



# GEARBOX MOTOR

GMF440D901

4,0 rpm with 24V BLDC motor

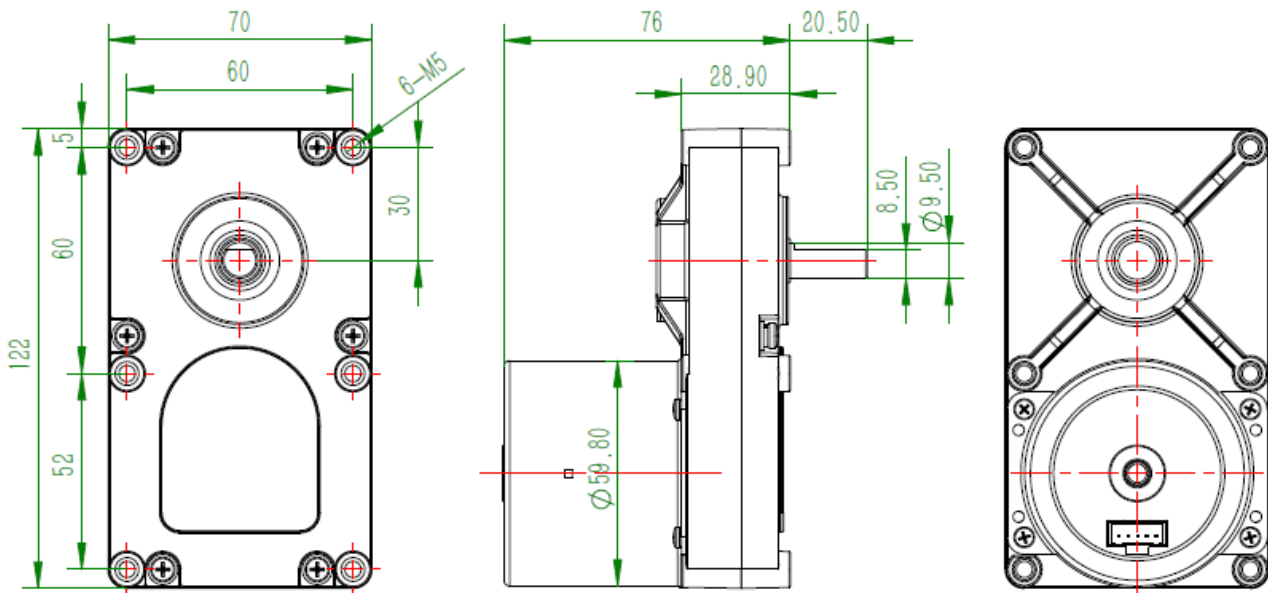
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Rated voltage	24 Vd.c.	Operating voltage	18 Vd.c. – 26 Vd.c.
Rated current	0,4 A ±10%	Operating temperature	from -20°C to +60°C - peaks up to 70°C
Rated power	10 W ±10%	Operating humidity	10 – 90 % R.H. (no condensation)
Speed range	0,2 - 4,0 rpm ±5%	Rotation	CW / CCW
Rated torque	10 Nm	Sound pressure level	48 dB(A) at 1 m
Max torque	18 Nm	IP rate	IP 40
Stall torque	24 Nm	Type of service	S1 (continuous)

**Note:**

- 1) Gearbox motor can operate with a torque load on the slow shaft from 0 Nm to max torque value.
- 2) The stall torque is the condition over which the gearbox motor is not able to operate.
- 3) If the gearbox motor operates over the max torque, its life is reduced drastically.

**Drawing**



Electrical and mechanical features		Material list		
Insulation Class	Class E	<b>Item</b>	<b>Material / References</b>	<b>pcs</b>
Class appliance	Class III	Gearbox shells	Zamak (zinc aluminium alloy)	2
Reduction rate	247,9:1 (3 stage)	Plastic gear	PA66	1
Axial play slow shaft	0,5 mm max	Metal gear	Sintered SB4050 and steel	4
Backlash (no load)	2,0° max	Shaft bearing	Ball bearing (two last stage)	4
Mounting position	Any	Motor bearing	Ball bearing NMB – 626ZZ	2
Driver	Built in	Grease	Derill® M660-H-B0	na

**Motor protection:**

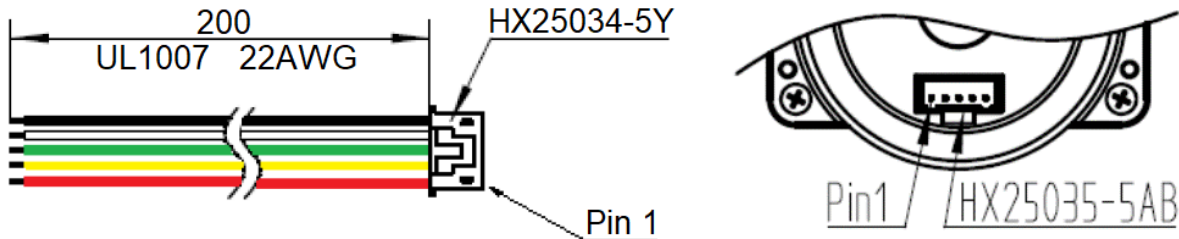
- Against reverse polarity
- Against over temperature
- Against over current, limit to 0,8 A

**Electrical connection and wiring diagram**

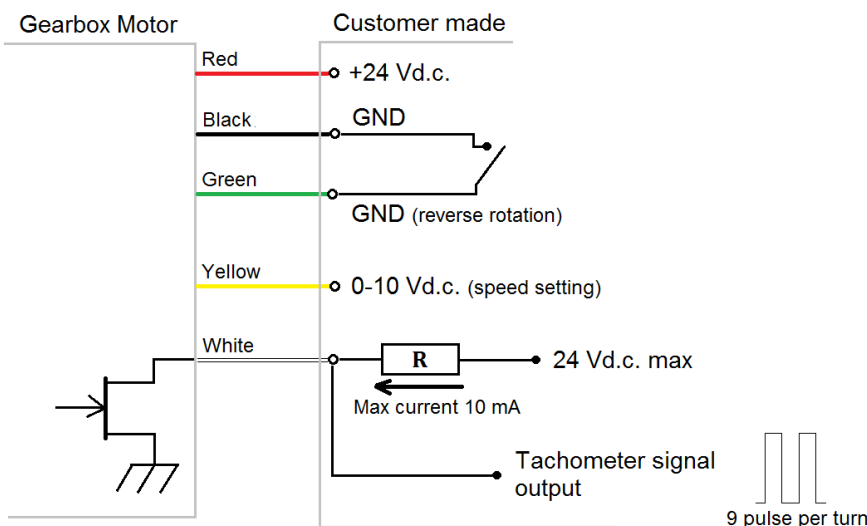
To connect with the motor has to be used the following products:

- Pitch connector HXH brand, code: HX25034-5Y
- Terminals HXH brand, code: HX25002-PT or HX25002-PTA

Note: the samples will be shipped with a connection cable 200mm length as following drawing for helping the electrical connection.



Pin Nr	Wire colour	Function	Feeding/Connection	Added information
1	Red	Feeding	+24Vd.c.	
2	Yellow	Speed regulation	0 – 10 V or PWM 10V 10kHz	See table at bottom page
3	Green	Reverse rotation	Open CW rotation To GND CCW rotation	
4	White	Speed output	Open-drain External pull up resistor is needed	9 pulses per turn of motor
5	Black	Ground	0 V (GND)	



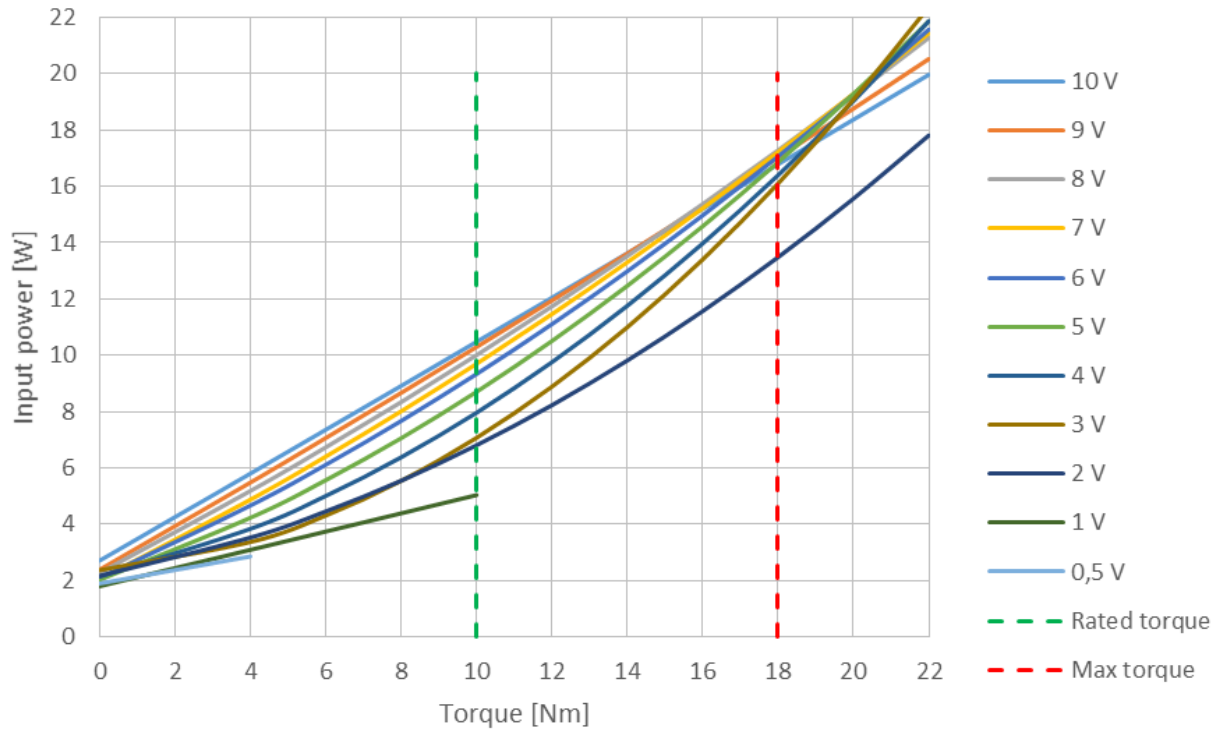
Speed regulation table

	Analogical regulation 0 – 10 Vd.c.	PWM regulation 10V 10kHz
Start	0.5 V	5 %
	5 V	50 %
	8 V	80 %
Full speed	10 V	100 %

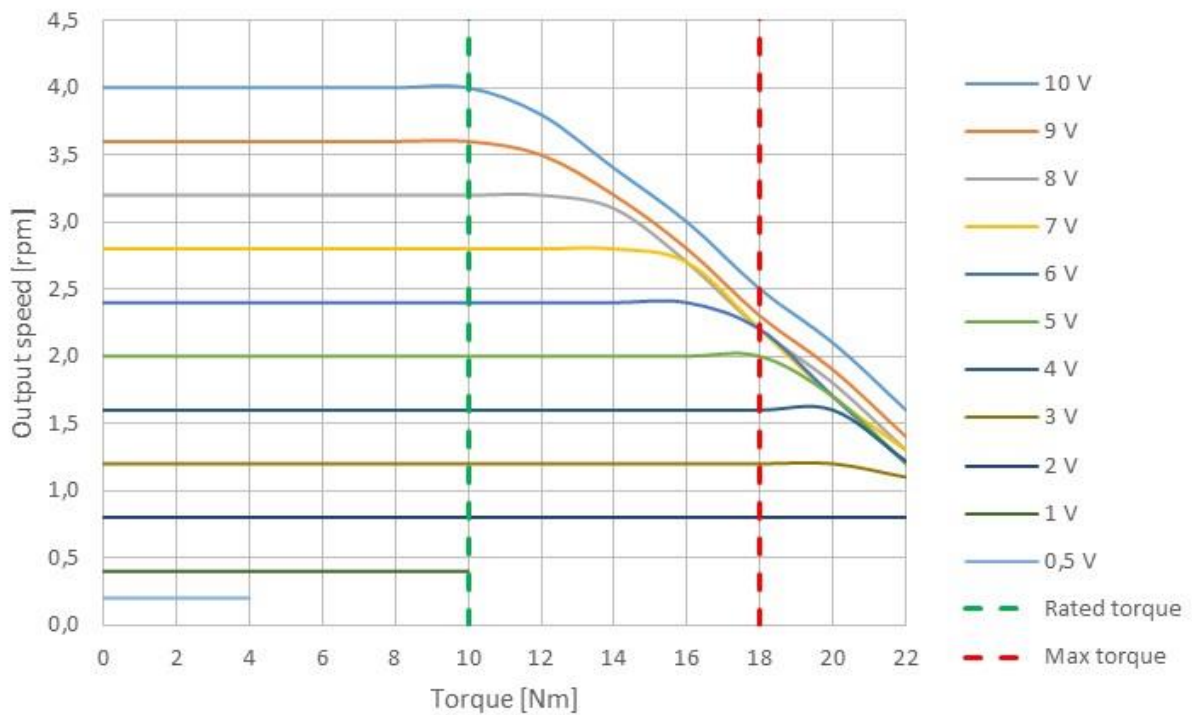
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**Performance curves**

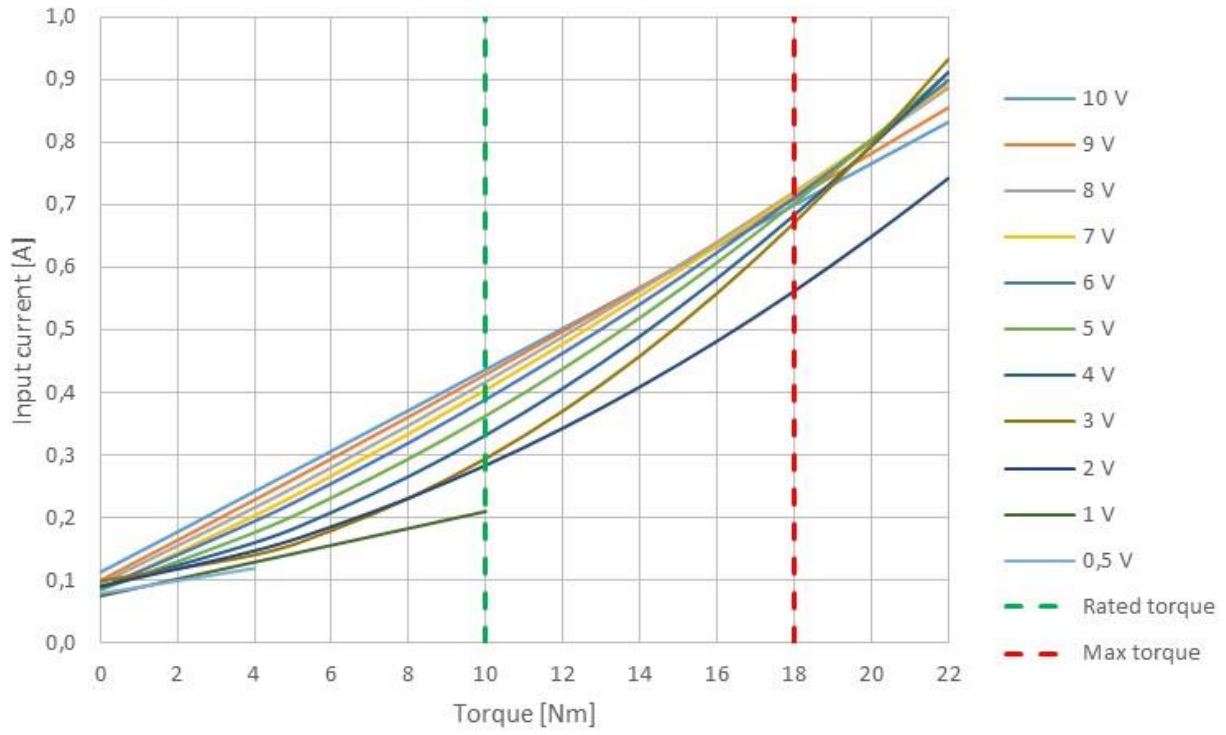
Gearbox BLDC motor GMFEB40xxx  
rated speed 0,2-4 rpm



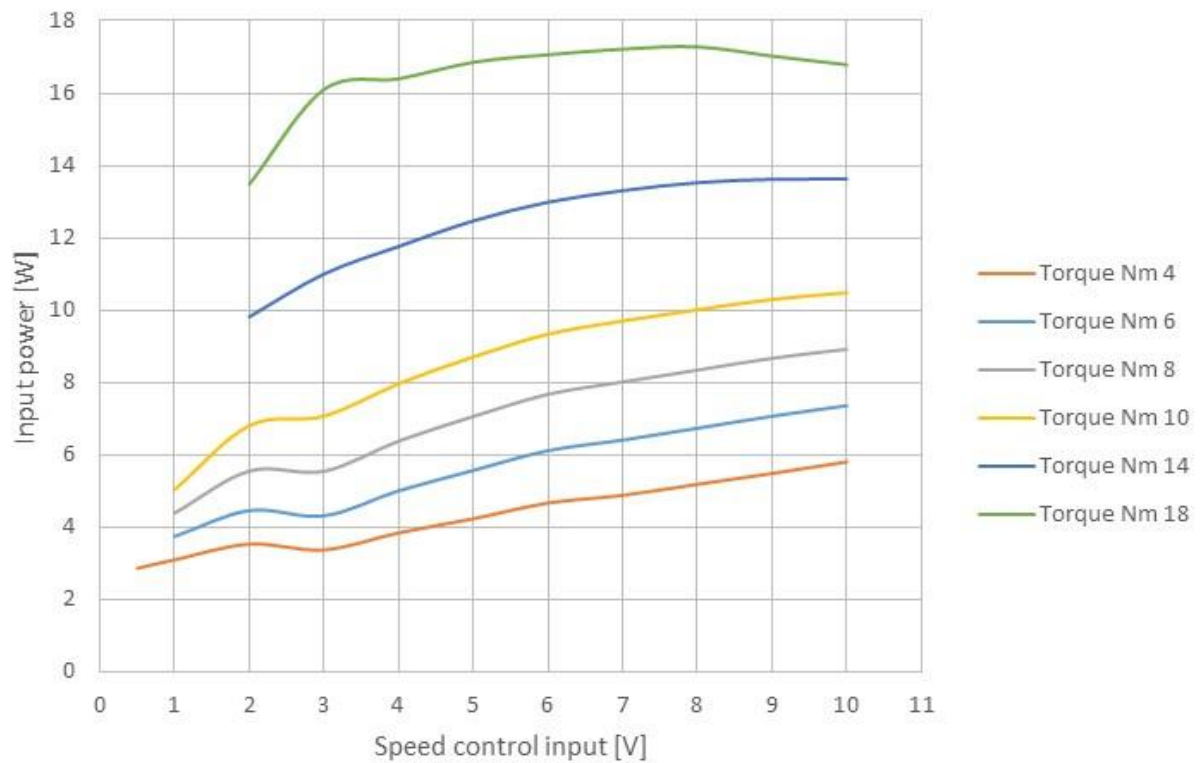
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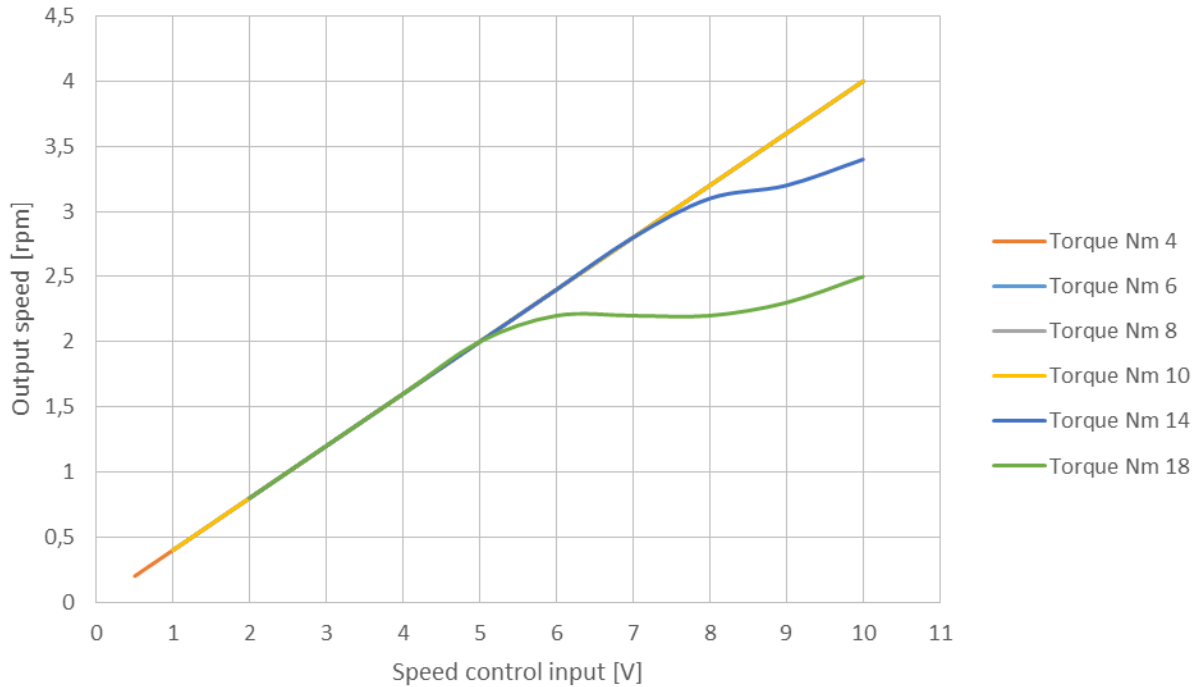
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