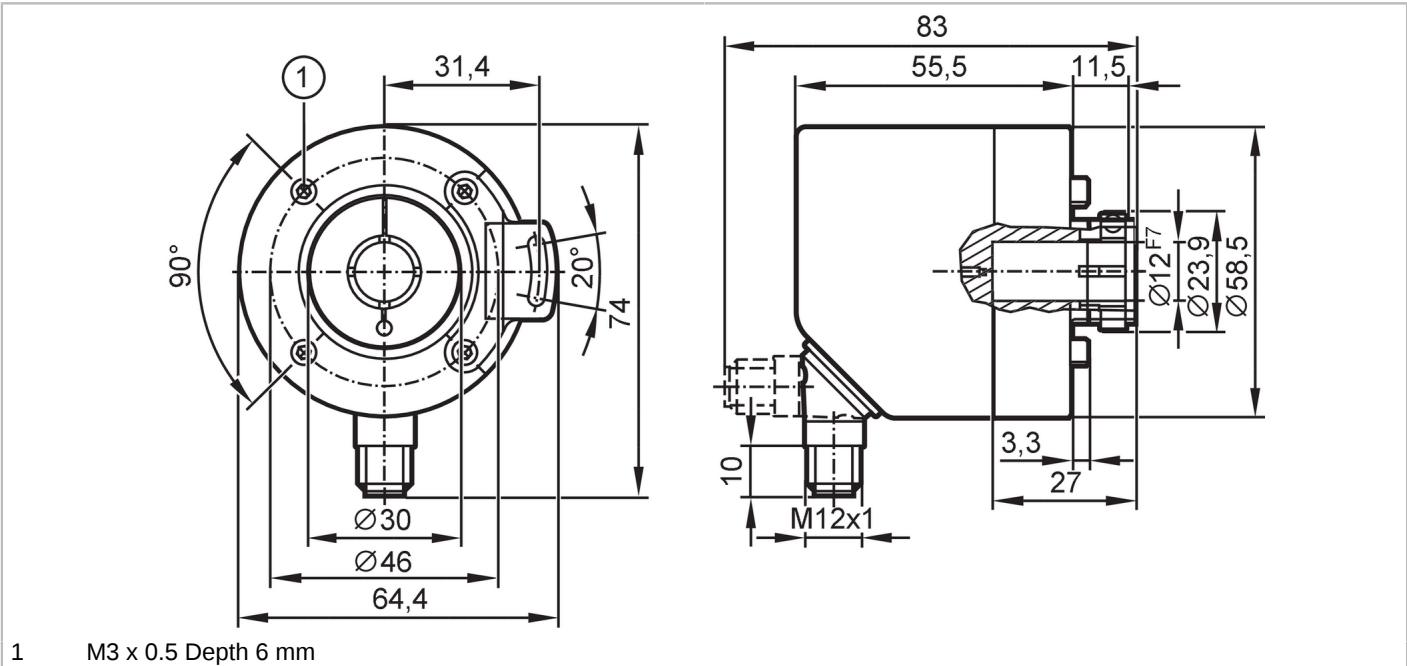


RO3100



Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE



Product characteristics

Resolution	1...10000; (configurable; Factory setting: 1024) resolution
Communication interface	IO-Link
Shaft design	hollow shaft open to one side
Shaft diameter [mm]	12

Application

Function principle	incremental
Detection system	magnetic

Electrical data

Operating voltage [V]	4.75...30 DC
Current consumption [mA]	< 150
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	0.5
Max. revolution electrical [U/min]	12000

Outputs

Electrical design	HTL/TTL
Switching frequency [kHz]	1000
Factory setting	Output function: HTL (50 mA)
Short-circuit protection	yes
Phase difference A und B [°]	90

Measuring/setting range

Resolution	1...10000; (configurable; Factory setting: 1024) resolution
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Accuracy / deviations

Accuracy [°]	0.1
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Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE

Software / programming			
Parameter setting options		Resolution; Direction of rotation; HTL; TTL	
Interfaces			
Communication interface		IO-Link	
Transmission type		COM2 (38,4 kBaud)	
IO-Link revision		1.1	
Profiles	Smart Sensor - SSP 0		Generic Profiled Sensor
	Function		Device identification
	Function		Process data variable
	Function		Device diagnosis
SIO mode		yes	
Min. process cycle time [ms]		2.3	
Supported DeviceIDs		Type of operation	DeviceID
		default	499
Operating conditions			
Ambient temperature [°C]		-40...85	
Storage temperature [°C]		-40...85	
Max. relative air humidity [%]		95; (Condensation not permissible)	
Protection		IP 65; IP 66; (on the housing: IP 67; on the shaft: IP 65)	
Tests / approvals			
Shock resistance			100 g
Vibration resistance			20 g
MTTF [years]		292	
Mechanical data			
Weight [g]		425	
Housing		tubular	
Dimensions [mm]		Ø 58.5 / L = 69	
Material		flange: aluminum; housing: stainless steel (1.4521 / 444)	
Tightening torque [Nm]		< 0.7; (Mounting screw)	
Max. revolution, mechanical [U/min]		12000	
Max. starting torque [Nm]		0.02	
Reference temperature torque [°C]		20	
Shaft design		hollow shaft open to one side	
Shaft diameter [mm]		12	
Shaft material		stainless steel	
Installation depth/shaft [mm]		27	
Max. axial shaft misalignment [mm]		0,5	
Fixing flange		Ø 58.5 mm	
Remarks			
Pack quantity		1 pcs.	

RO3100

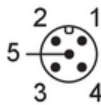


Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE

Electrical connection

Connector: 1 x M12, radial, can also be used axially; coding: A; Contacts: 5; Moulded body: stainless steel (1.4401 / 316); Maximum cable length: 100 m; (IO-Link: max. 20 m)



IO-Link

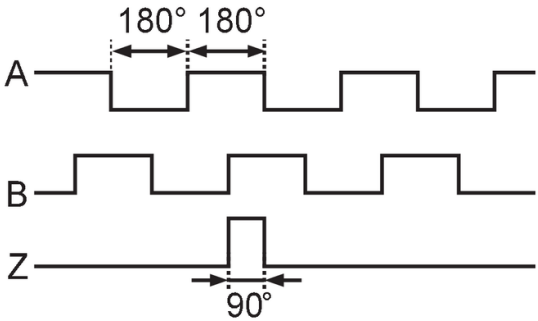
1	L+
2	not to be used
3	L-
4	IO-Link
5	not to be used
screen	plug

encoder

1	UB
2	A
3	GND
4	Z/0-Pulse (90 deg)
5	B
screen	plug

Diagrams and graphs

Pulse diagram



Direction of rotation clockwise (looking at the shaft)