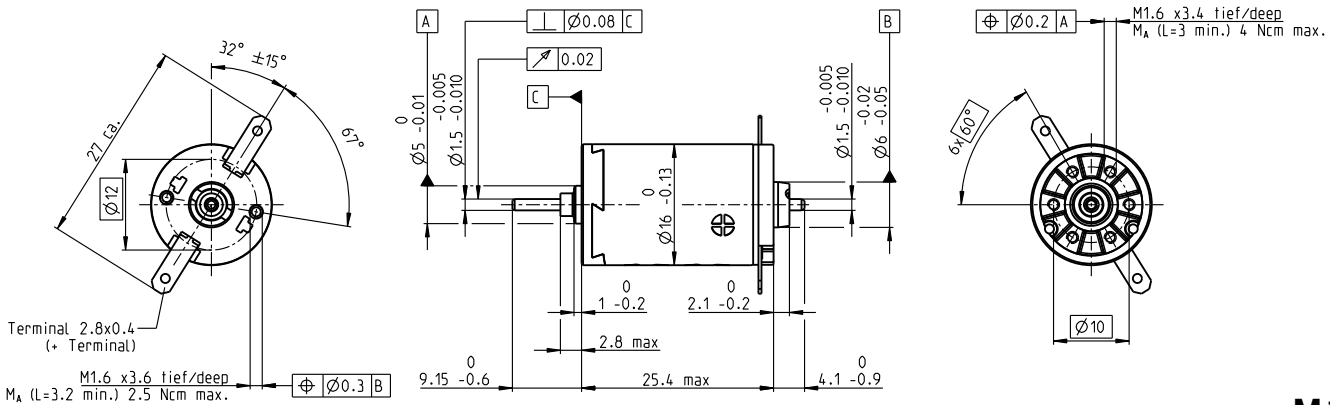


DC-max 16 S \varnothing 16 mm, precious metal brushes, DC motor



DC-max

Key Data: 2/4.3 W, 4.1 mNm, 11000 rpm



M 1:1

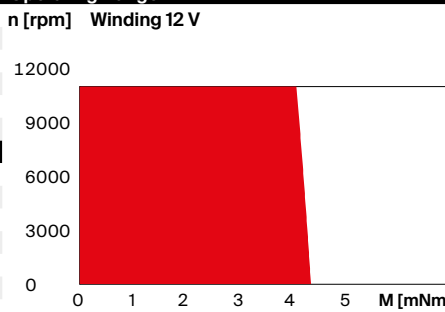
Motor Data

1_ Nominal voltage	V	6	12	24
2_ No load speed	rpm	7890	7560	7470
3_ No load current	mA	14.7	6.90	3.40
4_ Nominal speed	rpm	4830	4390	4210
5_ Nominal torque	mNm	4.06	3.92	3.80
6_ Nominal current (max. continuous current)	A	0.577	0.267	0.128
7_ Stall torque	mNm	10.5	9.44	8.75
8_ Stall current	A	1.46	0.629	0.289
9_ Max. efficiency	%	81	80	80
10_ Terminal resistance	Ω	4.10	19.1	83.2
11_ Terminal inductance	mH	0.140	0.610	2.49
12_ Torque constant	mNm/A	7.19	15.0	30.3
13_ Speed constant	rpm/V	1330	637	315
14_ Speed/torque gradient	rpm/mNm	758	809	864
15_ Mechanical time constant	ms	8.87	8.92	9.00
16_ Rotor inertia	gcm ²	1.12	1.05	0.994

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...+65
22_ Max. winding temperature	$^{\circ}$ C	85

Operating Range



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) (static, shaft supported)	N	30
28_ Max. radial load [mm from flange]	N	200
		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) (static, shaft supported)	N	35
28_ Max. radial load [mm from flange]	N	200
		1.4 [5]

Other specifications

29_ Number of pole pairs		1
30_ Number of commutator segments		7
31_ Weight of motor	g	23.3

Modular System

Gear	Stages [opt.]	Sensor
367_GPX 16 A/C	1-2 [3-4]	472_ENX 13 GAMA
368_GPX 16 LN/LZ	1-2 [3-4]	473_ENX 10 QUAD
371_GPX 19 A/C	3-4	473_ENX 10 EASY
372_GPX 19 LN/LZ	3-4	

Details on catalog page 36

Motor Control
532_ESCON Module 24/2
532_ESCON 36/2 DC
541_EPOS4 Micro 24/5
542_EPOS4 Module 24/1.5
543_EPOS4 Compact 24/5 3-axes
544_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