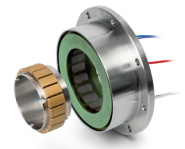
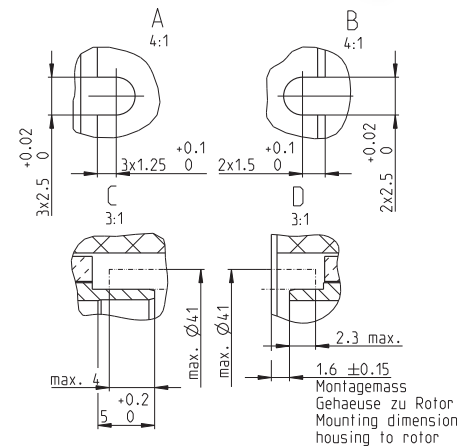
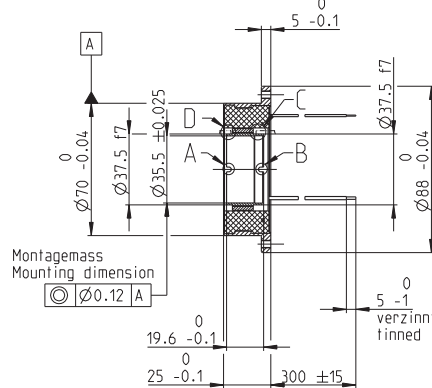
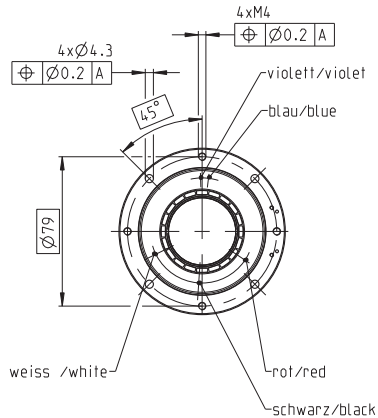


Dynamic Torque, potted in mounting flange



Frameless BLDC Motors



M 1:4

- Stock program
-  Standard program
-  Special program (on request)

Part numbers

sensorless		783327						
Motor data¹								
Values at nominal voltage								
1	Nominal voltage	V	48					
2	No load speed	rpm	4570					
3	No load current	mA	204					
4	Nominal speed	rpm	3590					
5	Nominal torque	mNm	978					
6	Nominal current (max. continuous current)	A	8.48					
7	Stall torque	mNm	4080					
8	Stall current	A	145					
9	Max. efficiency	%	92.6					
Characteristics								
10	Terminal resistance phase to phase	Ω	0.332					
11	Terminal inductance phase to phase	mH	0.458					
12	Torque constant	mNm/A	99.7					
13	Speed constant	rpm/V	95.8					
14	Speed/torque gradient	rpm/mNm	0.319					
15	Mechanical time constant	ms	0.569					
16	Rotor inertia	gcm²	170					

Specifications

Thermal data

- | | | |
|----|--|---------------|
| 17 | Thermal resistance housing-ambient (R_{th2}) | 1.6...3.6 K/W |
| 18 | Thermal resistance winding-housing | 0.379 K/W |
| 19 | Thermal time constant winding | 12.1 s |
| 20 | Thermal time constant motor | 1330 s |
| 21 | Ambient temperature | -40...+100 °C |
| 22 | Max. winding temperature | +155 °C |

Mechanical data

- 23 Max. speed 5000 rpm

Other specifications

- | | | |
|----|---|-------|
| 29 | Number of pole pairs | 10 |
| 30 | Number of phases | 3 |
| 31 | Weight of motor
(with mounting flange made of stainless steel) | 377 g |
| | Weight for integration
(without mounting flange) | 219 g |

Values listed in the table are nominal.

Connection motor (Cable AWG 18)

- | | |
|-------|-----------------|
| red | Motor winding 1 |
| black | Motor winding 2 |
| white | Motor winding 3 |

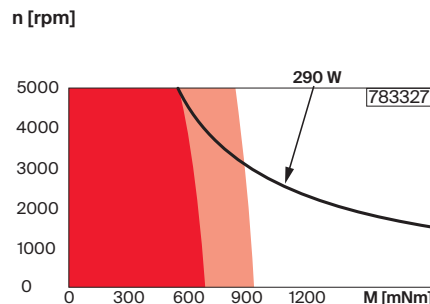
Connection NTC (Cable AWG 24)

- Resistance 25°C: 5 kΩ ±1%, beta (25–85°C):
3490 K

Comment

For Torque control data, refer to "Installation Manual" available on maxon online shop.

Operating range



Comments

¹The nominal data refer to a thermal resistance, housing-ambient (R_{th2}) of 1.6 K/W.

-  Continuous operation range at R_{th2} of 3.6 K/W
With mounting flange
-  Continuous operation range at R_{th2} of 1.6 K/W
Installed in a $\varnothing 78$ mm aluminum housing
Mounted on an aluminum plate sized
160x160x10 mm
-  Intermittent operation
-  **Assigned power rating**

Modular system

Details on catalog page 60

Sensors

429_T SX 65 MAG with
commutation signals

Control Electronics

- 447_ESCON2 Micro 60/5
448_ESCON2 Module 60/12
449_ESCON2 Compact 60/12
455_EPOS4 Module 50/8
459_EPOS4 Compact 50/8
462_EPOS4 70/15
462_EPOS4 Disk 60/8 CAN
463_EPOS4 Disk 60/8 EtherCAT

Variants

maxon integration into customer housing on request.
Other coil designs on request.