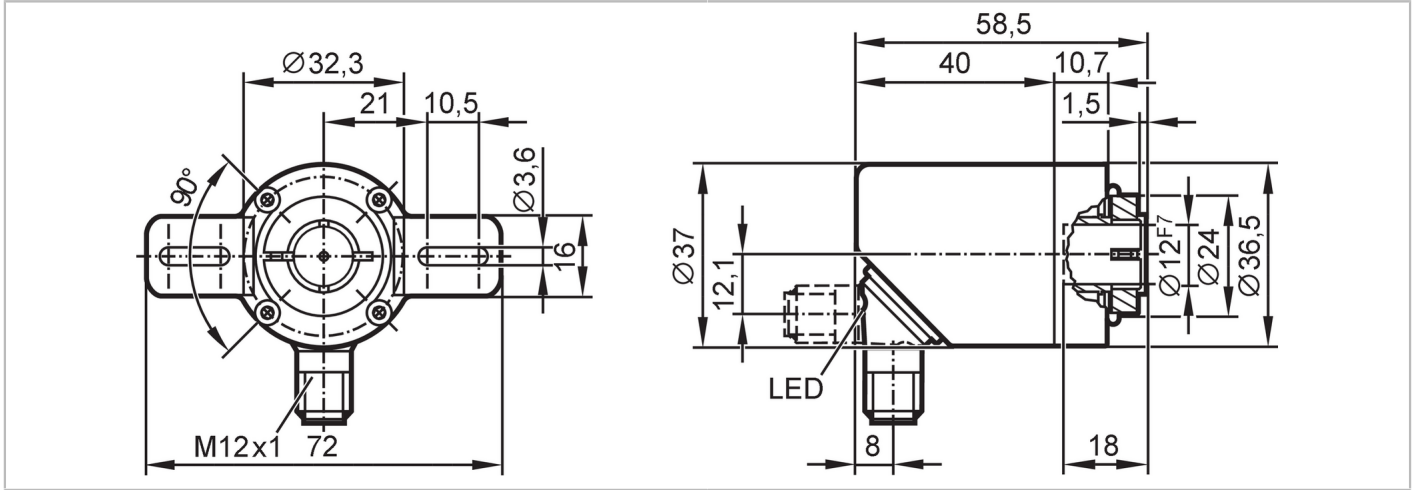


RA3102



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

Detection system	magnetic
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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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Software / programming

Parameter setting options	Resolution; Direction of rotation; HTL; TTL
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Interfaces

Communication interface	IO-Link
Transmission type	COM2 (38,4 kBaud)



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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; IP 67; (on the housing: IP 67; on the shaft: IP 65)	

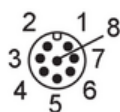
Tests / approvals		
Shock resistance	200 g	
Vibration resistance	30 g	
MTTF [years]	292	

Mechanical data		
Weight [g]	256.5	
Housing	tubular	
Dimensions [mm]	Ø 36.5 / L = 58.5	
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]	0.01	
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]	18	
Max. axial shaft misalignment [mm]	0,5	
Fixing flange	Ø 36.5 mm	

Remarks		
Pack quantity	1 pcs.	

Electrical connection

Connector: 1 x M12, radial, can also be used axially; coding: A; Contacts: 8; Moulded body: stainless steel (1.4401 / 316)





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

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

Diagrams and graphs

Pulse diagram

