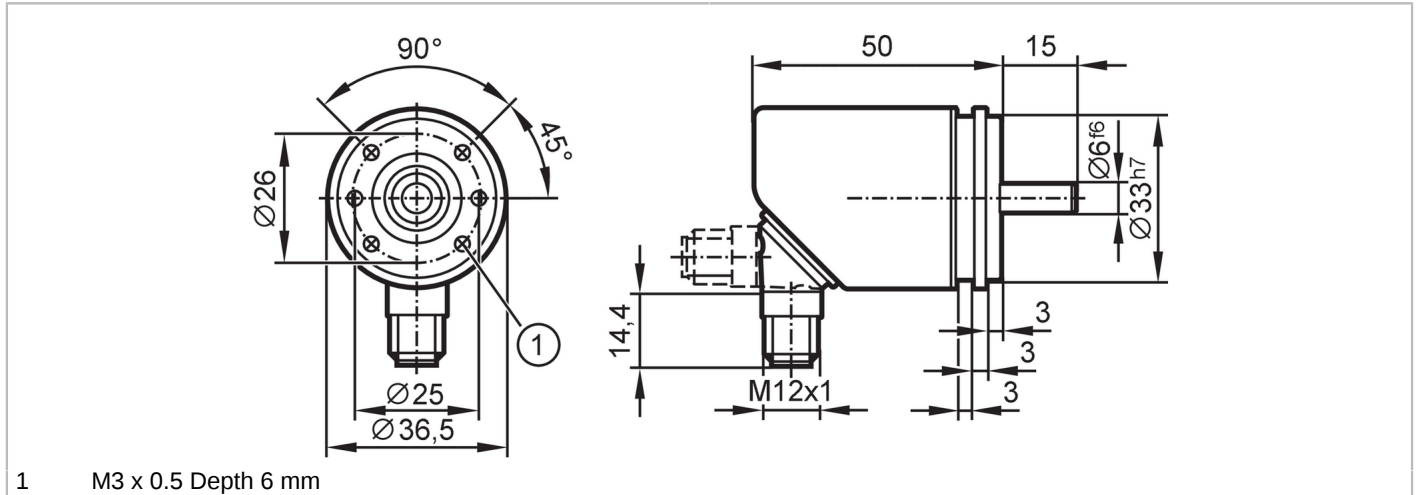


RB3100



Incremental encoder with solid shaft

INCREMENTAL ENCODER BASIC LINE



Product characteristics	
Resolution	1...10000; (parameterisable; Factory setting: 1024) resolution
Communication interface	IO-Link
Shaft design	solid shaft
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

RB3100



Incremental encoder with solid shaft

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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 64)	
Tests / approvals		
Shock resistance	100 g	
Vibration resistance	20 g	
MTTF [years]	292	
Mechanical data		
Weight [g]	245	
Housing	cylindrical	
Dimensions [mm]	Ø 36.5 / L = 65	
Materials	flange: aluminium; housing: stainless steel (444/1.4521)	
Max. revolution, mechanical [U/min]	12000	
Max. starting torque [Nm]	0.01	
Reference temperature torque [°C]	20	
Shaft design	solid shaft	
Shaft diameter [mm]	6	
Shaft material	stainless steel	
Max. shaft load axial (at the shaft end) [N]	10	
Max. shaft load radial (at the shaft end) [N]	20	
Fixing flange	Ø 36.5 mm	
Remarks		
Pack quantity	1 pcs.	

RB3100

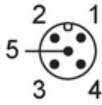


Incremental encoder with solid shaft

INCREMENTAL ENCODER BASIC LINE

Electrical connection

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



IO-Link

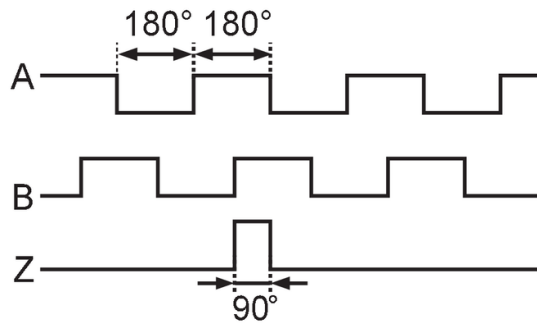
1	L+
2	not to be used
3	L-
4	IO-Link
5	not to be used
Screen	plug

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)