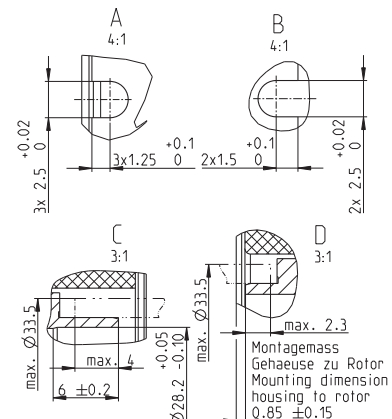
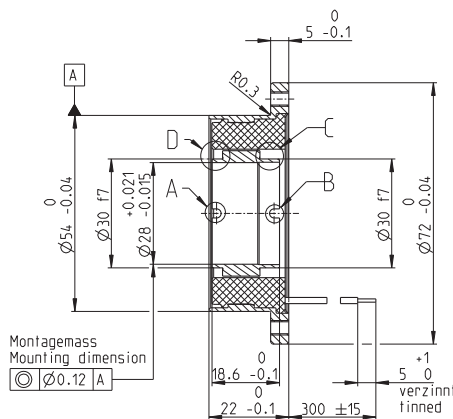
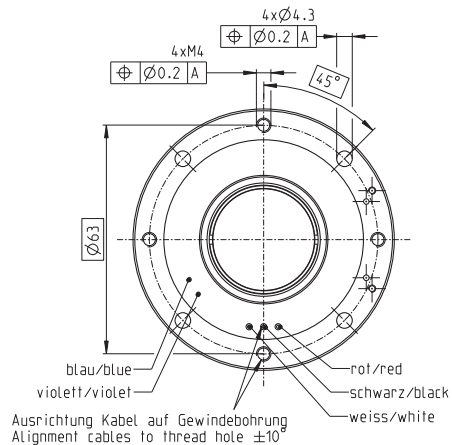
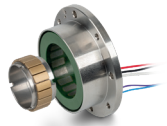


EC frameless DT 50 S Ø54 mm, brushless, 220 watt
Dynamic Torque, potted in mounting flange



M 2:3

 Stock program
 Standard program
 Special program (on request)

Part numbers

sensorless		734439							
Motor data¹									
Values at nominal voltage									
1	Nominal voltage	V	48						
2	No load speed	rpm	6650						
3	No load current	mA	150						
4	Nominal speed	rpm	5510						
5	Nominal torque	mNm	368						
6	Nominal current (max. continuous current)	A	4.9						
7	Stall torque	mNm	1890						
8	Stall current	A	81.2						
9	Max. efficiency	%	91.6						
Characteristics									
10	Terminal resistance phase to phase	Ω	0.591						
11	Terminal inductance phase to phase	mH	0.384						
12	Torque constant	mNm/A	68.5						
13	Speed constant	rpm/V	139						
14	Speed/torque gradient	rpm/mNm	1.2						
15	Mechanical time constant	ms	0.881						
16	Rotor inertia	gcm²	70						

Specifications	Operating range	Comments
Thermal data 17 Thermal resistance housing-ambient (R_{th2}) 2.4...4.0 K/W 18 Thermal resistance winding-housing 1.4 K/W 19 Thermal time constant winding 15.9 s 20 Thermal time constant motor 453 s 21 Ambient temperature -40...+100 °C 22 Max. winding temperature +155 °C	n [rpm] 	*The nominal data refer to a thermal resistance, housing-ambient (R_{th2}) of 2.4 K/W.
Mechanical data 23 Max. speed 7000 rpm		Continuous operation range at R_{th2} of 4.0 K/W With mounting flange Continuous operation range at R_{th2} of 2.4 K/W Installed in a $\varnothing 62$ mm aluminum housing Mounted on an aluminum plate sized 125x125x10 mm Intermittent operation Assigned power rating
Other specifications 29 Number of pole pairs 10 30 Number of phases 3 31 Weight of motor (with mounting flange made of stainless steel) 218 g Weight for integration (without mounting flange) 116 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)
purple NTC
blue NTC
Resistance 25 °C: 5 k Ω $\pm$ 1%, beta (25–85 °C):
3490 K

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

Sensors
428_TSX 50 MAG with
commutation signals

Control Electronics
447_ESCON2 Micro 60/5
454_EPOS4 Micro 24/5 CAN
454_EPOS4 Micro 24/5 EtherCAT
455_EPOS4 Module 50/5
458_EPOS4 Compact 50/5
461_EPOS4 50/5
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.