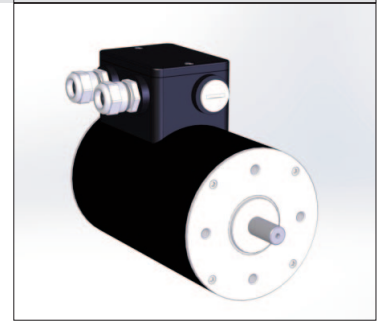


Brushless DC motor

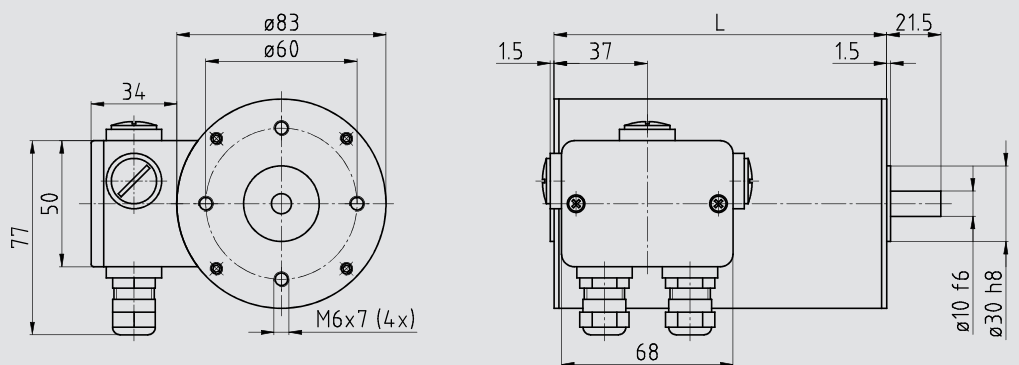


- Properties:**
- Operation: on the external standard controller (block commutation); Rotor position sensing by 3 hall sensors
 - Connection: K4 terminal box for power supply and sensors
 - Rotor: 8-pole neodymium magnet, low cogging torque due to continuous angular magnetization
 - Service life: 20,000 h, S1 duty
 - Insulation mat. class: F (155°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	MQ 847	MQ 867	MQ 887
	Nominal voltage	U	Volt DC	48	48	48
Rate	Nominal power	P ₂	W	337	450	562
	Nominal speed	n _{nenn}	rpm	3070	3310	3465
	Nominal torque	M _{nenn}	Nm	1.05	1.3	1.55
	Nominal current	I _{nennDC}	A	8.25	10.86	13.52
	Nominal efficiency	η		0.85	0.86	0.87
	Input power	P ₁	W	396	521	650
		Torque constant	k _M	Ncm/A	12.6	11.8
	Max. current (2sec)	I _{max}	A	3 × I _{nennDC}	3 × I _{nennDC}	3 × I _{nennDC}
	Max. torque	M _{max}	Nm	3 × M _{nenn}	3 × M _{nenn}	3 × M _{nenn}
	Cogging torque		mNm	max. 40	max. 44	max. 70
Idling	Idling speed	n ₀	rpm	3600	3850	3950
	Idling current	I ₀	A	0.4	0.7	0.9
Short-time duty (S2 5min)	Speed	n _{nenn}	rpm	2700	2800	2800
	Torque	M _{nenn}	Nm	1.7	2.4	3.1
	Current	I _{nennDC}	A	13	18.7	24.5
Connection	Terminal resistance	R	mOhm	295	194	147
	Terminal inductance	L	μH	863	617	367
Dynamics	Weight	m	kg	1.9	2.4	3
	Moment of inertia	J	gcm ²	1291.5	1873.3	2512.9
Thermal	Adm. ambient temperature	T _U	°C	-20 to +40	-20 to +40	-20 to +40
	Max. adm. stator temperature	T _{max}	°C	+155 „ISO F“	+155 „ISO F“	+155 „ISO F“
Coupling	Shaft diameter	d	mm	10	10	10
	Max. axial force	F _a	N	40	40	40
	Max. radial force	F _r	N	400	400	400

Dimensions

Type	L / mm
MQ 847	92
MQ 867	112
MQ 887	132



System technology

Recommended combinations
other gears and extensions upon request

Worm gear	S 769
Spur gear	M 10
Planetary gear	PM 80
Rotary encoder	RV 30 RI 30
Brake	B 77
Electronics	mcDSA-E25 or mcDSA-E45-HC