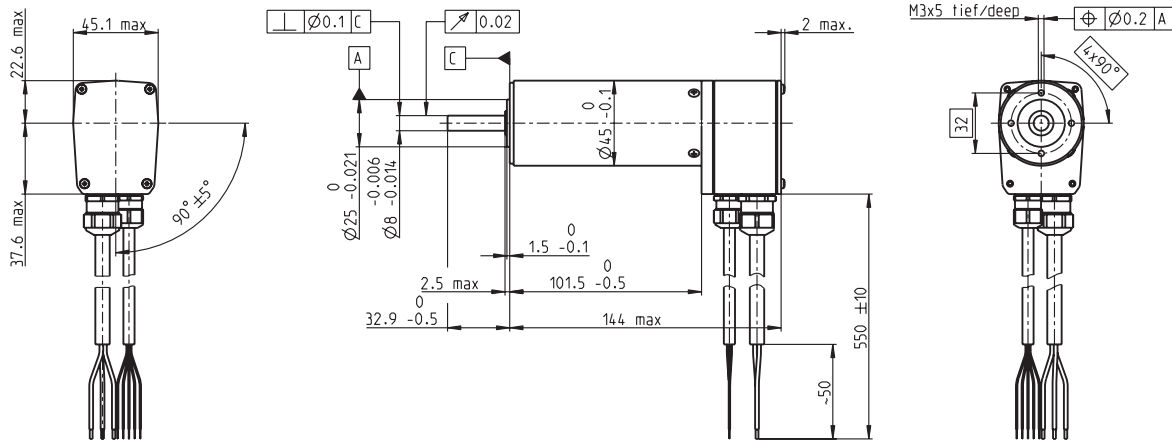


EC 45 Ø45 mm, brushless, 250 Watt



M 1:4

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

Part Numbers						
136210	136207	136211	136208	136212	136209	

Motor Data							
Values at nominal voltage							
1 Nominal voltage	V	24	24	36	36	48	48
2 No load speed	rpm	8670	5000	10400	6010	10700	6160
3 No load current	mA	897	341	834	312	656	244
4 Nominal speed	rpm	7970	4300	9730	5320	10000	5490
5 Nominal torque (max. continuous torque)	mNm	311	331	312	341	316	347
6 Nominal current (max. continuous current)	A	12.5	7.51	10.2	6.21	7.94	4.86
7 Stall torque	mNm	4400	2540	5750	3320	6110	3530
8 Stall current	A	167	55.8	175	58.3	143	47.7
9 Max. efficiency	%	86	85	87	86	87	87
Characteristics							
10 Terminal resistance phase to phase	Ω	0.143	0.43	0.206	0.617	0.336	1.01
11 Terminal inductance phase to phase	mH	0.0565	0.17	0.0883	0.265	0.149	0.448
12 Torque constant	mNm/A	26.3	45.5	32.8	56.9	42.7	73.9
13 Speed constant	rpm/V	364	210	291	168	224	129
14 Speed/torque gradient	rpm/mNm	1.98	1.98	1.82	1.82	1.76	1.76
15 Mechanical time constant	ms	4.34	4.34	3.99	3.99	3.85	3.85
16 Rotor inertia	gcm ²	209	209	209	209	209	209

Specifications	
Thermal data	
17 Thermal resistance housing-ambient	1.7 K/W
18 Thermal resistance winding-housing	1.1 K/W
19 Thermal time constant winding	31 s
20 Thermal time constant motor	1570 s
21 Ambient temperature	-20...+100°C
22 Max. winding temperature	+125°C
Mechanical data (preloaded ball bearings)	
23 Max. speed	12000 rpm
24 Axial play at axial load < 20 N	0 mm
> 20 N	max. 0.15 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	16 N
27 Max. force for press fits (static) (static, shaft supported)	182 N
28 Max. radial load, 5 mm from flange	5000 N
	180 N

Other specifications	
29 Number of pole pairs	1
30 Number of phases	3
31 Weight of motor	1150 g
Protection to	IP54*

Values listed in the table are nominal.

Connection motor (Cable AWG 16)

- Cable 1 Motor winding 1
- Cable 2 Motor winding 2
- Cable 3 Motor winding 3

Connection sensors (Cable AWG 24)¹⁾

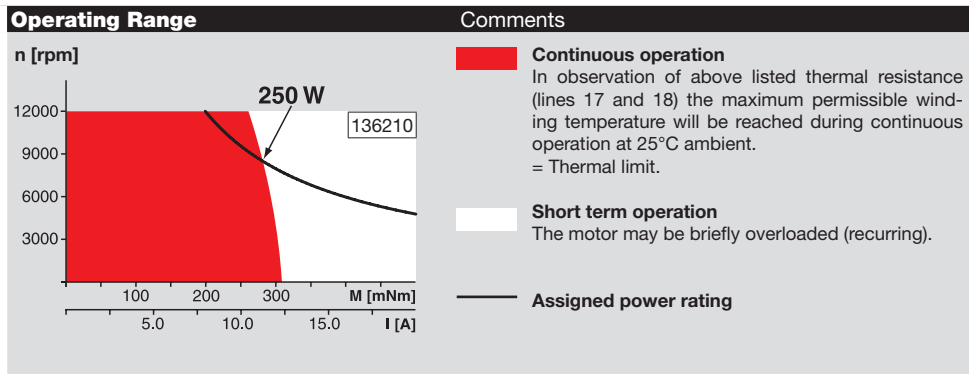
- white Hall sensor 3
- brown Hall sensor 2
- green Hall sensor 1
- yellow GND
- grey V_{Hall} 4.5...24 VDC

Wiring diagram for Hall sensors see p. 35

¹⁾ Not lead through in combination with resolver.

Option

Temperature monitoring, PTC resistance Micropille
 110°C, R 25°C < 0.5 kΩ, R 105°C = 1.2...1.5 kΩ,
 R 115°C = 7...13 kΩ, R 120°C = 18...35 kΩ



maxon Modular System	Overview on page 20-27
<p>Planetary Gearhead Ø42 mm 3 - 15 Nm Page 349</p> <p>Planetary Gearhead Ø52 mm 4 - 30 Nm Page 355</p> <p>Planetary Gearhead Ø62 mm 8 - 50 Nm Page 356</p>	<p>Encoder HEDL 9140 500 CPT, 3 channels Page 405</p> <p>Resolver Res 26 Ø26 mm 10 V Page 412</p> <p>Brake AB 28 24 VDC 0.4 Nm Page 447</p> <p>Recommended Electronics: Notes Page 26</p> <ul style="list-style-type: none"> ESCON Mod. 50/5 417 ESCON Mod. 50/4 EC-S 417 ESCON 50/5 418 ESCON 70/10 418 DEC Module 50/5 420 EPOS2 50/5, 70/10 425 EPOS4 Module 50/8 431 EPOS4 Comp. 50/8 CAN 431 EPOS4 Module 50/15 432 EPOS4 Comp. 50/15 CAN 432 MAXPOS 50/5 435

*Protection level only when installed with flange-side seal.