

## 57 square - 225 mNm continuous with Hall effect sensors 60 W nominal at 24 V and 3000 rpm Part number 80140511



- 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
<b>80140511</b> 60 W nominal at 24 V and 3000 rpm	801405	Without option

### Specifications

#### General characteristics

Max. speed (rpm)	10000
Torque peak in (mNm)	475*
Maximum continuous torque (mNm)	215**
Motor constant (mNm/W <sup>1/2</sup> )	57
Electrical time constant (ms)	2
Mechanical time constant (ms)	1,7
Energy losses at peak torque (W)	77
Torque/speed factor - zero impedance (mNm/ (rad/s) )	2,9
Rotor inertia (gcm <sup>2</sup> )	50
Thermal resistance (°C/W)	5,7
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)	900
Length (mm)	73
Protection index	IP54

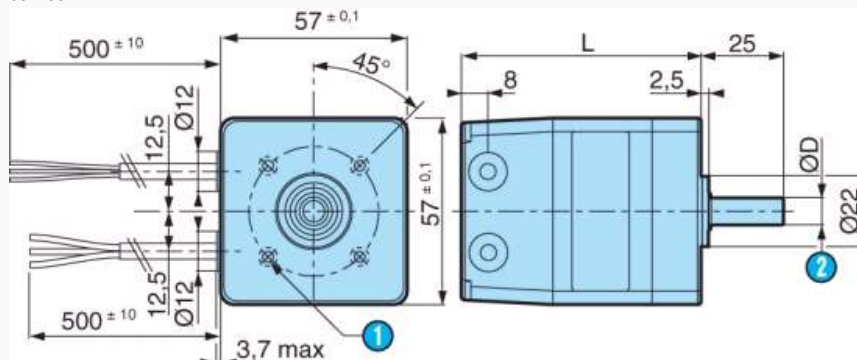
#### Comments

##### Standard winding

Phase-to-phase resistance (Ω)	1,03 ±12,5 %
Voltage at peak torque (V)	8,9
Current at peak torque (A)	8,7
Torque constant (mNm/A)	54,8 ±10 %
Back EMF constant (V/ (rad/s) )	0,0548
Back EMF constant (V/Krpm)	5,7 ±10 %
Inductance (mH)	2,1 ±30 %

### Dimensions (mm)

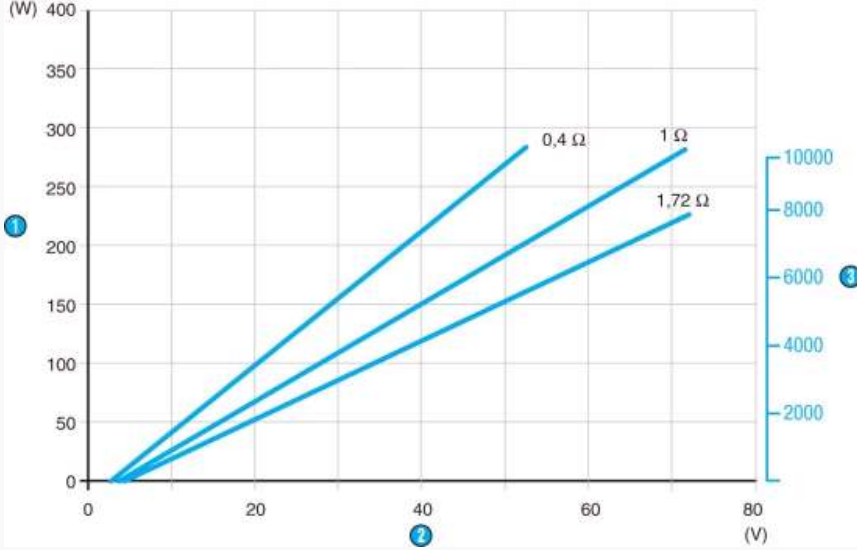
801405



N°	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.

**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 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

## Connections

## Part number 801405

Colore dei fili	Denominazione delle connessioni	Diametro fili AWG
Mero	Avvolgimento 1	<b>20</b>
Marrone	Avvolgimento 2	<b>20</b>
Rosso	Avvolgimento 3	<b>20</b>
Rosso	+ alim Hall	<b>24</b>
Nero	- alim Hall (ritorno)	<b>24</b>
Giallo	Sondq temp.	<b>24</b>
Arancione	Hall 1	<b>24</b>
Marrone	Hall 2	<b>24</b>
Verde	Hall 3	<b>24</b>

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