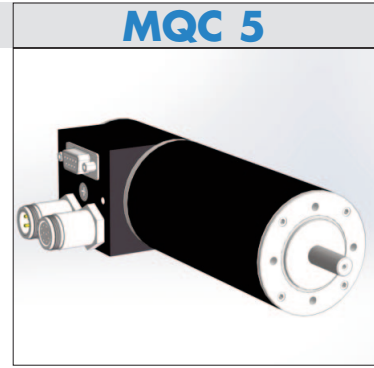


# Brushless DC motor

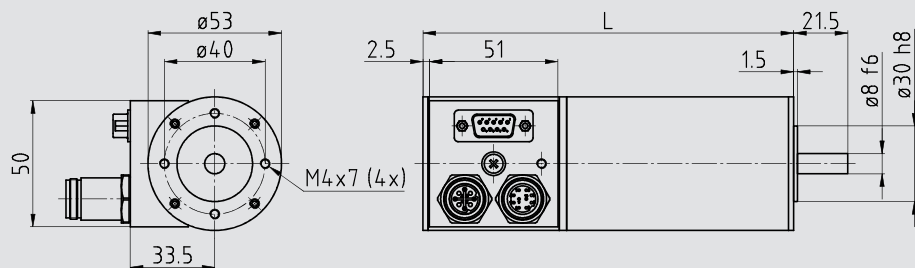
<b>Properties:</b>	Operation:	on the external standard controller (block commutation); Rotor position sensing by 3 hall sensors
	Connection:	K4 terminal box for power supply and sensors
	Rotor:	4-pole neodymium magnet, low cogging torque due to continuous angular magnetization
	Service life:	20,000 h, S1 duty
	Insulation mat. class:	B (120°C)
	System of protection:	IP 44, optional up to IP 65 (IP 69)
	Special Versions:	Design for short-time duty with higher performance, additional voltages and speeds upon request
	Options:	Thermal protection, special shafts, special flanges, stainless steel



Type	Name	U	Volt DC	MQC 543	MQC 563		
	Nominal voltage			24	24		
<b>Rate</b>	Nominal power	P <sub>2</sub>	W	58	81		
	Nominal speed	n <sub>nenn</sub>	rpm	3240	3515		
	Nominal torque	M <sub>nenn</sub>	Nm	0.17	0.22		
	Nominal current	I <sub>nennDC</sub>	A	3.50	4.50		
	Nominal efficiency	η		0.69	0.75		
	Input power	P <sub>1</sub>	W	84	108		
	Torque constant	k <sub>M</sub>	Ncm/A	4.7	4.8		
	Max. current (2sec)	I <sub>max</sub>	A	3 x I <sub>nennDC</sub>	3 x I <sub>nennDC</sub>		
	Max. torque	M <sub>max</sub>	Nm	3 x M <sub>nenn</sub>	3 x M <sub>nenn</sub>		
	Cogging torque		mNm	-	-		
<b>Idling</b>	Idling speed	n <sub>0</sub>	rpm	4000	4100		
	Idling current	I <sub>0</sub>	A	0.6	0.7		
<b>Short-time duty (S2 5min)</b>	Speed	n <sub>nenn</sub>	rpm	2700	2900		
	Torque	M <sub>nenn</sub>	Nm	0.28	0.42		
	Current	I <sub>nennDC</sub>	A	5.3	7.95		
<b>Connection</b>	Terminal resistance	R	mOhm	-	-		
	Terminal inductance	L	μH	-	-		
<b>Dynamics</b>	Weight	m	kg	1.1	1.3		
	Moment of inertia	J	gcm <sup>2</sup>	180	260		
<b>Thermal</b>	Adm. ambient temperature	T <sub>U</sub>	°C	-20 to +40	-20 to +40		
	Max. adm. stator temperature	T <sub>max</sub>	°C	+120 „ISO B“	+120 „ISO B“		
<b>Coupling</b>	Shaft diameter	d	mm	8	8		
	Max. axial force	F <sub>a</sub>	N	40	40		
	Max. radial force	F <sub>r</sub>	N	400	400		

**Dimensions**

Type	L / mm
MQC 543	147
MQC 563	167



**System technology**

<b>Recommended combinations</b> other gears and extensions upon request	Worm gear	S 668	
	Spur gear	M 7	
	Planetary gear	PM 50	
	Rotary encoder	RV 30	RI 30
	Brake	B 77	
	Electronics		