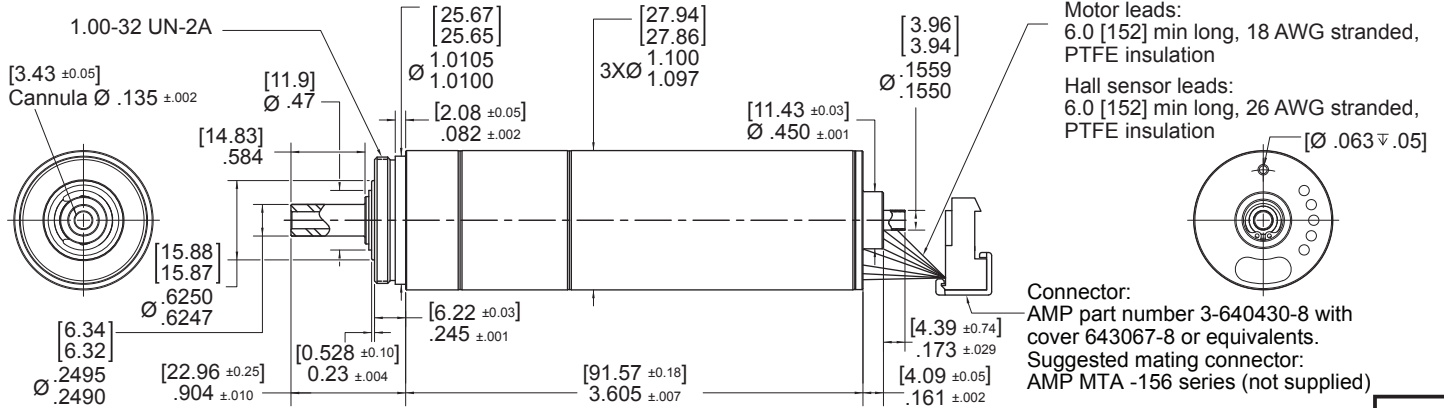


B1112A4 Large Bone Surgical Gearmotor - Drill/Reamer

Ø 1.1 inch • Brushless Slotted



Dimensions in inches [mm]

| Electrical Data | Symbol | B1112A4000 | B1112A4001 | Unit |
|--|-----------|---------------|---------------|-----------------------------------|
| 1 Nominal Voltage | U_N | 14.4 | 9.6 | Volt |
| 2 Optimization Direction | - | Symmetrical | Symmetrical | - |
| 3 No Load Speed | n_0 | 938 | 1'053 | rpm |
| 4 Typical No Load Current | I_0 | 1'090 | 1'487 | mA |
| 5 Max. Continuous Mechanical Power (@25°C) | P_{max} | 85.2 | 83.6 | W |
| 6 Max. Continuous Current | I_{cs} | 9.2 | 13.5 | A |
| 7 Max. Continuous Torque | T_{cs} | 937 (132.8) | 815 (115.5) | mNm (oz-in) |
| 8 Back EMF Constant | k_E | 15 | 9.1 | V/1000 rpm |
| 9 Torque Constant | k_T | 118.7 (16.8) | 70.6 (10) | mNm/A (oz-in/A) |
| 10 Motor Regulation | R/k^2 | 0.008 | 0.011 | $10^3/Nms$ |
| 11 Peak Torque | T_{pk} | 14'200 (2015) | 11'900 (1683) | mNm (oz-in) |
| 12 Motor Constant | k_M | 345 (48.7) | 295 (41.8) | $mNm/W^{1/2}$ (oz-in/ $W^{1/2}$) |
| 13 Line to Line Resistance | R_L | 0.119 | 0.057 | ohms |
| 14 Inductance Phase to Phase | L | 0.057 | 0.023 | mH |
| 15 Mechanical Time Constant | T_m | 1.79 | 2.46 | ms |
| 16 Electrical Time Constant | T_e | 0.48 | 0.4 | ms |

| General Data | | | | |
|--|----------|---------------------------|---------------------------|--|
| 17 Gearhead Ratio | - | 16:1 | 16:1 | Ratio |
| 18 Ambient Working Temperature Range | - | -30 to +135 (-22 to +275) | -30 to +135 (-22 to +275) | °C (°F) |
| 19 Maximum Winding Temperature | - | 155 (311) | 155 (311) | °C (°F) |
| 20 Radial Static Force w/o Shaft Support (max) | - | 78 (17.5) | 100 (22.5) | N (lbs) |
| 21 Axial Static Force w/o Shaft Support (max) | - | 85 (19) | 55 (12.5) | N (lbs) |
| 22 Thermal Resistance | R_{th} | 8.3 | 8.3 | °C/W |
| 23 Thermal Time Constant | T_w | 900 | 900 | s |
| 24 Weight | - | 354 (12.5) | 350 (12.4) | g (oz) |
| 25 Rotor Inertia | J_m | 84.7 (120) | 84.7 (120) | $kg\cdot cm^2 \cdot 10^{-4}$ (oz-in-sec ² 10^{-6}) |
| 26 Hall Sensor Electrical Phasing* | - | 60 | 60 | Electrical ° |
| 27 Autoclave Cycles | - | 1000+ | 1000+ | Cycles |

*Also available without Hall sensors

| Wire | Description |
|--------|---------------|
| Blue | Phase A |
| Brown | Phase B |
| Violet | Phase C |
| Red | 4.5 to 24 Vdc |
| Yellow | Sensor 1 |
| Orange | Sensor 2 |
| White | Sensor 3 |
| Black | GND |

