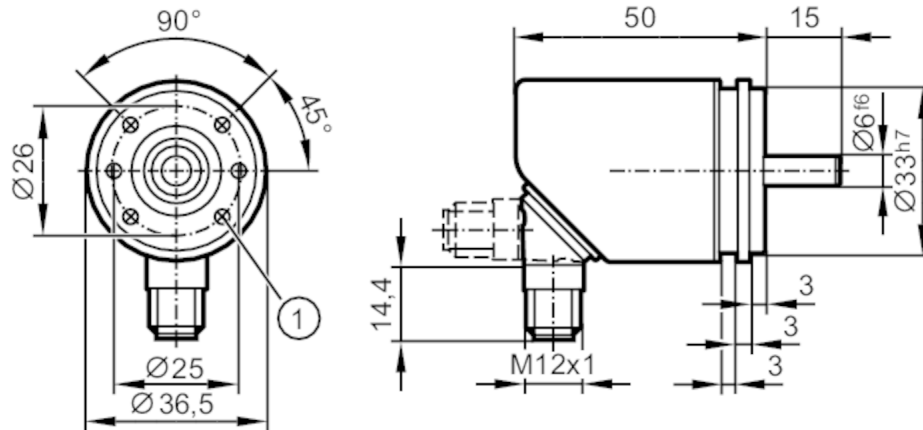


RB3100



Incremental encoder with solid shaft

INCREMENTAL ENCODER BASIC LINE



1 M3 x 0.5 Depth 6 mm



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; (parameterisable; Factory setting: 1024) resolution
Accuracy / deviations	
Accuracy [°]	0.1
Software / programming	
Parameter setting options	Resolution; direction of rotation; HTL; TTL
Interfaces	
Communication interface	IO-Link
Transmission type	COM 2
IO-Link revision	1.1
SIO mode	yes
Min. process cycle time [ms]	2.3



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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		200 g
Vibration resistance		30 g
MTTF	[years]	292
Mechanical data		
Weight	[g]	240.6
Dimensions	[mm]	Ø 36.5 / L = 65
Materials		flange: aluminium; housing: stainless steel (1.4521 / 444); plug: stainless steel (1.4401 / 316)
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
Electrical connection		
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	

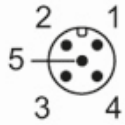
Connector: 1 x M12, radial, can also be used axially; Moulded body: stainless steel (1.4401 / 316); Maximum cable length: 100 m

RB3100



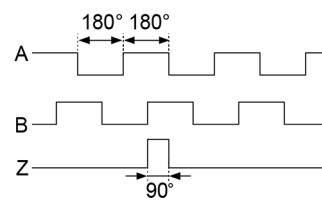
Incremental encoder with solid shaft

INCREMENTAL ENCODER BASIC LINE



Diagrams and graphs

Pulse diagram



direction of rotation clockwise (looking at the shaft)