



Data Sheet

dc motors size 32 & 42mm diameter & gearboxes

RS stock numbers 224-3530, 224-3546, 224-3580, 224-3552, 224-3568, 225-5410, 224-8636, 225-5173, 225-5397, 225-5404

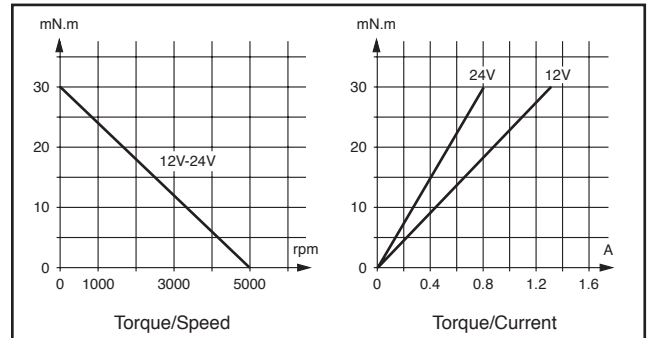
Motors

These motors have been designed and manufactured for incorporation into equipment or machines and are considered to be component parts of a larger system. The design and construction has taken into account the provisions of the appropriate European Legislation for these items.

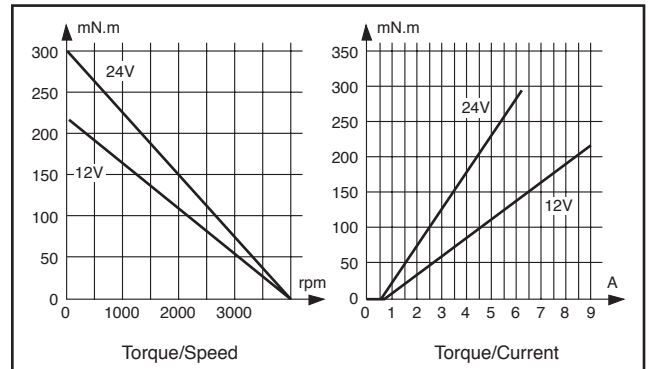
| Nominal Voltage | 12Vdc | | 24Vdc | |
|----------------------------|----------|----------|----------|----------|
| | 32 | 42 | 32 | 42 |
| Body Diameter | 32 | 42 | 32 | 42 |
| RS stock no. | 224-3530 | 224-8636 | 224-3546 | 225-5410 |
| Nominal speed [RPM] | 3700 | 2670 | 3700 | 3070 |
| Torque [mNm] | 7.7 | 70 | 7.7 | 70 |
| Output power [W] | 3 | 22 | 3 | 22 |
| Input Power, No load [W] | 1.2 | 4.8 | 1.92 | 4.3 |
| Input Current, No load [A] | 0.1 | 0.4 | 0.08 | 0.18 |
| Protection rating | IP40 | IP20 | IP40 | IP20 |
| Max usable power [W] | 3.9 | 22 | 3.9 | 31 |
| Start torque [mNm] | 30 | 219 | 30 | 298 |
| Start current [A] | 1.5 | 9 | 0.76 | 6.16 |
| Resistance [Ω] | 8 | 1.33 | 32 | 3.9 |
| Inductance [mH] | 10 | 2.67 | 41.6 | 9.35 |
| Weight [g] | 96 | 400 | 95 | 400 |
| Life [h] | 2000 | 2000 | 2000 | 2000 |

Torque

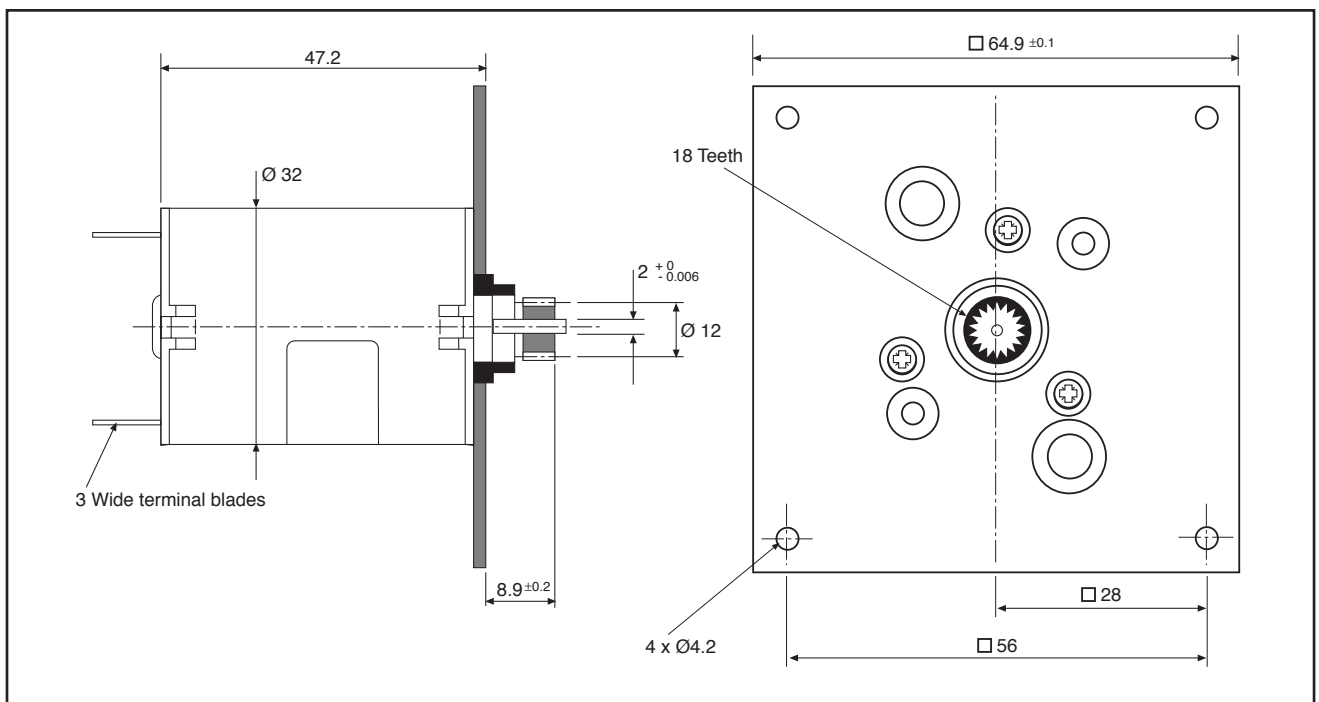
32mm diameter motor



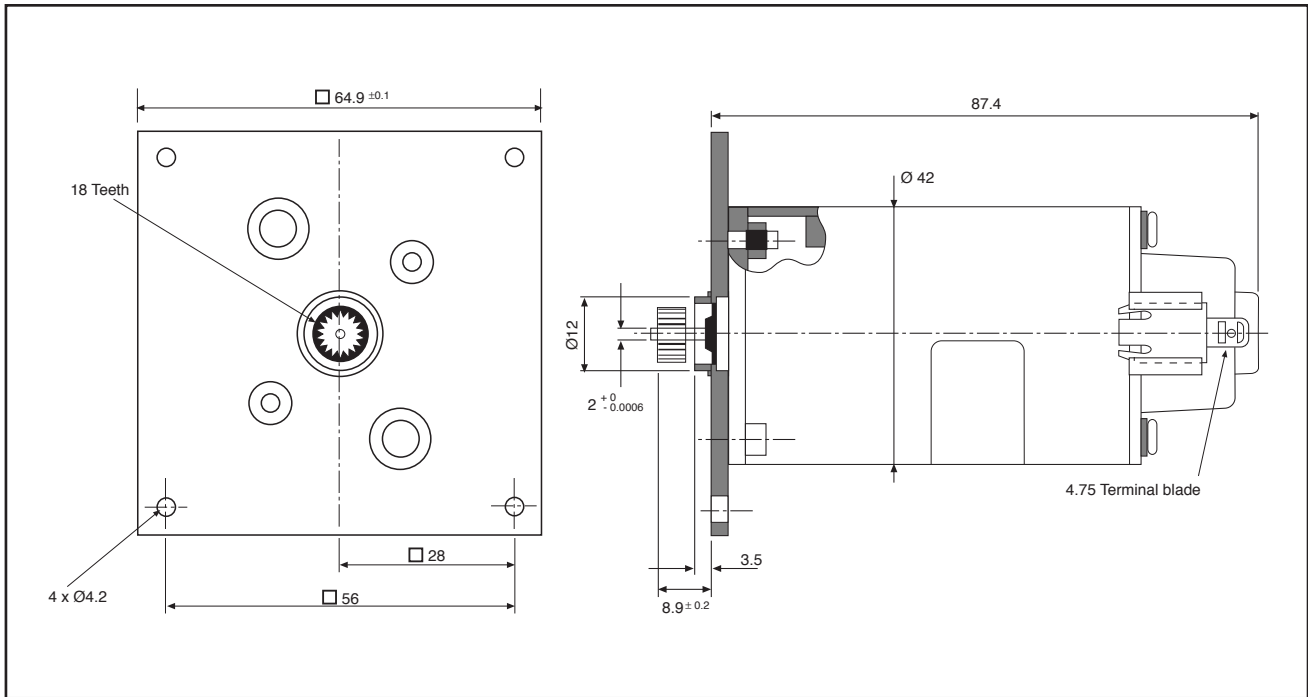
42mm diameter motor



32mm diameter motor



42mm diameter motor



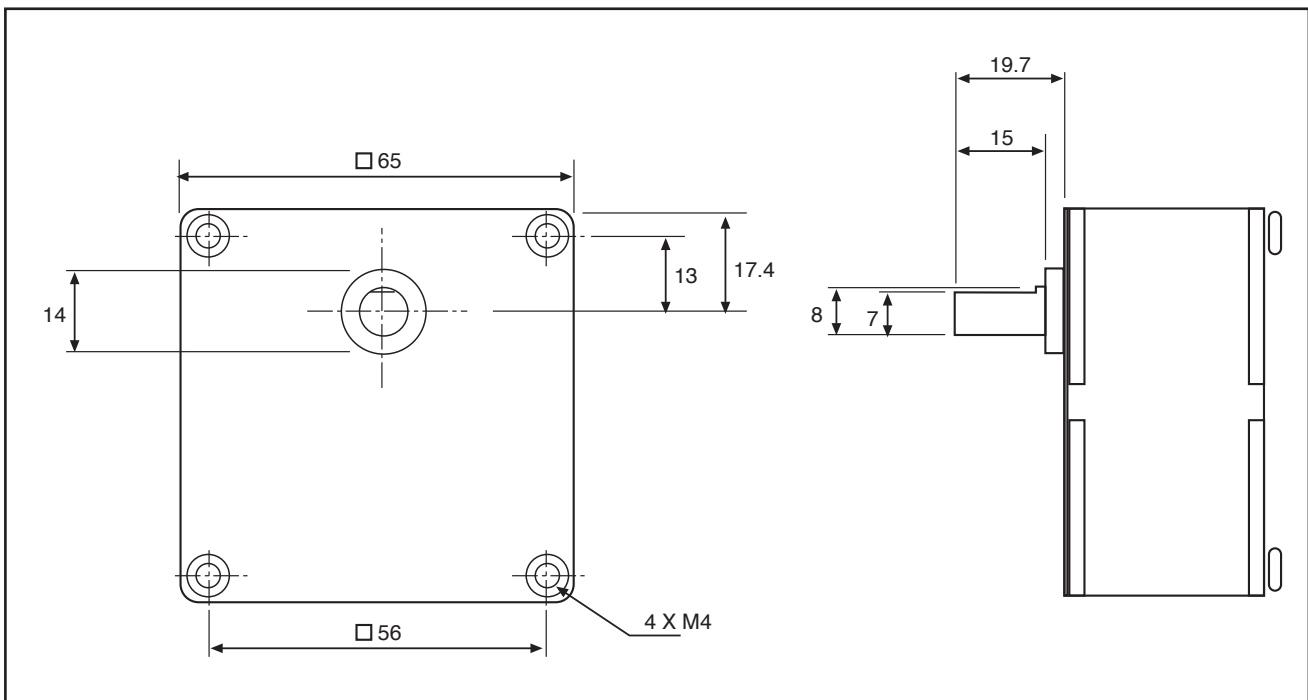
Gearboxes

These gearboxes may be used with either diameter motor and the data given below is the maximum design torque with a continuous duty.

| RS stock no. | Ratio |
|--------------|---------|
| 225-5173 | 25/3:1 |
| 224-3552 | 25:1 |
| 225-5397 | 125/3:1 |
| 225-5404 | 62.5:1 |
| 224-3568 | 125:1 |
| 224-3580 | 500:1 |

Fitting of gearbox to motor

The fitting method is the same for either size of diameter of the motor body. Remove the four rear plate retaining screws. Introduce the motor shaft with pinion through the entry hole in the rear plate. Once the motor pinion has meshed with the gearbox gears, attach the motor to the gearbox, by using the four retaining screws, which are passed through the motor mounting plate fixing holes and into the tapped gearbox retaining holes.

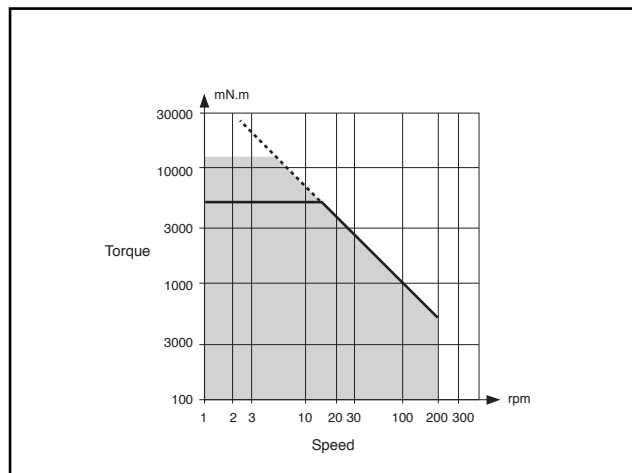


Combined motor and gearbox data

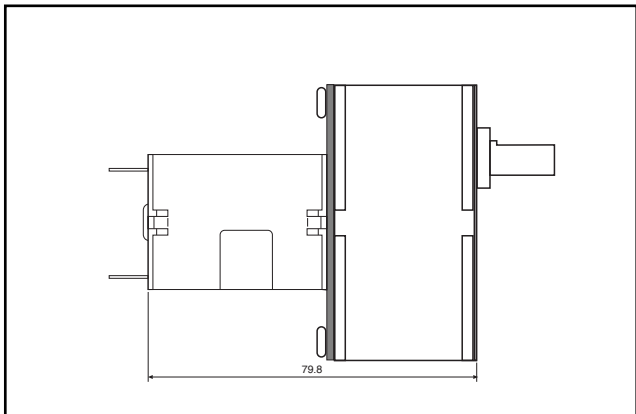
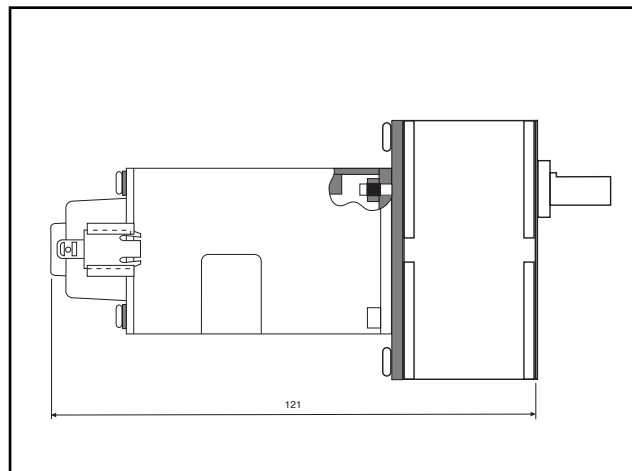
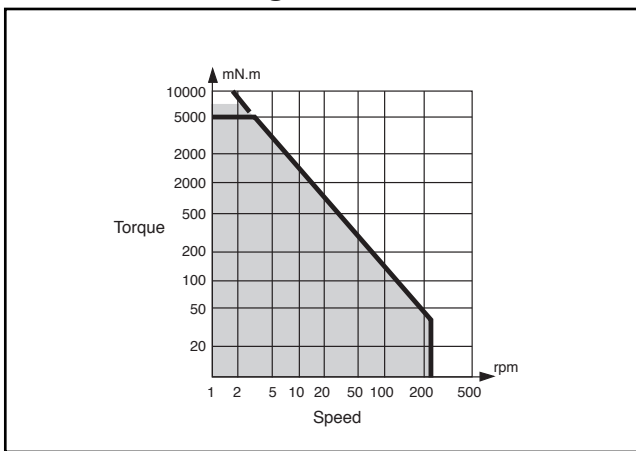
| Gearbox ratio | Final speed [RPM] | |
|---------------|----------------------|----------------------|
| | 32mm dia. 12 & 24Vdc | 42mm dia. 12 & 24Vdc |
| 25/3:1 | 516 | 312 |
| 25:1 | 172 | 104 |
| 125/3:1 | 103 | 62 |
| 62.5:1 | 69 | 42 |
| 125:1 | 34 | 21 |
| 500:1 | 8.6 | 5.2 |

| Motor body diameter | [mm] | 32 | 42 |
|---|------|-----|-----|
| Max permitted torque (Continuous rating) | [Nm] | 5 | 5 |
| Axial loads | [N] | 20 | 20 |
| Radial loads | [N] | 30 | 30 |
| Gearbox case temperature | [°C] | 50 | 40 |
| Weight | [g] | 465 | 800 |

42mm motor fitted to gearbox



32mm motor fitted to gearbox



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