

EX Series

Explosion Proof Servo Motors



Customer Value Proposition

EX series is a range of permanent magnet servo motors designed for use in explosive atmospheres. Featuring robust explosion-proof housings, EX motors are capable of containing internal explosions with no risks of propagation to the neighbouring environment.

Two versions are available, allowing conformance with either North American or European safety standards, EX servomotors are characterized by excellent motion quality, great acceleration / deceleration capabilities, and high torque output over a wide speed range.

Various winding variants and numerous options are available offering maximum flexibility.



Contact Information

EMEA Product Information Centre
Free phone: 00 800 27 27 5374
(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL, IS, IT, LU, MT, NL, NO, PL, PT, RU, SE, SK, UK, ZA)
US Product Information Centre
Toll-free number: 1-800-27 27 537
www.parker.com

Product Features

- Suitable for use in explosive atmospheres
- UL and CE versions available
- High dynamic performance
- Compact and robust
- Maintenance free
- High power density
- High precision and motion quality
- Low cogging
- Large set of options
- Usable with all popular drives



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Explosion Proof Servo Motors - EX series

Applications

EX servo motors have been designed for use in industrial environments where there is an accumulation of gas, mist, dust or vapor which, when mixed with air, has the potential to catch fire or explode. That includes amongst other applications:

- Food, Pharma & Beverage
- Material Forming
- Printing, plastic Industry
- Hazardous / Ex Environment
- Painting robot
- Waste processing plants...

Safety compliance

Two versions are available: One conforming with both Canadian and US safety requirements



Another conforming with the European safety requirements



Technical characteristics

| | | |
|---------------------------------|--|--|
| Motor type | Permanent magnet synchronous motors | |
| Number of poles | 10 | |
| Torque range | 1.75 to 35 Nm | |
| Speed range | 2000 to 8000 min ⁻¹ | |
| Marking | CE | UL |
| Voltage supply | 230 / 400 VAC | 230 / 480 VAC |
| Conformance | ATEX 94/9/EC Directive | UL 674 standard: Electric Motors and Generators for use in Division 1 Hazardous (Classified) Locations |
| | EN60079-0, EN60079-1 EN61241-0 and EN61241-1 standards | |
| Classification | II 2G Ex d IIB T4 IP64 (Gas) | Class 1, Division 1, Group C & D |
| | II 2GD Ex d IIB T4 IP65 Ex tD A21 IP65 T135°C (Gas and dust) | |
| Ingress protection level | IP64 (standard) | IP65 |
| | IP65 (option) | |
| Connections | Cable glands | Tapped holes |

- Mounting
Flange with clearance holes
- Mechanical interface
 - Solid smooth shaft (standard)
 - Solid shaft with key (option)
- Feedback sensors
 - 2 pole resolver (standard)
 - Absolute EnDat encoder (option)
 - Absolute Hiperface encoder (option)
- Thermal protection
Thermoswitches and thermofuses integrated to the windings
- Other options
Parking brake

| Rated Speed N_{MAX} [min ⁻¹] | Stall Torque M_0 [Nm] | Stall Current I_0 [A _{RMS}] | Rated Torque M_N [Nm] | Rated Current I_N [A _{RMS}] | Peak Torque M_{MAX} [Nm] | Peak Current I_{MAX} [A _{RMS}] | Moment of Inertia J [kgmm ²] | Product Code |
|---|-------------------------------|---|-------------------------------|---|----------------------------------|--|--|--------------|
| 480 VAC power supply (other models and power supply available, please contact your local sales office) | | | | | | | | |
| 7600 | 1.6 | 2.46 | 1.03 | 1.74 | 3.98 | 6.29 | 79 | EX310U_UR1_1 |
| 7000 | 3.2 | 4.15 | 1.1 | 1.58 | 8 | 10.8 | 290 | EX420U_IR1_1 |
| 5700 | 4.4 | 4.88 | 1.72 | 2.07 | 11 | 12.6 | 426 | EX430U_GR1_1 |
| 5000 | 6.4 | 6.02 | 1.71 | 1.95 | 17.4 | 16.2 | 980 | EX620U_MR1_1 |
| 4200 | 9.5 | 7.91 | 4.38 | 4.02 | 23.8 | 19.4 | 1470 | EX630U_KR1_1 |
| 4000 | 12.9 | 9.1 | 5.77 | 4.27 | 30 | 22.8 | 3200 | EX820U_QR1_1 |
| 3000 | 22.6 | 12 | 5.84 | 3.39 | 60 | 34.6 | 6200 | EX840U_LR1_1 |
| 2500 | 31.4 | 13.9 | 8.31 | 4.01 | 90 | 43.5 | 9200 | EX860U_JR1_1 |

We reserve the right to make technical changes. The data correspond to the technical state at the time of printing.
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