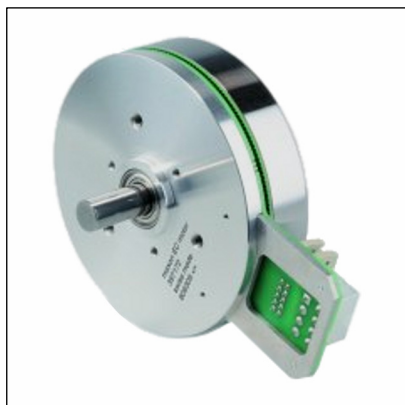




## EC-90-flat электродвигатель бесколлекторный



	with Hall sensors	323772	429271	244879
<b>Motor Data</b>				
Values at nominal voltage				
1 Nominal voltage	V	24	36	48
2 No load speed	rpm	3190	3120	2080
3 No load current	mA	544	348	135
4 Nominal speed	rpm	2590	2510	1610
5 Nominal torque (max. continuous torque)	mNm	444	560	533
6 Nominal current (max. continuous current)	A	6.06	4.76	2.27
7 Stall torque	mNm	4690	5730	4460
8 Starting current	A	70	69	21.1
9 Max. Efficiency	%	84	87	85
<b>Characteristics</b>				
10 Terminal resistance phase to phase	W	0.343	0.522	2.28
11 Terminal inductance phase to phase	Mh	0.264	0.625	2.5
12 Torque constant	mNm/A	70.5	109	217
13 Speed constant	rpm/V	135	88	44
14 Speed/torque gradient	rpm/mNm	0.659	0.423	0.462
15 Mechanical time constant	ms	21.1	13.6	14.8
16 Rotor inertia	gcm <sup>2</sup>	3060	3060	3060

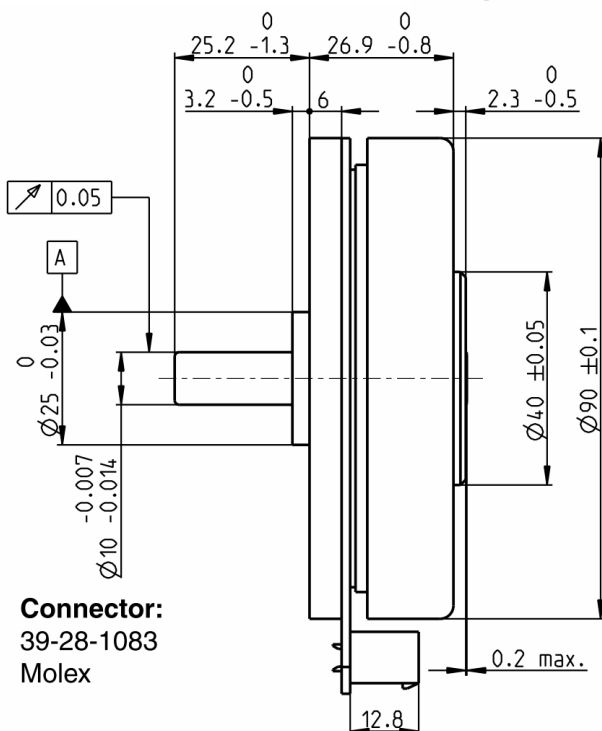
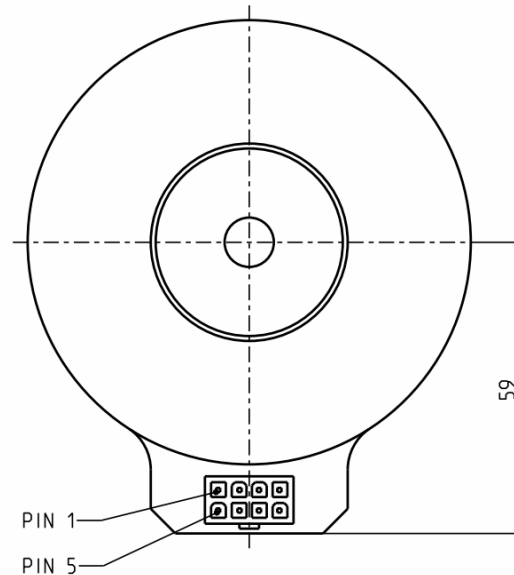
<b>Specifications</b>		
Thermal data		
17 Thermal resistance housing-ambient		1.91 K/W
18 Thermal resistance winding-housing		2.6 K/W
19 Thermal time constant winding		46.6 s
20 Thermal time constant motor		283 s
21 Ambient temperature		-40...+100 °C
22 Max. permissible winding temperature		+125 °C
Mechanical data (preloaded ball bearings)		
23 Max. permissible speed		5000 rpm
24 Axial play at axial load	< 15 N	0 mm
	> 15 N	0.14 mm
25 Radial play		preloaded
26 Max. axial load (dynamic)		12 N
27 Max. force for press fits (static) (static, shaft supported)		183 N
		8000 N
28 Max. radial loading, 7.5 mm from flange		60 N
Other specifications		
29 Number of pole pairs		12



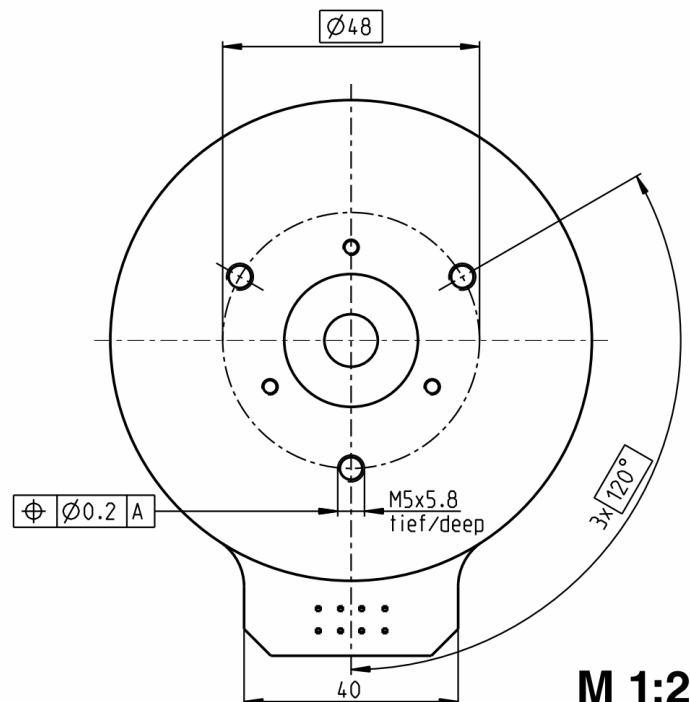
30 Number of phases		3
31 Weight of motor		600 g

Values listed in the table are nominal.

Connection	
Pin 1	Hall sensor 1
Pin 2	Hall sensor 2
Pin 3	V Hall 4.5... 18 VDC
Pin 4	Motor winding 3
Pin 5	Hall sensor 3
Pin 6	GND
Pin 7	Motor winding 1
Pin 8	Motor winding 2
Cable	
Connection cable Universal, L = 500 mm	339380
Connection cable to EPOS2, L = 500 mm	354045



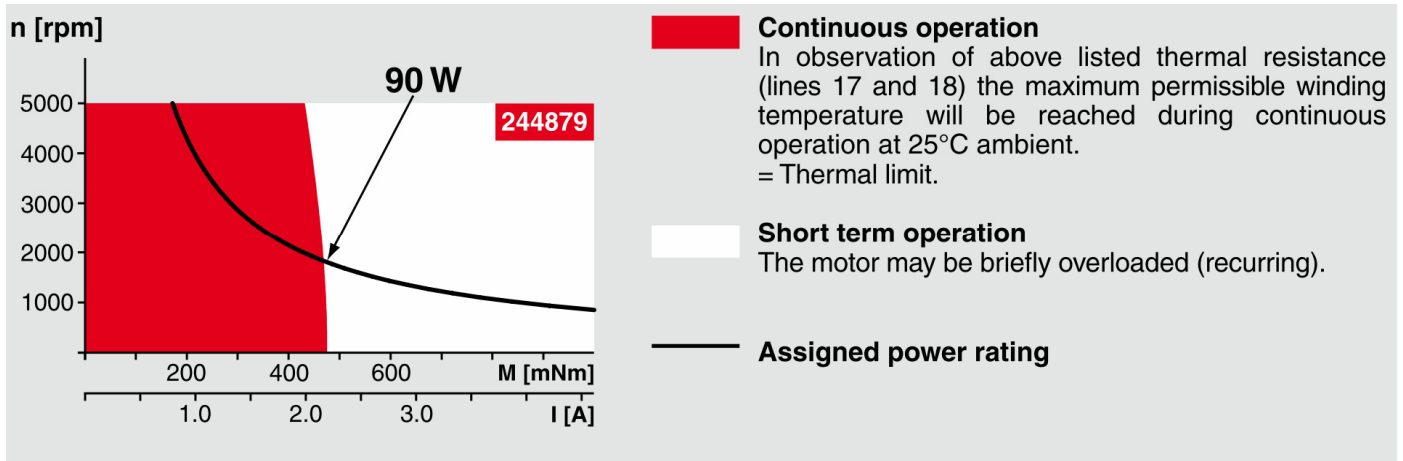
**Connector:**  
39-28-1083  
Molex



**M 1:2**

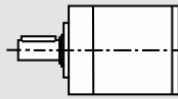


## Operating Range



## maxon Modular System

**Planetary Gearhead**  
Ø52 mm  
4 - 30 Nm  
Page 274



**Encoder MILE**  
800 - 6400 CPT,  
2 channels  
Page 294



### Recommended Electronics:

ESCON 50/5	Page 321
ESCON Module 50/5	321
ESCON 70/10	321
DECS 50/5	324
DEC Module 50/5	325
EPOS2 24/5, 50/5, 70/10	331
EPOS2 P 24/5	334
EPOS3 70/10 EtherCAT	337

**Notes** **24**