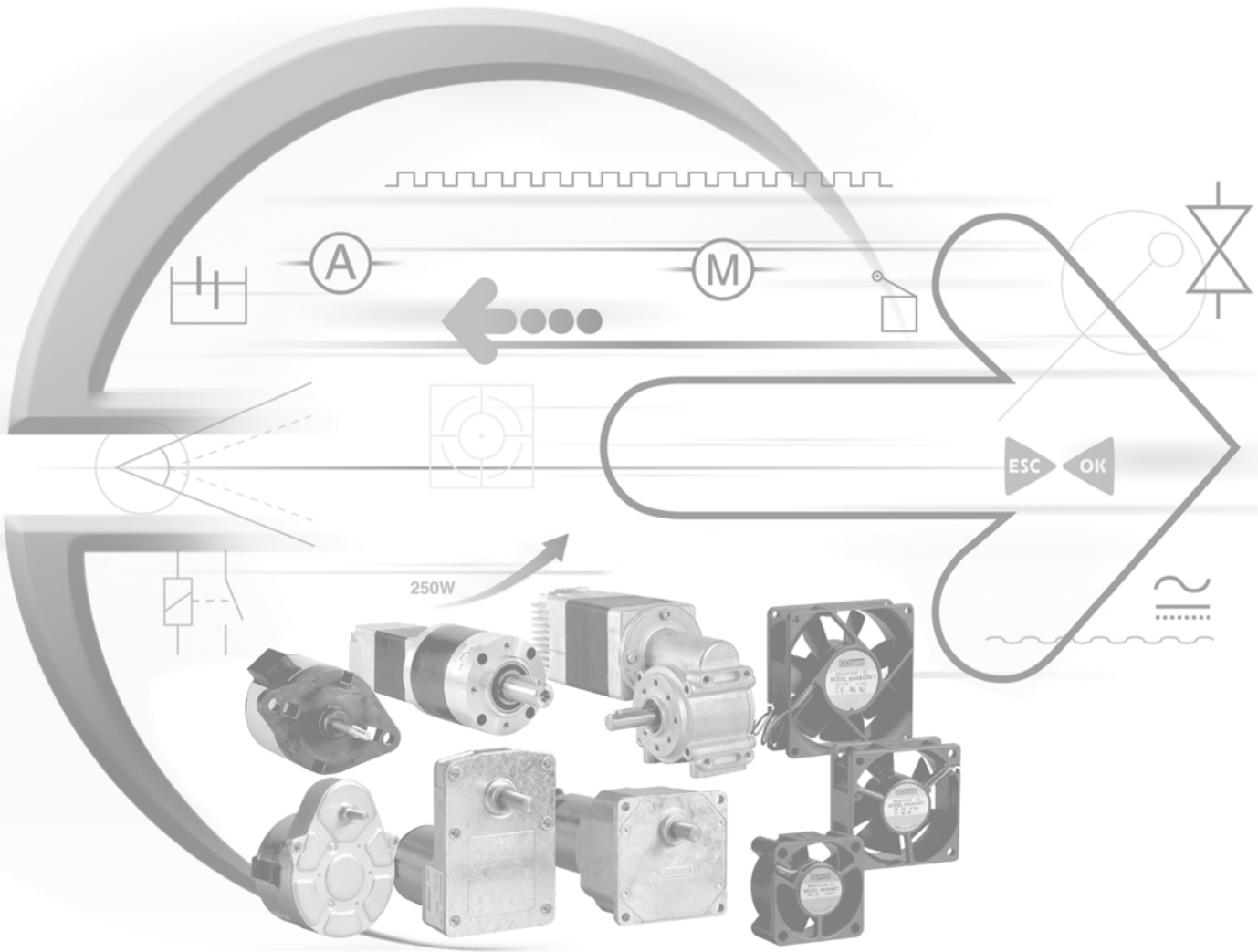




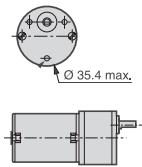
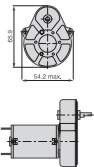
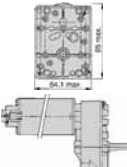
## D.C. Motors



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# DC Motors Selection guide

| Gearbox<br>Speed       |                             | Torque max (Nm)            |                          | 0.5                                                                                      |        | 1.2                                                                                                 |                                                                                                      |                                                                                                      |               |
|------------------------|-----------------------------|----------------------------|--------------------------|------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------|
|                        |                             | Type of Gearbox            |                          | 81 012                                                                                   | 81 021 | 81 032.1                                                                                            |                                                                                                      |                                                                                                      |               |
| Direct Motors          |                             |                            |                          |        |        |                  |                                                                                                      |                   |               |
| Power<br>usable<br>(w) | Torque<br>nominal<br>(mN.m) | Speed<br>nominal<br>(rpm ) | Voltage<br>supply<br>(V) | Type of motor<br>dimensions (mm)                                                         |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 3                      | 7.7                         | 3700                       | 12                       | ► p. 4 82 860 0                                                                          |        | ► p.18 82 862<br> | ► p.16 82 861<br> |                                                                                                      |               |
|                        |                             |                            | 24                       | Ø 32    |        |                                                                                                     |                                                                                                      | 1.5 ... 441 rpm0.36... 430 rpm                                                                       |               |
| 8.7                    | 41.5                        | 2000                       | 12                       | ► p. 8 82 810 0                                                                          |        |                                                                                                     |                                                                                                      | ► p.20 82 812<br> | 20... 130 rpm |
| 9.4                    | 45                          |                            | 24                       | Ø 42    |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 12                     | 45                          | 2580                       | 12                       | ► p. 6 82 810 5                                                                          |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 13                     |                             | 2750                       | 24                       | Ø 42    |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 16                     | 75                          | 2000                       | 12                       | ► p. 8 82 800 0                                                                          |        |                                                                                                     |                                                                                                      | ► p.20 82 802<br> | 20... 130 rpm |
|                        |                             |                            | 24                       | Ø 42    |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 20                     | 70                          | 2670                       | 12                       | ► p. 6 82 800 5                                                                          |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 22                     |                             | 3070                       | 24                       | Ø 42    |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 20                     | 70                          | 2670                       | 12                       | ► p.10 82 800 8                                                                          |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 22                     |                             | 3070                       | 24                       | Ø 42  |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 27                     | 172                         | 1500                       | 12                       | ► p.12 82 830 0                                                                          |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
|                        |                             |                            | 24                       | Ø 63  |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 32                     | 100                         | 3100                       | 12                       | ► p.10 82 850 0                                                                          |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 33                     |                             | 3200                       | 24                       | Ø 42  |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 47                     | 170                         | 2630                       | 12                       | ► p.12 82 830 5                                                                          |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 50                     |                             | 2770                       | 24                       | Ø 63  |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 90                     | 270                         | 3200                       | 24                       | ► p.14 82 890 0                                                                          |        |                                                                                                     |                                                                                                      |                                                                                                      |               |
| 95                     |                             | 3360                       | 48                       | Ø 63  |        |                                                                                                     |                                                                                                      |                                                                                                      |               |

## Selection of a geared motor

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

$$\text{Power} = \frac{2\pi}{60} C n$$

(W) (Nm) (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><br> | ► p.26 <b>82 863</b><br> | ► p.28 <b>82 864</b><br> |                          |                          | ► p.32 <b>82 867</b><br> |                          |
| 0.9 ... 108 rpm          | 99... 662 rpm            | 2... 66 rpm              |                          |                          | 1.72... 344 rpm          |                          |
|                          | ► p.24 <b>80 813</b><br> | ► p.30 <b>80 814</b><br> |                          | ► p.34 <b>80 815</b><br> | ► p.36 <b>80 817</b><br> | ► p.42 <b>82 812</b><br> |
|                          | 60... 400 rpm            | 1... 40 rpm              |                          | 10.5... 616 rpm          | 1.04... 208 rpm          | 4 / 8 / 12 rpm           |
|                          |                          |                          |                          |                          |                          |                          |
|                          | ► p.24 <b>80 803</b><br> | ► p.30 <b>80 804</b><br> |                          | ► p.34 <b>80 805</b><br> | ► p.36 <b>80 807</b><br> | ► p.42 <b>82 802</b><br> |
|                          | 60... 400 rpm            | 1... 40 rpm              |                          | 10.5... 616 rpm          | 1.04... 208 rpm          | 4 / 8 / 12 rpm           |
|                          |                          |                          |                          |                          |                          |                          |
|                          |                          |                          |                          |                          |                          |                          |
|                          |                          |                          | ► p.38 <b>80 835</b><br> |                          |                          | ► p.44 <b>82 832</b><br> |
|                          |                          |                          | 7.4... 426 rpm           |                          |                          | 5... 69 rpm              |
|                          |                          |                          |                          | ► p.40 <b>80 855</b><br> |                          |                          |
|                          |                          |                          |                          | 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.

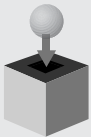
- Available in either 12 or 24 V D.C. versions.
- Sintered bronze bearings lubricated for life.
- Connection by 2.8 mm push-on terminals.
- Interference suppression fitted as standard.



## Specifications

|                                         | 3.9 Watts  | 3.9 Watts with encoder<br>1 pulse/revolution | 3.9 Watts  | 3.9 Watts with encoder<br>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                                         |
| Part numbers                            | 82 860 003 | 82 860 501                                   | 82 860 004 | 82 860 502                                   |
| <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

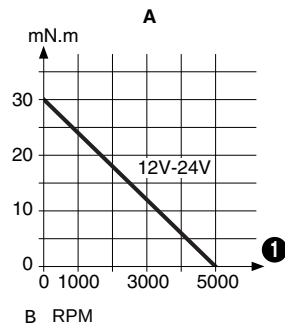
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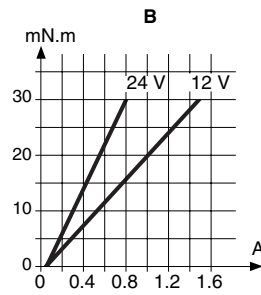
## Curves

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

82 860 0

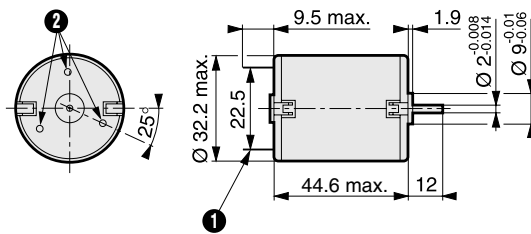


82 860 0



## 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.

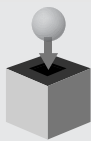
- Available in either 12 or 24 V D.C. versions.
- Sintered bronze bearings lubricated for life
- Replaceable brushes
- Magnetic encoder option



## 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       |
| Part numbers                            | 82 810 501 | 82 810 502 | 82 800 501 | 82 800 502 |
| <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

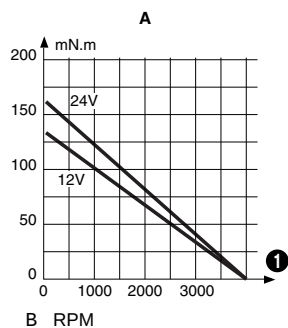
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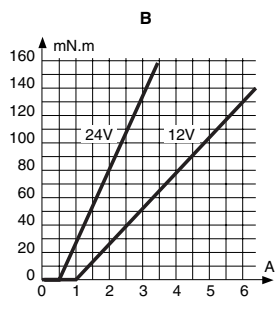
## Curves

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

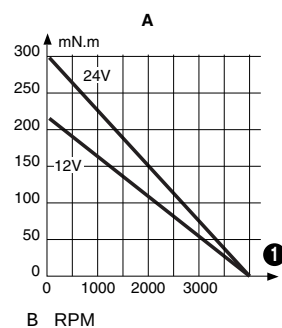
82 810 5



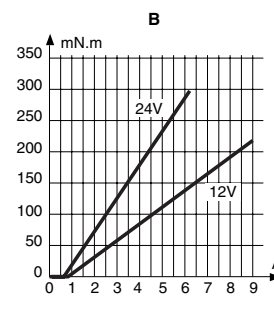
82 810 5



82 800 5

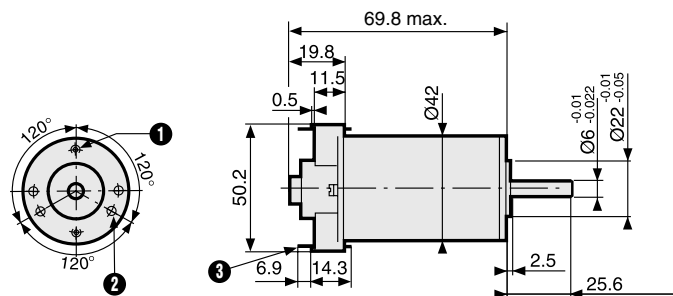


82 800 5



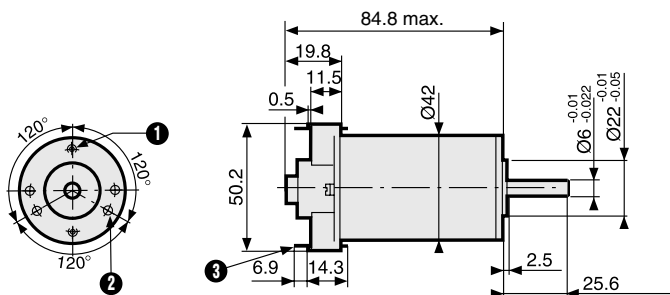
## Dimensions

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.

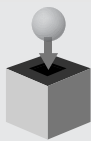
- Available in either 12, 24 or 48V D.C. versions
- Sintered bronze bearings lubricated for life
- Supply connection by 4.75 mm tags
- Replaceable brushes
- Optional magnetic encoder



## 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       |
| Part numbers                            | 82 810 017 | 82 810 018 | 82 800 036 | 82 800 037 |
| <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

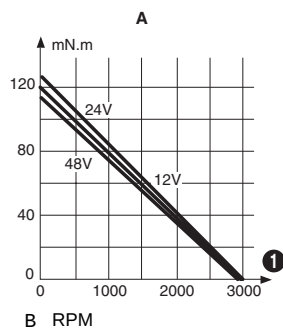
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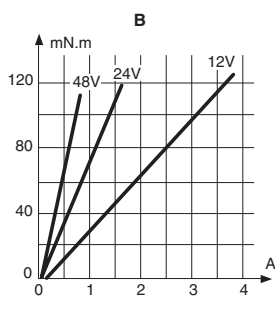
## Curves

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

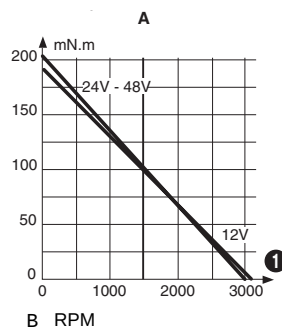
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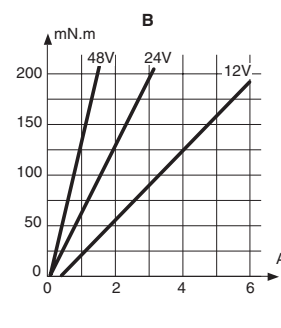
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82 800 0

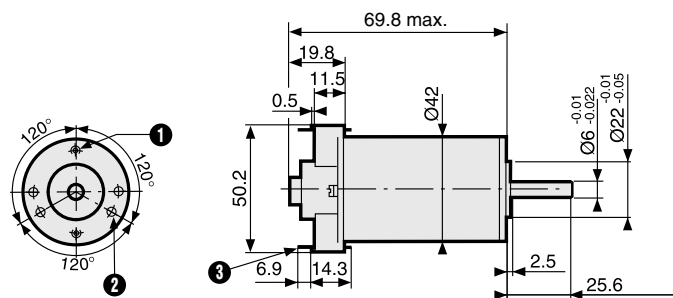


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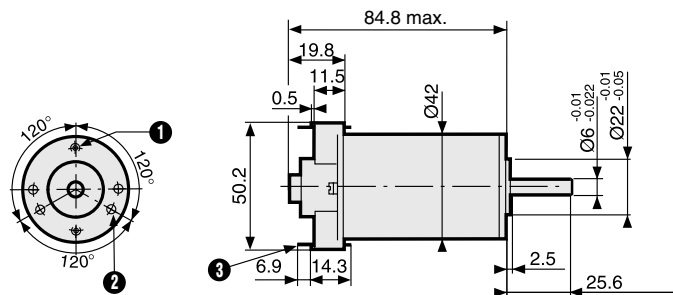
## Dimensions

82 810 0



- B 2 M3 at 180° depth 5 mm on Ø 32
- C 2 holes x Ø 2.75  $\pm 0.05$  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  $\pm 0.05$  at 120° depth 5 mm Ø 32
- D 2 tags IEC 760 series 4.8 x 0.5 mm

Products and specifications subject to change without notice.

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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.

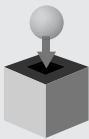
- Available in either 12 or 24 V D.C. versions.
- Sintered bronze bearings lubricated for life
- Supply connection by 2 leads



## 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       |
| Part numbers                            | 82 800 801 | 82 800 802 | 82 850 001 | 82 850 002 |
| <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

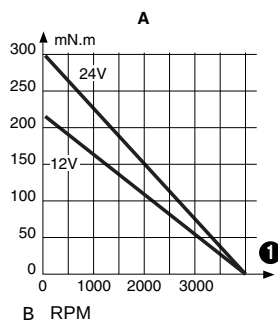
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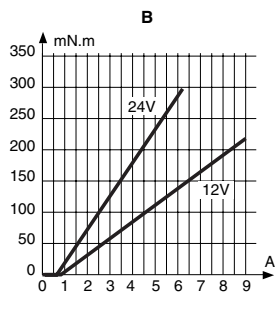
## Curves

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

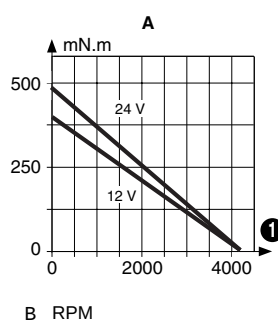
82 800 8



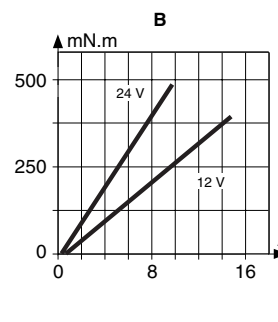
82 800 8



82 850 0

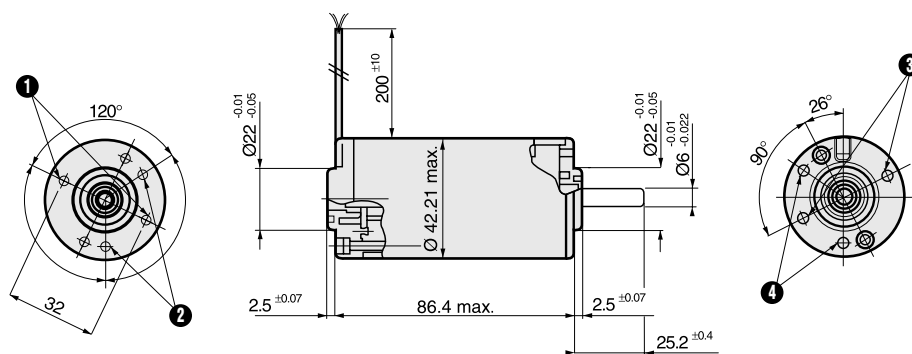


82 850 0



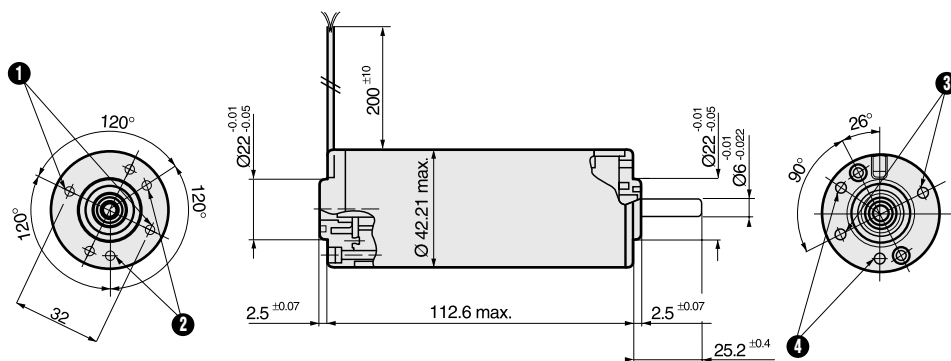
## Dimensions

82 800 8



- B 2 holes M3 x 0.5 at 180° depth 5 on Ø 32
- C 2 holes 2.75 ±0.05 at 120° depth 5 mm on Ø 32
- D 2 holes M3 x 0.5 at 180° depth 5.5 on Ø 32
- E 2 holes M3 x 0.5 at 120° depth 5.5 on Ø 32

82 850 0



- B 2 holes M3 x 0.5 at 180° depth 5 mm on Ø 32
- C 2 holes 2.75 ± 0.05 at 120° depth 5 mm on Ø 32
- D 2 holes M3 x 0.5 at 180° depth 5.5 mm on Ø 32
- E 2 holes M3 x 0.5 at 120° depth 5.5 mm on Ø 32

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# 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.

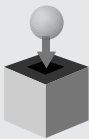
- Available in either 12, 24 or 48V D.C. versions.
- Ball bearings on output shaft
- Supply connection by 2 leads



## 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       |
| Part numbers                            | 82 830 009 | 82 830 010 | 82 830 501 | 82 830 502 |
| <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

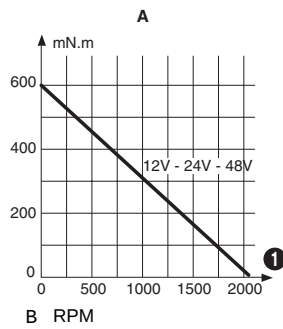
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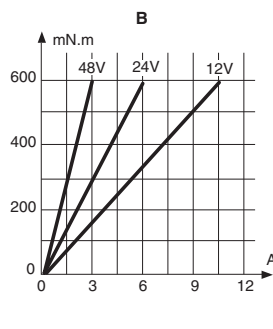
## Curves

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

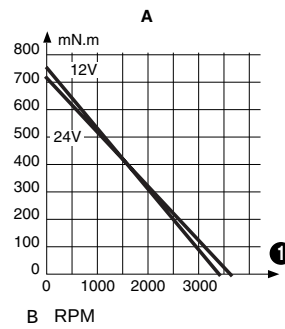
82 830 0



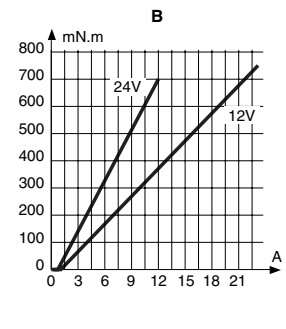
82 830 0



82 830 5

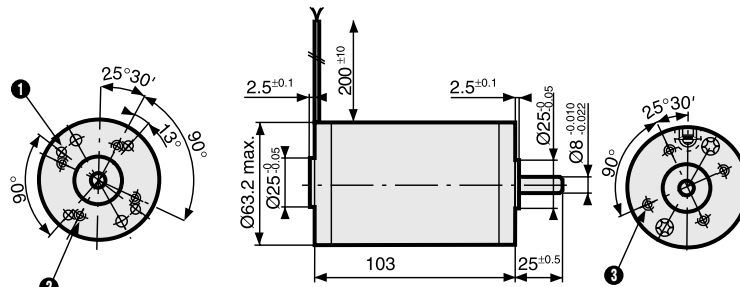


82 830 5



## Dimensions

82 830 0



- B 4 holes  $\varnothing 3.65 \pm 0.05$  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

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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.

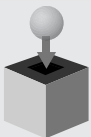
- Available in either 24 or 48V D.C. versions
- Ball bearings on output shaft
- Supply connection by 2 leads



## Specifications

|                                         | 194 Watts  | 255 Watts  |
|-----------------------------------------|------------|------------|
| Type                                    | 82 890 0   | 82 890 0   |
| Voltage                                 | 24 V       | 48 V       |
| Part numbers                            | 82 890 001 | 82 890 002 |
| <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

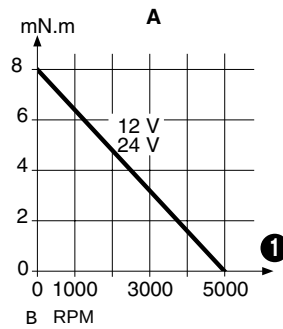
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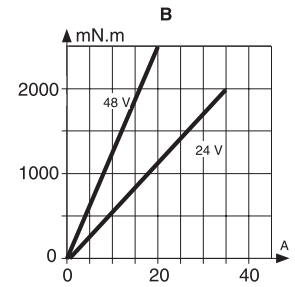
## Curves

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

82 890 0

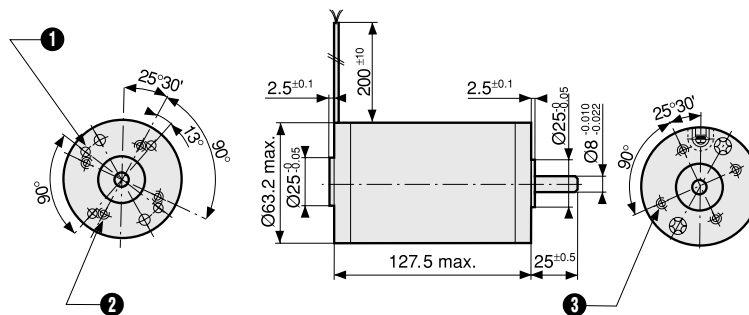


82 890 0



## 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

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# D.C. geared motors with brushes

→ 0.5 Nm    3.9 Watts

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

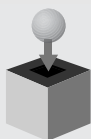
- Mechanical rating of gearbox with output shaft stalled : 0.5 Nm.
- 3.9 Watt motor versions.
- Available in either 12 or 24 V D.C.
- Gearbox ratios options for 0.36 to 430 rpm.



## Specifications

|                                                                                               |            | 3.9 Watts         | 3.9 Watts         |
|-----------------------------------------------------------------------------------------------|------------|-------------------|-------------------|
| Type                                                                                          |            | 82 861 0          | 82 861 0          |
| Voltage                                                                                       |            | 12 V              | 24 V              |
| Standard speed (rpm)                                                                          |            | 4300              | 4300              |
| Output speed (rpm)                                                                            | Ratios (i) |                   |                   |
| 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 ● |
| General characteristics                                                                       |            |                   |                   |
| 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

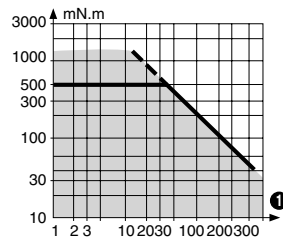
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## Curves

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.

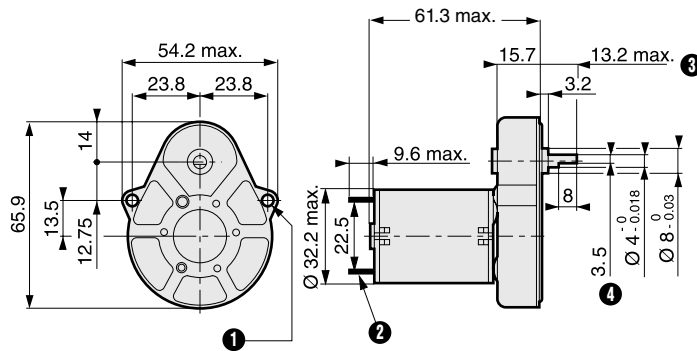
Nominal speed and torque curves



B RPM

## Dimensions

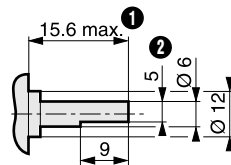
82 861 0



- 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

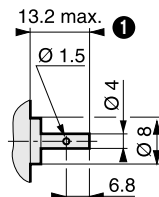
## Options

Shaft 70 999 421  
SP1295.10



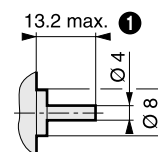
- B (shaft pushed-in  $\leftarrow$ )
- C 5 across flat

Shaft 79 200 779



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

Shaft 79 200 967



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

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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.

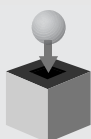
- Mechanical rating of gearbox with output shaft stalled : 0.5 Nm.
- 3.9 Watt motor power
- Available in either 12 or 24 V D.C. versions.
- Gearbox ratios options for 1.5 to 441 rpm.
- Options with magnetic encoder.



## 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

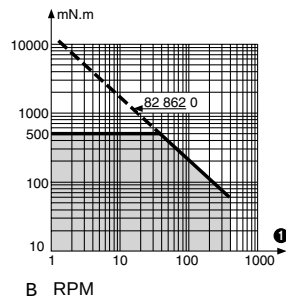
Products and specifications subject to change without notice.

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

## Curves

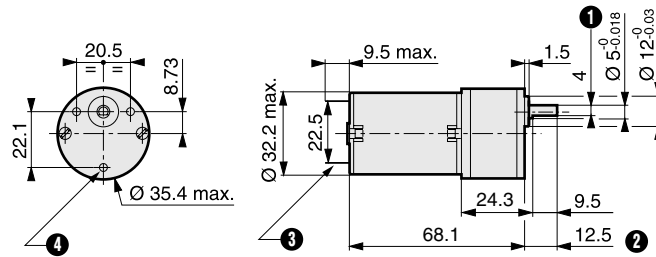
The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves



## Dimensions

### 82 862 0



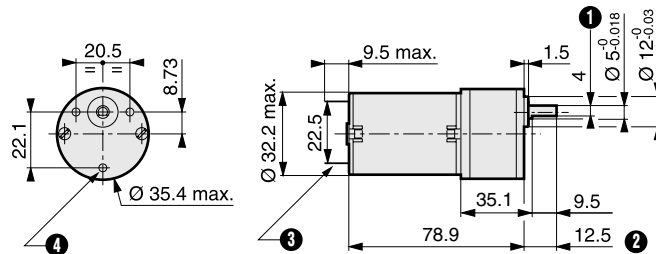
B 4 mm across flats

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

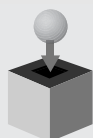
- Mechanical rating of gearbox with output shaft stalled : 1.2 Nm
- 10 and 17 Watt motor power
- Available in either 12, 24 or 48 V D.C.
- Gearbox ratios options for 20 to 100 rpm



## 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 ● |
| <b>General characteristics</b>                                                               |            |                   |                   |                   |                   |
| 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

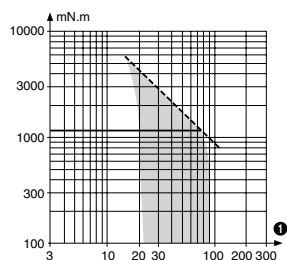
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## Curves

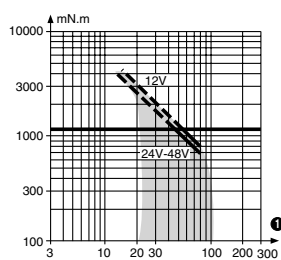
The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves  
82 802 0



B RPM

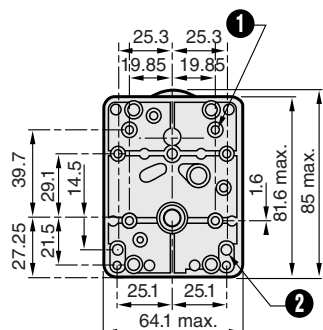
Nominal speed and torque curves  
82 812 0



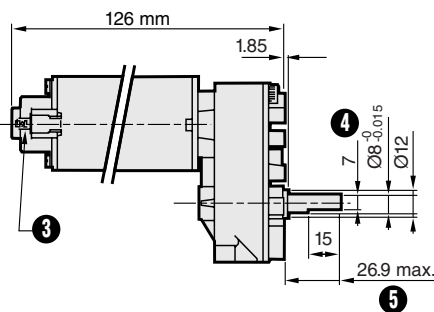
B RPM

## Dimensions

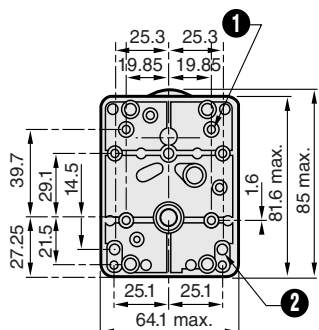
82 802 0 Standard



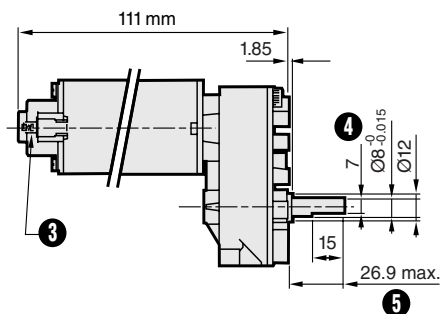
- B 4 holes M4 depth 7.5 mm
- C 3 holes M5 at 120° depth 7.5 mm
- D 2 tags IEC 760 series 4.8 x 0.5 mm
- E 7 mm across flats
- F (shaft pushed-in ←)



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 ←)



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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.

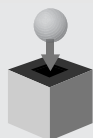
- Mechanical rating of gearbox with output shaft stalled : 2 Nm.
- 3.9 Watt motor versions.
- Available in either 12 or 24 V D.C.
- Gearbox ratios options for 0.36 to 430 rpm.
- Alternative shaft options.



## Specifications

|                                                                                             |            | 3.9 Watts         | 3.9 Watts         |
|---------------------------------------------------------------------------------------------|------------|-------------------|-------------------|
| Type                                                                                        |            | 82 869 0          | 82 869 0          |
| Voltage                                                                                     |            | 12 V              | 24 V              |
| Output speed (rpm)                                                                          | Ratios (i) |                   |                   |
| 108                                                                                         | 40         | 82 869 001        | 82 869 011        |
| 54                                                                                          | 80         | 82 869 006        | 82 869 012        |
| 27                                                                                          | 160        | 82 869 007        | 82 869 013        |
| 13                                                                                          | 320        | 82 869 008        | 82 869 014        |
| 7.2                                                                                         | 600        | 82 869 009        | 82 869 015        |
| 5.4                                                                                         | 800        | 82 869 0X00800X ● | 82 869 0Y00800X ● |
| 2.9                                                                                         | 1500       | 82 869 010        | 82 869 016        |
| 0.90                                                                                        | 4800       | 82 869 0X04800X ● | 82 869 0Y04800X ● |
| General characteristics                                                                     |            |                   |                   |
| 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

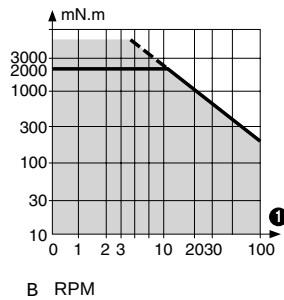
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## Curves

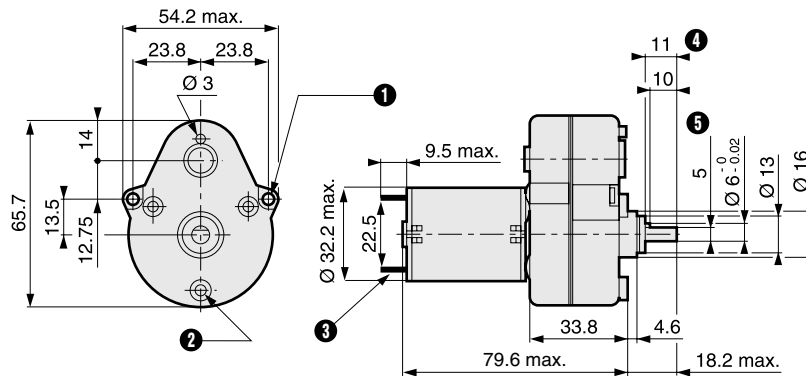
The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves



## Dimensions

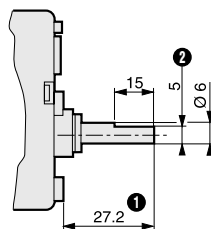
82 869 0



- 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

Products and specifications subject to change without notice.

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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

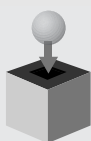
- Mechanical rating of gearbox with output shaft stalled : 1.2 Nm
- 10 and 17 Watt motor power
- Available in either 12, 24 or 48 V D.C.
- Gearbox ratios options for 60 to 400 rpm



## 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            |
| Output speed (rpm)                                                                          | Ratios (i) |                   |                   |                   |                 |
| 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

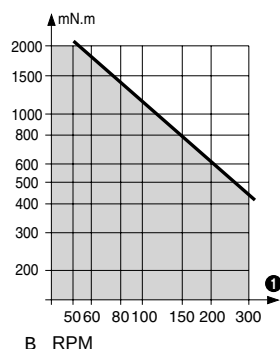
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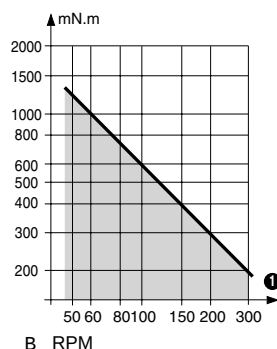
## Curves

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

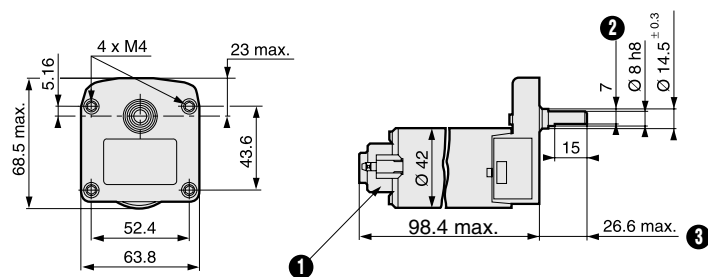


Nominal speed and torque curves  
80 813 0



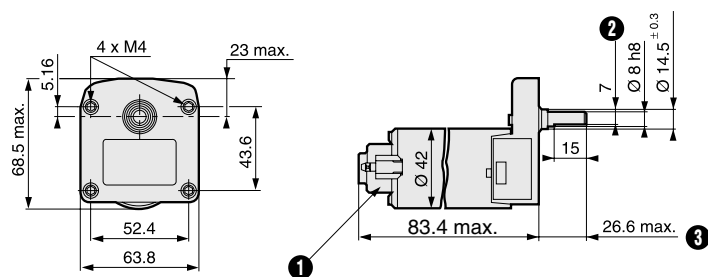
## Dimensions

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 ←)

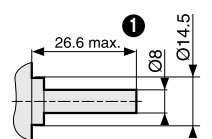
80 813 0 Standard



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

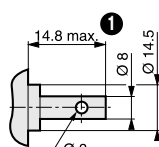
## Options

Shaft 79 261 300



B (shaft pushed-in ←)

Shaft 79 261 309



B (shaft pushed-in ←)

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# D.C. geared motors with brushes

→ 2 Nm    3.9 Watts

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

- Mechanical rating of gearbox with output shaft stalled : 2 Nm.
- 3.9 Watt motor power.
- Available in either 12 or 24 V D.C.
- Gearbox ratios options for 99 to 662 rpm.



## Specifications

|                                                                                                |            | 3.9 Watts         | 3.9 Watts         |
|------------------------------------------------------------------------------------------------|------------|-------------------|-------------------|
| Type                                                                                           |            | 82 863 0          | 82 863 0          |
| Voltage                                                                                        |            | 12 V              | 24 V              |
| Output speed (rpm)                                                                             | Ratios (i) |                   |                   |
| 662                                                                                            | 13/2       | 82 863 0X006.5Z ● | 82 863 0Y006.5Z ● |
| 498                                                                                            | 855/99     | 82 863 0X8.636Z ● | 82 863 0Y8.636Z ● |
| 266                                                                                            | 728/45     | 82 863 0X16.18Z ● | 82 863 0Y16.18Z ● |
| 198                                                                                            | 65/3       | 82 863 0X21.67Z ● | 82 863 0Y21.67Z ● |
| 170                                                                                            | 455/18     | 82 863 0X25.28Z ● | 82 863 0Y25.28Z ● |
| 132                                                                                            | 32.5       | 82 863 0X032.5Z ● | 82 863 0Y032.5Z ● |
| 99                                                                                             | 130/3      | 82 863 0X43.33Z ● | 82 863 0Y43.33Z ● |
| <b>General characteristics</b>                                                                 |            |                   |                   |
| Motor                                                                                          |            | 82 860 0          | 82 860 0          |
| Gearbox                                                                                        |            | 81 043 0          | 81 043 0          |
| Maximum permitted torque from gearmotor under continuous conditions (for 1 millions turns) N.m |            | 2                 | 2                 |
| Axial load (dynamic) daN                                                                       |            | 2                 | 2                 |
| Radial load (dynamic) daN                                                                      |            | 2                 | 2                 |
| Max. output (W)                                                                                |            | 3.9               | 3.9               |
| Nominal output (W)                                                                             |            | 3                 | 3                 |
| Gearbox case temperature rise (°C)                                                             |            | 50                | 50                |
| Weight (g)                                                                                     |            | 285               | 285               |

## 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

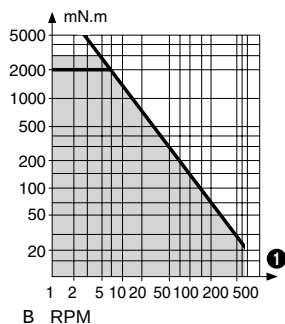
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## Curves

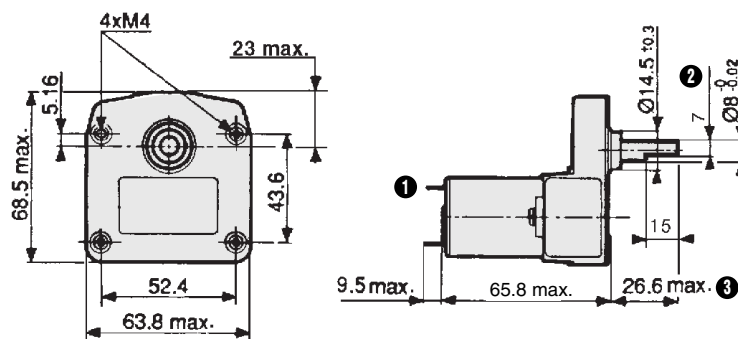
The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves



## Dimensions

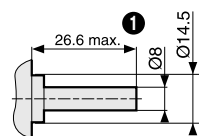
82 863 0



- B 2 tags NFC 20-120 series 2.8 x 0.5 mm
- C 7 mm across flats
- D (shaft pushed-in ←)

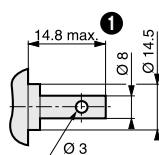
## Options

Shaft 79 261 300



B (shaft pushed-in ←)

Shaft 79 261 309



B (shaft pushed-in ←)

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# D.C. geared motors with brushes

→ 2 Nm    3.9 Watts

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

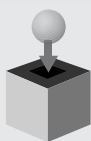
- Mechanical rating of gearbox with output shaft stalled : 2 Nm.
- 3.9 Watt motor versions.
- Available in either 12 or 24 V D.C.
- Gearbox ratios options for 2 to 66 rpm.



## Specifications

|                                                                                                |            | 3.9 Watts         |  | 3.9 Watts         |
|------------------------------------------------------------------------------------------------|------------|-------------------|--|-------------------|
| Type                                                                                           |            | 82 864 0          |  | 82 864 0          |
| Voltage                                                                                        |            | 12 V              |  | 24 V              |
| Output speed (rpm)                                                                             | Ratios (i) |                   |  |                   |
| 66                                                                                             | 65         | 82 864 0X00065Z ● |  | 82 864 0Y00065Z ● |
| 40                                                                                             | 325/3      | 82 864 0X108.3Z ● |  | 82 864 0Y108.3Z ● |
| 26                                                                                             | 162.5      | 82 864 0X162.5Z ● |  | 82 864 0Y162.5Z ● |
| 13                                                                                             | 325        | 82 864 0X00325Z ● |  | 82 864 0Y00325Z ● |
| 7                                                                                              | 650        | 82 864 0X00650Z ● |  | 82 864 0Y00650Z ● |
| 2                                                                                              | 2600       | 82 864 0X02600Z ● |  | 82 864 0Y02600Z ● |
| <b>General characteristics</b>                                                                 |            |                   |  |                   |
| Motor                                                                                          |            | 82 860 0          |  | 82 860 0          |
| Gearbox                                                                                        |            | 81 044 0          |  | 81 044 0          |
| Maximum permitted torque from gearmotor under continuous conditions (for 1 millions turns) N.m |            | 2                 |  | 2                 |
| Axial load (dynamic) daN                                                                       |            | 2                 |  | 2                 |
| Radial load (dynamic) daN                                                                      |            | 2                 |  | 2                 |
| Max. output (W)                                                                                |            | 3.9               |  | 3.9               |
| Nominal output (W)                                                                             |            | 3                 |  | 3                 |
| Gearbox case temperature rise (°C)                                                             |            | 50                |  | 50                |
| Weight (g)                                                                                     |            | 355               |  | 355               |

## Products adaptations



- 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

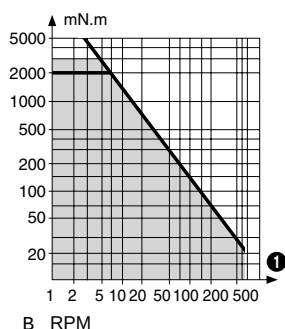
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## Curves

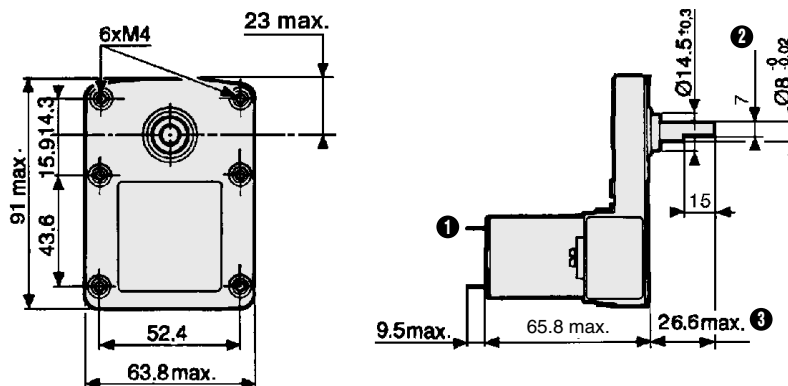
The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves



## Dimensions

82 864 0



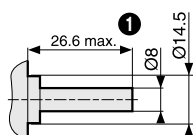
B 2 tags NFC 20-120 series 2.8 x 0.5 mm

C 7 mm across flats

D (shaft pushed-in ←)

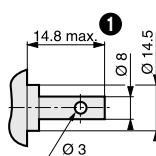
## Options

Shaft 79 261 300



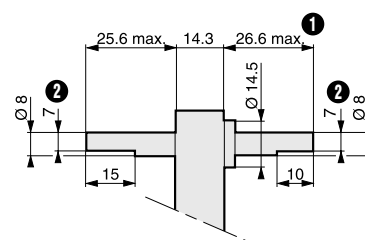
B (shaft pushed-in ←)

Shaft 79 261 309



B (shaft pushed-in ←)

Shaft 79 261 314



B (shaft pushed-in ←)

C 7 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.

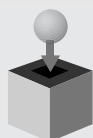
- Mechanical rating of gearbox with output shaft stalled : 2 Nm.
- 10 and 17 Watt motor power.
- Available in either 12, 24 or 48 V D.C.
- Gearbox ratios options for 1 to 40 rpm.



## Specifications

|                                                                                             |            | 17 Watts          | 17 Watts          | 10 Watts          | 10 Watts          |
|---------------------------------------------------------------------------------------------|------------|-------------------|-------------------|-------------------|-------------------|
| Type                                                                                        |            | 80 804 0          | 80 804 0          | 80 814 0          | 80 814 0          |
| Voltage                                                                                     |            | 12 V              | 24 V              | 12 V              | 24 V              |
| Output speed (rpm)                                                                          | Ratios (i) |                   |                   |                   |                   |
| 40                                                                                          | 65         | 80 804 0X00065Z ● | 80 804 0Y00065Z ● | 80 814 0X00065Z ● | 80 814 0Y00065Z ● |
| 24                                                                                          | 325/3      | 80 804 006        | 80 804 009        | 80 814 0X108.3Z ● | 80 814 0Y108.3Z ● |
| 16                                                                                          | 162.5      | 80 804 0X162.5Z ● | 80 804 0Y162.5Z ● | 80 814 0X162.5Z ● | 80 814 0Y162.5Z ● |
| 8                                                                                           | 325        | 80 804 007        | 80 804 010        | 80 814 0X00325Z ● | 80 814 0Y00325Z ● |
| 4                                                                                           | 650        | 80 804 008        | 80 804 011        | 80 814 0X00650Z ● | 80 814 0Y00650Z ● |
| 1                                                                                           | 2600       | 80 804 0X02600Z ● | 80 804 0Y02600Z ● | 80 814 0X02600Z ● | 80 814 0Y02600Z ● |
| <b>General characteristics</b>                                                              |            |                   |                   |                   |                   |
| Motor                                                                                       |            | 82 800 0          | 82 800 0          | 82 810 0          | 82 810 0          |
| Gearbox                                                                                     |            | 81 044 0          | 81 044 0          | 81 044 0          | 81 044 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              | 9.3               | 8.7               |
| Gearbox case temperature rise (°C)                                                          |            | 44                | 40                | 45                | 46                |
| Weight (g)                                                                                  |            | 670               | 670               | 570               | 570               |

## 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

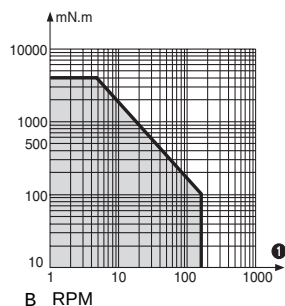
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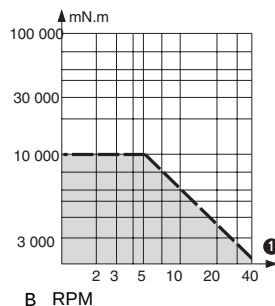
## Curves

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  
80 804 0

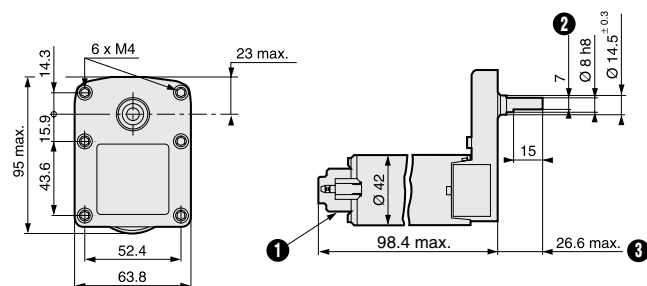


Nominal speed and torque curves  
80 814 0



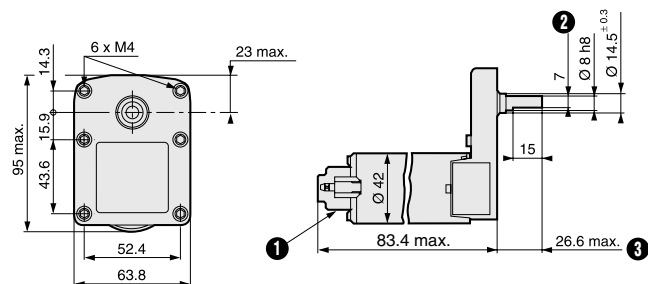
## Dimensions

80 804 0 Standard



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

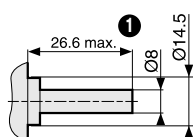
80 814 0 Standard



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

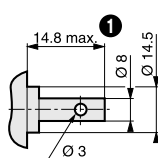
## Options

Shaft 79 261 300



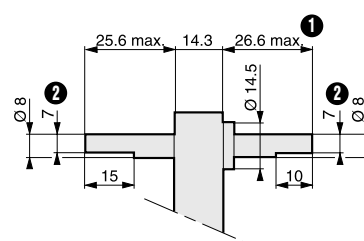
- B (shaft pushed-in ←)

Shaft 79 261 309



- B (shaft pushed-in ←)

Shaft 79 261 314



- B (shaft pushed-in ←)
- C 7 across flat

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# D.C. geared motors with brushes

→ 5 Nm    3.9 Watts

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

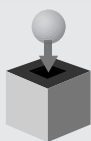
- Mechanical rating of gearbox with output shaft stalled : 5 Nm.
- 3.9 Watt motor versions.
- Available in either 12 or 24 V D.C.
- Gearbox ratios options for 1.7 to 344 rpm.
- Interference suppression on standard products



## Specifications

|                                                                                                |            | 3.9 Watts       |   | 3.9 watts       |   |
|------------------------------------------------------------------------------------------------|------------|-----------------|---|-----------------|---|
| Type                                                                                           |            | 82 867 0        |   | 82 867 0        |   |
| Voltage                                                                                        |            | 12 V            |   | 24 V            |   |
| Output speed (rpm)                                                                             | Ratios (i) |                 |   |                 |   |
| 344                                                                                            | 12.5       | 82 867 001      |   | 82 867 007      |   |
| 258                                                                                            | 50/3       | 82 867 0X16.67Z | ● | 82 867 0Y16.67Z | ● |
| 172                                                                                            | 25         | 82 867 002      |   | 82 867 008      |   |
| 103                                                                                            | 125/3      | 82 867 003      |   | 82 867 009      |   |
| 69                                                                                             | 62.5       | 82 867 004      |   | 82 867 010      |   |
| 34                                                                                             | 125        | 82 867 005      |   | 82 867 011      |   |
| 17                                                                                             | 250        | 82 867 0X00250Z | ● | 82 867 0Y00250Z | ● |
| 8.6                                                                                            | 500        | 82 867 006      |   | 82 867 012      |   |
| 1.72                                                                                           | 2500       | 82 867 0X2500Z  | ● | 82 867 0Y2500Z  | ● |
| <b>General characteristics</b>                                                                 |            |                 |   |                 |   |
| Motor                                                                                          |            | 82 860 0        |   | 82 860 0        |   |
| Gearbox                                                                                        |            | 81 037 0        |   | 81 037 0        |   |
| Maximum permitted torque from gearmotor under continuous conditions (for 1 millions turns) N.m |            | 5               |   | 5               |   |
| Axial load (dynamic) daN                                                                       |            | 2               |   | 2               |   |
| Radial load (dynamic) daN                                                                      |            | 3               |   | 3               |   |
| Max. output (W)                                                                                |            | 3.9             |   | 3.9             |   |
| Nominal output (W)                                                                             |            | 3               |   | 3               |   |
| Gearbox case temperature rise (°C)                                                             |            | 50              |   | 50              |   |
| Weight (g)                                                                                     |            | 465             |   | 465             |   |

## 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

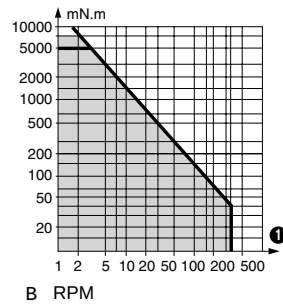
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## Curves

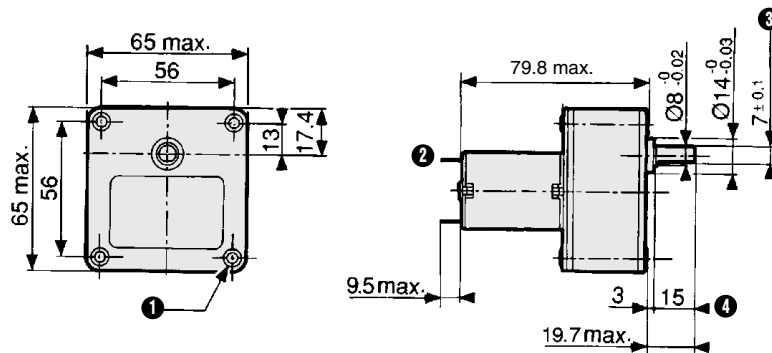
The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves  
82 867 0



## Dimensions

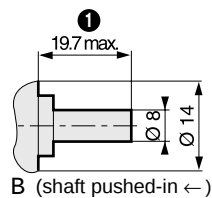
82 867 0



- B 4 fixing holes Ø M4 x 12 mm
- C 2 tags NFC 20-120 series 2.8 x 0.5 mm
- D 7 mm  $\pm 0.1$  across flats
- E (shaft pushed-in ←)

## Options

Shaft 79 206 478



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# D.C. geared motors with brushes

→ 5 Nm 10 and 17 Watts

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

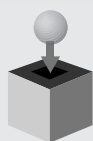
- Mechanical rating of gearbox with output shaft stalled : 5 Nm.
- 10 and 17 Watt motor power.
- Available in either 12, 24 or 48 V D.C.
- Gearbox ratios options for 10.5 to 616 rpm.



## Specifications

|                                                                           |            | 17 Watts          | 17 Watts          | 10 Watts          | 10 Watts          |
|---------------------------------------------------------------------------|------------|-------------------|-------------------|-------------------|-------------------|
| Type                                                                      |            | 80 805 0          | 80 805 0          | 80 815 0          | 80 815 0          |
| Voltage                                                                   |            | 12 V              | 24 V              | 12 V              | 24 V              |
| Standard speed (rpm)                                                      |            | 2600 rpm          | 2600 rpm          | 2600 rpm          | 2600 rpm          |
| Output speed (rpm)                                                        | Ratios (i) |                   |                   |                   |                   |
| 616                                                                       | 4.22       | 80 805 0X04.22Z ● | 80 805 0Y04.22Z ● | 80 815 0X04.22Z ● | 80 815 0Y04.22Z ● |
| 385                                                                       | 6.75       | 80 805 0X06.75Z ● | 80 805 0Y06.75Z ● | 80 815 0X06.75Z ● | 80 815 0Y06.75Z ● |
| 339.5                                                                     | 7.66       | 80 805 0X07.66Z ● | 80 805 0Y07.66Z ● | 80 815 0X07.66Z ● | 80 815 0Y07.66Z ● |
| 212                                                                       | 12.25      | 80 805 0X12.25Z ● | 80 805 0Y12.25Z ● | 80 815 0X12.25Z ● | 80 815 0Y12.25Z ● |
| 170                                                                       | 15.31      | 80 805 0X15.31Z ● | 80 805 0Y15.31Z ● | 80 815 0X15.31Z ● | 80 815 0Y15.31Z ● |
| 106                                                                       | 24.5       | 80 805 0X024.5Z ● | 80 805 0Y024.5Z ● | 80 815 0X024.5Z ● | 80 815 0Y024.5Z ● |
| 68                                                                        | 38.28      | 80 805 0X38.28Z ● | 80 805 0Y38.28Z ● | 80 815 0X38.28Z ● | 80 815 0Y38.28Z ● |
| 53                                                                        | 49         | 80 805 0X00049Z ● | 80 805 0Y00049Z ● | 80 815 0X00049Z ● | 80 815 0Y00049Z ● |
| 42.5                                                                      | 61.25      | 80 805 0X61.25Z ● | 80 805 0Y61.25Z ● | 80 815 0X61.25Z ● | 80 815 0Y61.25Z ● |
| 21                                                                        | 122.5      | 80 805 0X122.5Z ● | 80 805 0Y122.5Z ● | 80 815 0X122.5Z ● | 80 815 0Y122.5Z ● |
| 10.5                                                                      | 245        | 80 805 0X00245Z ● | 80 805 0Y00245Z ● | 80 815 0X00245Z ● | 80 815 0Y00245Z ● |
| <b>General characteristics</b>                                            |            |                   |                   |                   |                   |
| Motor                                                                     |            | 82 800 0          | 82 800 0          | 82 810 0          | 82 810 0          |
| Gearbox                                                                   |            | 81 035 0          | 81 035 0          | 81 035 0          | 81 035 0          |
| Maximum permitted torque from gearmotor under continuous conditions (N.m) |            | 5                 | 5                 | 5                 | 5                 |
| Axial load (dynamic) daN                                                  |            | 6                 | 6                 | 6                 | 6                 |
| Radial load (dynamic) daN                                                 |            | 6                 | 6                 | 6                 | 6                 |
| 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)                                                                |            | 920               | 920               | 820               | 820               |

## 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

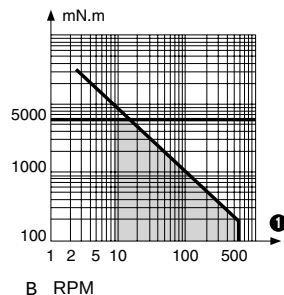
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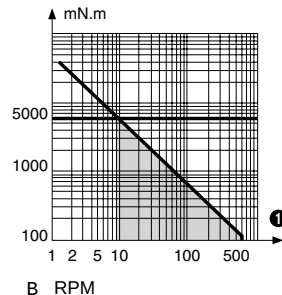
## Curves

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  
80 805 0

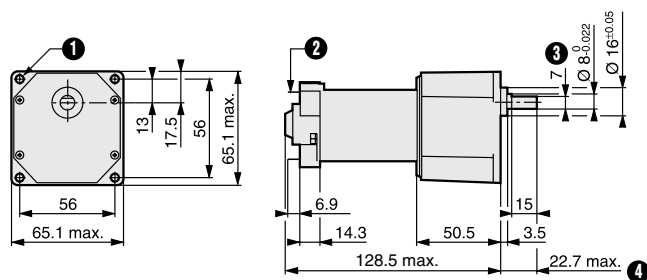


Nominal speed and torque curves  
80 815 0



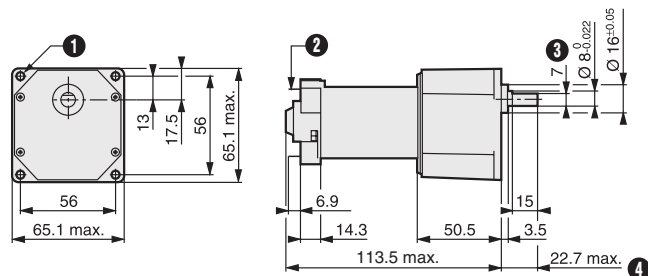
## Dimensions

80 805 0



- B 4 fixing holes  $\varnothing 4.2$
- C 2 tags IEC 760 series 4.8 x 0.5 mm
- D 7 mm  $\pm 0.1$  across flats
- E (shaft pushed-in  $\leftarrow$ )

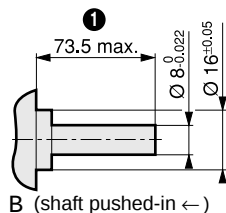
80 815 0 Standard



- B 4 fixing holes  $\varnothing 4.2$
- C 2 tags IEC 760 series 4.8 x 0.5 mm
- D 7 mm  $\pm 0.1$  across flats
- E (shaft pushed-in  $\leftarrow$ )

## Options

Gearbox shaft 79 290 064



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# D.C. geared motors with brushes

→ 5 Nm 10 and 17 Watts

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

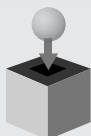
- Mechanical rating of gearbox with output shaft stalled : 5 Nm.
- 10 and 17 Watt motor power.
- Available in either 12, 24 or 48 V D.C.
- Gearbox ratios options for 1 to 208 rpm.



## Specifications

|                                                                                              |            | 17 Watts          | 17 Watts          | 10 watts          | 10 Watts          |
|----------------------------------------------------------------------------------------------|------------|-------------------|-------------------|-------------------|-------------------|
| Type                                                                                         |            | 80 807 0          | 80 807 0          | 80 817 0          | 80 817 0          |
| Voltage                                                                                      |            | 12 V              | 24 V              | 12 V              | 24 V              |
| Output speed (rpm)                                                                           | Ratios (i) |                   |                   |                   |                   |
| 208                                                                                          | 12.5       | 80 807 012        | 80 807 018        | 80 817 0X012.5Z ● | 80 817 0Y012.5Z ● |
| 156                                                                                          | 50/3       | 80 807 0X16.67Z ● | 80 807 0Y16.67Z ● | 80 817 0X16.67Z ● | 80 817 0Y16.67Z ● |
| 104                                                                                          | 25         | 80 807 013        | 80 807 019        | 80 817 0X00025Z ● | 80 817 0Y00025Z ● |
| 62                                                                                           | 125/3      | 80 807 014        | 80 807 020        | 80 817 0X41.67Z ● | 80 817 0Y41.67Z ● |
| 42                                                                                           | 62.5       | 80 807 015        | 80 807 021        | 80 817 0X062.5Z ● | 80 817 0Y062.5Z ● |
| 21                                                                                           | 125        | 80 807 016        | 80 807 001        | 80 817 0X00125Z ● | 80 817 0Y00125Z ● |
| 10                                                                                           | 250        | 80 807 0X00250Z ● | 80 807 0Y00250Z ● | 80 817 0X00250Z ● | 80 817 0Y00250Z ● |
| 5.20                                                                                         | 500        | 80 807 017        | 80 807 022        | 80 817 0X00500Z ● | 80 817 0Y00500Z ● |
| 1.04                                                                                         | 2500       | 80 807 0X2500Z ●  | 80 807 0Y02500Z ● | 80 817 0X02500Z ● | 80 817 0Y02500Z ● |
| <b>General characteristics</b>                                                               |            |                   |                   |                   |                   |
| Motor                                                                                        |            | 82 800 0          | 82 800 0          | 82 810 0          | 82 810 0          |
| Gearbox                                                                                      |            | 81 037 0          | 81 037 0          | 81 037 0          | 81 037 0          |
| Maximum permitted torque from gearmotor under continuous conditions for 1 millions turns N.m |            | 5                 | 5                 | 5                 | 5                 |
| Axial load (dynamic) daN                                                                     |            | 2                 | 2                 | 2                 | 2                 |
| Radial load (dynamic) daN                                                                    |            | 3                 | 3                 | 3                 | 3                 |
| 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)                                                                                   |            | 800               | 800               | 710               | 710               |

## 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

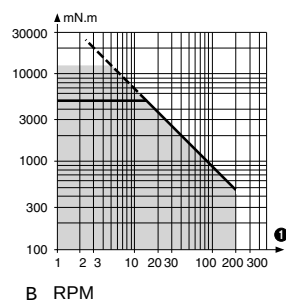
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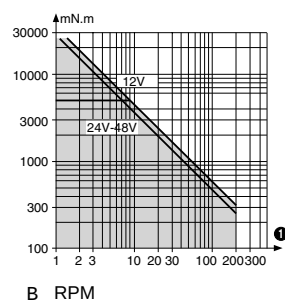
## Curves

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  
80 807 0

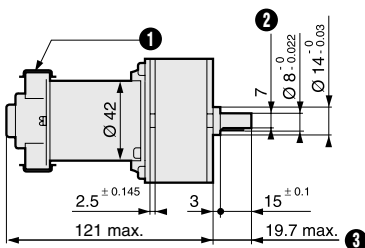
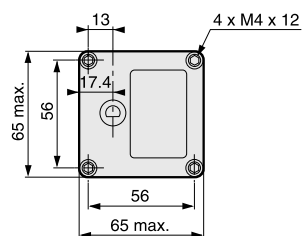


Nominal speed and torque curves  
80 817 0



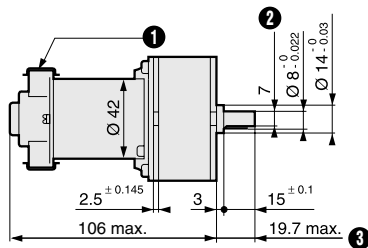
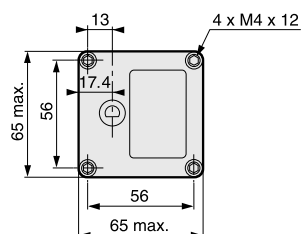
## Dimensions

80 807 0 Standard



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

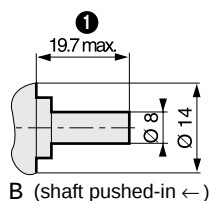
80 817 0 Standard



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

## Options

Gearbox shaft 79 206 478



- B (shaft pushed-in ←)

Products and specifications subject to change without notice.

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# D.C. geared motors with brushes

→ 5 Nm    33 Watts

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

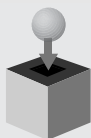
- Mechanical rating of gearbox with output shaft stalled : 5 Nm.
- 33 Watt motor power.
- Available in either 12, 24 or 48 V D.C.
- Gearbox ratios options for 7.4 to 426 rpm.



## Specifications

|                                                                           |            | 33 Watts          | 33 Watts          |
|---------------------------------------------------------------------------|------------|-------------------|-------------------|
| Type                                                                      |            | 80 835 0          | 80 835 0          |
| Voltage                                                                   |            | 12 V              | 24 V              |
| Standard speed (rpm)                                                      |            | 1800 rpm          | 1800 rpm          |
| Output speed (rpm)                                                        | Ratios (i) |                   |                   |
| 426                                                                       | 4.22       | 80 835 0X04.22Z ● | 80 835 0Y04.22Z ● |
| 266                                                                       | 6.75       | 80 835 012        | 80 835 009        |
| 235                                                                       | 7.66       | 80 835 0X07.66Z ● | 80 835 0Y07.66Z ● |
| 147                                                                       | 12.25      | 80 835 013        | 80 835 004        |
| 118                                                                       | 15.31      | 80 835 0X15.31Z ● | 80 835 0Y15.31Z ● |
| 73                                                                        | 24.5       | 80 835 014        | 80 835 002        |
| 47                                                                        | 38.28      | 80 835 015        | 80 835 003        |
| 37                                                                        | 49         | 80 835 0X0049Z ●  | 80 835 0Y0049Z ●  |
| 29.4                                                                      | 61.25      | 80 835 016        | 80 835 008        |
| 14.7                                                                      | 122.5      | 80 835 017        | 80 835 006        |
| 7.4                                                                       | 245        | 80 835 018        | 80 835 005        |
| General characteristics                                                   |            |                   |                   |
| Motor                                                                     |            | 82 830 0          | 82 830 0          |
| Gearbox                                                                   |            | 81 035 0          | 81 035 0          |
| Maximum permitted torque from gearmotor under continuous conditions (N.m) |            | 5                 | 5                 |
| Axial load (dynamic) daN                                                  |            | 6                 | 6                 |
| Radial load (dynamic) daN                                                 |            | 6                 | 6                 |
| Max. output (W)                                                           |            | 33                | 33                |
| Nominal output (W)                                                        |            | 27                | 27                |
| Gearbox case temperature rise (°C)                                        |            | 50                | 50                |
| Weight (g)                                                                |            | 1540              | 1540              |

## 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

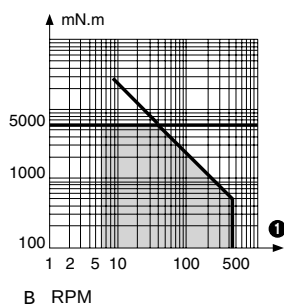
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## Curves

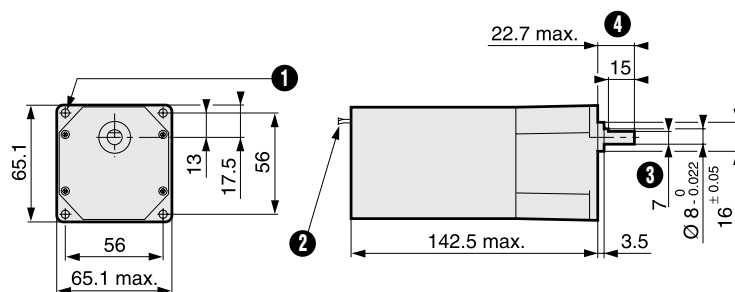
The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves



## Dimensions

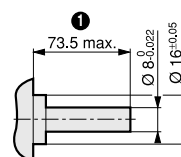
80 835 0



- B 4 fixing holes Ø 4.2
- C Lead length 200 mm  $\pm 10$
- D 7 mm across flats
- E (shaft pushed-in  $\leftarrow$ )

## Options

Gearbox shaft 79 290 064



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

Products and specifications subject to change without notice.

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# D.C. geared motors with brushes

→ 5 Nm 40 to 52 Watts

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

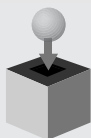
- Mechanical rating of gearbox with output shaft stalled : 5 Nm.
- 40 to 52 Watt motor versions.
- Available in either 12 or 24 V D.C.
- Gearbox ratios options for 13.8 to 805 rpm.



## Specifications

|                                                                                                    |            | 42 Watts          | 52 Watts          |
|----------------------------------------------------------------------------------------------------|------------|-------------------|-------------------|
| Type                                                                                               |            | 80 855 0          | 80 855 0          |
| Voltages                                                                                           |            | 12 V              | 24 V              |
| Standard speed (rpm)                                                                               |            | 3400 rpm          | 3400 rpm          |
| Output speed (rpm)                                                                                 | Ratios (i) |                   |                   |
| 805                                                                                                | 4.22       | 80 855 0X04.22Z ● | 80 855 0Y04.22Z ● |
| 503                                                                                                | 6.75       | 80 855 0X06.75Z ● | 80 855 0Y06.75Z ● |
| 444                                                                                                | 7.66       | 80 855 0X07.66Z ● | 80 855 0Y07.66Z ● |
| 277                                                                                                | 12.25      | 80 855 0X12.25Z ● | 80 855 0Y12.25Z ● |
| 222                                                                                                | 15.31      | 80 855 0X15.31Z ● | 80 855 0Y15.31Z ● |
| 139                                                                                                | 24.5       | 80 855 0X024.5Z ● | 80 855 0Y024.5Z ● |
| 89                                                                                                 | 38.28      | 80 855 0X38.28Z ● | 80 855 0Y38.28Z ● |
| 69                                                                                                 | 49         | 80 855 0X00049Z ● | 80 855 0Y00049Z ● |
| 55                                                                                                 | 61.25      | 80 855 0X61.25Z ● | 80 855 0Y61.25Z ● |
| 28                                                                                                 | 122.5      | 80 855 0X122.5Z ● | 80 855 0Y122.5Z ● |
| 13.8                                                                                               | 245        | 80 855 0X00245Z ● | 80 855 0Y00245Z ● |
| <b>General characteristics</b>                                                                     |            |                   |                   |
| Motor                                                                                              |            | 82 850 0          | 82 850 0          |
| Gearbox                                                                                            |            | 81 035 0          | 81 035 0          |
| Maximum permitted torque from gearmotor under continuous conditions (2.5 million revolution) (N.m) |            | 5                 | 5                 |
| Axial load (dynamic) daN                                                                           |            | 6                 | 6                 |
| Radial load (dynamic) daN                                                                          |            | 6                 | 6                 |
| Max. output (W)                                                                                    |            | 42                | 52                |
| Nominal output (W)                                                                                 |            | 32                | 32                |
| Gearbox case temperature rise (°C)                                                                 |            | 45                | 45                |
| Weight (g)                                                                                         |            | 985               | 985               |

## 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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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.

**B** RPM

Technical drawing of the Crouzet 220V 10A 50/60Hz thermal relay, showing front, side, and top views with dimensions and callouts.

**Front View (Left):**

- Overall width:  $65.1 \text{ max.}$
- Overall height:  $65.1 \text{ max.}$
- Mounting hole spacing:  $56 \pm 0.15$
- Central hole diameter:  $\varnothing 13$
- Callout 1 points to the top mounting holes.

**Side View (Middle):**

- Overall length:  $155.6 \text{ max.}$
- Terminal block height:  $200 \pm 10$
- Terminal block width:  $2.5 \pm 0.07$
- Terminal block depth:  $0.022 \pm 0.05$
- Terminal block diameter:  $\varnothing 22 \pm 0.05$
- Terminal block length:  $42.21 \text{ max.}$
- Terminal block width:  $50.5 \text{ max.}$
- Terminal block depth:  $16 \pm 0.05$
- Terminal block diameter:  $\varnothing 8 \pm 0.02$
- Terminal block length:  $3.5 \pm 0.1$
- Terminal block width:  $15 \pm 0.1$
- Terminal block length:  $21.4 \text{ mini}$  /  $22.7 \text{ maxi}$
- Callout 2 points to the terminal block.

**Top View (Right):**

- Overall width:  $63 \pm 0.1$
- Overall height:  $63 \pm 0.1$
- Mounting hole spacing:  $56 \pm 0.15$
- Central hole diameter:  $\varnothing 13$
- Callout 3 points to the top mounting holes.
- Callout 4 points to the bottom mounting holes.

**Legend:**

- B 4 fixing holes  $\varnothing 4.2$
- C 7 mm  $\pm 0.1$  across flats
- D 2 holes M3 x 0.5 at  $180^\circ$  depth 4 on  $\varnothing 32$
- E 2 holes  $2.5 \pm 0.5$  at  $120^\circ$  depth 4.5 on  $\varnothing 32$



4/41

# D.C. geared motors with brushes

→ 6 Nm 10 and 17 Watts

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

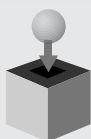
- Mechanical rating of gearbox with output shaft stalled : 6 Nm.
- 10 and 17 Watt motor power.
- Available in either 12, 24 or 48 V D.C.
- Gearbox ratios options for 4 to 12 rpm.



## Specifications

|                                                                                               |            | 10 Watts          | 10 Watts          | 17 Watts          | 17 Watts          |
|-----------------------------------------------------------------------------------------------|------------|-------------------|-------------------|-------------------|-------------------|
| Type                                                                                          |            | 82 812 5          | 82 812 5          | 82 802 5          | 82 802 5          |
| Voltage                                                                                       |            | 12 V              | 24 V              | 12 V              | 24 V              |
| Output speed (rpm)                                                                            | Ratios (i) |                   |                   |                   |                   |
| 12                                                                                            | 650/3      | 82 812 5X216.7Z ● | 82 812 5Y216.7Z ● | 82 802 5X216.7Z ● | 82 802 5Y216.7Z ● |
| 8                                                                                             | 338        | 82 812 5X00338Z ● | 82 812 5Y00338Z ● | 82 802 5X00338Z ● | 82 802 5Y00338Z ● |
| 4                                                                                             | 650        | 82 812 5X00650Z ● | 82 812 5Y00650Z ● | 82 802 5X00650Z ● | 82 802 5Y00650Z ● |
| <b>General characteristics</b>                                                                |            |                   |                   |                   |                   |
| Motor                                                                                         |            | 82 810 0          | 82 810 0          | 82 800 0          | 82 800 0          |
| Gearbox                                                                                       |            | 81 032 6          | 81 032 6          | 81 032 6          | 81 032 6          |
| Maximum permitted torque from gearmotor under continuous conditions for 10 millions turns N.m |            | 6                 | 6                 | 6                 | 6                 |
| Axial load (dynamic) daN                                                                      |            | 3.5               | 3.5               | 3.5               | 3.5               |
| Radial load (dynamic) daN                                                                     |            | 5                 | 5                 | 5                 | 5                 |
| Max. output (W)                                                                               |            | 10.3              | 9.5               | 16.3              | 17                |
| Nominal output (W)                                                                            |            | 9.4               | 8.7               | 15.7              | 15.6              |
| Gearbox case temperature rise (°C)                                                            |            | 45                | 46                | 44                | 40                |
| Weight (g)                                                                                    |            | 880               | 880               | 880               | 880               |

## 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

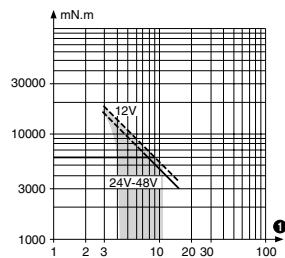
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## Curves

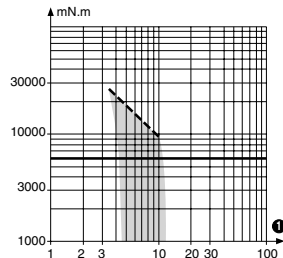
The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves  
82 812 5



B RPM

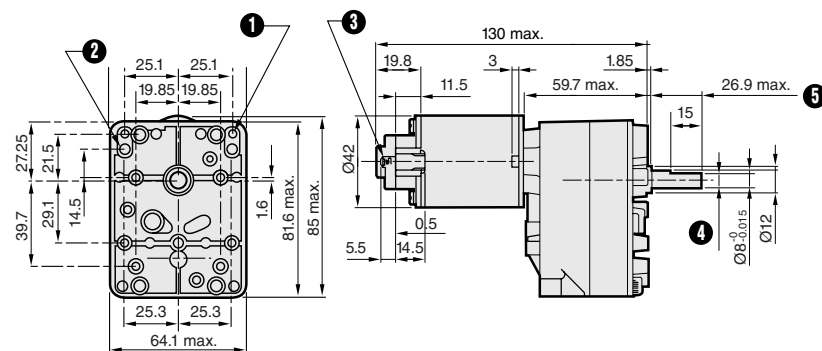
Nominal speed and torque curves  
82 802 5



B RPM

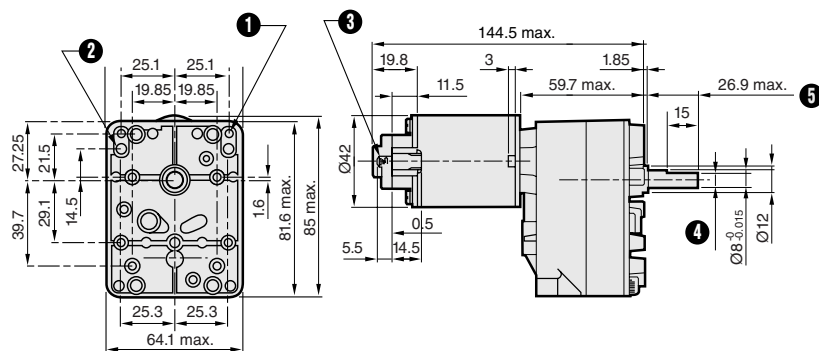
## Dimensions

82 812 5 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 ←)

82 802 5 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 ←)

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# D.C. geared motors with brushes

→ 6 Nm 33 Watts

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

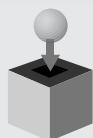
- Mechanical rating of gearbox with output shaft stalled : 6 Nm.
- 33 Watt motor power.
- Available in either 12, 24 or 48 V D.C.
- Gearbox ratios options for 5 to 14 rpm.



## Specifications

|                                                                                               |            | 33 Watts          |  | 33 Watts          |
|-----------------------------------------------------------------------------------------------|------------|-------------------|--|-------------------|
| Type                                                                                          |            | 82 832 5          |  | 82 832 5          |
| Voltages                                                                                      |            | 12 V              |  | 24 V              |
| Output speed (rpm)                                                                            | Ratios (i) |                   |  |                   |
| 14                                                                                            | 130        | 82 832 5X00130Z ● |  | 82 832 5Y00130Z ● |
| 8                                                                                             | 650/3      | 82 832 5X216.7Z ● |  | 82 832 5Y216.7Z ● |
| 5                                                                                             | 338        | 82 832 5X00338Z ● |  | 82 832 5Y00338Z ● |
| <b>General characteristics</b>                                                                |            |                   |  |                   |
| Motor                                                                                         |            | 82 830 0          |  | 82 830 0          |
| Gearbox                                                                                       |            | 81 032 6          |  | 81 032 6          |
| Maximum permitted torque from gearmotor under continuous conditions for 10 millions turns N.m |            | 6                 |  | 6                 |
| Axial load (dynamic) daN                                                                      |            | 3.5               |  | 3.5               |
| Radial load (dynamic) daN                                                                     |            | 5                 |  | 5                 |
| Max. output (W)                                                                               |            | 33                |  | 33                |
| Nominal output (W)                                                                            |            | 27                |  | 27                |
| Gearbox case temperature rise (°C)                                                            |            | 50                |  | 50                |
| Weight (g)                                                                                    |            | 1400              |  | 1400              |

## 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

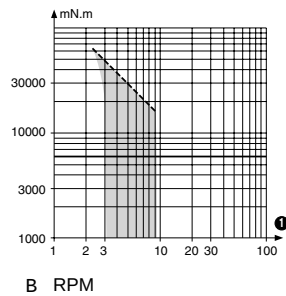
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## Curves

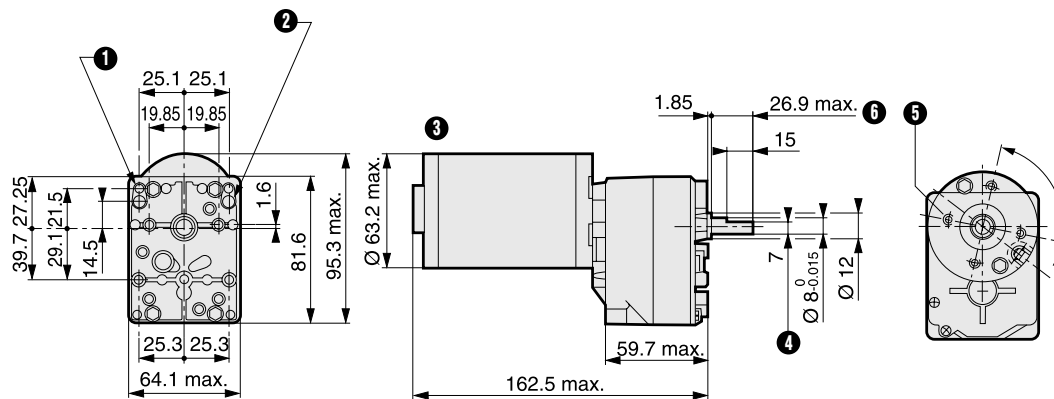
The shaded zone represents the operating range of the geared motor.  
The horizontal line marks the maximum torque available in continuous duty cycle for a given life.  
For higher torque ratings, service life will be reduced.

Nominal speed and torque curves



## Dimensions

82 832 5



- B 3 holes M5 at 120° depth 7.5 mm
- C 8 holes M4 depth 7.5 mm
- D Lead length 200 mm
- E 7 mm across flats
- F 4 holes M5 on Ø 40 depth 7 mm
- G (shaft pushed-in ←)

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# D.C. geared motors with brushes

→ 50 Nm 22 to 42 Watts

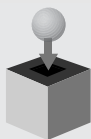
- Gearbox torque rating : 0.8 to 25 Nm.
- Associated DC motors : 15 to 90 watts.
- DC planetary geared motors with brushes
- Speed range : 11 to 454 rpm.



## Specifications

|                                |             |        | 22 Watts                                            |                  | 42 Watts                                           |                  |
|--------------------------------|-------------|--------|-----------------------------------------------------|------------------|----------------------------------------------------|------------------|
|                                |             |        | 80 809 2                                            |                  | 80 859 3                                           |                  |
| Type                           |             |        | 12 V                                                | 24 V             | 12 V                                               | 24 V             |
| Voltages                       |             |        |                                                     |                  |                                                    |                  |
| Number of stages               | Speed (rpm) | Ratios |                                                     |                  |                                                    |                  |
| 1                              | 454         | 6.75   | 80 809 2X06.75 ●                                    | 80 809 2Y06.75 ● |                                                    |                  |
| 1                              | 477         | 6.75   |                                                     |                  | 80 859 3X06.75 ●                                   | 80 859 3Y06.75 ● |
| 2                              | 122         | 25.0   | 80 809 2X00025 ●                                    | 80 809 2Y00025 ● |                                                    |                  |
| 2                              | 128         | 25.0   |                                                     |                  | 80 859 3X00025 ●                                   | 80 859 3Y00025 ● |
| 2                              | 69          | 46     | 80 809 2X00046 ●                                    | 80 809 2Y00046 ● |                                                    |                  |
| 2                              | 70          | 46     |                                                     |                  | 80 859 3X00046 ●                                   | 80 859 3Y00046 ● |
| 3                              | 33          | 93     | 80 809 2X00093 ●                                    | 80 809 2Y00093 ● |                                                    |                  |
| 3                              | 34          | 93     |                                                     |                  | 80 859 3X00093 ●                                   | 80 859 3Y00093 ● |
| 3                              | 20          | 169    | 80 809 2X00169 ●                                    | 80 809 2Y00169 ● |                                                    |                  |
| 3                              | 19          | 169    |                                                     |                  | 80 859 3X00169 ●                                   | 80 859 3Y00169 ● |
| 3                              | 12          | 308    | 80 809 2X00308 ●                                    | 80 809 2Y00308 ● |                                                    |                  |
| 3                              | 11          | 308    |                                                     |                  | 80 859 3X00308 ●                                   | 80 859 3Y00308 ● |
| <b>General characteristics</b> |             |        |                                                     |                  |                                                    |                  |
| Motor                          |             |        | 82 800 5                                            |                  | 82 850 0                                           |                  |
| Gearbox                        |             |        | 81 049 2                                            |                  | 81 049 3                                           |                  |
| Max. torque Nm                 |             |        | 0.8 (1 stage)<br>2 (2 stages)<br>4 (3 stages)       |                  | 3 (1 stage)<br>7.5 (2 stages)<br>15 (3 stages)     |                  |
| Efficiency (%)                 |             |        | 0.75 (1 stage)<br>0.7 (2 stages)<br>0.65 (3 stages) |                  | 0.8 (1 stage)<br>0.75 (2 stages)<br>0.7 (3 stages) |                  |
| Radial load (dynamic) daN      |             |        | 1.5 (1 stage)<br>3 (2 stages)<br>4.5 (3 stages)     |                  | 16 (1 stage)<br>23 (2 stages)<br>30 (3 stages)     |                  |
| Axial load (dynamic) daN       |             |        | 0.5 (1 stage)<br>1 (2 stages)<br>1.5 (3 stages)     |                  | 5 (1 stage)<br>8 (2 stages)<br>11 (3 stages)       |                  |
| Output ball bearing            |             |        | No                                                  |                  | Yes                                                |                  |
| Sintered bronze output bearing |             |        | Yes                                                 |                  | No                                                 |                  |

## Products adaptations, available on request



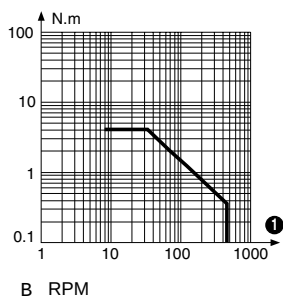
- Special supply voltages
- Special lead lengths
- Optional encoder
- Special connectors
- Special output shafts
- Special gearbox ratios
- Special gear material
- Special output bearings
- Special mounting plate

Products and specifications subject to change without notice.

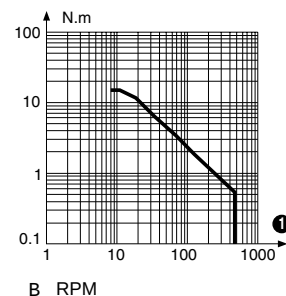
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## Curves

80 809 2

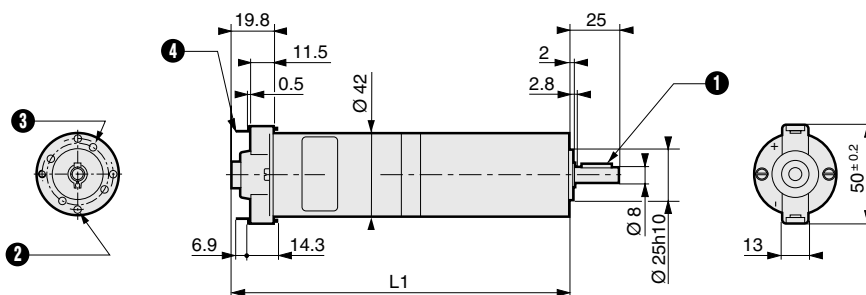


80 859 3



## Dimensions

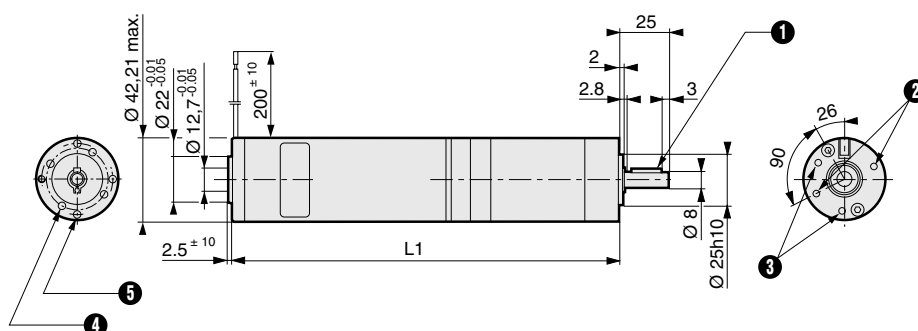
80 809 2



- B Key 3 x 3 x 16
- C 4 M4 x 10 on  $\varnothing 36$
- D 4 holes for M3 self-tapping screws on  $\varnothing 32$ , depth 10
- E 2 tags 4.75

- L1 1 stage : 134 mm
- L1 2 stages : 147 mm
- L1 3 stages : 160 mm

80 859 3



- B Key 3 x 3 x 16
- C 2 M3 x 0.5 at 180° depth 5.5 on  $\varnothing 32$
- D 2 M3 x 0.5 at 120° depth 5.5 on  $\varnothing 32$
- E 4 M4 x 10 on  $\varnothing 36$
- F 4 M3 x 10 on  $\varnothing 32$

- L1 1 stage : 162 mm
- L1 2 stages : 175 mm
- L1 3 stages : 188 mm

Products and specifications subject to change without notice.

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# D.C. geared motors with brushes

→ 50 Nm 67 to 195 Watts

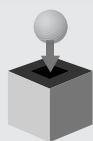
- Gearbox torque rating : 0.8 to 25 Nm.
- Associated DC motors : 15 to 90 watts.
- DC planetary geared motors with brushes
- Speed range : 11 to 454 rpm.



## Specifications

|                                |             |        | 67 Watts                                            |                  | 195 Watts                                          |                  |
|--------------------------------|-------------|--------|-----------------------------------------------------|------------------|----------------------------------------------------|------------------|
|                                |             |        | 80 839 4                                            |                  | 80 899 5                                           |                  |
| Type                           |             |        | 12 V                                                | 24 V             | 24 V                                               | 48 V             |
| Voltages                       |             |        |                                                     |                  |                                                    |                  |
| Number of stages               | Speed (rpm) | Ratios |                                                     |                  |                                                    |                  |
| 1                              | 410         | 6.75   | 80 839 4X06.75 ●                                    | 80 839 4Y06.75 ● |                                                    |                  |
| 1                              | 474         | 6.75   |                                                     |                  | 80 899 5X06.75 ●                                   | 80 899 5Z06.75 ● |
| 2                              | 110         | 25.0   | 80 839 4X00025 ●                                    | 80 839 4Y00025 ● |                                                    |                  |
| 2                              | 128         | 25.0   |                                                     |                  | 80 899 5X00025 ●                                   | 80 899 5Z00025 ● |
| 2                              | 62          | 46     | 80 839 4X00046 ●                                    | 80 839 4Y00046 ● |                                                    |                  |
| 2                              | 70          | 46     |                                                     |                  | 80 899 5X00046 ●                                   | 80 899 5Z00046 ● |
| 3                              | 30          | 93     | 80 839 4X00093 ●                                    | 80 839 4Y00093 ● |                                                    |                  |
| 3                              | 34          | 93     |                                                     |                  | 80 899 5X00093 ●                                   | 80 899 5Z00093 ● |
| 3                              | 18          | 169    | 80 839 4X00169 ●                                    | 80 839 4Y00169 ● |                                                    |                  |
| 3                              | 19          | 169    |                                                     |                  | 80 899 5X00169 ●                                   | 80 899 5Z00169 ● |
| 3                              | 11          | 308    | 80 839 4X00308 ●                                    | 80 839 4Y00308 ● |                                                    |                  |
| 3                              | 11          | 308    |                                                     |                  | 80 899 5X00308 ●                                   | 80 899 5Z00308 ● |
| <b>General characteristics</b> |             |        |                                                     |                  |                                                    |                  |
| Motor                          |             |        | 82 830 5                                            |                  | 82 890 0                                           |                  |
| Gearbox                        |             |        | 81 049 4                                            |                  | 82 849 5                                           |                  |
| Max. torque Nm                 |             |        | 2 (1 stage)<br>5 (2 stages)<br>10 (3 stages)        |                  | 4 (1 stage)<br>12 (2 stages)<br>25 (3 stages)      |                  |
| Efficiency (%)                 |             |        | 0.75 (1 stage)<br>0.7 (2 stages)<br>0.65 (3 stages) |                  | 0.8 (1 stage)<br>0.75 (2 stages)<br>0.7 (3 stages) |                  |
| Radial load (dynamic) daN      |             |        | 20 (1 stage)<br>32 (2 stages)<br>45 (3 stages)      |                  | 20 (1 stage)<br>32 (2 stages)<br>45 (3 stages)     |                  |
| Axial load (dynamic) daN       |             |        | 6 (1 stage)<br>10 (2 stages)<br>15 (3 stages)       |                  | 6 (1 stage)<br>10 (2 stages)<br>15 (3 stages)      |                  |
| Output ball bearing            |             |        | Yes                                                 |                  | Yes                                                |                  |
| Sintered bronze output bearing |             |        | No                                                  |                  | No                                                 |                  |

## Products adaptations, available on request



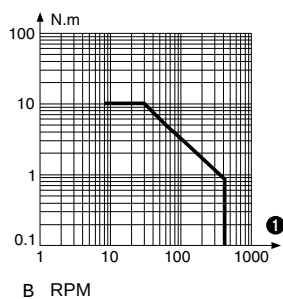
- Special supply voltages
- Special lead lengths
- Optional encoder
- Special connectors
- Special output shafts
- Special gearbox ratios
- Special gear material
- Special output bearings
- Special mounting plate

Products and specifications subject to change without notice.

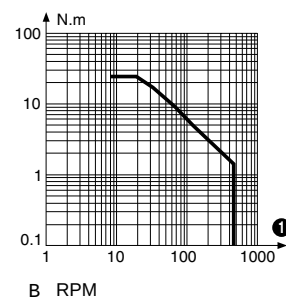
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## Curves

80 839 4

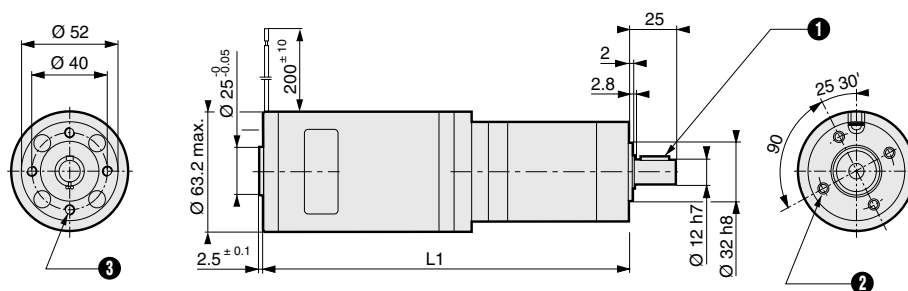


80 899 5



## Dimensions

80 839 4



B Key 4 x 4 x 16

C 4 M5 x 0.86 h depth 7 on Ø 40

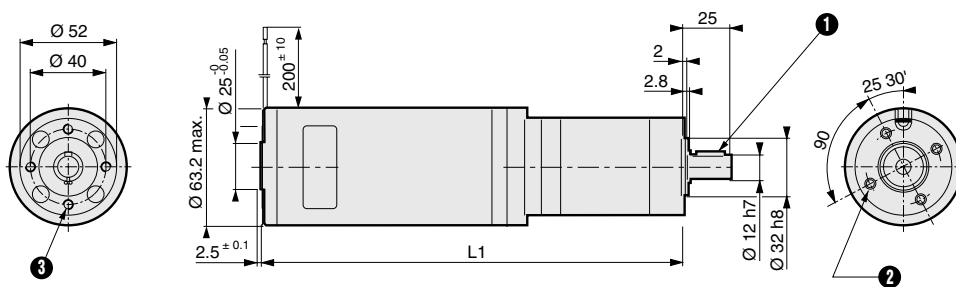
D 4 M5 x 10

L1 1 stage : 159 mm

L1 2 stages : 173 mm

L1 3 stages : 187 mm

80 899 5



B Key 4 x 4 x 16

C 4 M5 x 0.86 h depth 7 on Ø 40

D 4 M5 x 10

L1 1 stage : 184 mm

L1 2 stages : 198 mm

L1 3 stages : 212 mm

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# Magnetic Encoder

- For motors: 82 800 0 - 82 810 0 - 82 800 5 - 82 810 5 - 82 860
- For geared motors: 80 813 0 - 80 814 0 - 80 803 0 - 80 804 0 - 82 842 5 - 82 842 6 - 82 862 5 - 82 862 6

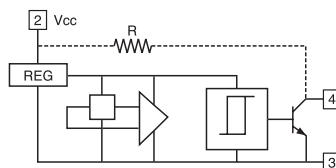
## Magnetic encoders, resolution of 1 pulse per revolution

### Technology

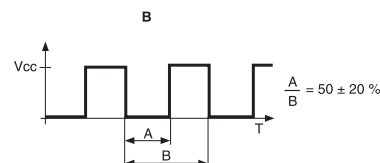
A magnetic wave is generated by a magnet integrated in the motor shaft. A Hall effect sensor reads this information and converts it into a square wave within the motor.

### General layout

Vdc from .4 to 24 volts - current: 50 mA



### Output Signal



82 800 0 - 82 810 0 - 82 800 5 - 82 810 5 - 80 313 0 - 80 814 0 - 80 803 0 - 80 604 0

### Applications

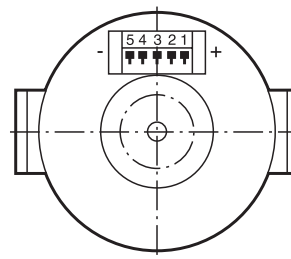
- Measuring systems for feed dispensing equipment
- Position settings for automatic access points
- Servomotors
- Magnetic encoder gives resolution of 5 pulses per revolution

### Connections - Motor and encoder power supplies must be kept separate

- 1 - Motor Supply +
- 2 - Encoder supply +
- 3 - Encoder ground
- 4 - Encoder output ~
- 5 - Motor ground

- 1- An integrated connector HE14 / 2.54 mm is used for motor and encoder power supplies and encoder output signals.
- 2 - Resistance R should be added (Value depends on Vdc)
- 3- Recommended customer connectors : STOCKO MKF 17-230/260/330/360 - LUMBERG 2.5 MBX

Made to order products,  
available on request



82 860 - 82 842 5 - 82 842 6 - 82 862 5 - 82 862 6

### Applications

- Positioning dental radiology equipment
- Adjusting Venetian blinds
- Measuring systems for coffee machines
- Magnetic encoder with a resolution of 5 or 12 pulses per revolution

### Connections - Motor and encoder power supplies must be kept separate

- 1 - + Motor supply output tag
- 2 - - Motor supply output tag
- 3 - Brown wire for + Vdc encoder supply
- 4 - Yellow wire for encoder signal
- 5 - Blue wire for encoder ground

- 1 - Encoder power supply and signal : lead length 135 mm
- 2 - Resistance R should be added (Value depends on Vdc)
- 3 - Standard motors 82 860 5 with magnetic encoders are equipped with interference suppression

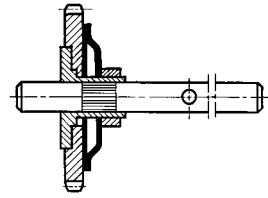
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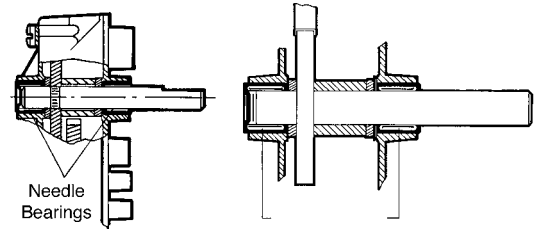
## Friction clutch for 81 021

This device is situated inside the gearbox and is particularly recommended when gearbox protection is required if accidental overloading occurs.  
In this system, the final gear is connected to the gearbox output shaft by means of a friction assembly.  
In some cases, this device can be used for time adjustment or zero reset on timers.  
The standard torque setting is : 1.8 to 2.5 cm/kg for gearbox 81 021

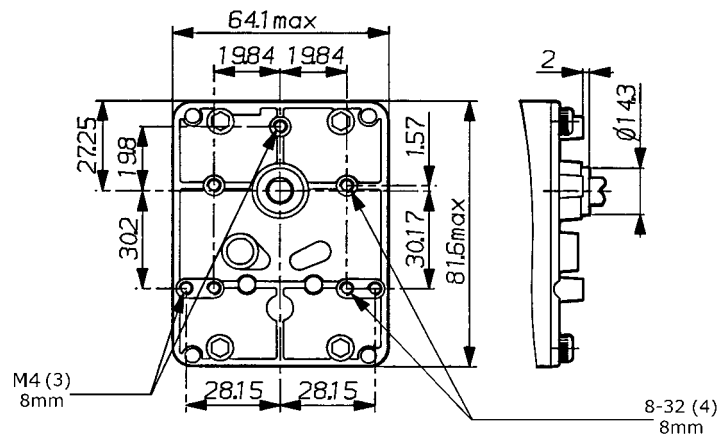


## Needle Bearings for 81 032

Where operating conditions are severe, e.g. where there are high radial or alternating loads, it is advisable for needle bearings to be substituted for the normal bearings.  
Please consult us.  
Note: applies to 81 032 gearboxes only.



## Cover 2 for 81 032



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