

# Rotary gripper module EHMD-40-RE-GE-16

Part number: 8099502

FESTO



 General operating condition

## Data sheet

Feature	Value
Size	40
Rotation angle	Infinite
Stroke per gripper jaws	15 mm
Controllable stroke range per gripper jaw	0 mm ... 15 mm
Reversing backlash theoretical	800 µm
Stepper angle for complete step	1.8 deg
Step angle full step, rotation	1.8 deg
Stepping angle tolerance	±5%
Step angle tolerance, rotation	±5%
Number of gripper jaws	2
Mounting position	Any
Design	Electric rotary drive Electric gripper
Mode of operation	Electric parallel gripper
Operating mode, rotation	Hybrid stepper motor
Gear unit ratio	1:1
Position detection	Turning: Motor encoder Gripping: Motor encoder
Gripper function	Parallel
Type of motor	Stepper motor
Referencing	Turning: Encoder index Gripping: Fixed-stop block
Rotor position sensor	Incremental encoder
Rotor position encoder interface	RS422 TTL AB channels + zero index
Rotor position sensor, encoder measuring principle	Optical
Max. drive output speed	240 rpm
Max. speed	0.07 m/s
Max. homing speed	0.005 m/s
Max. gripping speed per gripper jaw	70 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
Note on motor nominal current	0.5 A for gripper drive

Feature	Value
Nominal voltage DC	24 V
Phase winding inductance	4 mH
Winding inductance phase, rotation	11 mH
Phase winding resistance	5.6 Ohm
Winding resistance phase, rotation	5.8 Ohm
Pulses per revolution	500
Pulses per revolution, rotation	500
Nominal current per phase	0.5 A
Nominal current per phase, rotation	0.9 A
Approval	RCM
KC mark	KC-EMV
CE mark (see declaration of conformity)	To EU EMC Directive In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC
Vibration resistance	Transport application test with severity level 1 to FN 942017-4 and EN 60068-2-6
LABS (PWIS) conformity	VDMA24364 zone III
Storage temperature	-20 °C ... 70 °C
Relative air humidity	Non-condensing
Degree of protection	IP20
Ambient temperature	0 °C ... 40 °C
Gripping force per gripper jaw	3 N ... 14 N
Residual gripping force in the event of a power failure	4 N
Gripping force at nominal current	14 N
Motor holding torque	0.043 Nm
Holding torque motor, rotation	0.3 Nm
Mass moment of inertia	0.009 kgcm <sup>2</sup>
Mass moment of inertia, rotation	0.234 kgcm <sup>2</sup>
Max. output torque	0.3 Nm
Max. force on gripper jaw Fz static	30 N
Max. torque at gripper Mx static	1.5 Nm
Max. torque at gripper My static	1.5 Nm
Max. torque at gripper Mz static	1.5 Nm
Max. nominal load	0.25 kg
Feed constant	4.4 mm/U
Product weight	724 g
Electrical connection 1, function	2x encoder 2x motor
Electrical connection 1, connection type	Plug
Electrical connection 1, connector system	Connection pattern F1
Electrical connection 1, number of connections/cores	31
Electrical connection 1, connection pattern	00995929
Type of mounting	Via dovetail slot
Note on materials	RoHS compliant
Material cover	Reinforced PA
Material housing	Anodised wrought aluminium alloy