

- Compact rotary actuator
- Quick change-over & positioning on secondary axes
- All-in-one gearmotor-drive-position controller & encoder
- Closed loop position control
- Absolute multiturn encoder
- RD53 with integrated halt-brake
- Boot loader via CANopen



RD5 • RD53

ENVIRONMENTAL SPECIFICATIONS

Operating temperature range:	0°C +60°C (32°F +140°F)
Storage temperature range:	-20°C +80°C (-4°F +176°F) (98% R.H. without condensation)
Protection:	IP54

MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	hollow Ø14 mm
Shaft loading (axial and radial):	50 N max.
Positioning accuracy:	± 0,9°
Electrical connections:	3 x M12 connectors
Duty cycle:	70% ED, 300 s
Torque and shaft rotational speed:	5 Nm @ 60 rpm
Starting torque:	12 Nm
Hold force with activated brake:	17 Nm
Weight:	~ 1 kg (35.2 oz)

ELECTRICAL SPECIFICATIONS

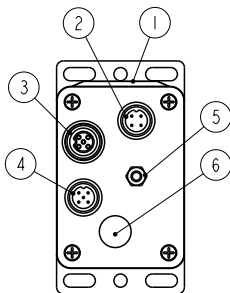
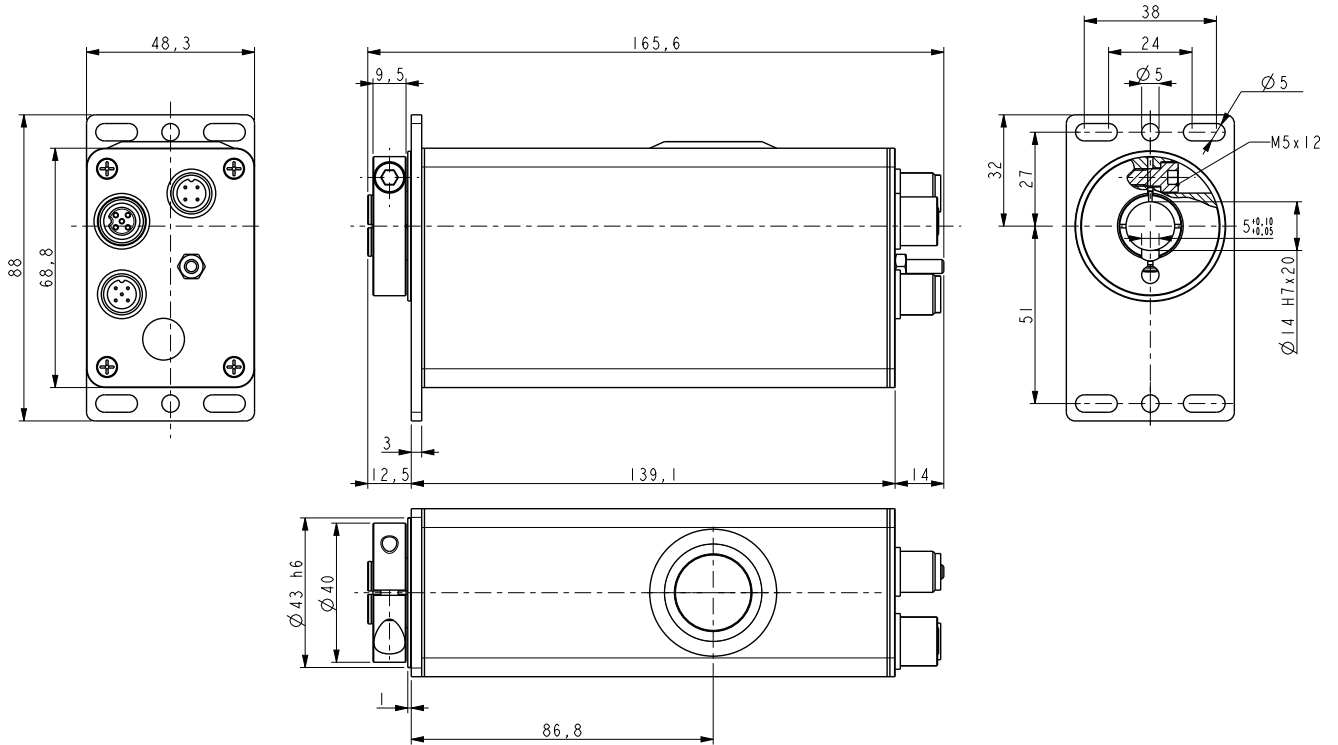
Resolution:	1024 inf./rev. x 256 rev.
Power supply:	+24Vdc ± 10%
Power (motor):	31 W
Input current:	motor: ~2 ÷ 2,5 A control unit: 80 mA max. brake: 480 mA max., when active (RD53)
Bus Interface:	Profibus-DP, CANopen, Modbus RTU (RS485)
Protection:	against overcurrent and overtemperature

MATERIALS

Flanges:	die cast aluminium, UNI EN AC-46100
Housing:	die cast aluminium, UNI EN AC-46100
Bearings:	ABEC 5
Shaft/Fixing clamp:	stainless steel non-magnetic, UNI EN 4305
Motor:	high performance brushless motor
Brake:	electromagnetic brake

ACCESSORIES

see complete list on pages 26-27



- 1 = Dip switch access, diagnostic LEDs
- 2 = Power supply connector
- 3 = Bus OUT connector
- 4 = Bus IN connector
- 5 = GND connection screw
- 6 = Magnet position for manual brake release

RD5 • RD53

Order code

RD5	-	X	-	XXX	-	XX	-	XX	-	X
RD53		Ⓐ		Ⓑ		Ⓒ		Ⓓ		Ⓔ

Ⓐ POWER SUPPLY
PB = 24Vdc ± 10%

Ⓑ TORQUE/SHAFT ROTATIONAL SPEED
T50 = 5 Nm @ 60 rpm

Ⓒ INTERFACE
CB = CANopen (DS301)
MB = Modbus RTU (RS485)
PB = Profibus-DP

Ⓓ ENCODER
E3 = Absolute, 1024 inf./rev. x 256 rev.

Ⓔ CONNECTIONS
M = M12 connectors

ACCESSORIES FOR RD1A, RD12A, RD5, RD53 SERIES

Order code	Description
CC-RD-PB	(Profibus) Mating connectors for RD1xA/RD5 (Bus IN, Bus OUT, PWR)
CC-RD-PB-90	(Profibus) 90° mating connectors for RD1xA/RD5 (Bus IN, Bus OUT, PWR)
CC-RD-CB/MB	(CANopen/Modbus RTU) Mating connectors for RD1xA/RD5 (Bus IN/OUT)
CC-RD-CB/MB-90	(CANopen/Modbus RTU) Mating connectors 90° for RD1xA/RD5 (Bus IN/OUT)
CC-RD-EC	(Ethernet) Mating connector for RD1xA (Bus IN, Bus OUT, PWR)
CC-RD-EC-90	(Profibus) 90° mating connector for RD1xA/RD5 (Bus IN, Bus OUT, PWR)
E-M12FC	M12 5 pin power supply connector for RD1xA/RD5
E-M12FC-90	M12 5 pin power supply connector 90° for RD1xA/RD5
E-M12F8	M12 8 pin service interface+I/O's connector for RD1xA
E-M12F8-90	M12 8 pin service interface+I/O's connector 90° for RD1xA
EC-M12FC-S37-P3-5	Power supply connector with cable 5m
EC-M12FC-S37-P3-10	Power supply connector with cable 10m
EC-M12FC-S37-P3-20	Power supply connector with cable 20m
EC-M12F8-LK-M8-5	RD1xA Service port (RS232, I/O's) connector with cable 5m
EC-M12F8-LK-M8-10	RD1xA Service port (RS232, I/O's) connector with cable 10m
EC-M12F8-LK-M8-15	RD1xA Service port (RS232, I/O's) connector with cable 15m
EC-M12F8-LK-M8-20	RD1xA Service port (RS232, I/O's) connector with cable 20m
IF92	Actuator/PC interface box RS232 > USB conversion
EC-RD1A-M12F8	Cable for connection from RDxx > IF92 > USB/PC
EXC-USB4-S54-GN-2-M12MC-S54	Connection cable RDxx Modbus RTU RS485 to USB/PC

ACCESSORIES FOR RD4 SERIES

Order code	Description
CC-RD4-PB	(Profibus) Mating connectors (Bus IN/OUT, PWR)
CC-RD4-PB-90	(Profibus) 90° mating connectors (Bus IN/OUT, PWR)
CC-RD4-CB/MB	(CANopen/Modbus RTU) Mating connectors (Bus IN/OUT, PWR)
CC-RD4-CB/MB-90	(CANopen/Modbus RTU) Mating connectors 90° (Bus IN/OUT, PWR)
E-M163F	M16 3 pin connector for power supply
E-M163F-90	M16 3 pin connector 90° for power supply
E-M12F8	M12 8 pin connector for I/O's (optional)
E-M12F8-90	M12 8 pin connector 90° for I/O's (optional)
EC-M163F-S37-P3-5	Power supply connector with cable 5m
EC-M163F-S37-P3-10	Power supply connector with cable 10m
EC-M163F-S37-P3-20	Power supply connector with cable 20m
EC-M12F8-LK-M8-5	Service port (I/O's) connector with cable 5m
EC-M12F8-LK-M8-10	Service port (I/O's) connector with cable 10m
EC-M12F8-LK-M8-15	Service port (I/O's) connector with cable 15m
EC-M12F8-LK-M8-20	Service port (I/O's) connector with cable 20m
IF91	Encoder/PC interface box Modbus RTU > USB conversion
EC-RD4-M12FC	Cable for connection from RD4 > IF91 > USB/PC

ACCESSORIES FOR RD6 SERIES

Order code	Description
CC-RD6-CB/MB	(CANopen/Modbus RTU) Mating connectors (Bus IN/OUT, PWR)
CC-RD6-PB	(Profibus) Mating connectors (Bus IN/OUT, PWR)
CC-RD6-EC	(Ethernet) Mating connectors (Bus IN/OUT, PWR)
E-M18F4	Power supply mating connector
EC-M12F8-LK-M8-5	Service port (RS232) connector with cable 5m
EC-M12F8-LK-M8-10	Service port (RS232) connector with cable 10m
EC-M12F8-LK-M8-15	Service port (RS232) connector with cable 15m
EC-M12F8-LK-M8-20	Service port (RS232) connector with cable 20m
IF92	Actuator/PC interface box RS232 > USB conversion
EC-RD6-M12F8	Cable for connection from RD6 > IF92 > USB/PC
EXC-USB4-S54-GN-2-M12MC-S54	Connection cable RDxx Modbus RTU RS485 to USB/PC

**RD1A, RD12A, RD5, RD53 RD4, RD6
PROFIBUS & CANOPEN CORDSETS FOR ROTARY ACTUATORS**

Order code	Description
EC-M12MP-LK-PB-5	Profibus, M12 male connector with cable 5 m
EC-M12MP-LK-PB-10	Profibus, M12 male connector with cable 10 m
EC-M12MP90-LK-PB-5	Profibus, M12 90° male connector with cable 5 m
EC-M12MP90-LK-PB-10	Profibus, M12 90° male connector with cable 10 m
EC-M12FP-LK-PB-5	Profibus, M12 female connector with cable 5 m
EC-M12FP-LK-PB-10	Profibus, M12 female connector with cable 10 m
EC-M12FP90-LK-PB-5	Profibus, M12 90° female connector with cable 5 m
EC-M12FP90-LK-PB-10	Profibus, M12 90° female connector with cable 10 m
EC-M12MC-LK-CB-5	CANopen & Modbus RTU, M12 male connector with cable 5 m
EC-M12MC-LK-CB-10	CANopen & Modbus RTU, M12 male connector with cable 10 m
EC-M12MC-LK-CB-15	CANopen & Modbus RTU, M12 male connector with cable 15 m
EC-M12MC90-LK-CB-5	CANopen & Modbus RTU, M12 90° male conn. with cable 5 m
EC-M12MC90-LK-CB-10	CANopen & Modbus RTU, M12 90° male conn. with cable 10 m
EC-M12MC90-LK-CB-15	CANopen & Modbus RTU, M12 90° male conn. with cable 15 m
EC-M12FC-LK-CB-5	CANopen & Modbus RTU, M12 female connector with cable 5 m
EC-M12FC-LK-CB-10	CANopen & Modbus RTU, M12 female connector with cable 10 m
EC-M12FC-LK-CB-15	CANopen & Modbus RTU, M12 female conn. with cable 15 m
EC-M12FC90-LK-CB-5	CANopen & Modbus RTU, M12 90° female conn. with cable 5 m
EC-M12FC90-LK-CB-10	CANopen & Modbus RTU, M12 90° female conn. with cable 10 m
EC-M12FC90-LK-CB-15	CANopen & Modbus RTU, M12 90° female conn. with cable 15 m



**ETHERNET CORDSETS FOR ROTARY ACTUATORS
(Profinet, Ethercat, Powerlink, Ethernet-IP, Modbus)**

Order code	Description
EC-M12ME-EC-GN-5	M12 ethernet plug with 5 m cable
EC-M12ME-EC-GN-10	M12 ethernet plug with 10 m cable
EC-M12ME-EC-GN-20	M12 ethernet plug with 20 m cable
EXC-M12ME-EC-GN-5-RJ-EC	M12 ethernet plug + 5 m cable + RJ conn.
EXC-M12ME-EC-GN-10-RJ-EC	M12 ethernet plug + 10 m cable + RJ conn.
EXC-M12ME-EC-GN-20-RJ-EC	M12 ethernet plug + 20 m cable + RJ conn.



LDT10 SERIES TOUCHSCREEN CONTROLLER

Order code	Description
EXC-M12FC-LK-CB-5-D9M-S54A	LDT10 connection cable, RS232 port to M12 (female) with 5 m cable
EXC-M12MC-LK-CB-5-M12FC-LK	Cordset M12 male to M12 female with cable 5 m