

Rotary gripper module EHMD-50-RE-GE-15

Part number: 8176191

FESTO



 General operating condition

Data sheet

Feature	Value
Size	50
Rotation angle	Infinite
Stroke per gripper jaw	15 mm
Controllable stroke range per gripper jaw	0 mm ... 15 mm
Reversing backlash	800 µm
Step angle with full step	1.8 deg
Step angle full step, rotation	1.8 deg
Step angle tolerance	±5%
Stepping angle tolerance, rotation	±5 %
Number of gripper jaws	2
Mounting position	Any
Structural design	Electric rotary actuator Electric gripper drive
Mode of operation	Electric parallel gripper
Mode of operation, rotation	Hybrid stepper motor
Gear ratio	1:1
Position sensing	Rotation: motor encoder Gripping: motor encoder
Gripper function	Parallel
Motor type	Stepper motor
Homing	Rotation: encoder index Gripping: fixed stop block
Rotor position sensor	Incremental encoder
Rotor position sensor interface	RS422 TTL A/B channels + zero index
Rotor position sensor measuring principle	Optical
Max. output speed	240 rpm
Max. speed	0.025 m/s
Max. homing speed	0.005 m/s
Max. positioning speed per gripper jaw	25 mm/s
Max. gripping speed per gripper jaw	10 mm/s
Duty cycle	100%
Insulation protection class	B
Max. current consumption	<60 mA
Max. current consumption, rotation	<60 mA
Nominal operating voltage DC	24 V
Nominal operating voltage DC, rotation	5 V

Feature	Value
DC nominal voltage	24 V
Winding inductance phase	2.8 mH
Winding inductance phase, rotation	2.3 mH
Phase winding resistance	2 Ohm
Winding resistance phase, rotation	0.83 Ohm
Pulses per revolution	500
Pulses per revolution, rotation	500
Nominal current per phase	0.5 A
Nominal current per phase, rotation	2.8 A
Certification	RCM compliance mark
CE marking (see declaration of conformity)	As per EU EMC directive As per EU RoHS directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC
Vibration resistance	Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6
LABS (PWIS) conformity	VDMA24364 zone III
Storage temperature	-20 °C ... 70 °C
Relative air humidity	0 - 85 % Non-condensing
Degree of protection	IP20
Ambient temperature	18 °C ... 28 °C
Gripping force per gripper jaw	18 N ... 67 N
Gripping force at 25% nominal current	12 N ... 22 N
Gripping force at nominal current	61 N ... 71 N
Motor holding torque	0.115 Nm
Holding torque motor, rotation	1 Nm
Mass moment of inertia	0.038 kgcm ²
Mass moment of inertia, rotation	0.51 kgcm ²
Max. output torque	1 Nm
Maximum force on gripper jaw Fz, static	15 N
Maximum torque on gripper jaw, Mx static	3.5 Nm
Maximum torque on gripper jaw, My static	5 Nm
Maximum torque on gripper jaw, Mz static	5 Nm
Maximum rated load	0.5 kg
Feed constant	2.3 mm/U
Permissible axial shaft load	15 N
Permissible radial shaft load	0 N
Product weight	1255 g
Electrical connection 1, function	2x motor
Electrical connection 1, connection type	Plug
Electrical connection 1, connection technology	PTSM
Electrical connection 1, number of pins/wires	8
Electrical connection for input 1, connection pattern	00997539
Electrical connection 2, function	2x encoder
Electrical connection 2, connection type	Plug
Electrical connection 2, connection technology	JST-ZH
Electrical connection 2, number of pins/wires	16
Electrical connection 2, connection pattern	00997540
Type of mounting	With dovetail slot
Note on materials	RoHS-compliant
Cover material	PA-reinforced
Housing material	Wrought aluminum alloy, anodized