

# servo motor EMMB-AS-40-01-K-S30M

Part number: 8097169

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 to EN 60034-7	IM B5 IM V1 IM V3
Assembly position	Any
Protection class	IP65
Note on degree of protection	IP40 motor shaft without RWDR IP54 motor shaft with rotary shaft seal IP65 motor housing without connection
Concentricity, coaxiality, axial runout to DIN SPEC 42955	N
Balance quality	G 2,5
Storage lifetime under nominal conditions	20,000 h
Shaft design Featherkey	DIN 6885 A 3 x 3 x 12
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
Authorisation	c UL us - Recognized (OL)
CE mark (see declaration of conformity)	to EU directive for EMC to EU directive low-voltage devices in accordance with EU RoHS directive
UKCA marking (see declaration of conformity)	To UK instructions for electrical equipment To UK instructions for EMC 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	5
Standstill torque	0.352 Nm
Nominal torque	0.32 Nm
Peak torque	0.96 Nm
Nominal rotary speed	3,000 1/min
Max. speed	6,000 1/min
Max. mechanical speed	10,000 1/min
Nominal motor power	100 W
Continuous open-circuit current	1.43 A
Nominal motor current	1.3 A
Peak current	3.9 A
Motor constant	0.268 Nm/A
Voltage constant, phase-to-phase	16.2 mVmin
Phase-phase winding resistance	7.9 Ohm
Phase-phase winding inductance	10.5 mH
Electric time constant	1.33 ms
Measuring flange	175 x 200 x 10, aluminium
Overall mass moment of inertia at power take-off	0.059 kgcm <sup>2</sup>
Product weight	570 g
Permissible axial shaft load	60 N
Permissible radial shaft load	120 N
Rotor position sensor	Absolute multi-turn encoder
Rotor position sensor, manufacturer designation	MAR-MX50AHN00
Rotor position sensor, absolute detectable revolutions	65,536
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