

- Integrated positioning unit
- High performance brushless motor
- RS232 service interface for easy setup
- Real absolute multi turn encoder
- Additional jog +/- and Preset buttons for easy calibration



RD1A

### 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):	100 N, 200 N
Positioning accuracy:	± 0,9°
Electrical connections:	4 x M12 connectors
Duty cycle:	20% ED, 300 s
Torque and shaft rotational speed:	9 Nm @ 32 rpm (T92), 5 Nm @ 60 rpm (T48) 2,5 Nm @ 120 rpm (T24), 1,2 Nm @ 240 rpm (T12)
Starting torque:	T92: 22 Nm, T48: 12 Nm, T24: 6 Nm, T12: 3 Nm
Weight:	~ 1,8 kg (63,5 oz)

### ELECTRICAL SPECIFICATIONS

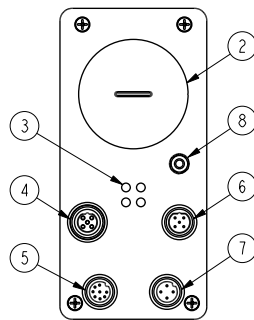
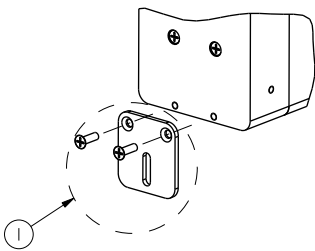
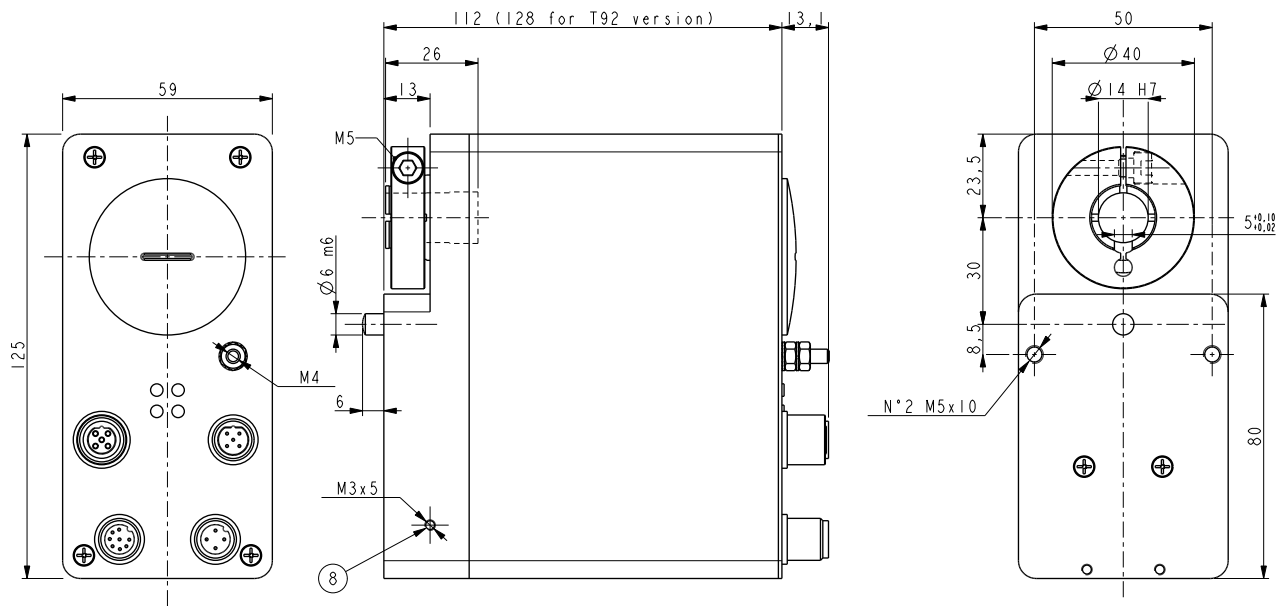
Resolution:	1024 inf./rev. x 1024 rev.
Power supply:	+24Vdc ± 10%
Power (motor):	31 W
Input current:	motor: ~2-2,5 A control unit: 140 mA max.
Service interface:	RS232 (except Modbus RTU RS485)
Bus Interface:	Modbus RTU (RS485), Profibus-DP, CANopen Modbus TCP/IP, EtherCAT, Profinet, Powerlink, EtherNet/IP
Inputs:	3 x 24V
Output:	1 x o.c @ 100 mA

### MATERIALS

Flange:	non corroding, UNI EN AW-6082
Housing:	non corroding, UNI EN AW-6082
Bearings:	ABEC 5
Shaft:	stainless steel non-magnetic, UNI EN 1.4305
Motor:	high performance brushless motor

### ACCESSORIES

see complete list on pages 26-27



- 1 Fixing plate
- 2 Dip switch Jog +/- Preset button access
- 3 Diagnostic leds
- 4 M12 5 pin connector BUS OUT
- 5 M12 8 pin plug, Service interface, I/Os
- 6 M12 5 pin plug BUS IN
- 7 M12 4 pin plug power supply
- 8 GND connection

RD1A

Order code

RD1A	-	X a	-	XXX b	-	XX c	-	XX d	-	X e
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a) POWER SUPPLY

P8 = 24Vdc ± 10%

b) TORQUE/SHAFT ROTATIONAL SPEED

T92 = 9 Nm @ 32 rpm  
 T48 = 5 Nm @ 60 rpm  
 T24 = 2,5 Nm @ 120 rpm  
 T12 = 1,2 Nm @ 240 rpm

c) INTERFACE

CB = CANopen (DS301)  
 MB = Modbus RTU (RS485)  
 PB = Profibus-DP  
 MT = Modbus TCP/IP  
 EC = EtherCAT  
 EP = EtherNet/IP  
 PL = Powerlink  
 PT = Profinet

d) ENCODER

E2 = Absolute, 1024 inf./rev. x 1024 rev.

e) 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