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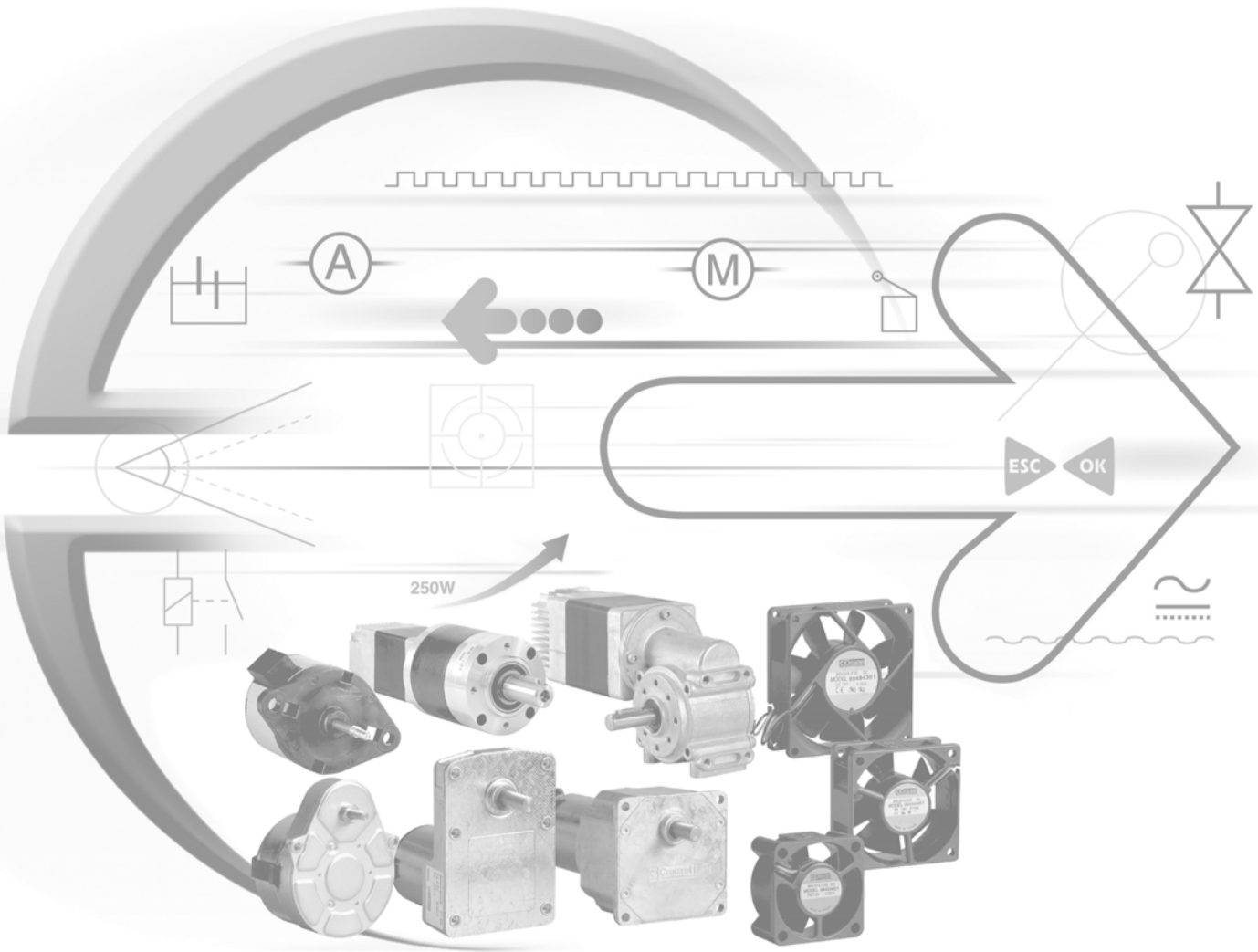
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# D.C. Motors



Products and specifications subject to change without notice.

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# DC Motors Selection guide

Gearbox Speed		Torque max (Nm)		0.5		1.2
		Type of Gearbox		81 012	81 021	81 032.1
<b>Direct Motors</b>						
Power usable (w)	Torque nominal (mN.m)	Speed nominal (rpm)	Voltage supply (V)	Type of motor dimensions (mm)		
3	7.7	3700	12	▶ p. 4 82 860 0 Ø 32 	▶ p.18 82 862 1.5 ... 441 rpm 	▶ p.16 82 861 0.36... 430 rpm 
			24			
8.7	41.5	2000	12	▶ p. 8 82 810 0 Ø 42 		▶ p.20 82 812 20... 130 rpm 
9.4	45		24			
12	45	2580	12	▶ p. 6 82 810 5 Ø 42 		
13		2750	24			
16	75	2000	12	▶ p. 8 82 800 0 Ø 42 		▶ p.20 82 802 20... 130 rpm 
			24			
20	70	2670	12	▶ p. 6 82 800 5 Ø 42 		
22		3070	24			
20	70	2670	12	▶ p.10 82 800 8 Ø 42 		
22		3070	24			
27	172	1500	12	▶ p.12 82 830 0 Ø 63 		
			24			
32	100	3100	12	▶ p.10 82 850 0 Ø 42 		
33		3200	24			
47	170	2630	12	▶ p.12 82 830 5 Ø 63 		
50		2770	24			
90	270	3200	24	▶ p.14 82 890 0 Ø 63 		
95		3360	48			

### Selection of a geared motor

This choice is based upon the desired usable power at the gearbox output shaft

$$\text{Power (W)} = \frac{2\pi}{60} C n \quad (\text{Nm}) \quad (\text{Rpm})$$

A geared motor must have usable power equal to or greater than the power required to rotate the load desired. It is selected by checking that the point corresponding to the required operating conditions (torque and speed output) is higher than the nominal torque versus speed curve of the geared motor. The required torque output of a geared motor must be within its maximum recommended torque for continuous duty.

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2			5			6
81 033	81 043	81 044	81 035	81 035	81 037	81 032 6
► p.22 <b>82 869</b> 	► p.26 <b>82 863</b> 	► p.28 <b>82 864</b> 			► p.32 <b>82 867</b> 	
0.9 ... 108 rpm	99... 662 rpm	2... 66 rpm			1.72... 344 rpm	
	► p.24 <b>80 813</b> 	► p.30 <b>80 814</b> 		► p.34 <b>80 815</b> 	► p.36 <b>80 817</b> 	► p.42 <b>82 812</b> 
	60... 400 rpm	1... 40 rpm		10.5... 616 rpm	1.04... 208 rpm	4 / 8 / 12 rpm
	► p.24 <b>80 803</b> 	► p.30 <b>80 804</b> 		► p.34 <b>80 805</b> 	► p.36 <b>80 807</b> 	► p.42 <b>82 802</b> 
	60... 400 rpm	1... 40 rpm		10.5... 616 rpm	1.04... 208 rpm	4 / 8 / 12 rpm
			► p.38 <b>80 835</b> 			► p.44 <b>82 832</b> 
			7.4... 426 rpm			5... 69 rpm
				► p.40 <b>80 855</b> 		
				13.8... 805 rpm		

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# D.C. direct drive brushed motors

→ Ø 32 mm 3.9 Watts

A range of small 32 mm diameter D.C. direct-drive brushed motors with 3.9 Watts output power.

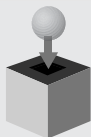
- Available in either 12 or 24 V D.C. versions.
- Sintered bronze bearings lubricated for life.
- Connection by 2.8 mm push-on terminals.
- Interference suppression fitted as standard.



## Specifications

	3.9 Watts	3.9 Watts with encoder 1 pulse/revolution	3.9 Watts	3.9 Watts with encoder 1 pulse/revolution
Type	82 860 0	82 860 0	82 860 0	82 860 0
Voltage	12 V	12 V	24 V	24 V
<b>Part numbers</b>	<b>82 860 003</b>	<b>82 860 501</b>	<b>82 860 004</b>	<b>82 860 502</b>
<b>No-load characteristics</b>				
Speed of rotation (rpm)	5000	5000	5000	5000
Absorbed power (W)	1.2	1.2	1.92	1.92
Absorbed current (A)	0.1	0.1	0.08	0.08
<b>Nominal characteristics</b>				
Speed (rpm)	3700	3700	3700	3700
Torque (mN.m)	7.7	7.7	7.7	7.7
Usable power (W)	3	3	3	3
Absorbed power (W)	6.2	6.2	6	6
Absorbed current (A)	0.43	0.43	0.26	0.26
Gearbox case temperature rise (°C)	50	50	50	50
Efficiency (%)	48	48	50	50
<b>General characteristics</b>				
Insulation class (conforming to IEC 85)	B (130 °C)	B (130°C)	B (130 °C)	B (130°C)
Protection rating	IP40	IP 40	IP40	IP 40
Max. output (W)	3.9	3.9	3.9	3.9
Start torque (mN.m)	30	30	30	30
Starting current (A)	1.5	1.5	0.76	0.76
Resistance (Ω)	8	8	32	32
Inductance (mH)	10	10	41.6	41.6
Torque constant (Nm/A)	0.0214	0.0214	0.0448	0.0448
Electrical time constant (ms)	1.3	1.3	1.3	1.3
Mechanical time constant (ms)	36	36	36	36
Thermal time constant (min)	8	8	8	8
Inertia (g.cm <sup>2</sup> )	19	19	19	19
Weight (g)	96	96	95	95
No of segments	3	3	3	3
Service life (h)	3000	3000	3000	3000
Sintered bronze bearings	✓	✓	✓	✓

## Products adaptations, available on request



- Special output shafts
- Pinion on output shaft
- Special supply voltages
- Special cable lengths
- Special output bearings
- Optional encoder
- Special mounting plate
- Customized electronics
- Special connectors

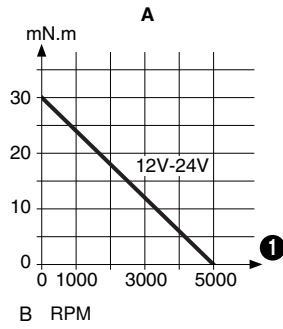
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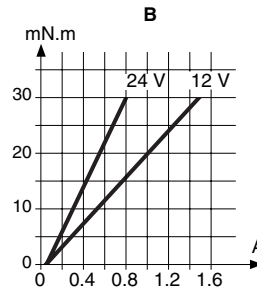
## Curves

A - Nominal speed and torque curves  
 B - Torque/Current curves

82 860 0

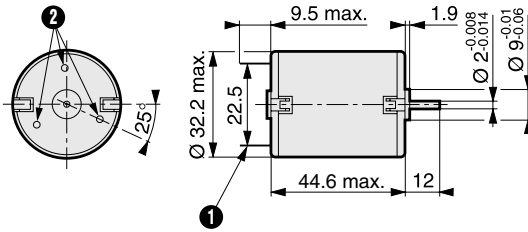


82 860 0



## Dimensions

82 860 0



B 2 tags NFC 20 - 120 series 2.8 x 0.5 mm

C 3 holes at 120° on Ø 26 mm : use self tapping screws M2.2 ; screw depth max 6 mm

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# D.C. direct drive brushed motors

→ Ø 42 mm 14 to 31 Watts

A range of 42 mm diameter D.C. direct-drive brushed motors with 14 to 31 W output power.

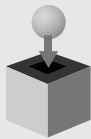
- Available in either 12 or 24 V D.C. versions.
- Sintered bronze bearings lubricated for life
- Replaceable brushes
- Magnetic encoder option



## Specifications

	14 Watts	16 Watts	22 Watts	31 Watts
Type	82 810 5	82 810 5	82 800 5	82 800 5
Voltage	12 V	24 V	12 V	24 V
<b>Part numbers</b>	<b>82 810 501</b>	<b>82 810 502</b>	<b>82 800 501</b>	<b>82 800 502</b>
<b>No-load characteristics</b>				
Speed of rotation (rpm)	3840	3860	3920	4010
Absorbed power (W)	12	11.28	9.96	12.24
Absorbed current (A)	1	0.47	0.83	0.51
<b>Nominal characteristics</b>				
Speed (rpm)	2580	2750	2670	3070
Torque (mN.m)	45	45	70	70
Usable power (W)	12	13	20	22
Absorbed power (W)	31	32	37	41
Absorbed current (A)	2.6	1.32	3.05	1.71
Gearbox case temperature rise (°C)	32	33	38	40
Efficiency (%)	39	40.8	54	54
<b>General characteristics</b>				
Insulation class (conforming to IEC 85)	F (155 °C)	F (155 °C)	F (155 °C)	F (155 °C)
Protection (IEC 529) Housing	IP20	IP20	IP20	IP20
Max. output (W)	14	16	22	31
Start torque (mN.m)	138	156	219	298
Starting current (A)	6.2	3.4	9	6.16
Resistance (Ω)	1.94	7.06	1.33	3.9
Inductance (mH)	4.45	16.94	2.67	9.35
Torque constant (Nm/A)	0.0265	0.0532	0.0268	0.0527
Electrical time constant (ms)	2.3	2.4	2	2.4
Mechanical time constant (ms)	26	23	20	15
Thermal time constant (min)	8	8	12	12
Inertia (g.cm <sup>2</sup> )	80	72	105	110
Weight (g)	310	310	400	400
No of segments	8	8	8	8
Service life (h)	2000	2000	2000	2000
Sintered bronze bearings	✓	✓	✓	✓
Replaceable brushes (mm)	✓	✓	✓	✓

## Products adaptations, available on request



- Special output shafts
- Pinion on output shaft
- Special supply voltages
- Special cable lengths
- Special output bearings
- Optional encoder
- Special mounting plate
- Customized electronics
- Special connectors

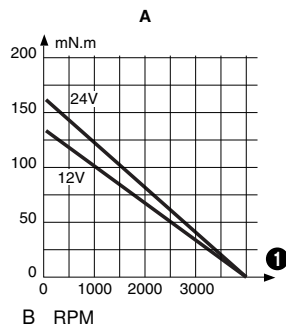
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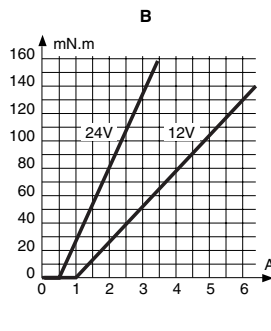
## Curves

A - Torque/Speed curves  
B - Torque/Current curves

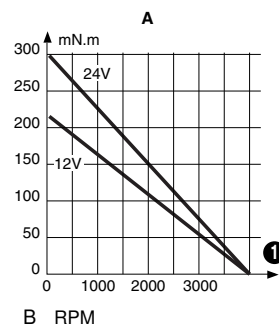
82 810 5



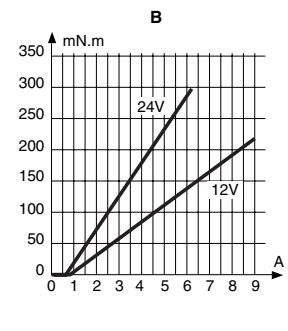
82 810 5



82 800 5

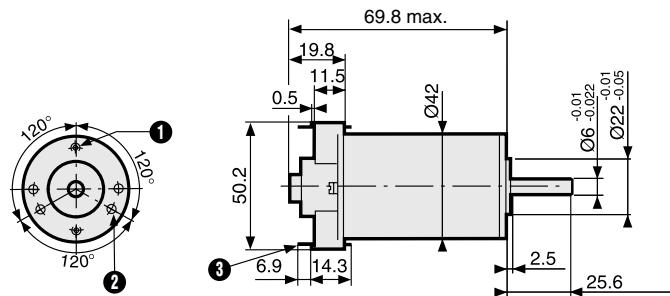


82 800 5



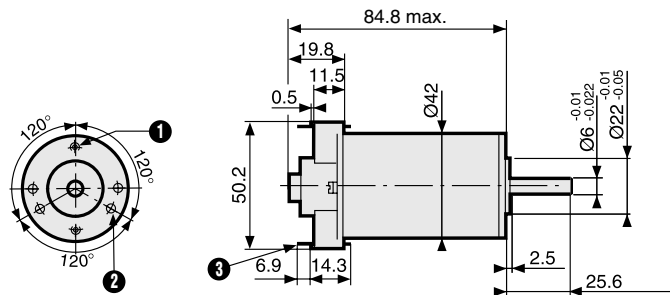
## Dimensions

82 810 5



- B 2 M3 at 180° depth 5 mm on Ø 32
- C 2 x Ø 2.75 at 120° depth 5 mm on Ø 32
- D 2 tags IEC 760 series 4.8 x 0.5 mm

82 800 5



- B 2 M3 at 180° depth 5 mm on Ø 32
- C 2 x Ø 2.75 at 120° depth 5 mm on Ø 32
- D 2 tags IEC 760 series 4.8 x 0.5 mm

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# D.C. direct drive brushed motors

→ Ø 42 mm 10 to 17 Watts

A range of 42 mm diameter D.C. direct-drive brushed motors with 10 or 17 Watts output power.

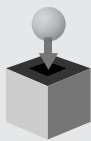
- Available in either 12, 24 or 48V D.C. versions
- Sintered bronze bearings lubricated for life
- Supply connection by 4.75 mm tags
- Replaceable brushes
- Optional magnetic encoder



## Specifications

	10 Watts	10 Watts	17 Watts	17 Watts
Type	82 810 0	82 810 0	82 800 0	82 800 0
Voltage	12 V	24 V	12 V	24 V
<b>Part numbers</b>	<b>82 810 017</b>	<b>82 810 018</b>	<b>82 800 036</b>	<b>82 800 037</b>
<b>No-load characteristics</b>				
Speed of rotation (rpm)	2850	2780	2960	2750
Absorbed power (W)	4.8	4.3	4.8	4.3
Absorbed current (A)	0.4	0.18	0.4	0.18
<b>Nominal characteristics</b>				
Speed (rpm)	2000	2000	2000	2000
Torque (mN.m)	45	41.5	75	75
Usable power (W)	9.4	8.7	15.7	15.6
Absorbed power (W)	20.4	15.6	30	26.4
Absorbed current (A)	1.7	0.65	2.5	1.1
Gearbox case temperature rise (°C)	45	46	44	40
Efficiency (%)	46	55.7	52	59
<b>General characteristics</b>				
Insulation class (conforming to IEC 85)	F (155 °C)	F (155 °C)	F (155 °C)	F (155 °C)
Protection (IEC 529) Housing	IP20	IP20	IP20	IP20
Max. output (W)	10.3	9.5	16.3	17
Start torque (mN.m)	127	117	185	210
Starting current (A)	4	1.7	5.8	2.7
Resistance (Ω)	3.1	14.6	2	7.7
Inductance (mH)	2.5	10.7	1.8	6.9
Torque constant (Nm/A)	0.035	0.077	0.0342	0.0724
Electrical time constant (ms)	0.8	0.73	0.89	0.89
Mechanical time constant (ms)	19	17	18	16
Thermal time constant (min)	10	10	12	12
Inertia (g.cm <sup>2</sup> )	80	72	105	110
Weight (g)	310	310	400	400
No of segments	8	8	8	8
Service life (h)	3000	3000	3000	3000
Sintered bronze bearings	✓	✓	✓	✓
Replaceable brushes (mm)	✓	✓	✓	✓

## Products adaptations, available on request



- Special output shafts
- Pinion on output shaft
- Special supply voltages
- Special cable lengths
- Special output bearings
- Optional encoder
- Special mounting plate
- Customized electronics
- Special connectors

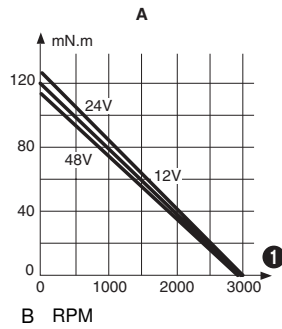
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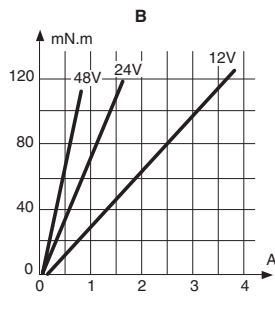
## Curves

A - Torque/Speed curves  
B - Torque/Current curves

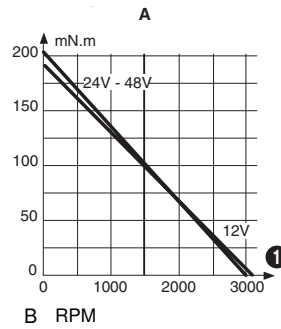
82 810 0



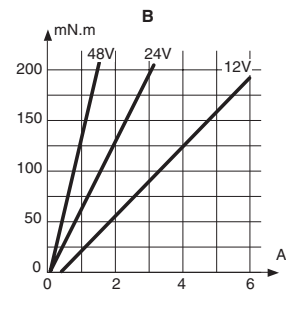
82 810 0



82 800 0

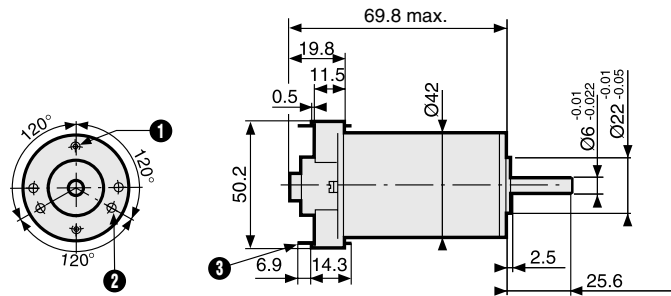


82 800 0



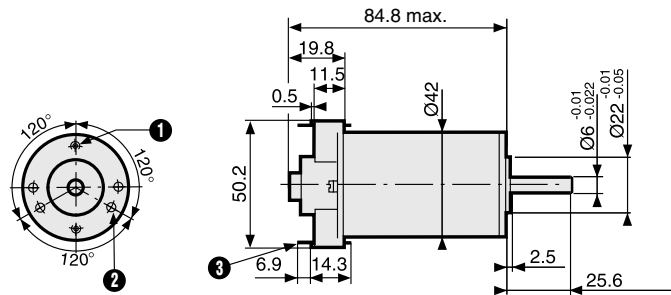
## Dimensions

82 810 0



- B 2 M3 at 180° depth 5 mm on Ø 32
- C 2 holes x Ø 2.75<sup>±0.05</sup> at 120° C depth 5 mm Ø 32
- D 2 tags IEC 760 series 4.8 x 0.5 mm

82 800 0



- B 2 M3 at 180° depth 5 mm on Ø 32
- C 2 x Ø 2.75<sup>±0.05</sup> at 120° depth 5 mm Ø 32
- D 2 tags IEC 760 series 4.8 x 0.5 mm

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# D.C. direct drive brushed motors

→ Ø 42 mm 22 to 52 Watts

A range of 42 mm diameter D.C. direct-drive brushed motors with 22 to 52 Watts output power.

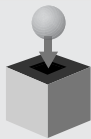
- Available in either 12 or 24 V D.C. versions.
- Sintered bronze bearings lubricated for life
- Supply connection by 2 leads



## Specifications

	22 Watts	31 Watts	42 Watts	52 Watts
Type	82 800 8	82 800 8	82 850 0	82 850 0
Voltage	12 V	24 V	12 V	24 V
<b>Part numbers</b>	<b>82 800 801</b>	<b>82 800 802</b>	<b>82 850 001</b>	<b>82 850 002</b>
<b>No-load characteristics</b>				
Speed of rotation (rpm)	3920	4010	4150	4050
Absorbed power (W)	9.96	12.24	7.32	7.44
Absorbed current (A)	0.83	0.51	0.61	0.31
<b>Nominal characteristics</b>				
Speed (rpm)	2670	3070	3100	3200
Torque (mN.m)	70	70	100	100
Usable power (W)	20	22	32.5	33.5
Absorbed power (W)	37	41	51	52
Absorbed current (A)	3.05	1.71	4.25	2.15
Gearbox case temperature rise (°C)	38	40	63	54
Efficiency (%)	54	54	63	64
<b>General characteristics</b>				
Insulation class (conforming to IEC 85)	F (155 °C)	F (155 °C)	F (155 °C)	F (155 °C)
Protection (IEC 529) Terminal	IP20	IP20	IP20	IP20
Max. output (W)	22	31	42	52
Start torque (mN.m)	219	298	390	490
Starting current (A)	9	6.16	14.8	9.6
Resistance (Ω)	1.33	3.9	0.81	2.5
Inductance (mH)	2.67	9.35	0.7	2.5
Torque constant (Nm/A)	0.0268	0.0527	0.027	0.052
Electrical time constant (ms)	2	2.4	0.85	1
Mechanical time constant (ms)	20	15	16	13
Thermal time constant (min)	12	12	26	21
Inertia (g.cm <sup>2</sup> )	105	110	140	140
Weight (g)	400	400	640	640
No of segments	8	8	8	8
Service life (h)	3000	3000	3000	3000
Sintered bronze bearings	✓	✓	✓	✓
Wires length (mm)	200	200	200	200

## Products adaptations, available on request



- Special output shafts
- Pinion on output shaft
- Special supply voltages
- Special cable lengths
- Special output bearings
- Optional encoder
- Special mounting plate
- Customized electronics
- Special connectors

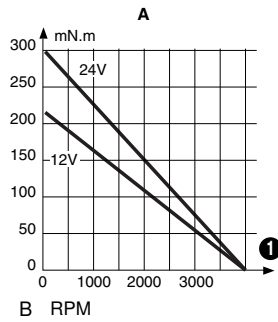
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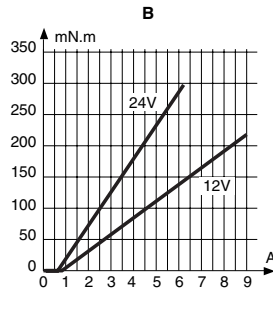
## Curves

A - Torque/Speed curves  
B - Torque/Current curves

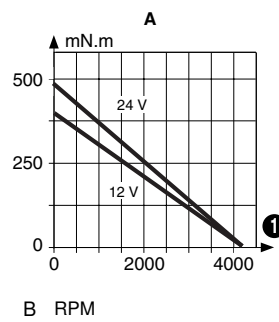
82 800 8



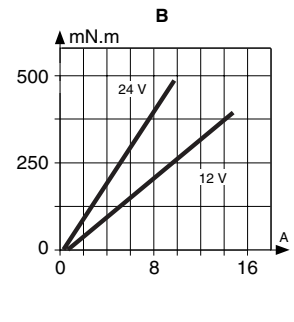
82 800 8



82 850 0

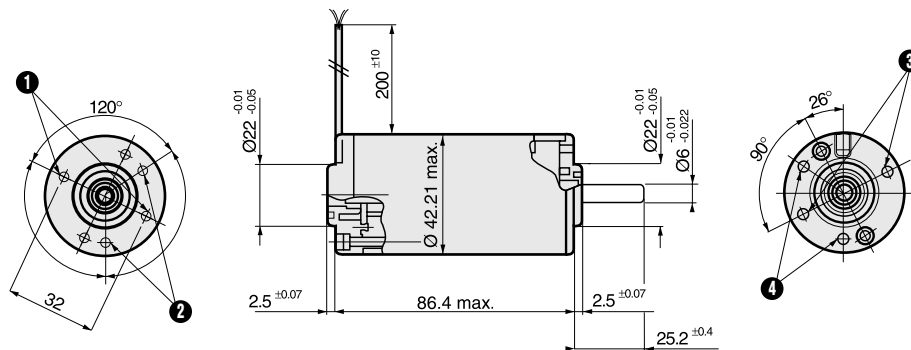


82 850 0



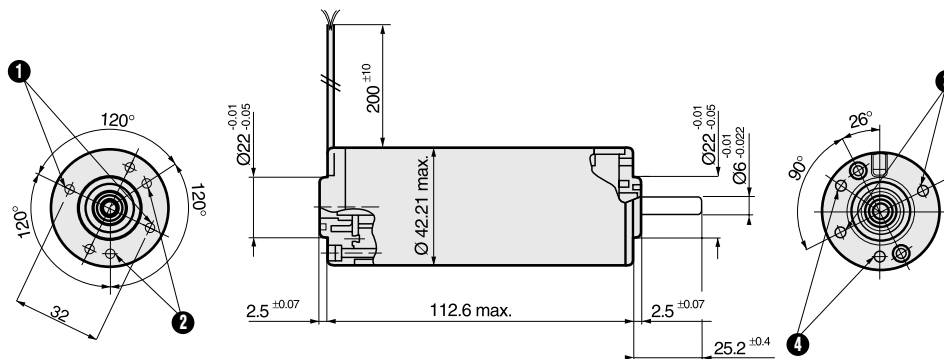
## Dimensions

82 800 8



- B 2 holes M3 x 0.5 at 180° depth 5 on  $\varnothing 32$
- C 2 holes  $2.75 \pm 0.05$  at 120° depth 5 mm on  $\varnothing 32$
- D 2 holes M3 x 0.5 at 180° depth 5.5 on  $\varnothing 32$
- E 2 holes M3 x 0.5 at 120° depth 5.5 on  $\varnothing 32$

82 850 0



- B 2 holes M3 x 0.5 at 180° depth 5 mm on  $\varnothing 32$
- C 2 holes  $2.75 \pm 0.05$  at 120° depth 5 mm on  $\varnothing 32$
- D 2 holes M3 x 0.5 at 180° depth 5.5 mm on  $\varnothing 32$
- E 2 holes M3 x 0.5 at 120° depth 5.5 mm on  $\varnothing 32$

Products and specifications subject to change without notice.

Order/Technical Support - Tel: (800) 677-5311 / FAX: (800) 677-3865 / [www.crouzet-usa.com](http://www.crouzet-usa.com)

# D.C. direct drive brushed motors

→ Ø 63 mm 33 to 67 Watts

A range of 63mm diameter D.C. direct-drive brushed motors with 33 to 67 W output power.

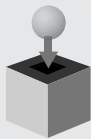
- Available in either 12, 24 or 48V D.C. versions.
- Ball bearings on output shaft
- Supply connection by 2 leads



## Specifications

	33 watts	33 Watts	67 Watts	67 Watts
Type	82 830 0	82 830 0	82 830 5	82 830 5
Voltage	12 V	24 V	12 V	24 V
<b>Part numbers</b>	<b>82 830 009</b>	<b>82 830 010</b>	<b>82 830 501</b>	<b>82 830 502</b>
<b>No-load characteristics</b>				
Speed of rotation (rpm)	2100	2100	3400	3660
Absorbed power (W)	4.8	4.8	12.6	12
Absorbed current (A)	0.4	0.2	1.05	0.5
<b>Nominal characteristics</b>				
Speed (rpm)	1500	1500	2630	2770
Torque (mN.m)	172	172	170	170
Usable power (W)	27	27	47	50
Absorbed power (W)	43	45	72	72
Absorbed current (A)	3.6	1.9	6	3
Gearbox case temperature rise (°C)	50	50	46	50
Efficiency (%)	62	60	65	69.4
<b>General characteristics</b>				
Insulation class (conforming to IEC 85)	F (155 °C)	F (155 °C)	F (155 °C)	F (155 °C)
Protection (IEC 529) Terminal	IP20	IP20	IP20	IP20
Max. output (W)	33	33	67	67
Start torque (mN.m)	600	600	750	700
Starting current (A)	12	6.2	23.1	11.8
Resistance (Ω)	1	3.9	0.52	2.03
Inductance (mH)	1.4	6.4	1.19	4.68
Torque constant (Nm/A)	0.0517	0.1	0.034	0.0619
Electrical time constant (ms)	1.4	1.64	2.3	2.3
Mechanical time constant (ms)	19	19	33	33
Thermal time constant (min)	37	37	20	18
Inertia (g.cm <sup>2</sup> )	514	492	520	500
Weight (g)	840	840	840	840
No of segments	12	12	12	12
Service life (h)	5000	5000	4000	4000
Ball bearings	✓	✓	✓	✓
Wires length (mm)	200	200	200	200

## Products adaptations, available on request



- Special output shafts
- Pinion on output shaft
- Special supply voltages
- Special cable lengths
- Special output bearings
- Optional encoder
- Special mounting plate
- Customized electronics
- Special connectors

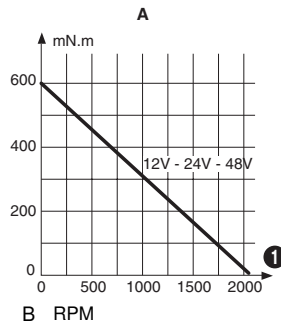
Products and specifications subject to change without notice.

Order/Technical Support - Tel: (800) 677-5311 / FAX: (800) 677-3865 / [www.crouzet-usa.com](http://www.crouzet-usa.com)

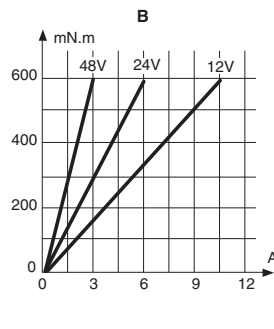
## Curves

A - Torque/Speed curves  
B - Torque/Current curves

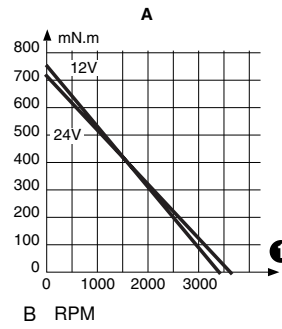
82 830 0



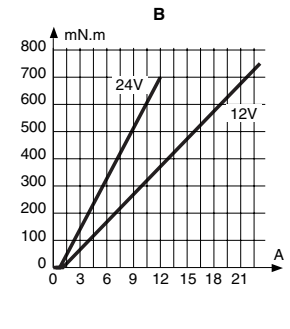
82 830 0



82 830 5

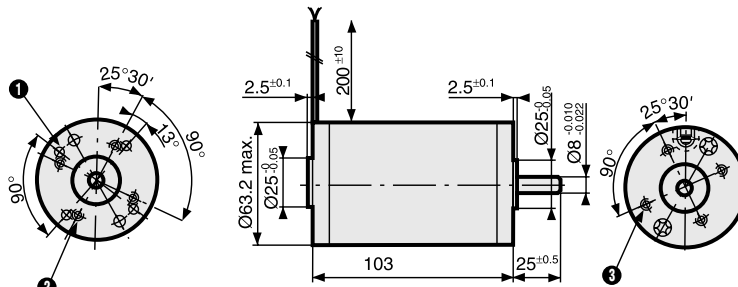


82 830 5



## Dimensions

82 830 0



- B 4 holes  $\varnothing 3.65^{+0.05}$  at  $90^\circ$  on  $\varnothing 48$
- C 4 holes M5 on  $\varnothing 40$  depth 7 mm
- D 4 holes M5 on  $\varnothing 40$  depth 7 mm

Products and specifications subject to change without notice.

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# D.C. direct drive brushed motors

→ Ø 63 mm 194 to 255 Watts

A range of D.C. direct-drive brushed motors with a case diameter of 63 mm and between 194 and 255 Watts output power.

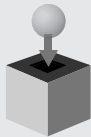
- Available in either 24 or 48V D.C. versions
- Ball bearings on output shaft
- Supply connection by 2 leads



## Specifications

	194 Watts	255 Watts
Type	82 890 0	82 890 0
Voltage	24 V	48 V
<b>Part numbers</b>	<b>82 890 001</b>	<b>82 890 002</b>
<b>No-load characteristics</b>		
Speed of rotation (rpm)	3700	3750
Absorbed power (W)	10.8	9.6
Absorbed current (A)	0.45	0.2
<b>Nominal characteristics</b>		
Speed (rpm)	3200	3360
Torque (mN.m)	270	270
Usable power (W)	90	95
Absorbed power (W)	120	118
Absorbed current (A)	5.00	2.45
Gearbox case temperature rise (°C)	50	50
Efficiency (%)	75	80
<b>General characteristics</b>		
Insulation class (conforming to IEC 85)	F (155 °C)	F (155 °C)
Protection (IEC 529) Terminal	IP20	IP20
Max. output (W)	194	255
Start torque (mN.m)	2000	2600
Starting current (A)	34.1	21.7
Resistance (Ω)	0.7	2.2
Inductance (mH)	1.05	4.62
Torque constant (Nm/A)	0.059	0.12
Electrical time constant (ms)	1.5	2.1
Mechanical time constant (ms)	16	12
Thermal time constant (min)	41	36
Inertia (g.cm <sup>2</sup> )	795	795
Weight (g)	1580	1580
No of segments	12	12
Service life (h)	5000	5000
Ball bearings	✓	✓
Wires length (mm)	200	200

## Products adaptations, available on request



- Special output shafts
- Pinion on output shaft
- Special supply voltages
- Special cable lengths
- Special output bearings
- Optional encoder
- Special mounting plate
- Customized electronics
- Special connectors

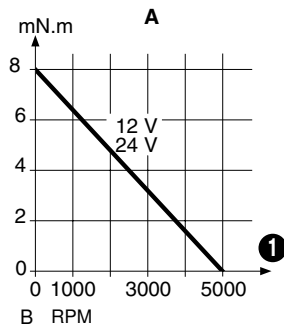
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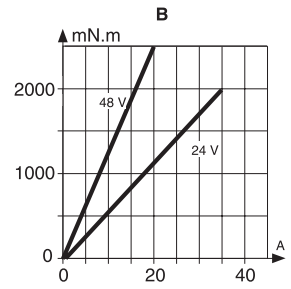
## Curves

A - Torque/Speed curves  
B - Torque/Current curves

82 890 0

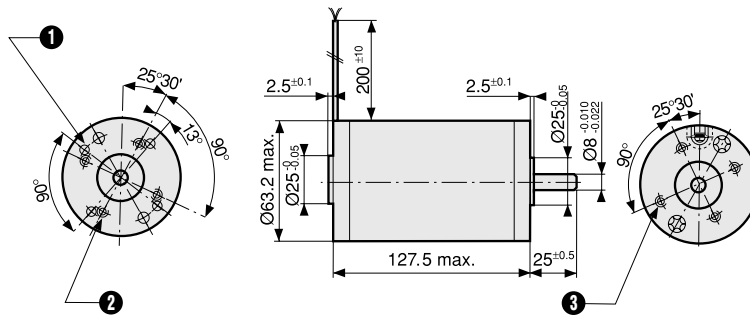


82 890 0



## Dimensions

82 890 0



- B 4 holes Ø 3.65 ±0.05 at 90° on Ø 48
- C 4 holes M5 on Ø 40 depth 7 mm
- D 4 holes M5 on Ø 40 depth 7 mm

Products and specifications subject to change without notice.

Order/Technical Support - Tel: (800) 677-5311 / FAX: (800) 677-3865 / [www.crouzet-usa.com](http://www.crouzet-usa.com)

# D.C. geared motors with brushes

→ 0.5 Nm    3.9 Watts

A range of D.C. geared motors with ovoid gearbox.

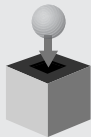
- Mechanical rating of gearbox with output shaft stalled : 0.5 Nm.
- 3.9 Watt motor versions.
- Available in either 12 or 24 V D.C.
- Gearbox ratios options for 0.36 to 430 rpm.



## Specifications

		3.9 Watts	3.9 Watts
Type		82 861 0	82 861 0
Voltage		12 V	24 V
Standard speed (rpm)		4300	4300
<b>Output speed (rpm)</b>	<b>Ratios (i)</b>		
430	10	82 861 006	82 861 015
215	20	82 861 007	82 861 016
179	24	82 861 0X00024B ●	82 861 0Y00024B ●
143	30	82 861 008	82 861 017
108	40	82 861 009	82 861 018
90	48	82 861 0X00048B ●	82 861 0Y00048B ●
54	80	82 861 010	82 861 019
49	90	82 861 0X00090B ●	82 861 0Y00090B ●
29	150	82 861 0X00150B ●	82 861 0Y00150B ●
22	200	82 861 011	82 861 020
11	375	82 861 012	82 861 021
8.6	500	82 861 013	82 861 022
5.8	750	82 861 0X00750B ●	82 861 0Y00750B ●
3.6	1200	82 861 014	82 861 023
1.8	2400	82 861 0X02400B ●	82 861 0Y02400B ●
0.80	5400	82 861 0X05400B ●	82 861 0Y05400B ●
0.36	12000	82 861 0X12000B ●	82 861 0Y12000B ●
<b>General characteristics</b>			
Motor		82 860 0	82 860 0
Gearbox		81 021 0	81 021 0
Maximum permitted torque from gearmotor under continuous conditions (for 1 millions turns) Nm		0.5	0.5
Axial load (static) daN		1	1
Radial load (static) daN		8	8
Max. output (W)		3.9	3.9
Nominal output (W)		3	3
Gearbox case temperature rise (°C)		50	50
Weight (g)		160	160

## Products adaptations, available on request



- Special supply voltages
- Special lead lengths
- Optional encoder
- Special connectors
- Special output shafts
- Special gearbox ratios
- Special gear material
- Special output bearings
- Special mounting plate

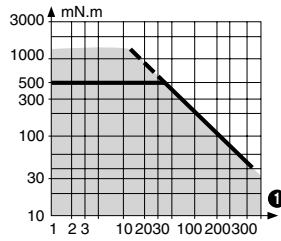
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## Curves

The shaded zone represents the operating range of the geared motor.  
 The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
 For higher torque ratings, service life will be reduced.

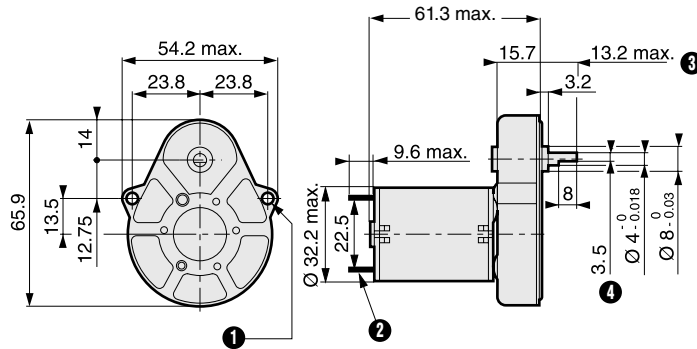
Nominal speed and torque curves



B RPM

## Dimensions

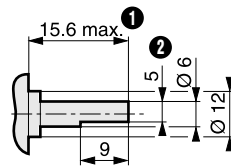
82 861 0



- B 2 fixing holes  $\varnothing 3.2$
- C 2 tags NFC 20-120 series 2.8 x 0.5 mm
- D (shaft pushed-in  $\leftarrow$ )
- E 3.5 mm across flats

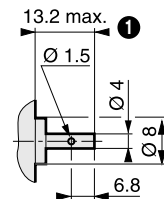
## Options

Shaft 70 999 421  
 SP1295.10



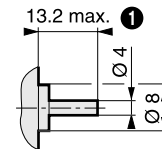
- B (shaft pushed-in  $\leftarrow$ )
- C 5 across flat

Shaft 79 200 779



- B (shaft pushed-in  $\leftarrow$ )

Shaft 79 200 967



- B (shaft pushed-in  $\leftarrow$ )

Products and specifications subject to change without notice.

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# D.C. geared motors with brushes

→ 0.5 Nm 3.9 Watts

A range of D.C. geared motors with sintered metal gears.

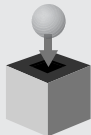
- Mechanical rating of gearbox with output shaft stalled : 0.5 Nm.
- 3.9 Watt motor power
- Available in either 12 or 24 V D.C. versions.
- Gearbox ratios options for 1.5 to 441 rpm.
- Options with magnetic encoder.



## Specifications

		3.9 Watts	3.9 Watts
Type		82 862 0/2	82 862 0/2
Voltage		12 V	24 V
Output speed (rpm)	Ratios (i)		
441	9.76	82 862 001	82 862 004
141	30.6	82 862 002	82 862 005
45	95.4	82 862 003	82 862 006
14	298	82 862 201	82 862 204
5	931	82 862 202	82 862 205
1.5	2910	82 862 203	82 862 206
General characteristics			
Motor		82 860 0	82 860 0
Gearbox		81 012 0 / 81 012 2	81 012 0 / 81 012 2
Maximum permitted torque from gearmotor under continuous conditions (for 1 millions turns) N.m		0.5	0.5
Axial load (static) daN		1	1
Radial load (static) daN		8	8
Max. output (W)		3.9	3.9
Nominal output (W)		3	3
Gearbox case temperature rise (°C)		50	50
Weight (g)		160 / 170	160 / 170

## Products adaptations, available on request



- Special supply voltages
- Special lead lengths
- Optional encoder
- Special connectors
- Special output shafts
- Special gearbox ratios
- Special gear material
- Special output bearings
- Special mounting plate

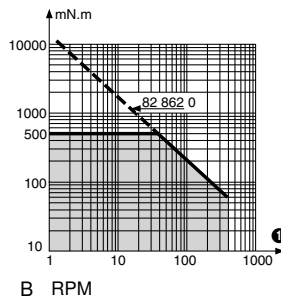
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## Curves

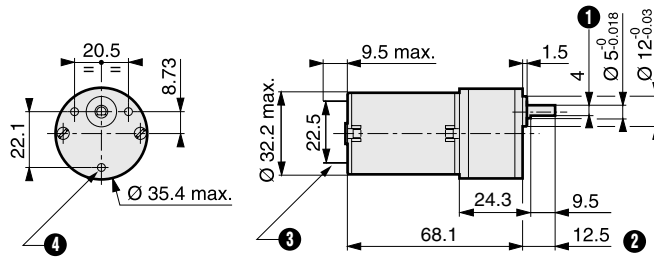
The shaded zone represents the operating range of the geared motor.  
 The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
 For higher torque ratings, service life will be reduced.

Nominal speed and torque curves



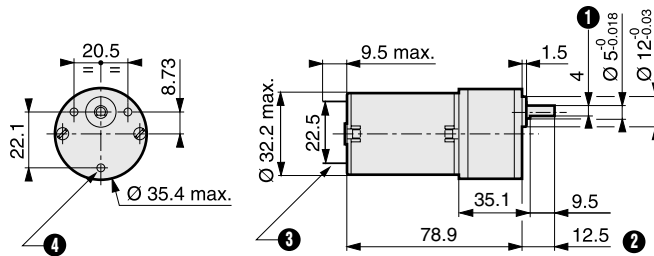
## Dimensions

### 82 862 0



- B 4 mm across flats
- C (shaft pushed-in ←)
- D 2 tags NFC 20-120 series 2.8 x 0.5 mm
- E 3 holes M3 depth 4.5 mm

### 82 862 2



- B 4 mm across flats
- C (shaft pushed-in ←)
- D 2 tags NFC 20-120 series 2.8 x 0.5 mm
- E 3 holes M3 depth 4.5 mm

Products and specifications subject to change without notice.

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# D.C. geared motors with brushes

→ 1.2 Nm 10 and 17 Watts

A range of D.C. geared motors with solid metal gears

- Mechanical rating of gearbox with output shaft stalled : 1.2 Nm
- 10 and 17 Watt motor power
- Available in either 12, 24 or 48 V D.C.
- Gearbox ratios options for 20 to 100 rpm



## Specifications

		17 Watts	17 Watts	10 Watts	10 watts
Type		82 802 0	82 802 0	82 812 0	82 812 0
Voltage		12 V	24 V	12 V	24 V
Output speed (rpm)	Ratios (i)				
100	26	82 802 0X00026Z ●	82 802 0Y00026Z ●	82 812 0X00026Z ●	82 812 0Y00026Z ●
80	32.5	82 802 0X032.5Z ●	82 802 0Y032.5Z ●	82 812 0X032.5Z ●	82 812 0Y032.5Z ●
60	130/3	82 802 0X43.33Z ●	82 802 0Y43.33Z ●	82 812 0X43.33Z ●	82 812 0Y43.33Z ●
38	67.6	82 802 0X067.6Z ●	82 802 0Y067.6Z ●	82 812 0X067.6Z ●	82 812 0Y067.6Z ●
30	598/7	82 802 0X85.43Z ●	82 802 0Y85.43Z ●	82 812 0X85.43Z ●	82 812 0Y85.43Z ●
20	130	82 802 0X00130Z ●	82 802 0Y00130Z ●	82 812 0X00130Z ●	82 812 0Y00130Z ●
General characteristics					
Motor		82 800 0	82 800 0	82 810 0	82 810 0
Gearbox		81 032 1	81 032 1	81 032 1	81 032 1
Maximum permitted torque from gearmotor under continuous conditions for 10 millions turns Nm		1.2	1.2	1.2	1.2
Axial load (dynamic) daN		3.5	3.5	3.5	3.5
Radial load (dynamic) daN		5	5	5	5
Max. output (W)		16.3	17	10.3	9.5
Nominal output (W)		15.7	15.6	9.4	8.7
Gearbox case temperature rise (°C)		44	40	45	46
Weight (g)		670	670	670	670

## Products adaptations, available on request



- Special supply voltages
- Special lead lengths
- Optional encoder
- Special connectors
- Special output shafts
- Special gearbox ratios
- Special gear material
- Special output bearings
- Special mounting plate

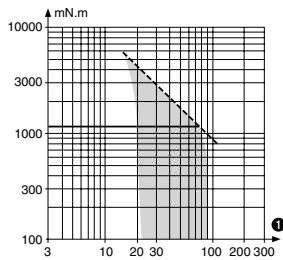
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## Curves

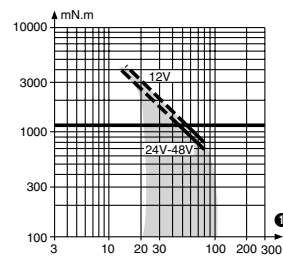
The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves  
82 802 0



B RPM

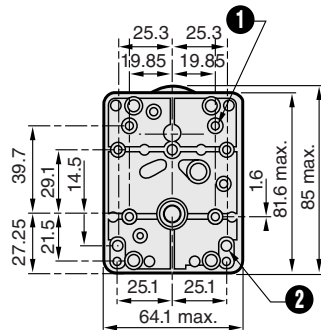
Nominal speed and torque curves  
82 812 0



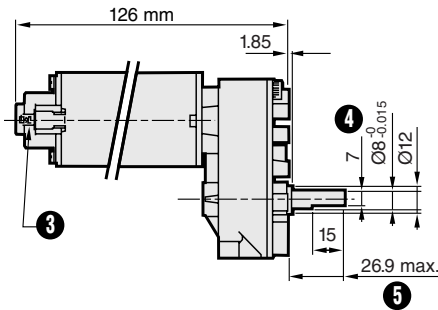
B RPM

## Dimensions

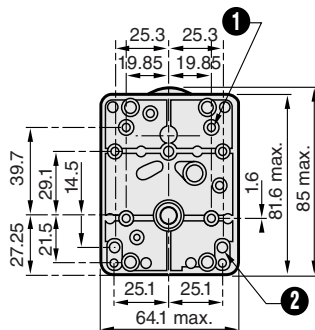
82 802 0 Standard



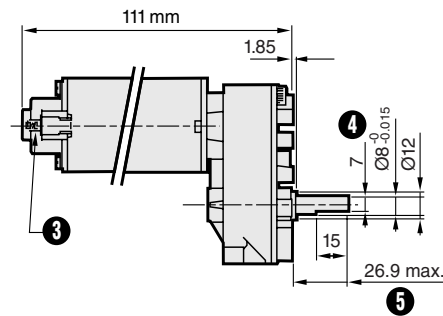
- B 4 holes M4 depth 7.5 mm
- C 3 holes M5 at 120° depth 7.5 mm
- D 2 tags IEC 760 series 4.8 x 0.5 mm
- E 7 mm across flats
- F (shaft pushed-in ←)



82 812 0 Standard



- B 8 holes M4 depth 7.5 mm
- C 3 holes M5 at 120° depth 7.5 mm
- D 2 tags IEC 760 series 4.8 x 0.5 mm
- E 7 mm across flats
- F (shaft pushed-in ←)



Products and specifications subject to change without notice.

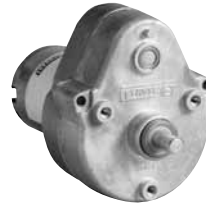
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# D.C. geared motors with brushes

→ 2 Nm 3.9 Watts

A range of D.C. geared motors with ovoid gearbox.

- Mechanical rating of gearbox with output shaft stalled : 2 Nm.
- 3.9 Watt motor versions.
- Available in either 12 or 24 V D.C.
- Gearbox ratios options for 0.36 to 430 rpm.
- Alternative shaft options.



## Specifications

		3.9 Watts	3.9 Watts
Type		82 869 0	82 869 0
Voltage		12 V	24 V
<b>Output speed (rpm)</b>	<b>Ratios (i)</b>		
108	40	<b>82 869 001</b>	<b>82 869 011</b>
54	80	<b>82 869 006</b>	<b>82 869 012</b>
27	160	<b>82 869 007</b>	<b>82 869 013</b>
13	320	<b>82 869 008</b>	<b>82 869 014</b>
7.2	600	<b>82 869 009</b>	<b>82 869 015</b>
5.4	800	<b>82 869 0X00800X ●</b>	<b>82 869 0Y00800X ●</b>
2.9	1500	<b>82 869 010</b>	<b>82 869 016</b>
0.90	4800	<b>82 869 0X04800X ●</b>	<b>82 869 0Y04800X ●</b>
<b>General characteristics</b>			
Motor		82 860 0	82 860 0
Gearbox		81 033 0	81 033 0
Maximum permitted torque from gearmotor under continuous conditions for 1 millions turns Nm		2	2
Axial load (static) daN		1	1
Radial load (static) daN		10	10
Max. output (W)		3.9	3.9
Nominal output (W)		3	3
Gearbox case temperature rise (°C)		50	50
Weight (g)		240	240

## Products adaptations, available on request



- Special supply voltages
- Special lead lengths
- Optional encoder
- Special connectors
- Special output shafts
- Special gearbox ratios
- Special gear material
- Special output bearings
- Special mounting plate

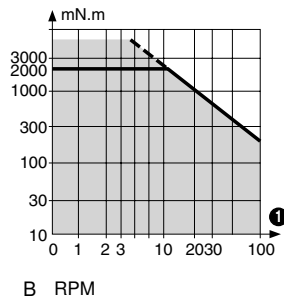
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## Curves

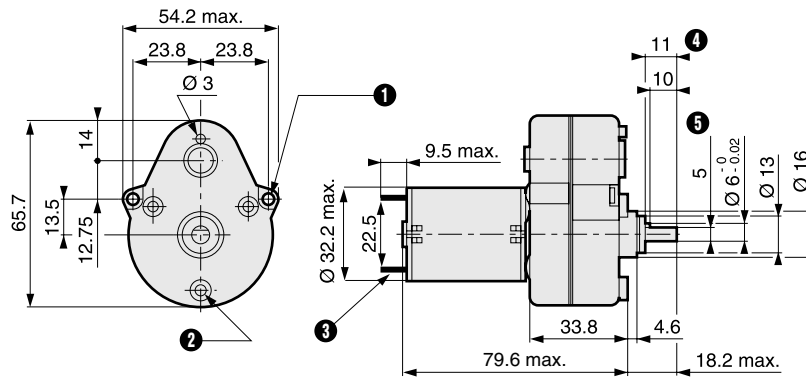
The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves



## Dimensions

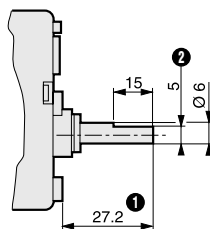
82 869 0



- B 2 fixing holes Ø 3.2
- C 3 bosses Ø 7.2 at 120° on R=19.5 with 3 M3 holes
- D 2 tags NFC 20-120 series 2.8 x 0.5 mm
- E (shaft pushed-in ←)
- F 5 mm across flats

## Options

Shaft 79 202 573



- B (shaft pushed-in ←)
- C 5 across flat

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# D.C. geared motors with brushes

→ 2 Nm 10 and 17 Watts

A range of D.C. geared motors with solid metal gears

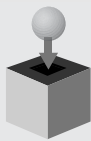
- Mechanical rating of gearbox with output shaft stalled : 1.2 Nm
- 10 and 17 Watt motor power
- Available in either 12, 24 or 48 V D.C.
- Gearbox ratios options for 60 to 400 rpm



## Specifications

		17 Watts	17 Watts	10 Watts	10 Watts
Type		80 803 0	80 803 0	80 813 0	80 813 0
Voltage		12 V	24 V	12 V	24 V
<b>Output speed (rpm)</b>	<b>Ratios (i)</b>				
400	13/2	80 803 0X006.5Z ●	80 803 0Y006.5Z ●	80 813 0X006.5Z ●	80 813 0Y006.5Z
301	855/99	80 803 0X8.636Z ●	80 803 0Y8.636Z ●	80 813 0X8.636Z ●	80 813 0Y8.636Z
161	728/45	80 803 005	80 803 008	80 813 0X16.18Z ●	80 813 0Y16.18Z
120	65/3	80 803 0X21.67Z ●	80 803 0Y21.67Z ●	80 813 0X21.67Z ●	80 813 0Y21.67Z
103	455/18	80 803 0X25.28Z ●	80 803 0Y25.28Z ●	80 813 0X25.28Z ●	80 813 0Y25.28Z
80	32.5	80 803 006	80 803 009	80 813 0X32.5Z ●	80 813 0Y32.5Z
60	130/3	80 803 007	80 803 010	80 813 0X43.33Z ●	80 813 0Y43.33Z
<b>General characteristics</b>					
Motor		82 800 0	82 800 0	82 810 0	82 810 0
Gearbox		81 043 0	81 043 0	81 043 0	81 043 0
Maximum permitted torque from gearmotor under continuous conditions for 1 millions turns Nm		2	2	2	2
Axial load (dynamic) daN		2	2	2	2
Radial load (dynamic) daN		2	2	2	2
Max. output (W)		16.3	17	10.3	9.5
Nominal output (W)		15.7	15.6	9.4	8.7
Gearbox case temperature rise (°C)		44	40	45	46
Weight (g)		600	600	500	500

## Products adaptations, available on request



- Special supply voltages
- Special lead lengths
- Optional encoder
- Special connectors
- Special output shafts
- Special gearbox ratios
- Special gear material
- Special output bearings
- Special mounting plate

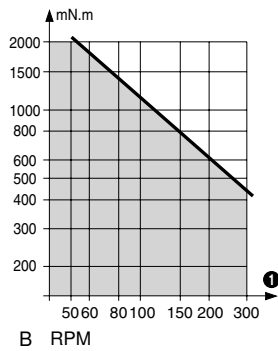
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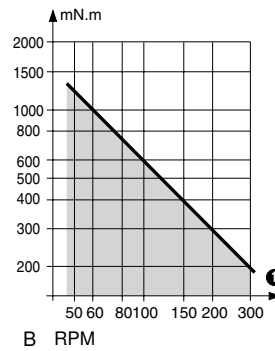
## Curves

The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves  
80 803 0

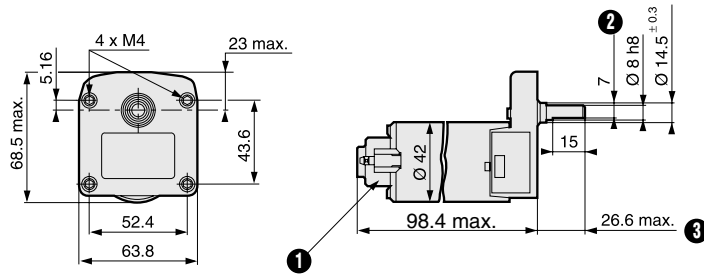


Nominal speed and torque curves  
80 813 0



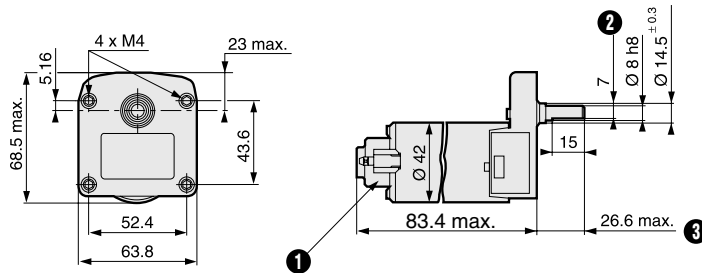
## Dimensions

### 80 803 0 Standard



- B 2 tags IEC 760 series 4.8 x 0.5 mm
- C 7 mm across flats
- D (shaft pushed-in ←)

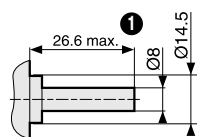
### 80 813 0 Standard



- B 2 tags IEC 760 series 4.8 x 0.5 mm
- C 7 mm across flats
- D (shaft pushed-in ←)

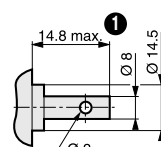
## Options

### Shaft 79 261 300



- B (shaft pushed-in ←)

### Shaft 79 261 309



- B (shaft pushed-in ←)

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