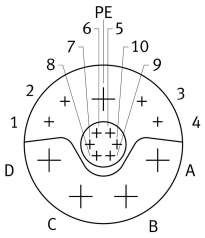
# Servo motor
# EMMT-AS-150-L-HS-R3MB

Part number: 8148328






## Data sheet

| Feature | Value |
|---|---|
| Ambient temperature | -15 °C...40 °C |
| Note on ambient temperature | Up to 80 °C with derating of -1.5% per degree Celsius |
| Max. installation height | 4000 m |
| Information on max. installation height | with 1,000 m and longer only with derating of -1.0% per 100 m |
| Storage temperature | -20 °C...70 °C |
| Relative air humidity | 0 - 90% |
| Conforms to standard | IEC 60034 |
| Thermal class according to EN 60034-1 | F |
| Max. winding temperature | 155 °C |
| Rating class according to EN 60034-1 | S1 |
| Temperature monitoring | Digital motor temperature transmission via EnDat® 2.2 |
| Motor type as per EN 60034-7 | IM B5<br>IM V1<br>IM V3 |
| Mounting position | Any |
| Degree of protection | IP21 |
| Note on degree of protection | IP21 for motor shaft without rotary shaft seal<br>IP65 for motor shaft with rotary shaft seal<br>IP67 for motor housing, incl. connection technology |
| Concentricity, coaxiality, axial runout according to DIN SPEC 42955 | N |
| Balancing quality | G 2.5 |
| Detent torque | <1.0% of peak torque |
| Bearing lifetime, under nominal conditions | 20000 h |
| Interface code, motor out | 150A |
| Electrical connection 1, connection type | Hybrid plug |
| Electrical connection 1, connection technology | M40x1 |
| Electrical connection 1, number of pins/wires | 15 |
| Contamination level | 2 |
| Note on materials | RoHS compliant |
| Corrosion resistance class (CRC) | 0 - No corrosion stress |

| Feature | Value |
|---|---|
| LABS (PWIS) conformity | VDMA24364 Zone III |
| Vibration resistance | as per EN 60068-2-6 |
| Shock resistance | as per EN 60068-2-29<br>15 g/11 ms as per EN 60068-2-27 |
| Certification | RCM compliance mark<br>c UL us - recognized (OL) |
| CE marking (see declaration of conformity) | As per EU EMC directive<br>As per EU low voltage directive<br>As per EU RoHS directive |
| UKCA marking (see declaration of conformity) | To UK instructions for EMC<br>To UK RoHS instructions<br>To UK instructions for electrical equipment |
| Certificate issuing authority | UL E342973 |
| Nominal operating voltage DC | 680 V |
| Type of winding switch | Star inside |
| Number of pole pairs | 5 |
| Stall torque | 45.5 Nm |
| Nominal torque | 29 Nm |
| Peak torque | 87 Nm |
| Nominal rotary speed | 2100 rpm |
| Max. rotational speed | 3495 rpm |
| Max. mechanical speed | 8000 rpm |
| Angular acceleration | 100000 rad/s² |
| Motor nominal power | 6377 W |
| Continuous stall current | 23.6 A |
| Motor nominal current | 15.4 A |
| Peak current | 49.5 A |
| Motor constants | 1.88 Nm/A |
| Standstill torque constant | 2.23 Nm/A |
| Voltage constant, phase-to-phase | 135.1 mVmin |
| Phase-phase winding resistance | 0.25 Ohm |
| Winding inductance phase-phase | 4.4 mH |
| Winding longitudinal inductivity Ld (phase) | 2.15 mH |
| Cross inductivity Lq (phase) | 2.2 mH |
| Electric time constant | 17.1 ms |
| Thermal time constant | 55 min |
| Thermal resistance | 0.39 K/W |
| Measuring flange | 450 x 450 x 30 mm, steel |
| Total output inertia moment | 70.1 kgcm² |
| Product weight | 29700 g |
| Permissible axial shaft load | 274 N |
| Permissible radial shaft load | 1370 N |
| Rotor position sensor | Absolute multi-turn encoder |
| Rotor position sensor for manufacturer designation | EQI 1331 |
| Rotor position encoder for absolutely detectable revolutions | 4096 |
| Rotor position sensor interface | EnDat 22 |
| Rotor position sensor measuring principle | Inductive |
| Rotor position encoder for DC operating voltage | 5 V |
| Rotor position encoder for DC operating voltage range | 3.6 V...14 V |
| Rotor position encoder for positional values per revolution | 524288 |
| Rotor position sensor resolution | 19 bit |
| Rotor position encoder system accuracy angle measurement | -65 arcsec...65 arcsec |
| Brake holding torque | 65 Nm |
| Brake DC operating voltage | 24 V |

| Feature | Value |
|---|---|
| Brake current consumption | 1.08 A |
| Brake power consumption | 26 W |
| Brake separation time | 200 ms |
| Brake closing time | 40 ms |
| DC brake response delay | 10 ms |
| Max. brake no-load speed | 8000 rpm |
| Max. friction work per braking operation | 40000 J |
| Number of emergency stops per hour | 1 |
| Total brake friction work | 4500 kJ |
| Brake mass moment of inertia | 12.5 kgcm² |
| Switching cycles, holding brake | 5 million idle actuations (without friction work!) |
| MTTF, subcomponent | 190 years, rotor position encoder |
| Energy efficiency | ENEFF (CN) / Class 1 |