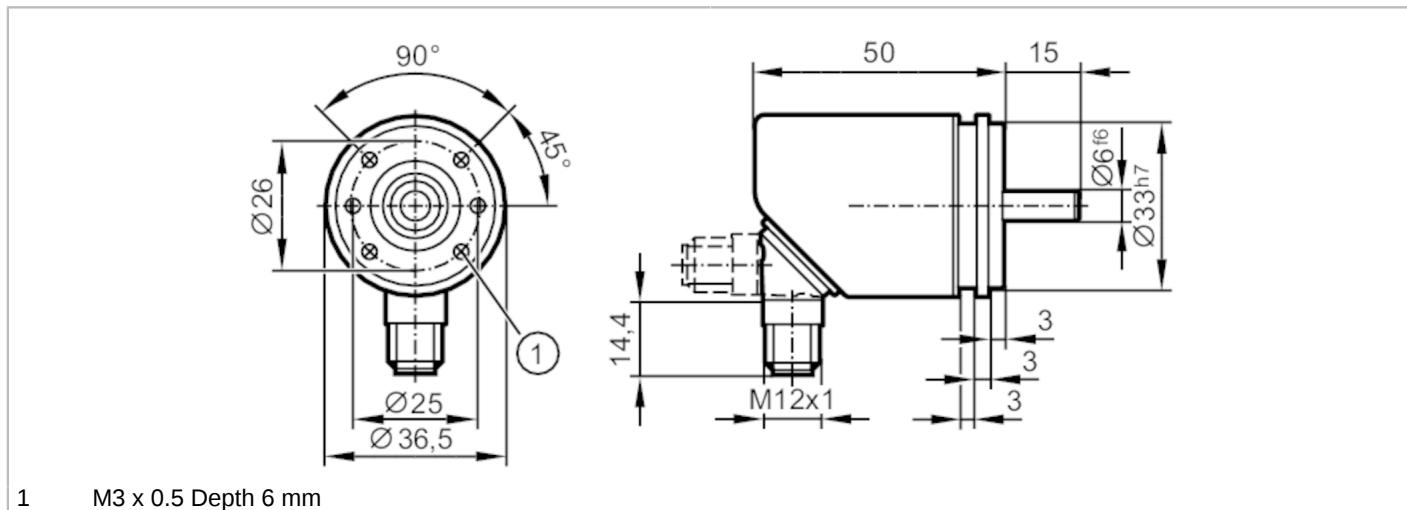


RB3100



Incremental encoder with solid shaft

INCREMENTAL ENCODER BASIC LINE



1 M3 x 0.5 Depth 6 mm



cUL us
LISTED



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
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Accuracy / deviations

Accuracy [°]	0.1
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Software / programming

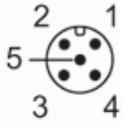
Parameter setting options	Resolution; direction of rotation; HTL; TTL
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Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.1
SIO mode		yes
Min. process cycle time [ms]		2.3
Operating conditions		
Ambient 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
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]		1
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
Electrical connection		
Connector: 1 x M12, radial, can also be used axially; coding: A; Moulded body: stainless steel (316 / 1.4401); Maximum cable length: 100 m; (IO-Link: max. 20 m)		
		

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IO-Link

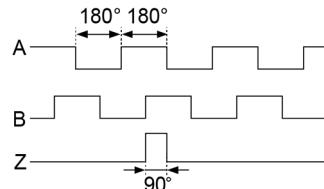
1	L+
2	not to be used
3	L-
4	IO-Link
5	not to be used
Screen	plug

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)