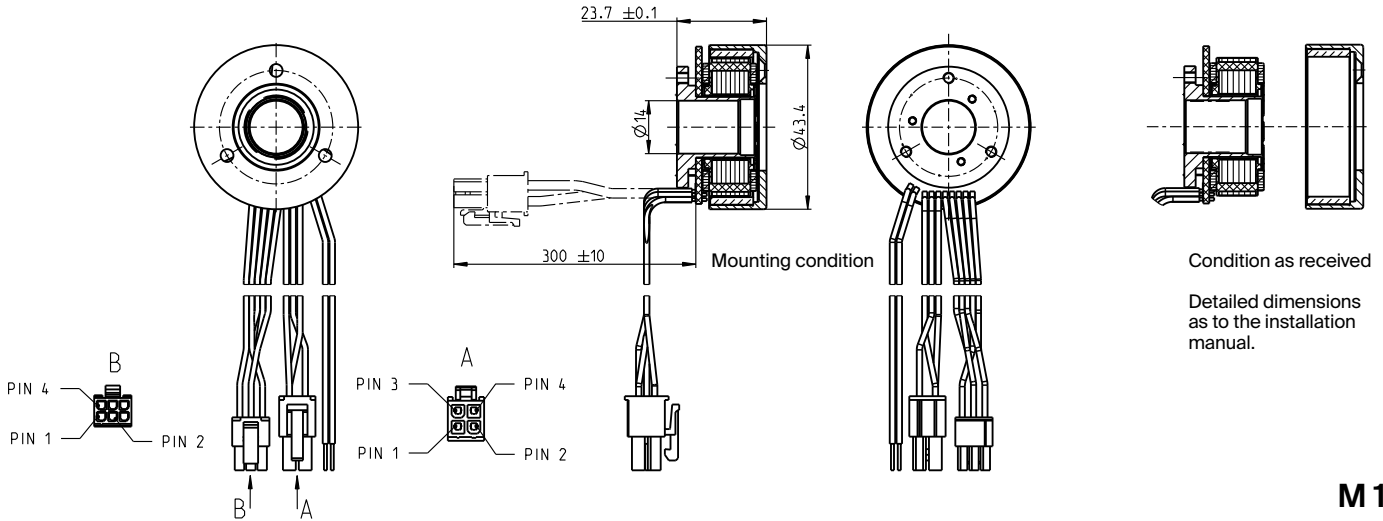


EC frameless 45 flat $\varnothing 43.4$ mm, brushless, 50 watt

EC frameless



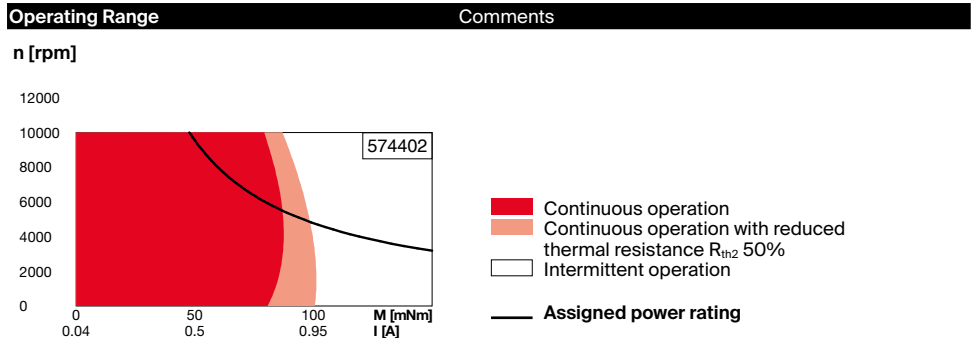
M 1:1

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

Part Numbers				
with Hall sensors	543631	574402	574403	574404

Motor Data					
Values at nominal voltage					
1 Nominal voltage	V	18	24	24	36
2 No load speed	rpm	6720	6710	4730	3360
3 No load current	mA	247	185	106	42.3
4 Nominal speed	rpm	5190	5240	3480	2360
5 Nominal torque (max. continuous torque)	mNm	971	83.4	69.6	90.5
6 Nominal current (max. continuous current)	A	3.52	2.33	1.41	0.828
7 Stall torque	mNm	975	780	402	484
8 Stall current	A	38.8	23.3	8.47	4.81
9 Max. efficiency	%	85	83.3	79.3	82.4
Characteristics					
10 Terminal resistance phase to phase	Ω	0.464	1.03	2.83	7.48
11 Terminal inductance phase to phase	mH	0.322	0.572	1.15	5.15
12 Torque constant	mNm/A	25.1	33.5	47.5	101
13 Speed constant	rpm/V	380	285	201	95
14 Speed/torque gradient	rpm/mNm	7.02	8.77	12	7.07
15 Mechanical time constant	ms	13.6	17	23.3	13.7
16 Rotor inertia	gcm ²	185	185	185	185

- | Specifications | Operating Range | Comments |
|---------------------------------------|-----------------|----------|
| Thermal data | | |
| 17 Thermal resistance housing-ambient | 4.53 K/W | |
| 18 Thermal resistance winding-housing | 4.75 K/W | |
| 19 Thermal time constant winding | 17.7 s | |
| 20 Thermal time constant motor | 227 s | |
| 21 Ambient temperature | -40...+100°C | |
| 22 Max. winding temperature | +125°C | |
| Mechanical data | | |
| 23 Max. speed | 10000 rpm | |
| Other specifications | | |
| 29 Number of pole pairs | 8 | |
| 30 Number of phases | 3 | |
| 31 Weight of motor | 110 g | |
| Weight of rotor | 41 g | |
| Weight of stator | 69 g | |



Values listed in the table are nominal.

- Connection motor** (Cable AWG 24)
- red Motor winding 1 Pin 1
 - black Motor winding 2 Pin 2
 - white Motor winding 3 Pin 3
 - N.C. Pin 4

- Connector** Part number
Molex 39-01-2040

- Connection sensors** (Cable AWG 24)
- yellow Hall sensor 1* Pin 1
 - brown Hall sensor 2* Pin 2
 - grey Hall sensor 3* Pin 3
 - blue GND Pin 4
 - green V_{Hall} 4.5...24 VDC Pin 5
 - N.C. Pin 6

- Connector** Part number
Molex 43025-0600
Wiring diagram for Hall sensors see p. 59
*Internal pull-up (7...13 k Ω) on pin 5

- Connection NTC** (Cable AWG 24)
- pink NTC
 - blue NTC
- Resistance 25°C: 5k Ω \pm 1%, beta (25–85°C): 3490K

maxon Modular System Details on catalog page 46

Recommended Electronics:

Notes	Page 46
ESCON Module 24/2	500
ESCON 36/3 EC	501
ESCON Mod. 50/4 EC-S	501
ESCON Module 50/5	501
ESCON 50/5	503
DEC Module 24/2	505
DEC Module 50/5	505
EPOS4 Micro 24/5	509
EPOS4 Mod./Comp. 24/1.5	510
EPOS4 Mod./Comp. 50/5	510
EPOS4 Comp. 24/5 3-axes	511
EPOS4 50/5	515
EPOS4 Disk 60/12	517
EPOS2 P 24/5	520