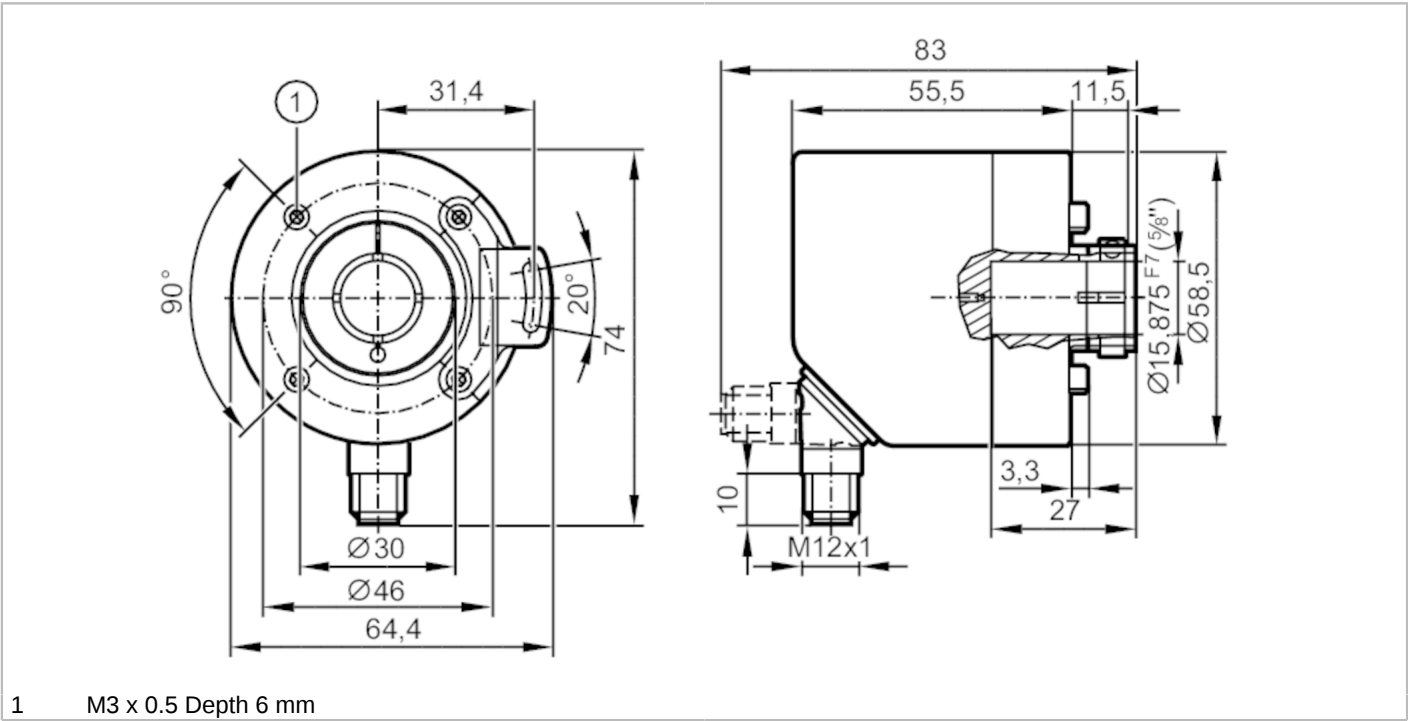


RO3104



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]	15.875
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



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]	409
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]	15.875
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.	

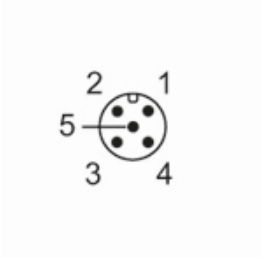


Incremental encoder with hollow shaft

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

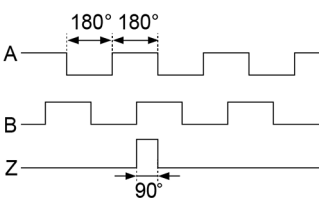
1	L+
2	not to be used
3	L-
4	IO-Link
5	not to be used
screen	plug

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)