Rotary drive unit ERMS-32-180-ST-M-H1-PLK-AA

FESTO

Part number: 8087822





General operating condition

Electromechanical rotary actuator With integrated drive with integrated drive with integrated garbox Mounting position Any Type of mounting With internal thread Rotation angle Gear ratio 7:1 Max. rotational speed 100 rpm Max. speed at 90° 100 rpm Torsional backlash 0.2 deg Repetition accuracy 20.1° Position sensing Motor encoder Max. axial force 450 N Max. axial force 450 N Max. ratial force 950 N Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle with full step 1.8 deg Step angle tolerance 250 Lycycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, connection pattern 0.0995989 Logic interface, connection type Plug Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation PC comminal voltage DC comminal voltage DC comminal voltage PC axis contaction permissible voltage fluctuations Premissible voltage fluctuations PC memissible voltage fluctuations PC remissible voltage fluctuations PC final max care for inconsumption PC mominal current PC Axis contaction permissible voltage fluctuations PC final max care for inconsumption PC mominal current PC Axis contaction PC memissible voltage fluctuations PC final mounts according the function of the properties of the p	Feature	Value
With integrated drive with integrated gearbox Mounting position Any Type of mounting With internal thread Rotation angle Gear ratio 7:1 Max. rotational speed 100 rpm Max. speed at 90° 100 rpm Torsional backlash 0.2 deg Repetition accuracy 40.1° Position sensing Motor encoder Max. axial force 450 N Max. ratial force 550 N Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle with full step 1.8 deg Step angle tolerance 100% Power supply, type of connection Plug Power supply, type of connection Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, connection pattern Logic interface, connection type Plug Logic interface, connection type Plug Max. calle length 15 m outputs 15 m inputs 20 m for 10-Link® operation PC comminal outrent Max. calle length 15 m outputs 15 m inputs 20 m Max. calle length Pcomer supply functionsumption Pcomer supply and connection pattern Power supply connection pattern Power supply connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection type Plug Anx. calle length 15 m outputs 15 m inputs 20 m for 10-Link® operation PC nominal outrent Max. current consumption Fermissible voltage fluctuations 4/-15 %	Size	32
Type of mounting Rotation angle Gear ratio 7:1 Max. rotational speed 100 rpm Max. speed at 90° 100 rpm Torsional backlash 0.2 deg Repetition accuracy 40.1° Rossition sensing Motor encoder Max. axila force 450 N Max. radial force 550 N Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle otlerance 15% Duty cycle 100% Power supply, type of connection Power supply, number of pins/wires 4 Power supply, connection pattern 00995999 Logic interface, connection technology Max. cable length 15 m outputs 15 m inputs 20 m for 10-Link© operation DC nominal current 53 M Max. current Consumption Fermissible voltage fluctuations 4/-15 %	Structural design	With integrated drive
Rotation angle 180° Gear ratio 7:1 Max. rotational speed 190° 100 rpm Max. speed at 90° 100 rpm Torsional backlash 0.2 deg Repetition accuracy ±0.1° Position sensing Motor encoder Max. axial force 450 N Max. radial force 550 N Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle with full step 1.8 deg Step angle tolerance ±5% Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, number of pins/wires 4 Power supply, connection pattern 0099589 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, number of poles/wires 8 Logic interface, number of poles/wires 8 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for 10-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Max. current consumption +/- 15 %	Mounting position	Any
Gear ratio 7:1 Max. rotational speed 100 rpm Max. speed at 90° 100 rpm Torsional backlash 0.2 deg Repetition accuracy 40.1° Max. axial force 450 N Max. radial force 550 N Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle tolerance 45% Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, connection type 10gic interface, connection type 10gic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection pattern 00995989 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5.4 Max. current consumption 500 mA Permissible voltage fluctuations +/- 15 %	Type of mounting	With internal thread
Max. rotational speed 100 rpm Max. speed at 90° 100 rpm Torsional backlash 0.2 deg Repetition accuracy ±0.1° Position sensing Motor encoder Max. axial force 450 N Max. radial force 550 N Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle with full step 1.8 deg Step angle tolerance ±5% Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, connection pattern 0.0995989 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection pattern 0.0992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link⊕ operation DC nominal voltage 15 A Max. current consumption 5300 mA Permissible voltage fluctuations +/-15 %	Rotation angle	180°
Max. speed at 90° 100 rpm Torsional backlash 0.2 deg Repetition accuracy 40.1° Position sensing Motor encoder Max. axial force 450 N Max. radial force 550 N Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle with full step 1.8 deg Step angle tolerance 45% Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, connection pattern 00995989 Logic interface, connection type Plug Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5 A Max. current consumption 5300 mA +/-15 %	Gear ratio	7:1
Torsional backlash 0.2 deg Repetition accuracy 40.1 ° Position sensing Motor encoder Max. axial force 450 N Max. radial force 550 N Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle with full step 1.8 deg Step angle tolerance ±5% Duty cycle 100% Power supply, type of connection Plug Power supply, connection pattern 00995989 Logic interface, connection type Logic interface, connection pattern 00992264 Max. cable length DC nominal voltage Nominal current Motor nominal current Max. carrent consumption Permissible voltage fluctuations 4.01° Motor nominal current 4.01° Motor nominal current 4.02 deg Motor nomoder 4.01° Motor nominal current 4.03 deg Motor nomoder Motor nominal current 4.01° Motor nominal current 5.3 A Max. current consumption 4.01° Motor nominal current 5.30 m 4.7-15 %	Max. rotational speed	100 rpm
Repetition accuracy Position sensing Motor encoder Max. axial force 450 N Max. radial force 550 N Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle with full step 1.8 deg Step angle tolerance 150 W Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, number of pins/wires 4 Power supply, connection type Logic interface, connection type Logic interface, connection pattern 00992264 Max. cable length DC nominal voltage Nominal current S A Max. current consumption Permissible voltage fluctuations 40.10 A50 N Motor nominal current A50 N Motor n	Max. speed at 90°	100 rpm
Position sensing Motor encoder Max. axial force 450 N Max. radial force 550 N Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle with full step 1.8 deg Step angle tolerance 45% Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, connection pattern 0.0995989 Logic interface, connection type Plug Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection pattern 0.099264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5.4 Max. current consumption 5300 mA Permissible voltage fluctuations 4/-15 %	Torsional backlash	0.2 deg
Max. axial force 550 N Max. radial force 550 N Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle with full step 1.8 deg Step angle tolerance 5% Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, connection pattern 00995989 Logic interface, connection type Plug Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection technology M2x1, A-coded as per EN 61076-2-101 Logic interface, connection type Plug Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption 5300 mA Permissible voltage fluctuations +/-15 %	Repetition accuracy	±0.1 °
Max. radial force Permissible mass moment of inertia 0.0164 kgm² Product weight 2304 g Step angle with full step 1.8 deg Step angle tolerance 45% Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, connection pattern 00995989 Logic interface, connection type Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption Fermissible voltage fluctuations +/-15 %	Position sensing	Motor encoder
Permissible mass moment of inertia O.0164 kgm² Product weight Step angle with full step 1.8 deg Step angle tolerance 45% Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, number of pins/wires 4 Power supply, connection pattern 00995989 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, number of poles/wires 8 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption Permissible voltage fluctuations +/-15 %	Max. axial force	450 N
Product weight 2304 g Step angle with full step 1.8 deg Step angle tolerance ±5% Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, number of pins/wires 4 Power supply, connection type 00995989 Logic interface, connection type Plug Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, number of poles/wires 8 Logic interface, number of poles/wires 8 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption 5300 mA Permissible voltage fluctuations +/-15 %	Max. radial force	550 N
Step angle with full step 1.8 deg Step angle tolerance ±5% Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, number of pins/wires 4 Power supply, connection pattern 00995989 Logic interface, connection type Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, number of poles/wires 8 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption Permissible voltage fluctuations 1,20% 1,20% 1,20% 1,30% 1,30% 1,40% 1,5	Permissible mass moment of inertia	0.0164 kgm²
Step angle tolerance ±5% Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, number of pins/wires 4 Power supply, connection pattern 00995989 Logic interface, connection type Plug Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, number of poles/wires 8 Logic interface, number of poles/wires 8 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5.4 Max. current consumption 5300 mA Permissible voltage fluctuations +/- 15 %	Product weight	2304 g
Duty cycle 100% Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, number of pins/wires 4 Power supply, connection pattern 00995989 Logic interface, connection type Plug Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, number of poles/wires 8 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5A Max. current consumption 5300 mA Permissible voltage fluctuations +/- 15 %	Step angle with full step	1.8 deg
Power supply, type of connection Plug Power supply, connection technology M12x1, T-coded as per EN 61076-2-111 Power supply, number of pins/wires 4 Power supply, connection pattern 00995989 Logic interface, connection type Plug Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, number of poles/wires 8 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption Premissible voltage fluctuations +/- 15 %	Step angle tolerance	±5%
Power supply, connection technology Power supply, number of pins/wires 4 Power supply, connection pattern O0995989 Logic interface, connection type Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, number of poles/wires 8 Logic interface, connection pattern O0992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5 A Motor nominal current 5 A Max. current consumption Fermissible voltage fluctuations M12x1, T-coded as per EN 61076-2-111 4 Accoded as per EN 61076-2-101 B12x1, A-coded as per EN 61076-2-101 B2x1 Accoded as per EN 61076-2-101 B2x1 Accoded as per EN 61076-2-101 B2x1 B3x1 B3x1 B4x1	Duty cycle	100%
Power supply, number of pins/wires Power supply, connection pattern O0995989 Logic interface, connection type Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, number of poles/wires 8 Logic interface, connection pattern O0992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5 A Motor nominal current 5 A Max. current consumption Permissible voltage fluctuations 4 O0995989 Plug M12x1, A-coded as per EN 61076-2-101 8 8 A12x1, A-coded as per EN 61076-2-101 8 A12x1, A-coded as per EN 61076-2-101 A12x1, A-coded as per EN 61076-2-101 8 A12x1, A-coded as per EN 61076-2-101 A12x	Power supply, type of connection	Plug
Power supply, connection pattern Logic interface, connection type Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, number of poles/wires 8 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption Permissible voltage fluctuations 100995989 Plug M12x1, A-coded as per EN 61076-2-101 8 8 Logic interface, connection pattern 00992264 8 A Noter nonection pattern 5 A 5 A 5 A Max. current consumption 5 A Fermissible voltage fluctuations	Power supply, connection technology	M12x1, T-coded as per EN 61076-2-111
Logic interface, connection type Logic interface, connection technology M12x1, A-coded as per EN 61076-2-101 Logic interface, number of poles/wires 8 Logic interface, connection pattern 00992264 Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption 5300 mA Permissible voltage fluctuations +/- 15 %	Power supply, number of pins/wires	4
Logic interface, connection technology Logic interface, number of poles/wires Logic interface, connection pattern Max. cable length Max. cable length DC nominal voltage Nominal current Max. current consumption DC nominal voltage fluctuations M12x1, A-coded as per EN 61076-2-101 8 4 M12x1, A-coded as per EN 61076-2-101 8 4 M2x1, A-coded as per EN 61076-2-101 8 4 M2x1, A-coded as per EN 61076-2-101 8 4 M2x1, A-coded as per EN 61076-2-101 8 A Mouples 15 m outputs 15 m inputs 20 m for IO-Link® operation 5.3 A Motor nominal current 5.3 A Max. current consumption 5300 mA +/- 15 %	Power supply, connection pattern	00995989
Logic interface, number of poles/wires Logic interface, connection pattern Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption Permissible voltage fluctuations 8 00992264 15 m outputs 15	Logic interface, connection type	Plug
Logic interface, connection pattern Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption Permissible voltage fluctuations 00992264 15 m outputs 15 m ou	Logic interface, connection technology	M12x1, A-coded as per EN 61076-2-101
Max. cable length 15 m outputs 15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption 5300 mA Permissible voltage fluctuations 15 m outputs 15 m o	Logic interface, number of poles/wires	8
15 m inputs 20 m for IO-Link® operation DC nominal voltage 24 V Nominal current 5.3 A Motor nominal current 5 A Max. current consumption 5300 mA Permissible voltage fluctuations +/- 15 %	Logic interface, connection pattern	00992264
Nominal current 5.3 A Motor nominal current 5 A Max. current consumption 5300 mA Permissible voltage fluctuations +/- 15 %	Max. cable length	15 m inputs
Motor nominal current 5 A Max. current consumption 5300 mA Permissible voltage fluctuations +/- 15 %	DC nominal voltage	24 V
Max. current consumption 5300 mA Permissible voltage fluctuations +/- 15 %	Nominal current	5.3 A
Permissible voltage fluctuations +/- 15 %	Motor nominal current	5 A
	Max. current consumption	5300 mA
Number of digital logic inputs 2	Permissible voltage fluctuations	+/- 15 %
•	Number of digital logic inputs	2

Feature	Value
Characteristics of logic input	Configurable
	Not galvanically isolated
Logic input specification	Based on IEC 61131-2, type 1
Work range of logic input	24 V
Input switching logic	PNP (positive switching)
Number of digital logic outputs 24 V DC	2
Characteristics of digital logic outputs	Configurable Not galvanically isolated
Max. current of digital logic outputs	100 mA
Switching logic at outputs	PNP (positive switching)
IO-Link®, SIO mode support	Yes
IO-Link®, protocol version	Device V 1.1
IO-Link®, communication mode	COM3 (230.4 kBd)
IO-Link®, port class	A
IO-Link®, number of ports	1
IO-Link®, process data width OUT	2 Byte
IO-Link®, process data content OUT	Move in 1 bit
	Move out 1 bit Ouit Error 1 bit
	Move Intermediate 1 bit
IO-Link®, process data width IN	2 Byte
IO-Link®, process data content IN	State In 1 bit
	State Out 1 bit
	State Move 1 bit State Device 1 bit
	State Intermediate 1 bit
IO-Link®, service data contents IN	32 bit force
·	32 bit position
	32 bit speed
IO-Link®, minimum cycle time	1 ms
IO-Link®, data memory required	500 byte
IO-Link®, Connection technology	Plug
Parameterization interface	IO-Link® User interface
Insulation protection class	В
Motor type	Stepper motor
Rotor position sensor	Absolute encoder, single-turn
Rotor position sensor measuring principle	Magnetic
Rotor position sensor resolution	16 bit
Homing	Fixed stop block positive Fixed stop block, negative
Protective function	Temperature monitoring
Additional functions	User interface Integrated end-position sensing
Display	LED
Ready status indication	LED
Symbol	00997295
Angular acceleration	≤140 rad/s²
Certification	RCM compliance mark
KC characters	KC EMC
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
,,,	To UK RoHS instructions
Peak torque	5.6 Nm

Feature	Value
Protection class	III
Storage temperature	-20 °C 60 °C
Ambient temperature	0 ℃ 50 ℃
Note on ambient temperature	Above an ambient temperature of 30°C, the power must be reduced by 2% per K.
Relative air humidity	0 - 85 %
Vibration resistance	Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 1 as per FN 942017-5 and EN 60068-2-27
LABS (PWIS) conformity	VDMA24364 zone III
Note on materials	RoHS-compliant
Material of flange	Wrought aluminum alloy, anodized
Housing material	Wrought aluminum alloy, anodized
Speed "Speed Press"	2 m/s
Logic max. current consumption	0.3 A
Maintenance interval	Life-time lubrication