CROUZET MOTORS

57 square - 225 mNm continuous with Hall effect sensors 45 W nominal at 24 V and 2000 rpm Part number 80140504

- High power motors (up to 95 W continuous at 24 VDC)
- Suitable for voltages between 6 and 75 VDC
- Ideal for applications where the control electronics have to be off centre due to the high ambient temperature
- Temperature probe built into the motor

Part numbers

	Type	Type	References
80140504	45 W nominal at 24 V and 2000 rpm	801405	With BDE30 connections

Specifications

General characteristics

Max. speed (rpm)	10000
Torque peak in (mNm)	500*
Maximum continuous torque (mNm)	225**
Motor constant (mNm/$W^{1/2}$)	57
Electrical time constant (ms)	2,2
Mechanical time constant (ms)	1,5
Energy losses at peak torque (W)	77
Torque/speed factor - zero impedance (mNm/ (rad/s))	3,2
Rotor inertia (gcm^2)	50
Thermal resistance (°C/W)	5,7
Max. coil temperature (^{0}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)	900
Length (mm)	73
Protection index	IP54

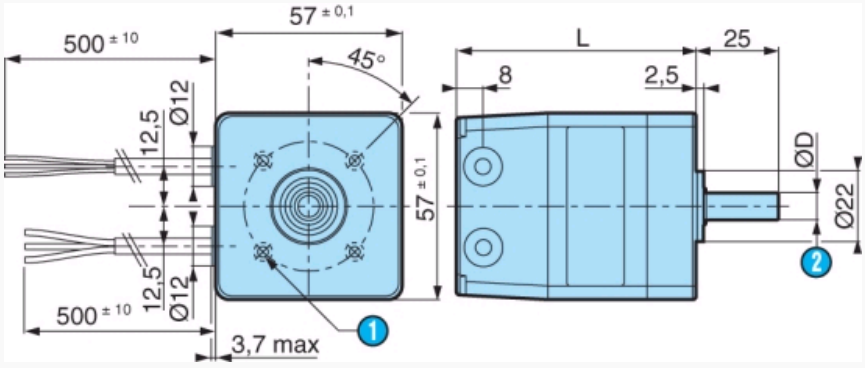
Comments

Standard winding

Phase-to-phase resistance (Ω)	1,72 ±12,5 %
Voltage at peak torque (V)	11,5
Current at peak torque (A)	6,7
Torque constant (mNm/A)	74,5 ±10 %
Back EMF constant (V/ (rad/s))	0,0745
Back EMF constant (V/Krpm)	7,8 ±10 %
Inductance (mH)	3,8 ±30 %

Dimensions (mm)

801405



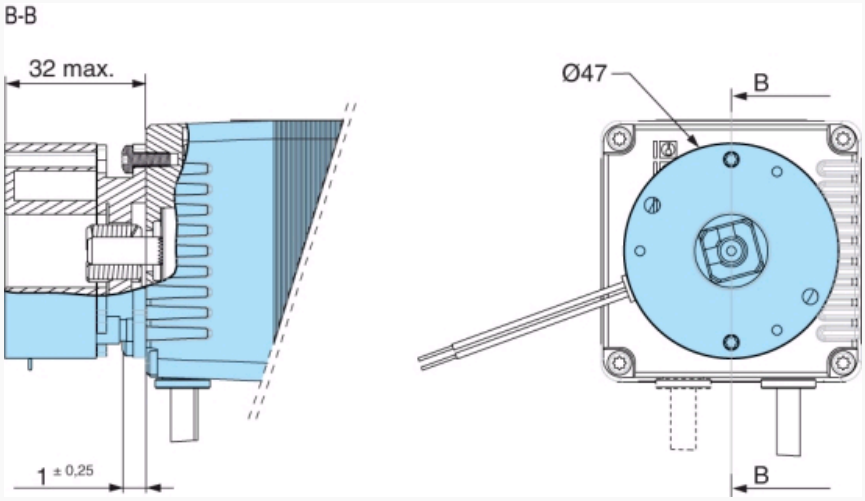
Unless otherwise specified, the characteristics given are applicable to all or part of the product range selected

80140504 : with BDE30 connections

Nº	Legend
1	4 holes M5 over Ø 40 mm - depth of thread : 4.5 mm - depth of hole 6.6 mm
2	D : Ø6 - 0.010 - 0.020 mm
	L : 73.2 mm max.

Dimensions (mm)

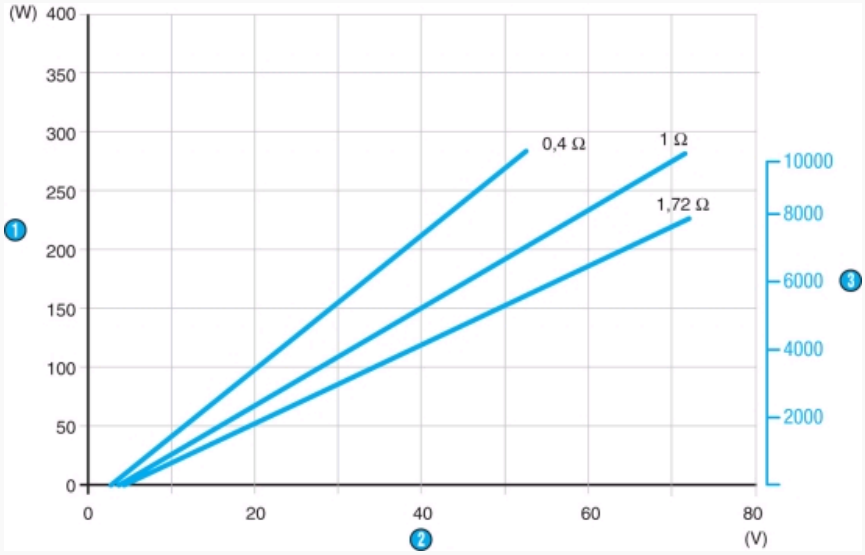
Holding brake - 80140518



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



Nº	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

Nº	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

Nº	Legend
①	Winding

Connections

Part number 801405

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
- A single cable instead of two
- C12 connector built in
- 200, 500, 1000 points/revolution encoder
- Shorter motor