



cyber motor

cyber[®] power motor AMW
liquid-cooled brushless servo motors

highly dynamic
high continuous torque
easily modified



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Liquid-cooled servo motors for highly dynamic servo applications

The WITTENSTEIN liquid-cooled cyber[®] power motors AMW (6 poles) are designed for highly dynamic servo applications with a wide speed range and variable load. These servo motors offer one of the largest power ranges in the industry, with standard models delivering continuous stall torque values from 1 to 137 Nm [8.8–1,211.6 lb-in].

Compared to their naturally-cooled counterpart (the cyber[®] power motor AM), the torque and output power of the cyber[®] power motors AMW are almost doubled, despite their sizes being almost the same. Another advantage of these liquid-cooled motors is their ability to operate at higher ambient temperatures.

The cyber[®] power motors AMW feature modular designs that support a variety of options. In addition, WITTENSTEIN cyber motor can provide fully customized solutions. We offer winding systems and special insulation options for different intermediate circuit voltages (12 V, 24 V, 48 V, 330 V, 560 V and 700 V_{DC}) as well as for a wide range of different voltage constants (from about 1 to 500 V min. / 1,000). For high speed applications, WITTENSTEIN cyber motor offers special rotors with double or triple bandages, in 2- or 4-pole variants. We can also customize active lengths and develop special mechanical designs for the flange, shaft end and bearings, for applications requiring higher radial and axial forces. Our motors can be engineered to meet even the toughest environmental requirements (higher temperature; hazardous or harsh environment), have increased IP ratings and be equipped with a variety of available encoder options to meet all our customer needs.

Specifications

| Dimensions | Measuring Unit | cyber [®] power motor AMW |
|-----------------------------------|---|------------------------------------|
| Continuous Stall Torque M° | Nm [lb-in] | 1–137 [8.8–1,211.6] |
| Peak Torque M _{max} | Nm [lb-in] | 2.6–181 [23–1,601] |
| Rated Speed n _N | min ⁻¹ (rpm) | 0–10,000 |
| Rated Power P _N | kW [hp] | 0.3–28.2 [0.402–37.82] |
| Rated Torque M _N | Nm [lb-in] | 0.98–136 [8.7–1,203] |
| Moment of Inertia J | kg m ² [lb-in sec ² x 10 ⁻⁴] | 0.12–81 [1.06–716.7] |
| Position Transducer | Standard / Optional | Resolver / Encoder |
| Temperature Monitoring | N/A | PTC, PT1000, Thermoswitch |
| Brake | N/A | Optional |
| Rated Bus Voltage V _{DC} | V | 300/560 (or customizable) |
| Certificate / Marks | N/A | CE |
| Cooling | N/A | Water * |

* The standard cooling agent for AMW servo motors is water. However, different types of coolants (e.g. oils, antifreeze mixtures, etc.) with varying temperature ranges are available upon request.

Features

- High continuous torque
- Compact dimensions
- High efficiency
- High quality production
- High precision assembly
- Long life and high operational reliability

Benefits

- Highly customizable
- High power density
- Space-saving equipment dimensions
- Rugged structure
- Minimal maintenance needs
- Ability to operate at increased ambient temperatures
- Different winding options available



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