

57 mm square and Ø 57 mm - 463 mNm continuous with Hall effect sensors 100 W nominal at 24 V and 3200 rpm Part number 80180504



- 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
80180504	100 W nominal at 24 V and 3200 rpm	801805 With BDE30 connections

Specifications

General characteristics

Max. speed (rpm)	10000
Torque peak in (mNm)	845*
Maximum continuous torque (mNm)	340**
Motor constant (mNm/W ^{1/2})	78
Electrical time constant (ms)	2,6
Mechanical time constant (ms)	1,7
Energy losses at peak torque (W)	117
Torque/speed factor - zero impedance (mNm/ (rad/s))	6,1
Friction torque (mNm)	25
Rotor inertia (gcm ²)	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)	0,44 ±12,5 %
Voltage at peak torque (V)	7,2
Current at peak torque (A)	16,3
Torque constant (mNm/A)	52 ±10 %
Back EMF constant (V/ (rad/s))	0,052
Back EMF constant (V/Krpm)	5,45 ±10 %
Inductance (mH)	1,15 ±30 %

Comments

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

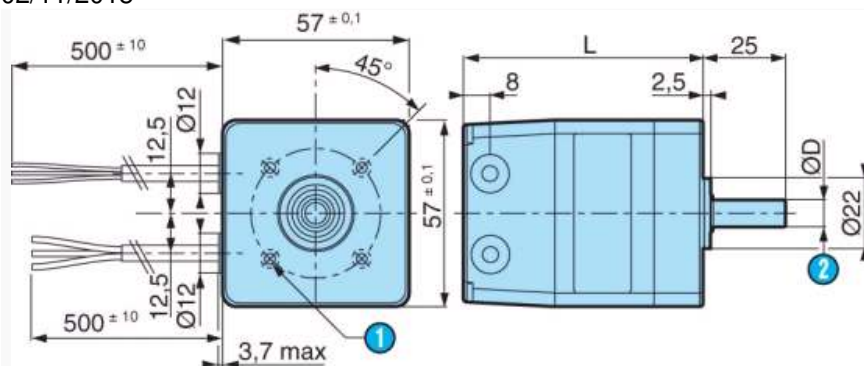
* 10 sec. at 25 °C ambient temperature

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

*** With the exception of part number 80180504

Dimensions (mm)

801805



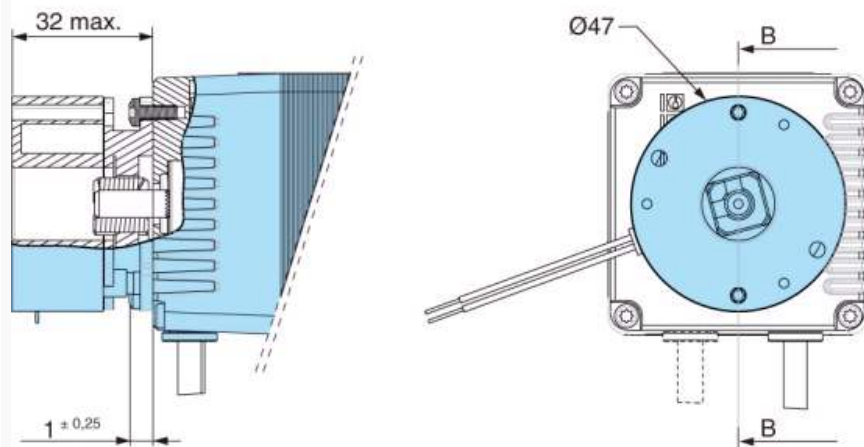
80180504 : With BDE30 connections

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.

Dimensions (mm)

Holding brake : 80180514

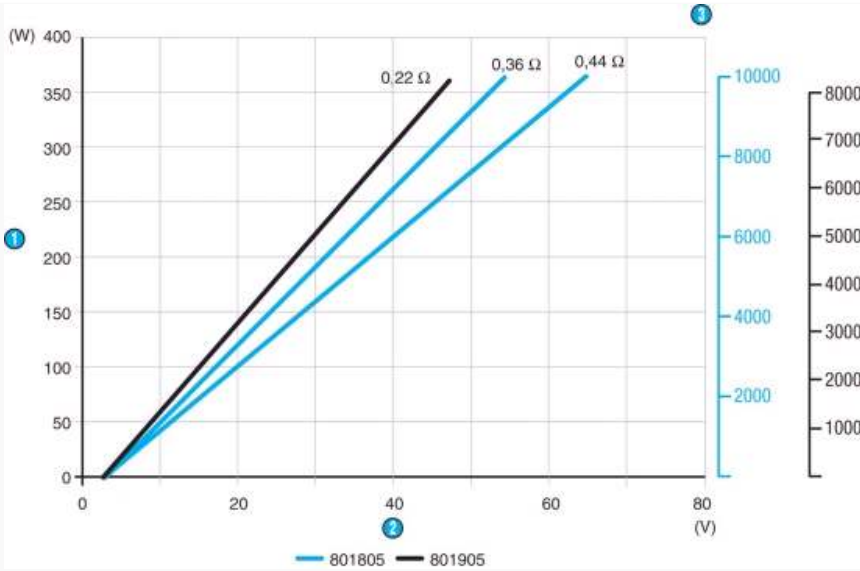
B-B



Holding brake : At power switch off - 0.5 Nm - 7 W - 24 V ± 10% Weight : 250 g - AWG26 leads - 400 mm

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	-
1	1	0	0V	-	+V
0	1	0	-	0V	+V
0	1	1	+V	0V	-
0	0	1	+V	-	0V
1	0	1	-	+V	0V

N°	Legend
1	Winding

Connections

Reverse

Hall			①		
1	2	3	1	2	3
1	0	0	+V 	0V	-
1	0	1	-	0V	+V 
0	0	1	0V	-	+V 
0	1	1	0V	+V 	-
0	1	0	-	+V 	0V
1	1	0	+V 	-	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

Precautions for use

Not protected against connection errors

Product adaptations

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