



ServoStep Motor
ST231 Series

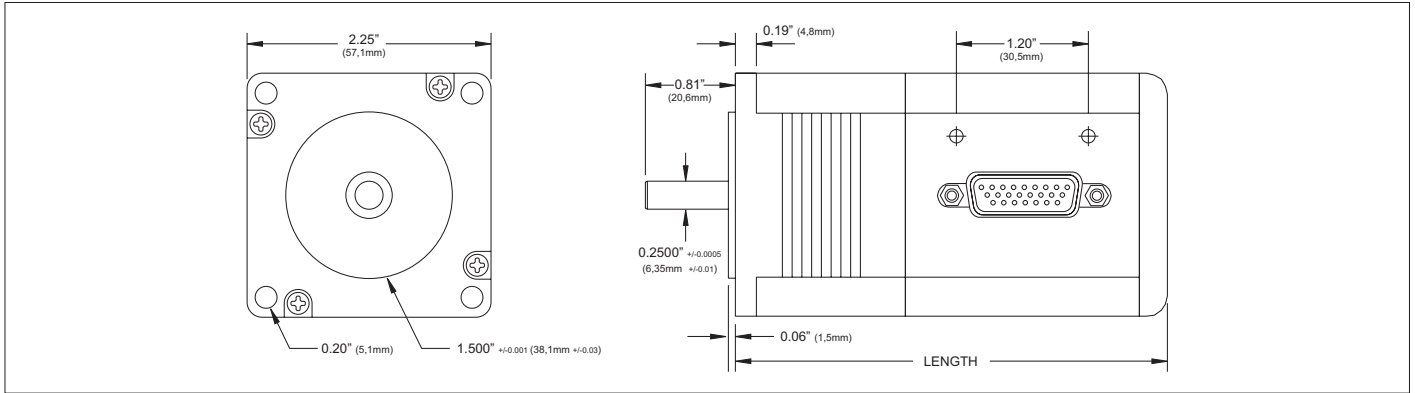


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ST232 Series

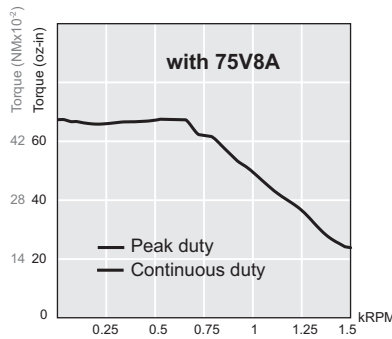
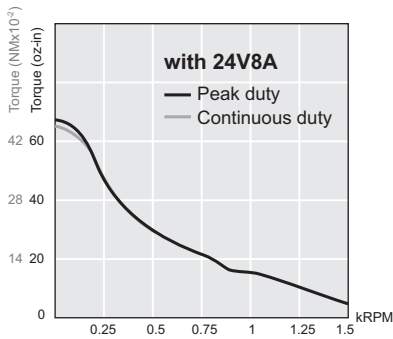
| DESCRIPTION | | UNITS | ST231 | ST232 | |
|------------------------|---------------------------------------|--|------------------------|------------------------|--------------------|
| Power | Input | VDC | 20 - 80 (max) | 20 - 80 (max) | |
| | Operating Temperature | °F (°C) | 32 to 185 (0 to 85) | 32 to 185 (0 to 85) | |
| Environment | Enclosure Rating (approximate) | | IP40 | IP40 | |
| | Storage Temperature | °F (°C) | -4 to 185 (-20 to 85) | -4 to 185 (-20 to 85) | |
| | Humidity (non-condensing) | % | 0 to 80 | 0 to 80 | |
| | Peak Torque (Tp) | oz-in (N-m) | 67 (0.47) | 137 (0.97) | |
| Performance | Continuous Torque (Tc) | oz-in (N-m) | 67 (0.47) | 137 (0.97) | |
| | No Load Speed | RPM | 1700 | 1600 | |
| | Nominal Power | HP (kW) | 0.04 (0.03) | 0.04 (0.03) | |
| | Servo Update | Hz | 4069 | 4069 | |
| | PWM Frequency | kHz | 33.3 | 33.3 | |
| | Encoder | Type | Incremental | VDC | VDC |
| | | Resolution | ppr (post-quad) | 8000 | 8000 |
| | Memory | Volatile | kRAM | 32 | 32 |
| | | Non-volatile | kRAM | 28 | 28 |
| | Motor | Commutation | | 6-step Trapezoidal | 6-step Trapezoidal |
| Torque Constant (Kt) | | oz-in/Amp (N-m/Amp) | NA | NA | |
| Rotor Inertia (Jm) | | oz-in-s ² (10 ⁻⁵ kg-m ²) | 0.0018 (1.28) | 0.0039 (2.75) | |
| Insulation | | | Class B | Class B | |
| Number of Poles (Np) | | | NA | NA | |
| Winding Resistance (R) | | Ohms | 2.7 | 5.3 | |
| Input/Output | | Number (Type) | | 10 (5VDC TTL) | 10 (5VDC TTL) |
| | Input | Digital | 5VDC TTL sinking input | 5VDC TTL sinking input | |
| | | Analog | Sinking input, 10 bit | Sinking input, 10 bit | |
| | Output | Sourcing | mA | 5 | 5 |
| | | Sinking | mA | 10 | 10 |
| | Encoder/Step & Direct Input Frequency | MHz | 1 | 1 | |
| Communications | Type | | RS485; Serial (ASCII) | RS485; Serial (ASCII) | |
| | Speed | KBaud | 2.4 to 38.4 | 2.4 to 38.4 | |
| Physical | Radial Load | lbs (kg) | 15 (6.8) | 15 (6.8) | |
| | Axial Thrust Load | lbs (kg) | 13 (5.9) | 13 (5.9) | |
| | Width | in (mm) | 2.25 (57.2) | 2.25 (57.2) | |
| | Length | in (mm) | 3.9 (100) | 4.4 (113) | |
| | Weight (Wt) | lbs (kg) | 1.5 (0.66) | 1.9 (0.88) | |
| | Shaft Diameter** | in (mm) | 0.25 (6.4) | 0.25 (6.4) | |
| | Pilot Diameter** | in (mm) | 1.501 (38.1) | 1.501 (38.1) | |
| | Bolt Circle Diameter** | in (mm) | 2.630 (66.8) | 2.630 (66.8) | |

Performance spec based on PS75V6A-OF

Note: ** check tolerance in drawings



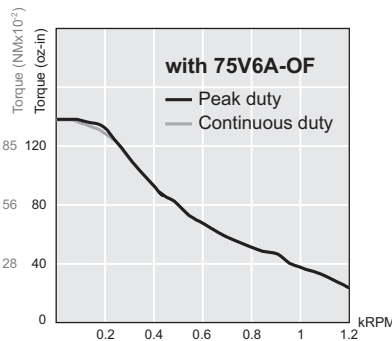
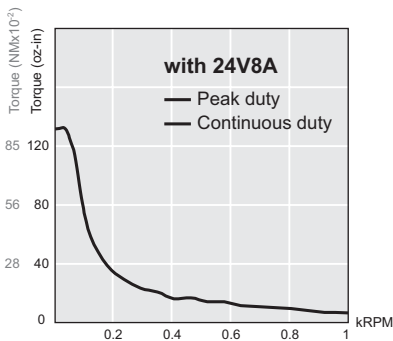
SMARTMOTOR ST231



Notes:

1. Custom windings are available on select SmartMotors. These special windings allow SmartMotors to achieve higher speeds or greater torque. Please consult factory for specific details.
2. Custom shaft lengths and diameters are available on select SmartMotors. Flats and keyways are common options found on motor shafts. SmartMotors can be purchased with various versions of these shaft modifications. Please consult factory for available shaft options.
3. Torque vs. Speed curve data is derived under dynamometer testing using a PS75V6A-OF power supply at an ambient temperature of 27°C (80.6°F).
4. Connector kits and cable options found on pp. 68 and 69.

SMARTMOTOR ST232



SmartMotors
ST231 and ST232
are CE marked

26 Pin, High Density
D-Sub I/O Connector

