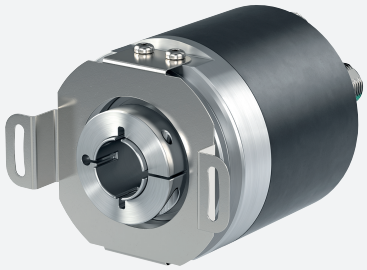


Absolute encoders

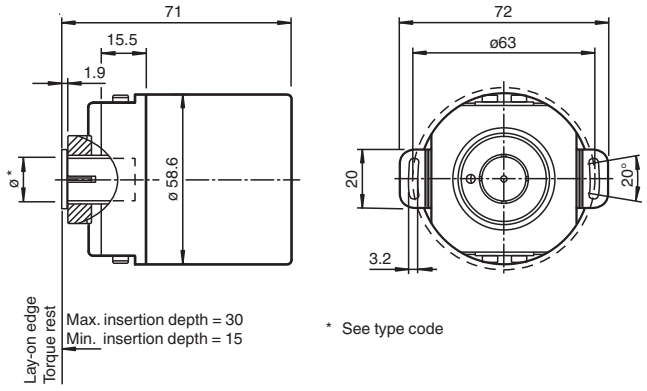
ENA58TL-R***-IO-Link

- Absolut rotary encoder of the innovative Pure Line
- Recessed hollow shaft
- IO-Link Interface for process data, parameterization and diagnosis
- Suitable for condition monitoring
- Measuring range, direction of rotation and switching signals programmable
- Free of wear magnetic sampling
- High resolution and accuracy
- Status LEDs

Function

Absolute encoders with IO Link are high precision encoders with internal magnetic sampling.
The integrated IO Link interface offers an optimal adaption to different applications through parameterization as well as process data transfer and condition monitoring.

Dimensions

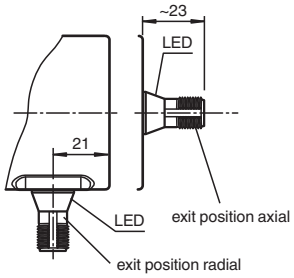


Recessed hollow shaft

Connections

Dimensions in mm

Connector M12



Release date: 2021-02-08 Date of issue: 2021-02-08 Filename: t193209_eng.pdf

Technical Data

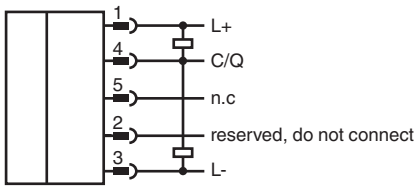
General specifications		
Detection type		magnetic sampling
Device type		Absolut rotary encoder as Pure Line
Linearity error		≤ ± 0.1 °
UL File Number		E223176 "For use in NFPA 79 Applications only" , if UL marking is marked on the product.
Functional safety related parameters		
$MTTF_d$		566 a at 40 °C
Mission Time (T_M)		20 a
L_{10}		5 E+8 revolutions at 24/198 N axial/radial shaft load
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
LED STATUS		LED green flashing with short break (1 Hz) - IO-Link mode
Electrical specifications		
Operating voltage	U_B	18 ... 30 V DC
No-load supply current	I_0	max. 50 mA
Power consumption	P_0	approx. 1.5 W
Time delay before availability	t_v	< 1 s
Interface		
Interface type		IO-Link
IO-Link Revision		1.1
Device profile		Identification & Diagnosis - I&D
Resolution		
Single turn		up to 16 Bit programmable
Multiturn		up to 15 Bit programmable
Overall resolution		up to 31 Bit programmable
Process data		Input 12 Byte - measurement value 4 Byte - resolution 16 Bit - auxiliary mesurement value 4 Byte - switching signals 2 Bit - diagnosis signals 2 Bit - status data
Vendor ID		1 (0x0001)
Device ID		5243905 (0x500401), 5243906 (0x500402), 5243909 (0x500405), 5243910 (0x500406)
Transfer rate		COM 3 (230.4 kBaud)
Min. cycle time		1.5 ms
SIO mode support		no
Compatible master port type		Class A Class B (use 3-pole adapter or 3-wire cable)
Connection		
Connector		M12 connector, 5 pin , A-coded
Standard conformity		
Degree of protection		DIN EN 60529, IP65, IP67
Communication interface		IEC 61131-9 / IO-Link V1.1.2
Climatic testing		DIN EN 60068-2-78, no moisture condensation
Emitted interference		EN 61000-6-4:2007
Noise immunity		EN 61000-6-2:2005
Shock resistance		DIN EN 60068-2-27, 100 *g*, 6 ms
Vibration resistance		DIN EN 60068-2-6, 10 *g*, 10 ... 1000 Hz
Approvals and certificates		
UL approval		cULus Listed, General Purpose, Class 2 Power Source , if UL marking is marked on the product.
Ambient conditions		
Operating temperature		-40 ... 85 °C (-40 ... 185 °F)

Release date: 2021-02-08 Date of issue: 2021-02-08 Filename: t193209_eng.pdf

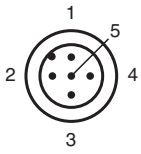
Technical Data

Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Relative humidity	98 % , no moisture condensation
Mechanical specifications	
Material	
Housing	Zinc plated steel, painted
Flange	Aluminum
Shaft	Stainless steel
Mass	approx. 370 g
Rotational speed	max. 12000 min $^{-1}$
Moment of inertia	< 30 gcm^2
Starting torque	< 3 Ncm
Shaft load	
Axial	24 N
Radial	198 N
Angle offset	± 0.9 °
Axial offset	± 0.3 mm static; ± 0,1 mm dynamic
Radial offset	± 0.5 mm static; &lusmn 0,2 mm dynamic

Connection



Connection Assignment



Accessories

	**ICE1-8IOL-G60L-V1D**	Ethernet IO-Link module with 8 inputs/outputs
	**IO-Link-Master02-USB**	IO-Link master, supply via USB port or separate power supply, LED indicators, M12 plug for sensor connection
	**V1-G-0,6M-PUR-V1-G**	Cordset M12 socket straight to M12 plug straight A-coded, 4-pin, PUR cable grey
	**V15-G-1M-PUR-V15-G**	Cordset M12 socket straight to M12 plug straight A-coded, 5-pin, PUR cable grey
	**ACC-PACK-ABS-_S_58 ø15**	Accessories set for Ø58 absolut rotary encoder with recessed hollow shaft 15 mm

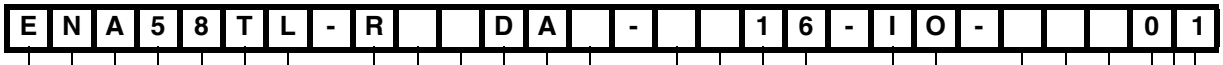
Release date: 2021-02-08 Date of issue: 2021-02-08 Filename: t193209_eng.pdf

Accessories

	**ACC-PACK-ABS-_S_58 ø14**	Accessories set for Ø58 absolut rotary encoder with recessed hollow shaft 14 mm
	**ACC-PACK-ABS-_S_58 ø12**	Accessories set for Ø58 absolut rotary encoder with recessed hollow shaft 12 mm
	**ACC-PACK-ABS-_S_58 ø10**	Accessories set for Ø58 absolut rotary encoder with recessed hollow shaft 10 mm
	**ICE1-8IOL-G30L-V1D**	Ethernet IO-Link module with 8 inputs/outputs
	**ICE2-8IOL-G65L-V1D**	EtherNet/IP IO-Link master with 8 inputs/outputs
	**ICE2-8IOL-K45P-RJ45**	EtherNet/IP IO-Link master with 8 inputs/outputs, DIN rail, push-in connectors
	**ICE2-8IOL-K45S-RJ45**	EtherNet/IP IO-Link master with 8 inputs/outputs, DIN rail, screw terminal
	**ICE3-8IOL-G65L-V1D**	PROFINET IO IO-Link master with 8 inputs/outputs
	**ICE3-8IOL-K45P-RJ45**	PROFINET IO IO-Link master with 8 inputs/outputs, DIN rail, push-in terminals
	**ICE3-8IOL-K45S-RJ45**	PROFINET IO IO-Link master with 8 inputs/outputs, DIN rail, screw terminal

Release date: 2021-02-08 Date of issue: 2021-02-08 Filename: t193209_eng.pdf

Type Code



Parameterization status
01 P+F factory setting

Connection type
ABD axial connection alignment, M12 x 1, 5-pin, A-coded
RBD radial connection alignment, M12 x 1, 5-pin, A-coded

Interface, electric
IO IO-Link

Singleturn resolution
16 programmable up to 16 bit

Multiturn resolution
00 Singleturn rotary encoder
15 Multiturn rotary encoder, programmable up to 15 bit

Degree of protection
5 IP65
7 IP66, IP 67

Flange
DA Dual spring plate

Shaft diameter
06 6 mm
10 10 mm
12 12 mm
14 14 mm
15 15 mm

Shaft type
R Recessed hollow shaft

Version
TL Target Line

Size
58 Housing diameter: 58 mm

Device type
ENA Absolute rotary encoder

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