

# Servomotor EMMB-AS-60-04-K-S30S

Part number: 8097181

FESTO



## Data sheet

| Feature   | Value   |
|---|---|
| Ambient temperature   | -15 ... 40 °C   |
| Note on ambient temperature   | Up to 60° C with derating of -1.5% per degree Celsius   |
| Max. installation height  | 4,000 m   |
| Note on max. installation height                                    | As of 1,000 m, only with derating of -1.0% per 100 m  |
| Storage temperature   | -20 ... 55 °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 Nikon A format   |
| Motor type acc. to EN 60034-7                                       | IM B5<br>IM V1<br>IM V3   |
| Assembly position   | Any   |
| Protection class  | IP65  |
| Note on degree of protection  | IP40 motor shaft without RWDR<br>IP54 motor shaft with rotary shaft seal<br>IP65 motor housing without connection |
| Concentricity, coaxiality, axial runout according to DIN SPEC 42955 | N   |
| Balance quality   | G 2,5   |
| Storage lifetime under nominal conditions                           | 20,000 h  |
| Shaft design Featherkey   | DIN 6885<br>A 5 x 5 x 16  |
| Electrical connection 1, connection type                            | Plug  |
| Electrical connection 1, connection technology                      | Connection pattern RE   |
| Electrical connection 1, number of pins/wires                       | 6   |
| Degree of contamination   | 2   |
| Materials note  | Conforms to RoHS  |
| Corrosion resistance classification CRC                             | 0 - No corrosion stress   |
| PWIS conformity   | VDMA24364 zone III  |
| Vibration resistance  | Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6                    |
| Shock resistance  | Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27                                 |
| Authorization   | c UL us - Recognized (OL)   |
| CE symbol (see declaration of conformity)                           | according to EU-EMV guideline<br>according to EU low voltage guideline<br>in accordance with EU RoHS directive    |
| UKCA marking (see declaration of conformity)                        | To UK instructions for electrical equipment<br>To UK instructions for EMC<br>To UK RoHS instructions              |
| Certificate issuing department                                      | UL E342973  |
| Nominal operating voltage DC  | 300 V   |
| Nominal voltage DC  | 300 V   |
| Type of winding switch  | Star inside   |

| Feature   | Value                        |
|---|------------------------------|
| Number of pole pairs  | 3                            |
| Standstill torque   | 1.4 Nm                       |
| Nominal torque  | 1.27 Nm                      |
| Peak torque   | 3.81 Nm                      |
| Nominal rotary speed  | 3,000 1/min                  |
| Max. speed  | 6,000 1/min                  |
| Max. mechanical speed                                       | 10,000 1/min                 |
| Nominal motor power   | 400 W                        |
| Continuous open-circuit current                             | 2.6 A                        |
| Nominal motor current                                       | 2.4 A                        |
| Peak current  | 7.2 A                        |
| Motor constant  | 0.562 Nm/A                   |
| Voltage constant, phase-to-phase                            | 34 mVmin                     |
| Phase-phase winding resistance                              | 5.8 Ohm                      |
| Phase-phase winding inductance                              | 11.5 mH                      |
| Electric time constant                                      | 1.98 ms                      |
| Measuring flange  | 255 x 255 x 8, aluminium     |
| Overall mass moment of inertia at power take-off            | 0.405 kgcm <sup>2</sup>      |
| Product weight  | 1,600 g                      |
| Permissible axial shaft load                                | 90 N                         |
| Permissible radial shaft load                               | 180 N                        |
| Rotor position sensor                                       | Absolute single turn encoder |
| Rotor position sensor, manufacturer designation             | SAR-ML50AJC00                |
| Rotor position sensor, absolute detectable revolutions      | 1                            |
| Rotary position encoder interface                           | Nikon A format               |
| Rotary position encoder measuring principle                 | Optical                      |
| Rotor position sensor, DC operating voltage                 | 5 V                          |
| Rotor position sensor, DC operating voltage range           | 4.75 ... 5.25 V              |
| Rotor position sensor, position values per revolution       | 1,048,576                    |
| Rotor position encoder resolution                           | 20 Bit                       |
| Rotor position sensor, system accuracy of angle measurement | -120 ... 120 arcsec          |