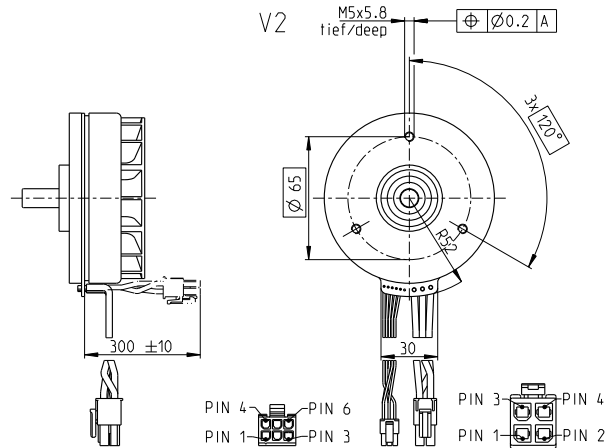
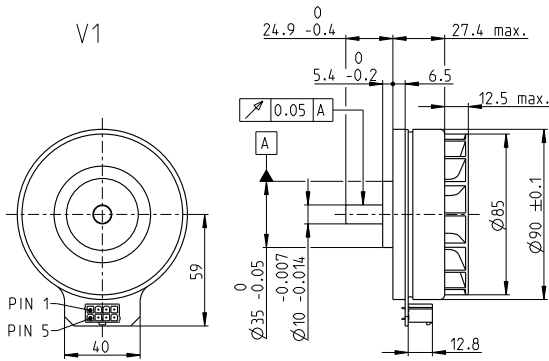


EC 90 flat $\varnothing 90$ mm, brushless, 360 watt

Ventilated

EC flat



M 1:4

- Stock program
- Standard program
- Special program (on request)

Part Numbers

V1 with Hall sensors	607950	607951	607952	
V2 with Hall sensors and cables	607953	607954	607955	607956

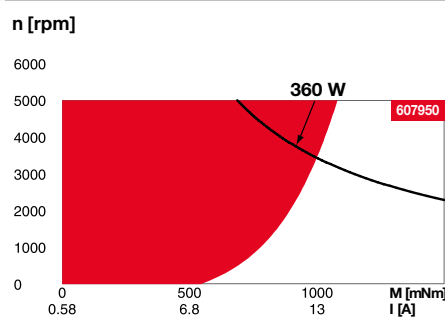
Motor Data

Values at nominal voltage		12	24	36	60
1 Nominal voltage	V	12	24	36	60
2 No load speed	rpm	3210	3210	3120	2640
3 No load current	mA	1390	696	444	210
4 Nominal speed	rpm	2310	2340	2270	1890
5 Nominal torque (max. continuous torque)	mNm	951	953	933	894
6 Nominal current (max. continuous current)	A	23.9*	12	7.61	3.73
7 Stall torque ¹	mNm	7290	7800	7470	6320
8 Stall current	A	208	111	68.9	29.6
9 Max. efficiency	%	84.5	85	84.8	84
Characteristics					
10 Terminal resistance phase to phase	Ω	0.0577	0.216	0.523	2.03
11 Terminal inductance phase to phase	mH	0.058	0.232	0.554	2.15
12 Torque constant	mNm/A	35.1	70.1	108	214
13 Speed constant	rpm/V	272	136	88.1	44.7
14 Speed/torque gradient	rpm/mNm	0.448	0.419	0.425	0.424
15 Mechanical time constant	ms	14.9	13.9	14.1	14.1
16 Rotor inertia	gcm ²	3210	3210	3210	3210

Specifications

Thermal data	
17 Thermal resistance housing-ambient	1.12 K/W
18 Thermal resistance winding-housing	1.04 K/W
19 Thermal time constant winding	20 s
20 Thermal time constant motor	166 s
21 Ambient temperature	-40...+100°C
22 Max. winding temperature	+125°C
Mechanical data (preloaded ball bearings)	
23 Max. speed	5000 rpm
24 Axial play at axial load	0.14 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	34 N
27 Max. force for press fits (static) (static, shaft supported)	440 N
28 Max. radial load, 10 mm from flange	800 N
29 Number of pole pairs	11
30 Number of phases	3
31 Weight of motor	638 g

Operating Range



Comments

- Continuous operation**
In observation of above listed thermal resistance (lines 17 and 18) the maximum permissible winding temperature will be reached during continuous operation at 25°C ambient. = Thermal limit.
- Short term operation**
The motor may be briefly overloaded (recurring).
- Assigned power rating**

Connection V1		V2 (sensors, AWG 24)	
Pin 1	Hall sensor 1	Pin 1	Hall sensor 1
Pin 2	Hall sensor 2	Pin 2	Hall sensor 2
Pin 3	V _{Hall} 4.5...24 VDC	Pin 3	Hall sensor 3
Pin 4	Motor winding 3	Pin 4	GND
Pin 5	Hall sensor 3	Pin 5	V _{Hall} 4.5...24 VDC
Pin 6	GND	Pin 6	N.C.
Pin 7	Motor winding 1		
Pin 8	Motor winding 2		
Wiring diagram for Hall sensors see p. 59			
Connector		Part number	
Molex	46015-0806	Molex	43025-0600
Molex		Molex	171692-0104
Connection cable for V1		339380	
Universal, L = 500 mm			
¹ Calculation does not include saturation effect (p. 71/178)			

maxon Modular System

Planetary Gearhead
 $\varnothing 52$ mm
 4-30 Nm
 Page 411



Details on catalog page 46

Encoder MILE
 512-6400 CPT,
 2 channels
 Page 463

Recommended Electronics:

Notes	Page 46
ESCON Mod. 50/5	501
ESCON Mod. 50/8 (HE)	502
ESCON 50/5	503
ESCON 70/10	503
DEC Module 50/5	505

Note: The cable alignment relative to the mounting holes of the gearhead is not defined.

*607953 cannot be combined with the MILE encoder, because the current limit of the connectors of the MILE circuit board is 13 A.