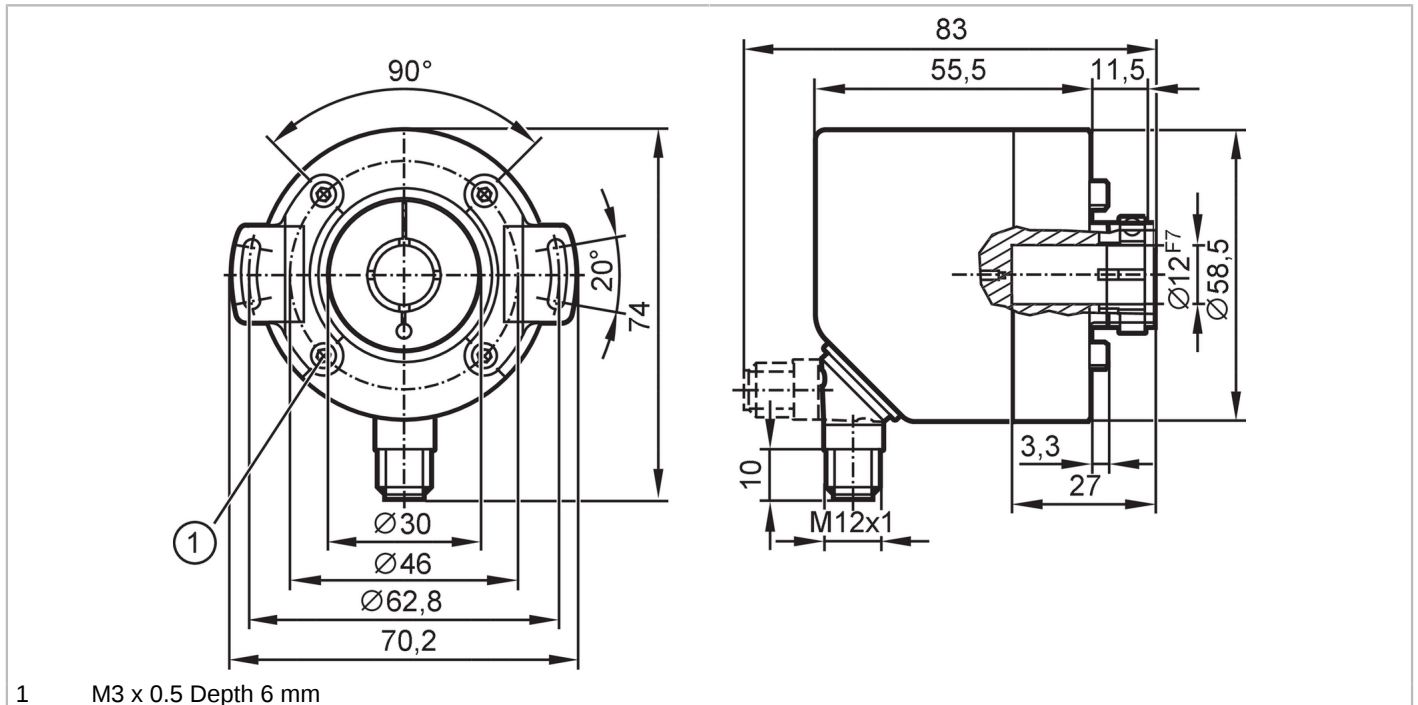


# RO3101



## 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

# RO3101



## Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE

Accuracy / deviations		
Accuracy	[°] 0.1	
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] 430	
Housing	tubular	
Dimensions	[mm] Ø 58.5 / L = 67	
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.	

# RO3101

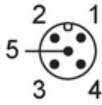


## Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE

### Electrical connection

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



### IO-Link

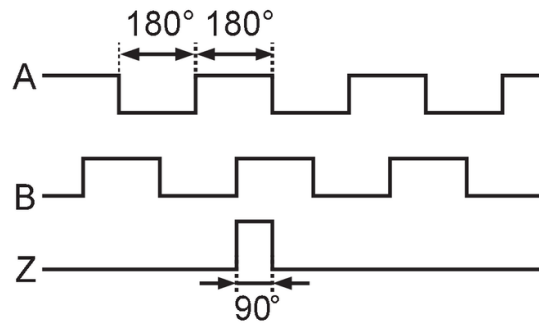
1	L+
2	not to be used
3	L-
4	IO-Link
5	not to be used
screen	plug

### 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)