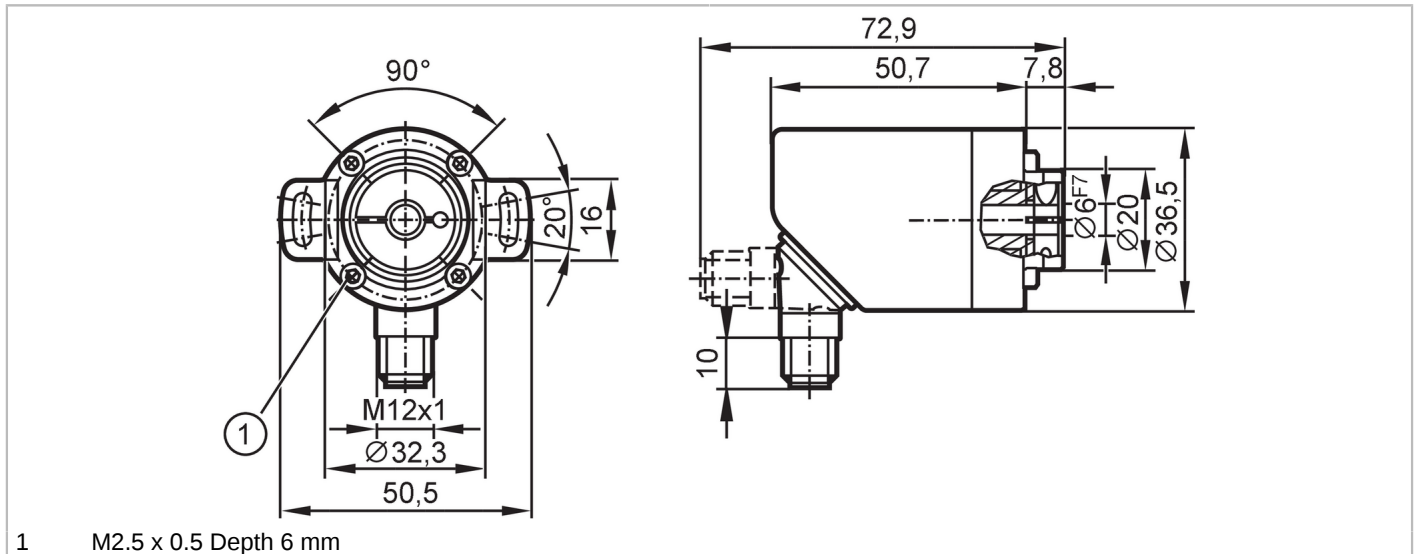


RA3101



Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE



1 M2.5 x 0.5 Depth 6 mm



Product characteristics	
Resolution	1...10000; (parameterisable; Factory setting: 1024) resolution
Communication interface	IO-Link
Shaft design	hollow shaft open to one side
Shaft diameter [mm]	6
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 and B [°]	90
Measuring/setting range	
Resolution	1...10000; (parameterisable; Factory setting: 1024) resolution
Accuracy / deviations	
Accuracy [°]	0.1
Software / programming	
Parameter setting options	Resolution; direction of rotation; HTL; TTL

RA3101



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INCREMENTAL ENCODER BASIC LINE

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	<table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>default</td> <td>499</td> </tr> </tbody> </table>	Type of operation	DeviceID	default	499
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 64)

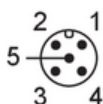
Tests / approvals	
Shock resistance	100 g
Vibration resistance	20 g
MTTF [years]	292

Mechanical data	
Weight [g]	268.5
Housing	cylindrical
Dimensions [mm]	Ø 36.5 / L = 58.5
Materials	flange: aluminium; housing: stainless steel (444/1.4521)
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]	6
Shaft material	stainless steel
Installation depth of 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; Moulded body: stainless steel (316 / 1.4401)





Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE

IO-Link

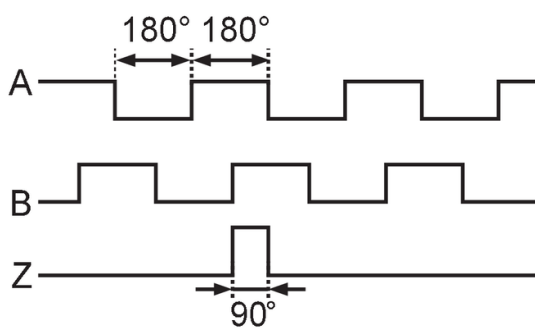
1	L+
2	not to be used
3	L-
4	IO-Link
5	not to be used
Screen	plug

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)