

## 57 mm square and Ø 57 mm - 463 mNm continuous with Hall effect sensors 120 W nominal at 24 V and 4000 rpm Part number 80180506



- High power motors (up to 160 W continuous at 24 VDC)
- Suitable for voltages between 6 and 75 VDC
- Ideal for applications where the control electronics have to be remote due to the high ambient temperature

### Part numbers

Type	Type	References
80180506 120 W nominal at 24 V and 4000 rpm	801805	Without option

### Specifications

#### General characteristics

Max. speed (rpm)	10000
Torque peak in (mNm)	763*
Maximum continuous torque (mNm)	307**
Motor constant (mNm/W <sup>1/2</sup> )	70
Electrical time constant (ms)	2,1
Mechanical time constant (ms)	2,1
Energy losses at peak torque (W)	117
Torque/speed factor - zero impedance (mNm/ (rad/s) )	4,96
Friction torque (mNm)	25
Rotor inertia (gcm <sup>2</sup> )	105
Thermal resistance (°C/W)	3,8
Max. coil temperature (°C)	120
Integrated temperature sensor	Yes
Number of phases	3 (delta config)
Number of poles	4
Ambient operating temperature (°C)	-40 →70
Dielectric strength at 500 V DC (MΩ)	1000
Service life (h)	20000
Output ball bearing	Yes
Weight (g)	1300
Length (mm)	94
Protection index	IP54

#### Comments

##### Standard winding

Phase-to-phase resistance (Ω)	0,36 ±12,5 %
Voltage at peak torque (V)	6,5
Current at peak torque (A)	18
Torque constant (mNm/A)	42,4 ±10 %
Back EMF constant (V/ (rad/s) )	0,0424
Back EMF constant (V/Krpm)	4,4 ±10 %
Inductance (mH)	0,76 ±30 %

#### Comments

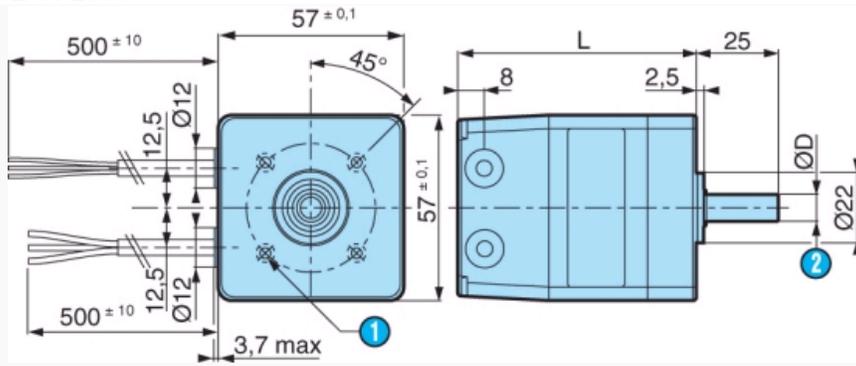
Motor mounted on aluminium plate 254 x 254 x 10 mm thick to encourage heat flow

\* 10 sec. at 25 °C ambient temperature

\*\* 25 °C ambient temperature and 120 °C winding temperature

### Dimensions (mm)

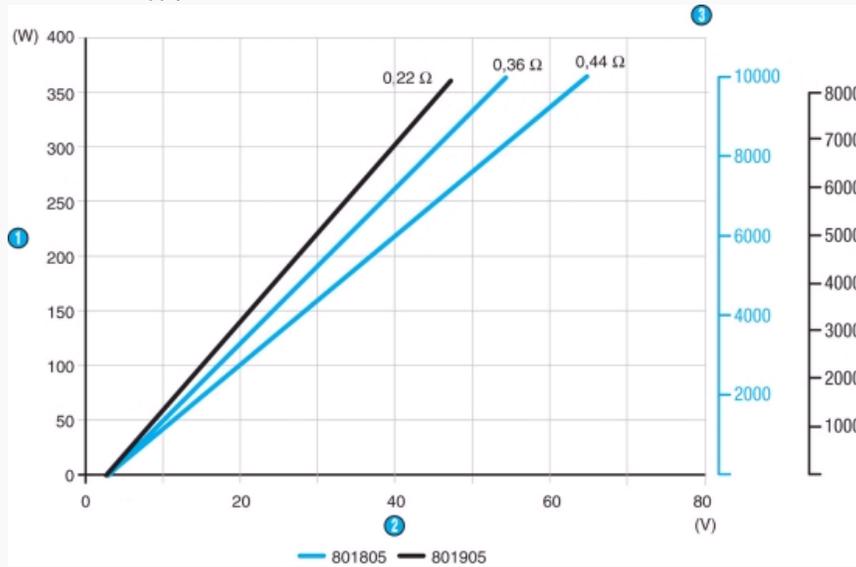
801805



N°	Legend
①	4 holes M5 over Ø 40 mm - depth of thread : 4.5 mm - depth of hole 6.6 mm
②	D : Ø8 - 0.010 mm - 0.020 mm
	L : 94.2 mm max.

**Curves**

**Power/Power supply**



N°	Legend
①	Nominal power
②	Supply voltage
③	Speeds (rpm)

**Connections**

**Forward**

Hall			①		
1	2	3	1	2	3
1	0	0	0V	+V $\equiv$	-
1	1	0	0V	-	+V $\equiv$
0	1	0	-	0V	+V $\equiv$
0	1	1	+V $\equiv$	0V	-
0	0	1	+V $\equiv$	-	0V
1	0	1	-	+V $\equiv$	0V



N°	Legend
①	Winding

### Connections

#### Reverse

Hall			①		
1	2	3	1	2	3
1	0	0	+V $\equiv$	0V	-
1	0	1	-	0V	+V $\equiv$
0	0	1	0V	-	+V $\equiv$
0	1	1	0V	+V $\equiv$	-
0	1	0	-	+V $\equiv$	0V
1	1	0	+V $\equiv$	-	0V



N°	Legend
①	Winding

### Connections

Part number 801805

Wire colour	Connection name	Wire gauge (AWG)
Black	Winding 1	20
Brown	Winding 2	20
Red	Winding 3	20
Red	+ Hall power supply	24
Black	- Hall power supply (return)	24
Yellow	Sonde temp.	24
Orange	Hall 1	24
Brown	Hall 2	24
Green	Hall 3	24

Hall effect : Voltage range : 4.5 24 VDC Max. current : 20 mA Type of output : NPN open collector Not protected against connection errors

#### Other information

For other standard windings visit [www.crouzet.com](http://www.crouzet.com)

#### Precautions for use

Not protected against connection errors

#### Product adaptations



- Special shafts
- Lead length
- C12 connector built in
- 200, 500, 1000 points/revolution encoder