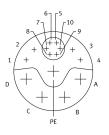
## Servo motor EMMT-AS-80-H-HS-RMYB Part number: 8185114





## **Data sheet**

| Feature   | Value   |
|---|---|
| Ambient temperature                                       | -15 °C40 °C   |
| Note on ambient temperature                               | Up to 80°C with derating of -1.5% per degree Celsius  |
| Max. installation height                                  | 4000 m  |
| Note on max. installation height                          | As of 1,000 m: only with derating of -1.0% per 100 m  |
| Storage temperature                                       | -20 °C70 °C   |
| Relative air humidity                                     | 0 - 90%   |
| Conforms to standard                                      | IEC 60034   |
| Temperature class as per EN 60034-1                       | F   |
| Max. winding temperature                                  | 155 ℃   |
| Rating class as per EN 60034-1                            | S1  |
| Temperature monitoring                                    | Digital motor temperature transmission via EnDat® 2.2   |
| Motor type to EN 60034-7                                  | IM B5<br>IM V1<br>IM V3   |
| Mounting position   | optional  |
| Degree of protection                                      | IP40  |
| Note on degree of protection                              | IP40 for motor shaft without rotary shaft seal<br>IP65 for motor shaft with rotary shaft seal<br>IP67 for motor housing including connection components |
| Concentricity, coaxiality, axial runout to DIN SPEC 42955 | N   |
| Balance quality   | G 2.5   |
| Detent torque   | <1,0% vom Spitzendrehmoment   |
| Bearing lifetime under nominal conditions                 | 20000 h   |
| Interface code, motor out                                 | 80P   |
| Electrical connection 1, connection type                  | Hybrid plug   |
| Electrical connection 1, connector system                 | M23x1   |
| Electrical connection 1, number of connections/cores      | 15  |
| Pollution degree  | 2   |
| Note on materials   | RoHS-compliant  |
| Corrosion resistance class CRC                            | 0 - No corrosion stress   |



| Feature  | Value   |
|--|---|
| LABS (PWIS) conformity                                 | VDMA24364 zone III  |
| Vibration resistance                                   | Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6                    |
| Shock resistance                                       | Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27                                   |
| Approval   | RCM trademark<br>German Technical Control Board (TÜV)<br>c UL us - Recognized (OL)                  |
| CE mark (see declaration of conformity)                | To EU EMC Directive<br>To EU Low Voltage Directive<br>In accordance with EU RoHS Directive          |
| CE marking (see declaration of conformity)             | To UK instructions for EMC<br>To UK RoHS instructions<br>To UK regulations for electrical equipment |
| Certificate issuing authority                          | TÜV 968/INS 464.00/24<br>UL E342973   |
| Nominal operating voltage DC                           | 565 V   |
| Type of winding switch                                 | Star inside   |
| Number of pole pairs                                   | 5   |
| Standstill torque                                      | 4.3 Nm  |
| Nominal torque   | 3.4 Nm  |
| Peak torque  | 13.5 Nm   |
| Nominal rotary speed                                   | 3000 rpm  |
| Max. rotational speed                                  | 6500 rpm  |
| Angular acceleration                                   | 100000 rad/s <sup>2</sup>   |
| Nominal power rating of motor                          | 1070 W  |
| Continuous stall current                               | 4.8 A   |
| Nominal motor current                                  | 3.8 A   |
| Peak current   | 21.7 A  |
| Motor constant   | 0.9 Nm/A  |
| Standstill torque constant                             | 1 Nm/A  |
| Voltage constant, phase-to-phase                       | 61.4 mVmin  |
| Phase-phase winding resistance                         | 2.21 Ohm  |
| Phase-phase winding inductance                         | 10.7 mH   |
| Winding longitudinal inductivity Ld (phase)            | 6.6 mH  |
| Winding cross inductivity Lq (phase)                   | 8 mH  |
| Electric time constant                                 | 7.2 ms  |
| Thermal time constant                                  | 51 min  |
| Thermal resistance                                     | 0.65 K/W  |
| Measuring flange                                       | 250 x 250 x 15 mm, steel  |
| Total mass moment of inertia of output                 | 2.43 kgcm <sup>2</sup>  |
| Product weight   | 4750 g  |
| Permissible axial shaft load                           | 120 N   |
| Permissible radial shaft load                          | 620 N   |
| Rotor position sensor                                  | Absolute multi-turn safety encoder  |
| rotor position sensor, manufacturer designation        | EQI 1131  |
| rotor position sensor, absolute detectable revolutions | 4096  |
| Rotor position encoder interface                       | EnDat® 22   |
| Rotor position sensor, encoder measuring principle     | Inductive   |
| rotor position sensor, DC operating voltage            | 5 V   |
| rotor position sensor, DC operating voltage range      | 3.6 V14 V   |
| rotor position sensor, position values per revolution  | 524288  |
| Rotor position transducer resolution                   | 19 bit  |
| Brake holding torque                                   | 7 Nm  |
| Operating voltage DC for brake                         | 24 V  |
| Power consumption, brake                               | 15 W  |

| Feature                                | Value   |
|--|---|
| Number of emergency stops per hour     | 1   |
| Mass moment of inertia of brake        | 0.459 kgcm <sup>2</sup>   |
| Switching cycles holding brake         | 10 million idle actuations (without friction work!)   |
| Safety device                          | Safety device   |
| Maximum SIL                            | Safety integrity level 3<br>See user documentation  |
| Safety sub-functions up to SIL2        | Reliable recording and transmission of single-turn position data  |
| Safety sub-functions up to SIL3        | Reliable recording and transmission of single-turn position data, only with additional software function in the servo drive |
| Maximum PL and category                | Performance Level e, Category 3<br>See user documentation   |
| Safety sub-function up to PL d, Cat. 3 | Reliable recording and transmission of single-turn position data  |
| Safety sub-function up to PL e, Cat. 3 | Reliable recording and transmission of single-turn position data, only with additional software function in the servo drive |
| PFHd, subcomponent                     | 15 x 10E-9, encoder   |
| Duration of use Tm, subcomponent       | 20 years, rotor position sensor   |
| Energy efficiency                      | ENEFF (CN) / Class 2  |