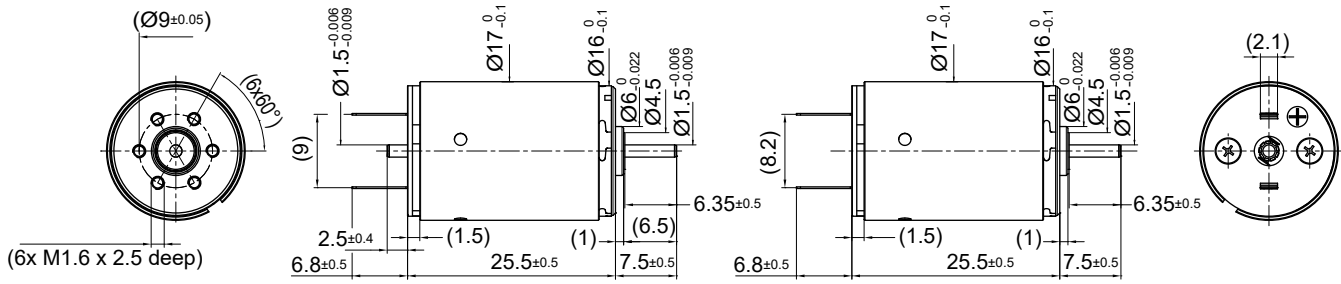


17DCT Athlonix™

Ø 17 mm • Precious metal commutation • 6.14 mNm



17DCT 26P2 .... 2

17DCT 26P1 .... 1

Dimensions in mm.

| Electrical Data             | Symbol       | 17DCT 26P1/P2 .... * |              |              |              |              | Unit              |
|-----------------------------|--------------|----------------------|--------------|--------------|--------------|--------------|-------------------|
|                             |              | 216P                 | 211P         | 209P         | 208P         | 207P         |                   |
| 1 Nominal Voltage           | V            | 3                    | 6            | 9            | 12           | 15           | Volt              |
| 2 No-Load Speed             | $n_0$        | 7838                 | 7842         | 7645         | 8158         | 8358         | rpm               |
| 3 No-Load Current           | $I_0$        | 24.7                 | 12.3         | 8.0          | 6.4          | 5.3          | mA                |
| 4 Terminal Resistance       | R            | 0.9                  | 3.3          | 7.7          | 12.1         | 18.6         | $\Omega$          |
| 5 Output Power              | $P_{2max}$   | 4.6                  | 4.7          | 4.8          | 4.7          | 4.7          | W                 |
| 6 Stall Torque              | mNm          | 12.31 (1.75)         | 13.21 (1.88) | 13.02 (1.85) | 13.79 (1.96) | 13.62 (1.93) | mNm (oz-in)       |
| 7 Efficiency                | $\eta_{max}$ | 84                   | 84           | 84           | 85           | 84           | %                 |
| 8 Max Continuous Speed      | $n_{e max}$  | 10000                | 10000        | 10000        | 10000        | 10000        | rpm               |
| 9 Max Continuous Torque     | $M_{e max}$  | 5.81 (0.83)          | 6.02 (0.86)  | 6.05 (0.86)  | 6.03 (0.86)  | 5.92 (0.84)  | mNm (oz-in)       |
| 10 Max Continuous Current   | $I_{e max}$  | 1.63                 | 0.84         | 0.55         | 0.44         | 0.35         | A                 |
| 11 Back-EMF Constant        | $k_E$        | 0.38                 | 0.76         | 1.17         | 1.46         | 1.78         | mV/rpm            |
| 12 Torque Constant          | $k_M$        | 3.63                 | 7.26         | 11.16        | 13.96        | 17.03        | mNm/A             |
| 13 Motor Regulation         | $R/k^2$      | 66.64                | 62.15        | 61.45        | 61.92        | 64.25        | $10^3/Nms$        |
| 14 Friction Torque          | $T_F$        | 0.08 (0.011)         | 0.08 (0.011) | 0.08 (0.011) | 0.08 (0.011) | 0.08 (0.011) | mNm (oz-in)       |
| 15 Mechanical Time Constant | $\tau_m$     | 7.01                 | 6.41         | 6.30         | 6.27         | 6.25         | ms                |
| 16 Rotor Inertia            | J            | 1.05                 | 1.03         | 1.02         | 1.01         | 0.97         | g-cm <sup>2</sup> |

| General Data                                |                   |                                |  |  |
|---|-------------------|--------------------------------|--|--|
| 17 Thermal Resistance (rotor/body)          | $R_{th1}/R_{th2}$ | 6/25                           |  | $^{\circ}C/W$  |
| 18 Thermal Time Constant (rotor/stator)     | $t_{W1}/t_{W2}$   | 12/250                         |  | S  |
| 19 Operating Temperature Range:             | motor             | -30°C to 85°C (-22°F to 185°F) |  | $^{\circ}C (^{\circ}F)$                              |
|   | rotor             |                                |  | 100°C (212°F)  |
| 20 Shaft Load Max.:<br>(5 mm. from bearing) | -radial<br>-axial | With sleeve bearings           |  | N (oz)<br>N (oz)<br>mm (inch)<br>mm (inch)<br>g (oz) |
|   |                   | 1.5 (5.39)                     |  |  |
|   |                   | 100 (359.6)                    |  |  |
| 21 Shaft Play:                              | -radial<br>-axial | 0.03 (0.0012)                  |  | mm (inch)  |
|   |                   | 0.15 (0.0059)                  |  | mm (inch)  |
| 22 Weight                                   | g                 | 27 (0.96)                      |  | g (oz)   |
| 23 Commutation Segment                      | -                 | 9                              |  | segment  |

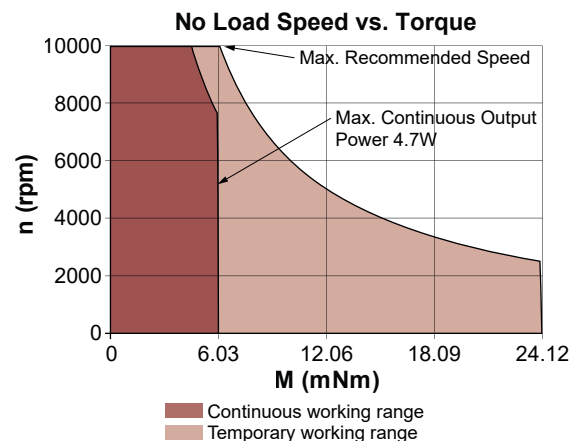
\*Also available with ball bearing

Execution Table

| Gearbox | Single Shaft | MR2 | M Sense B |
|---------|--------------|-----|-----------|
| R16     | 1            | 2   | 10        |
| B16     | 3            | 4   | 11        |
| BA16    | 3            | 4   | 11        |

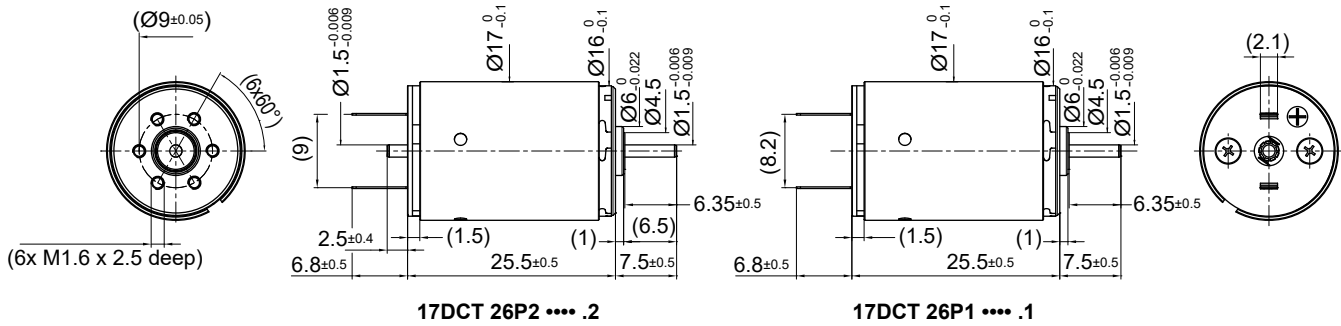
Note:  
P1: standard commutation  
P2: special commutation for double shaft version

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



17DCT Athlonix™

Ø 17 mm • Precious metal commutation • 6.14 mNm



Dimensions in mm.

| Electrical Data             | Symbol      | 17DCT 26P1/P2 .... * |              |              |              | Unit                 |
|-----------------------------|-------------|----------------------|--------------|--------------|--------------|----------------------|
|                             |             | 209E                 | 205P         | 107P         | 205E         |                      |
| 1 Nominal Voltage           | V           | 18                   | 24           | 36           | 48           | Volt                 |
| 2 No-Load Speed             | $n_0$       | 8030                 | 7769         | 9800         | 8145         | rpm                  |
| 3 No-Load Current           | $I_0$       | 4.2                  | 3.1          | 2.6          | 1.6          | mA                   |
| 4 Terminal Resistance       | R           | 30.7                 | 51.4         | 76.0         | 208.1        | Ω                    |
| 5 Output Power              | $P_{2max}$  | 4.5                  | 4.8          | 4.7          | 4.6          | W                    |
| 6 Stall Torque              | mNm         | 12.36 (1.76)         | 13.6 (1.93)  | 16.43 (2.33) | 12.8 (1.82)  | mNm (oz-in)          |
| 7 Efficiency                | $h_{max}$   | 84                   | 84           | 86           | 84           | %                    |
| 8 Max Continuous Speed      | $n_{e max}$ | 10000                | 10000        | 10000        | 10000        | rpm                  |
| 9 Max Continuous Torque     | $M_{e max}$ | 5.75 (0.82)          | 6.14 (0.87)  | 6 (0.85)     | 5.8 (0.83)   | mNm (oz-in)          |
| 10 Max Continuous Current   | $I_{e max}$ | 0.27                 | 0.21         | 0.17         | 0.11         | A                    |
| 11 Back-EMF Constant        | $k_E$       | 2.23                 | 3.07         | 3.65         | 5.85         | mV/rpm               |
| 12 Torque Constant          | $k_M$       | 21.25                | 29.31        | 34.89        | 55.88        | mNm/A                |
| 13 Motor Regulation         | $R/k^2$     | 68.01                | 59.79        | 62.45        | 66.62        | 10 <sup>3</sup> /Nms |
| 14 Friction Torque          | $T_F$       | 0.08 (0.011)         | 0.08 (0.011) | 0.08 (0.011) | 0.08 (0.011) | mNm (oz-in)          |
| 15 Mechanical Time Constant | $\tau_m$    | 7.06                 | 6.23         | 6.22         | 7.04         | ms                   |
| 16 Rotor Inertia            | J           | 1.04                 | 1.04         | 1.00         | 1.06         | g-cm <sup>2</sup>    |

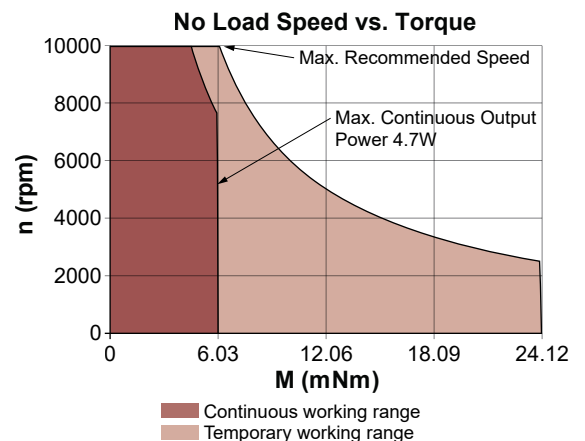
| General Data                                |                   |                                |  |           |
|---|-------------------|--------------------------------|--|-----------|
| 17 Thermal Resistance (rotor/body)          | $R_{th1}/R_{th2}$ | 6/25                           |  | °C/W      |
| 18 Thermal Time Constant (rotor/stator)     | $t_{W1}/t_{W2}$   | 12/250                         |  | S         |
| 19 Operating Temperature Range:             | motor             | -30°C to 85°C (-22°F to 185°F) |  | °C (°F)   |
|   | rotor             | 100°C (212°F)                  |  | °C (°F)   |
| 20 Shaft Load Max.:<br>(5 mm. from bearing) | -radial<br>-axial | With sleeve bearings           |  |           |
|   |                   | 1.5 (5.39)                     |  | N (oz)    |
|   |                   | 100 (359.6)                    |  | N (oz)    |
| 21 Shaft Play:                              | -radial           | 0.03 (0.0012)                  |  | mm (inch) |
|   | -axial            | 0.15 (0.0059)                  |  | mm (inch) |
| 22 Weight                                   | g                 | 27 (0.96)                      |  | g (oz)    |
| 23 Commutation Segment                      | -                 | 9                              |  | segment   |

\*Also available with ball bearing

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