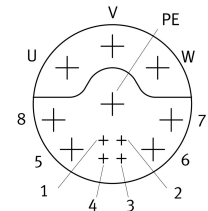


**Servo motor**  
**EMMH-AS-68-HKA-HS-S1M-T**  
 Part number: 8215346

**FESTO**



**Data sheet**

| Feature                                                             | Value                                                            |
|---------------------------------------------------------------------|------------------------------------------------------------------|
| Ambient temperature                                                 | -30 °C...40 °C                                                   |
| Note on ambient temperature                                         | Up to 80 °C with derating of -1.5% per degree Celsius            |
| Max. installation height                                            | 3000 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 - 100 %                                                        |
| 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 B14<br>IM V18                                                 |
| Mounting position                                                   | Any                                                              |
| Degree of protection                                                | IP69K                                                            |
| 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                                           | 68C                                                              |
| Electrical connection 1, connection type                            | Hybrid plug                                                      |
| Electrical connection 1, connection technology                      | M17x0.75                                                         |
| Electrical connection 1, number of pins/wires                       | 15                                                               |
| Contamination level                                                 | 2                                                                |
| Note on materials                                                   | RoHS-compliant                                                   |
| Corrosion resistance class (CRC)                                    | 4 - Particularly high corrosion stress<br>(except laser marking) |
| LABS (PWIS) conformity                                              | VDMA24364 zone III                                               |
| For use in the food industry                                        | Approved for direct food contact                                 |
| Vibration resistance                                                | as per EN 60068-2-6                                              |

| Feature                                                      | Value                                                                                                |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Shock resistance                                             | as per EN 60068-2-29<br>15 g/11 ms as per EN 60068-2-27                                              |
| Certification                                                | RCM compliance mark                                                                                  |
| 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 |
| Nominal operating voltage DC                                 | 680 V                                                                                                |
| Type of winding switch                                       | Star inside                                                                                          |
| Number of pole pairs                                         | 5                                                                                                    |
| Stall torque                                                 | 1.9 Nm                                                                                               |
| Nominal torque                                               | 1.15 Nm                                                                                              |
| Peak torque                                                  | 5.9 Nm                                                                                               |
| Nominal rotary speed                                         | 3100 rpm                                                                                             |
| Max. rotational speed                                        | 8350 rpm                                                                                             |
| Max. mechanical speed                                        | 10000 rpm                                                                                            |
| Angular acceleration                                         | 100000 rad/s <sup>2</sup>                                                                            |
| Motor nominal power                                          | 375 W                                                                                                |
| Continuous stall current                                     | 2.4 A                                                                                                |
| Motor nominal current                                        | 1.6 A                                                                                                |
| Peak current                                                 | 7.5 A                                                                                                |
| Motor constants                                              | 0.73 Nm/A                                                                                            |
| Standstill torque constant                                   | 0.79 Nm/A                                                                                            |
| Voltage constant, phase-to-phase                             | 53.6 mVmin                                                                                           |
| Phase-phase winding resistance                               | 4.8 Ohm                                                                                              |
| Winding inductance phase-phase                               | 9.5 mH                                                                                               |
| Winding longitudinal inductivity Ld (phase)                  | 4.3 mH                                                                                               |
| Cross inductivity Lq (phase)                                 | 4.8 mH                                                                                               |
| Electric time constant                                       | 2.2 ms                                                                                               |
| Thermal time constant                                        | 55 min                                                                                               |
| Thermal resistance                                           | 1.25 K/W                                                                                             |
| Measuring flange                                             | 300 x 300 x 30 mm, steel                                                                             |
| Rotor mass moment of inertia                                 | 0.7 kgcm <sup>2</sup>                                                                                |
| Total output inertia moment                                  | 0.7 kgcm <sup>2</sup>                                                                                |
| Product weight                                               | 3300 g                                                                                               |
| Permissible axial shaft load                                 | 68 N                                                                                                 |
| Permissible radial shaft load                                | 340 N                                                                                                |
| Rotor position sensor                                        | Absolute encoder, multi-turn                                                                         |
| Rotor position sensor for manufacturer designation           | EQI 1131                                                                                             |
| 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     | -120 arcsec...120 arcsec                                                                             |
| MTTF, subcomponent                                           | 190 years, rotor position sensor                                                                     |