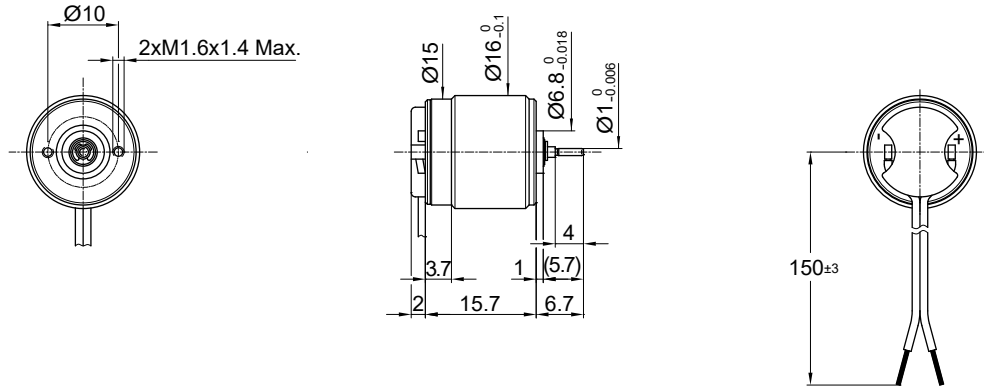


16C18

Ø 16 mm • Precious metal commutation • 1.12 mNm



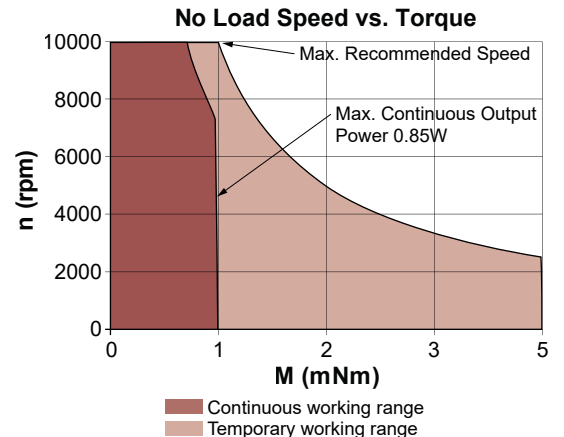
Dimensions in mm.

| Electrical Data             | Symbol              | 16C18 .... 67 |             |             |             |             | Unit                 |
|-----------------------------|---------------------|---------------|-------------|-------------|-------------|-------------|----------------------|
|                             |                     | 115           | 210         | 207         | 205         | 204         |                      |
| 1 Nominal Voltage           | V                   | 1.5           | 4           | 6           | 12          | 15          | Volt                 |
| 2 No-Load Speed             | n <sub>0</sub>      | 15,300        | 14,700      | 15,700      | 16,200      | 16,000      | rpm                  |
| 3 No-Load Current           | I <sub>0</sub>      | 74.8          | 23.0        | 18.4        | 10.4        | 6.9         | mA                   |
| 4 Terminal Resistance       | R                   | 1.2           | 7.5         | 18.0        | 65.0        | 162.0       | Ω                    |
| 5 Output Power              | P <sub>2max.</sub>  | 0.7           | 0.8         | 0.7         | 0.8         | 0.7         | W                    |
| 6 Stall Torque              | mNm                 | 1.1           | 1.3         | 1.1         | 1.2         | 0.8         | mNm (oz-in)          |
| 7 Efficiency                | h <sub>max.</sub>   | 57            | 63          | 59          | 58          | 53          | %                    |
| 8 Max Continuous Speed      | n <sub>e max.</sub> | 10,000        | 10,000      | 10,000      | 10,000      | 10,000      | rpm                  |
| 9 Max Continuous Torque     | M <sub>e max.</sub> | 0.98 (0.15)   | 1.12 (0.15) | 1 (0.15)    | 1 (0.14)    | 0.79 (0.11) | mNm (oz-in)          |
| 10 Max Continuous Current   | I <sub>e max.</sub> | 1.19          | 0.48        | 0.31        | 0.16        | 0.10        | A                    |
| 11 Back-EMF Constant        | k <sub>E</sub>      | 0.09          | 0.26        | 0.36        | 0.70        | 0.87        | mV/rpm               |
| 12 Torque Constant          | k <sub>M</sub>      | 0.88          | 2.48        | 3.44        | 6.68        | 8.30        | mNm/A                |
| 13 Motor Regulation         | R/k <sup>2</sup>    | 1555.0        | 1220.0      | 1520.0      | 1460.00     | 2350.00     | 10 <sup>3</sup> /Nms |
| 14 Friction Torque          | T <sub>F</sub>      | 0.07 (0.02)   | 0.06 (0.01) | 0.06 (0.01) | 0.07 (0.02) | 0.06 (0.01) | mNm (oz-in)          |
| 15 Rotor Inductance         | L                   | 20.00         | 150.00      | 250.00      | 1000.00     | 1000.00     | mH                   |
| 16 Mechanical Time Constant | τ <sub>m</sub>      | 48.0          | 50.0        | 41.0        | 60.0        | 63.0        | ms                   |
| 17 Rotor Inertia            | J                   | 0.31          | 0.41        | 0.27        | 0.41        | 0.27        | g-cm <sup>2</sup>    |

| General Data                                |                                    |                                |  |           |
|---|------------------------------------|--------------------------------|--|-----------|
| 18 Thermal Resistance (rotor/body)          | R <sub>th1</sub> /R <sub>th2</sub> | 15/40                          |  | °C/W      |
| 19 Thermal Time Constant (rotor/stator)     | t <sub>w1</sub> /t <sub>w2</sub>   | 4/230                          |  | S         |
| 20 Operating Temperature Range:             | motor                              | -30°C to 85°C (-22°F to 185°F) |  | °C (°F)   |
|   | rotor                              | 100°C (212°F)                  |  | °C (°F)   |
| 21 Shaft Load Max.:<br>(5 mm. from bearing) | -radial<br>-axial                  | With sleeve bearings           |  |           |
|   |                                    | 1.5 (5.4)                      |  | N (oz)    |
|   |                                    | 100 (359.6)                    |  | N (oz)    |
| 22 Shaft Play:                              | -radial                            | <0.03 (0.0012)                 |  | mm (inch) |
|   | -axial                             | 0.15 (0.0059)                  |  | mm (inch) |
| 23 Weight                                   | g                                  | 14 (0.49)                      |  | g (oz)    |
| 24 Commutation Segment                      | -                                  | 5                              |  | segment   |

Execution Table

| Gearbox | Single Shaft | F16 |
|---------|--------------|-----|
| B16     | 67           | 76  |
| BA16    | 67           | 76  |
| R16     | 30           | 76  |



► Motor shaft rotates CW when seen from motor front face when +ve and -ve supply is given to respective terminals.