

## ▶ Brushless - DC Motors

5642

- Peak Torque ..... 0.8 Nm
- Max. Current ..... 40 A
- Weight ..... 650 g
- Dimensions ..... Ø42 mm  
H85 mm

Compact and high torque density are the main features of this BLDC motor. It is suitable for high temperature and high vibration applications (automotive heavy duty harsh environments) and it integrates a position sensor.

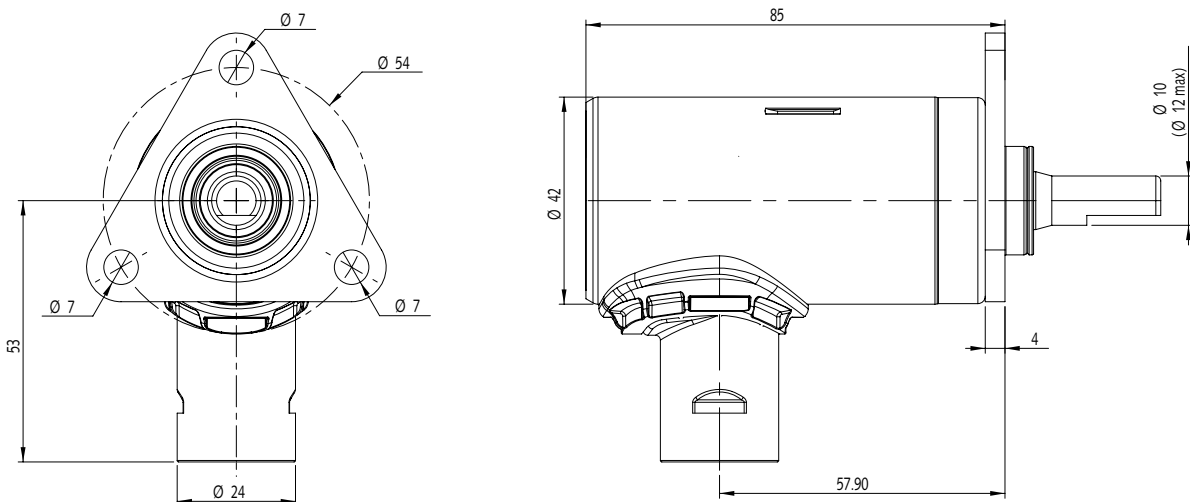
### ▶ Technical data

Mass	0.650	kg	Nominal detent torque	30	mNm
Phase Number	3-Δ	-	Motor constant	70	mNm/W <sup>1/2</sup>
Nominal Voltage	12	V	Torque constant	20	mNm/A
Phase Resistance	72	mΩ	Continuous stall torque	300	mNm
Phase Inductance	60	μH	Max static torque	800	mNm
Step per revolution	30	-	No load speed	5500	rpm
Tightness	IP67	-	Rotor Inertia	15	kg.mm <sup>2</sup>

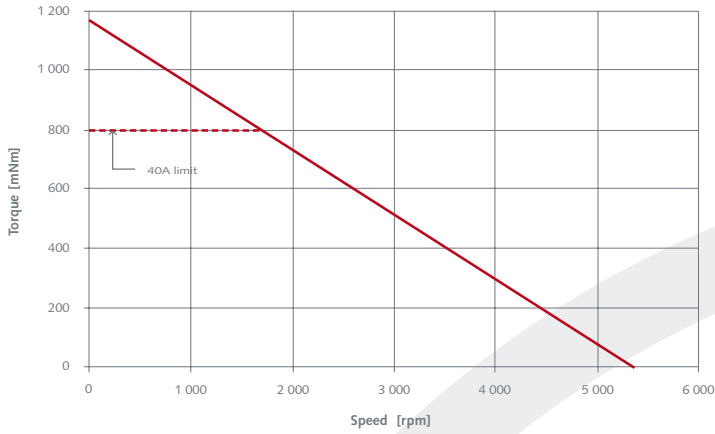
Nota: Values at ambient temperature

### ▶ Dimensions

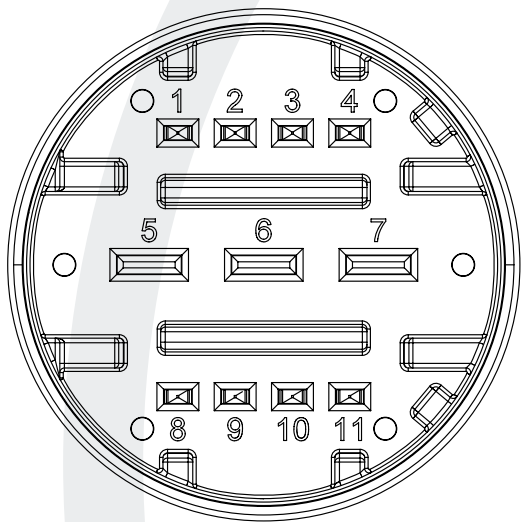
Drawing not to scale. All dimensions in mm.



► Dynamic characteristics

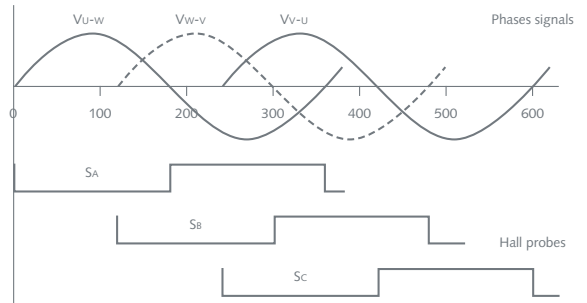


► Electrical Interface and Step sequence

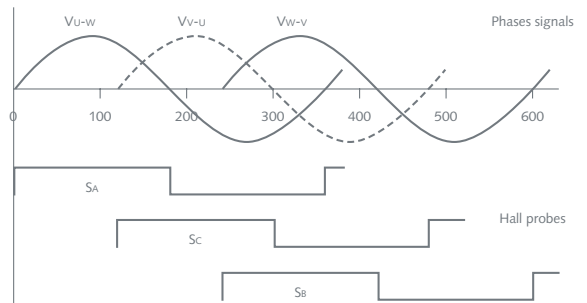


Pin out	
Pin	Config.
1	FREE
2	SB
3	FREE
4	SC
5	W
6	V
7	U
8	FREE
9	SA
10	GND
11	SUPPLY

• Hall Probes & phases signals



BLDC motor : Timing for CW rotation as viewed from the front shaft



BLDC motor : Timing for CCW rotation as viewed from the front shaft

► Working conditions

Temperature Range ..... -40° C / 140° C  
 Vibration level ..... up to 15 g – bandwidth 0-1600 Hz

Overall specifications depend on sensor options and driving duty cycles.  
 Special requirements upon customer specifications. Right to change without notifications reserved.

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