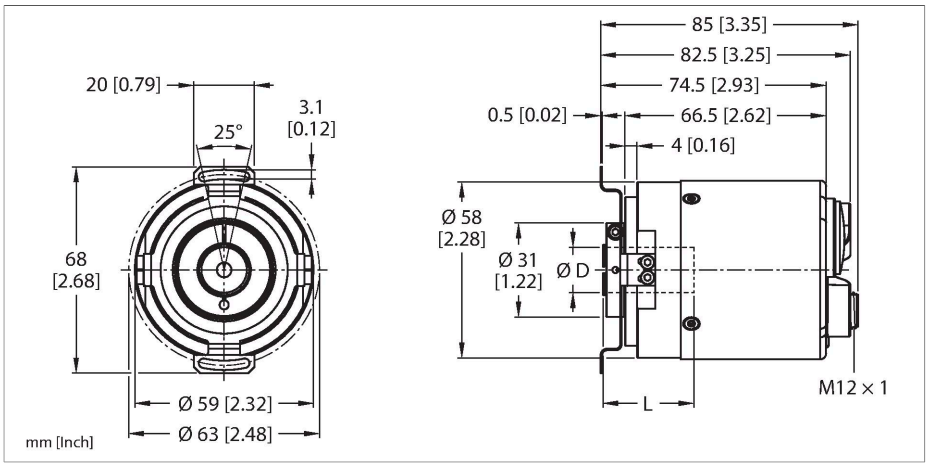
RES-108B12E-9E19B-B3M12
Absolute Rotary Encoder - Singleturn
Industrial Line



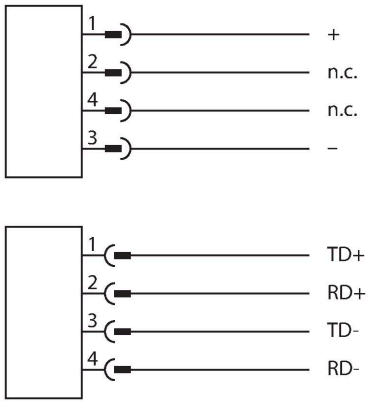
Technical data

Type	RES-108B12E-9E19B-B3M12
ID	100046574
Measuring principle	Optical
General data	
Max. rotational speed	6000 rpm
Moment of inertia of the rotor	6 × 10^{-6} kgm²
Measuring range	0…360 °
Output type	Absolute singleturn
Resolution singleturn	19 Bit
	Singleturn scalable
Electrical data	
Operating voltage U_B	10…30 VDC
No-load current	≤ 250 mA
Wire break/reverse polarity protection	yes
Communication protocol	PROFINET
Mechanical data	
Flange type	Flange with stator coupling
Flange diameter	Ø 63 mm
Shaft Type	Blind hole shaft
Shaft diameter D (mm)	12
Shaft material	Stainless steel
Housing material	Aluminium
Electrical connection	Connector, 3 x M12
Axial shaft load	40 N
Radial shaft load	80 N

Features

- Flange with stator coupling, Ø 63 mm
- Hollow shaft, Ø 12 mm
- Optical measuring principle
- Shaft, stainless steel
- Protection class IP67 on housing side
- -40…+80 °C
- Max. 6000 rpm
- 10…30 VDC
- Profinet IO, RT and IRT up to 250 µs
- Encoder profile version 4.2
- Media Redundancy Protocol (MRP)
- Link Layer Discovery Protocol (LLDP)
- Simple Network Management Protocol (SNMP)
- Fast Startup (FSU)
- M12 × 3 connector, 4-pin
- Singleturn resolution scalable up to 19 bit, default 13 bit

Wiring diagram



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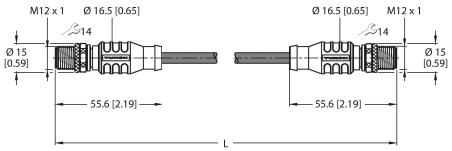
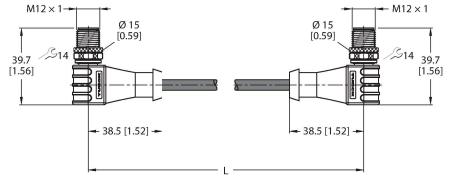
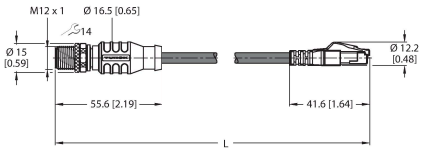
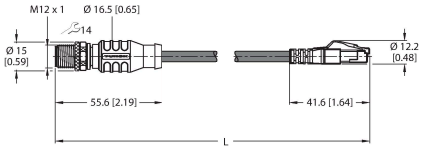
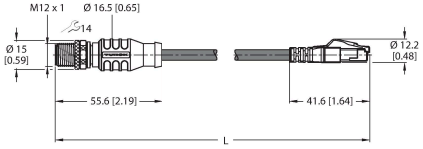
Technical data

Environmental conditions	
Ambient temperature	-40…+80 °C
Vibration resistance (EN 60068-2-6)	10 g (100 m/s²), 55…2000 Hz
Shock resistance (EN 60068-2-27)	250 g (2500 m/s²), 6 ms
Protection class	IP67
Protection class shaft	IP67
MTTF	19 years

Accessories

Dimension drawing	Type	ID	
	RSSD-RSSD-4422-2M	6635150	Cable for Industrial Ethernet, M12 male connector, D-coded, straight to M12 male connector, D-coded, straight, cable length: 2 m, jacket material: PUR, green
	WSSD-WSSD-4422-2M	6635188	Cable for Industrial Ethernet, M12 male connector, D-coded, angled to M12 male connector, D-coded, angled, cable length: 2 m, jacket material: PUR, green
	RSSD-RJ45S-4422-2M	6635170	Cable for Industrial Ethernet, M12 male connector, D-coded, straight to RJ45 male connector, straight, cable length: 2 m, jacket material: PUR, green
	RSSD-RJ45S-4422-7M	6635579	Cable for Industrial Ethernet, M12 male connector, D-coded, straight to RJ45 male connector, straight, cable length: 2 m, jacket material: PUR, green
	RSSD-RJ45S-4422-8M	6635538	Cable for Industrial Ethernet, M12 male connector, D-coded, straight to RJ45 male connector, straight, cable length: 2 m, jacket material: PUR, green

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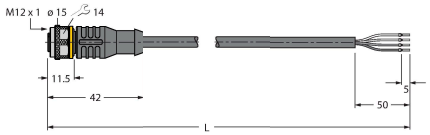
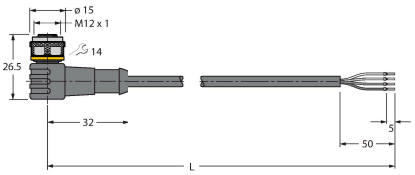
Dimension drawing	Type	ID	
	RKC4.4T-2/TXL	6625503	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval
	WKC4.4T-2/TXL	6625515	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval

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