Servo motor EMME-AS-80-M-LS-ASB Part number: 2093170

FESTO



General operating condition

Data sheet

Type of winding switch Number of pole pairs Stall torque 3.5 Nm Nominal torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase Phase-phase winding resistance Star inside Star inside 3.5 Nm 3.5 Nm 3.5 Nm 4.627 rpm 14 Nm 15.6 A 0.865 Nm/A 55 mVmin	Feature	Value
Relative air humidity 0 - 90 % Conforms to standard Insulation protection class F Rating class according to EN 60034-1 Degree of protection IP21 Electrical connection technology Plug Note on materials RoHS-compliant Corrosion resistance class (CRC) O - No corrosion stress LABS (PWIS) conformity VDMA24364 zone III Certification RCM compliance mark cult us - Recognized (O1) CE marking (see declaration of conformity) As per EU EMC directive As per EU BMC directive As per EU ROHS directive As	Ambient temperature	-10 °C 40 °C
Conforms to standard Insulation protection class F Rating class according to EN 60034-1 Degree of protection Electrical connection technology Plug Note on materials RoHS-compliant Corrosion resistance class (CRC) O-No corrosion stress LABS (PWIS) conformity VDMA24364 zone III Certification RCM compliance mark c UL us - Recognized (OI) CE marking (see declaration of conformity) As per EU ROHS directive As per EU ROHS directive As per EU ROHS directive As per EU ROHS of structions To UK instructions for EMC To UK RoHS instructions To UK instructions for electrical equipment Nominal operating voltage DC DC nominal voltage 360 V Type of winding switch Star inside Number of pole pairs 3 Stall torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power Continuous stall current 3.7 A Peak current Motor constants 0.865 Nm/A Motor constants 0.865 Nm/A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase F As per Eu Roh Wang Via mell Via	Storage temperature	-20 °C 70 °C
Insulation protection class Rating class according to EN 60034-1 Degree of protection Electrical connection technology Note on materials RoHS-compliant Corrosion resistance class (CRC) O - No corrosion stress LABS (PWIS) conformity VDMA24364 zone III Certification RCM compliance mark cUL us - Recognized (OL) CE marking (see declaration of conformity) As per EU ROHS directive As per EU ROHS	Relative air humidity	0 - 90 %
Rating class according to EN 60034-1 Degree of protection IP21 Electrical connection technology Note on materials Corrosion resistance class (CRC) O - No corrosion stress LABS (PWIS) conformity VDMA24364 zone III Certification CE marking (see declaration of conformity) CE marking (see declaration of conformity) WCAP as per EU low voltage directive As per EU now lotted in the conformity of UK Instructions for EMC TO UK Inst	Conforms to standard	IEC 60034
Degree of protection IP21 Electrical connection technology Plug Note on materials RoHS-compliant Corrosion resistance class (CRC) O - No corrosion stress LABS (PWIS) conformity VDMA24364 cpt III Certification RCM compliance mark CUL us - Recognized (OL) CE marking (see declaration of conformity) As per EU Iwo Vultage directive As per EU Row Outlage directive As per EU Row Outlage directive UKCA marking (see declaration of conformity) To UK instructions for EMC To UK RoHS instructions To UK instructions for electrical equipment Nominal operating voltage DC 360 V Type of winding switch Star inside Number of pole pairs 3 Stall torque 3.5 Nm Nominal torque 3.5 Nm Nominal torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.9 A Motor nominal current 3.65 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 0hm Winding inductance phase-phase 7.43 mH	Insulation protection class	F
Electrical connection technology Note on materials RoHS-compliant Corrosion resistance class (CRC) O-No corrosion stress LABS (PWIS) conformity VDMA24364 zone III Certification RCM compliance mark cUL us - Recognized (OL) CE marking (see declaration of conformity) As per EU EMC directive As per EU RoHS directi	Rating class according to EN 60034-1	S1
Note on materials Corrosion resistance class (CRC) O - No corrosion stress LABS (PWIS) conformity VDMA24364 zone III Certification RCM compliance mark cUL us - Recognized (OL) CE marking (see declaration of conformity) As per EU EMC directive As per EU low voltage directive As per EU tow toltage directive As	Degree of protection	IP21
Corrosion resistance class (CRC) LABS (PWIS) conformity VDMA24364 zone III Certification RCM compliance mark cult us - Recognized (OL) CE marking (see declaration of conformity) As per EU EMC directive As per EU RMC	Electrical connection technology	Plug
LABS (PWIS) conformity Certification RCM compliance mark c UL us - Recognized (OL) CE marking (see declaration of conformity) As per EU EMC directive As per EU Row voltage directive As per EU Row Solt irective UKCA marking (see declaration of conformity) To UK instructions for EMC To UK RoWES instructions To UK instructions To UK instructions for electrical equipment Nominal operating voltage DC 360 V DC nominal voltage 360 V Star inside Number of pole pairs 3 Stall torque 3.5 Nm Nominal torque 3.2 Nm Peak torque 14 Nm Nominal torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current Motor nominal current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase Fase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Note on materials	RoHS-compliant
Certification RCM compliance mark c UL us - Recognized (OL) CE marking (see declaration of conformity) As per EU EMC directive As per EU Iow voltage directive As per EU RoMS directive UKCA marking (see declaration of conformity) To UK instructions for EMC To UK RoMS instructions To UK instructions for EMC TO UK RoMS instructions To UK instructions for electrical equipment Nominal operating voltage DC 360 V DC nominal voltage 360 V Type of winding switch Star inside Number of pole pairs 3 Stall torque 3.5 Nm Nominal torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor rominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Corrosion resistance class (CRC)	0 - No corrosion stress
CE marking (see declaration of conformity) As per EU EMC directive As per EU low voltage directive As per EU RoHS directive UKCA marking (see declaration of conformity) To UK instructions for EMC To UK RoHS instructions To UK instructions for electrical equipment Nominal operating voltage DC 360 V DC nominal voltage 360 V Type of winding switch Star inside Number of pole pairs 3 Stall torque 3.5 Nm Nominal torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	LABS (PWIS) conformity	VDMA24364 zone III
As per EU low voltage directive As per EU RoHS directive To UK RoHS instructions for EMC To UK RoHS instructions for EMC To UK RoHS instructions for electrical equipment Nominal operating voltage DC 360 V DC nominal voltage 360 V Type of winding switch Star inside Number of pole pairs 35 Nm Stall torque 3.5 Nm Nominal torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase	Certification	· ·
To UK RoHS instructions To UK instructions To UK instructions for electrical equipment Nominal operating voltage DC DC nominal voltage 360 V Type of winding switch Star inside Number of pole pairs 3 Stall torque 3.5 Nm Nominal torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase Phase-phase winding resistance Winding inductance phase-phase 7.43 mH	CE marking (see declaration of conformity)	As per EU low voltage directive
DC nominal voltage Type of winding switch Star inside Number of pole pairs 3 Stall torque 3.5 Nm Nominal torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance Winding inductance phase-phase 7.43 mH	UKCA marking (see declaration of conformity)	To UK RoHS instructions
Type of winding switch Number of pole pairs 3 Stall torque 3.5 Nm Nominal torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase Voltage rephase winding resistance 2.8 Ohm Winding inductance phase-phase	Nominal operating voltage DC	360 V
Number of pole pairs Stall torque 3.5 Nm Nominal torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase Voltage constant, phase-to-phase Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase	DC nominal voltage	360 V
Stall torque 3.5 Nm Nominal torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Type of winding switch	Star inside
Nominal torque 3.2 Nm Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Number of pole pairs	3
Peak torque 14 Nm Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 15.6 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Stall torque	3.5 Nm
Nominal rotary speed 3000 rpm Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 15.6 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Nominal torque	3.2 Nm
Max. rotational speed 4627 rpm Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 15.6 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Peak torque	14 Nm
Motor nominal power 1000 W Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Nominal rotary speed	3000 rpm
Continuous stall current 3.9 A Motor nominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Max. rotational speed	4627 rpm
Motor nominal current 3.7 A Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Motor nominal power	1000 W
Peak current 15.6 A Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Continuous stall current	3.9 A
Motor constants 0.865 Nm/A Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Motor nominal current	3.7 A
Voltage constant, phase-to-phase 55 mVmin Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Peak current	15.6 A
Phase-phase winding resistance 2.8 Ohm Winding inductance phase-phase 7.43 mH	Motor constants	0.865 Nm/A
Winding inductance phase-phase 7.43 mH	Voltage constant, phase-to-phase	55 mVmin
	Phase-phase winding resistance	2.8 Ohm
Total output inertia moment 2.2 kgcm ²	Winding inductance phase-phase	7.43 mH
	Total output inertia moment	2.2 kgcm ²

Feature	Value
Product weight	4350 g
Permissible axial shaft load	72 N
Permissible radial shaft load	360 N
Rotor position sensor	Absolute encoder, single-turn
Rotor position sensor interface	HIPERFACE®
Rotor position sensor measuring principle	Capacitive
Rotor position encoder, sinusoidal/cosinusoidal periods per revolution	16
Typical rotor position sensor resolution	12 bit
Rotor position encoder, typical angular accuracy	20 arcmin
Brake holding torque	4.5 Nm
Brake DC operating voltage	24 V
Brake power consumption	12 W
Brake mass moment of inertia	0.222 kgcm²
Switching cycles, holding brake	5 million idle actuations (without friction work!)
MTTF, subcomponent	797 years, holding brake
MTTFd, subcomponent	340 years, rotor position sensor
Energy efficiency	ENEFF (CN) / Class 2