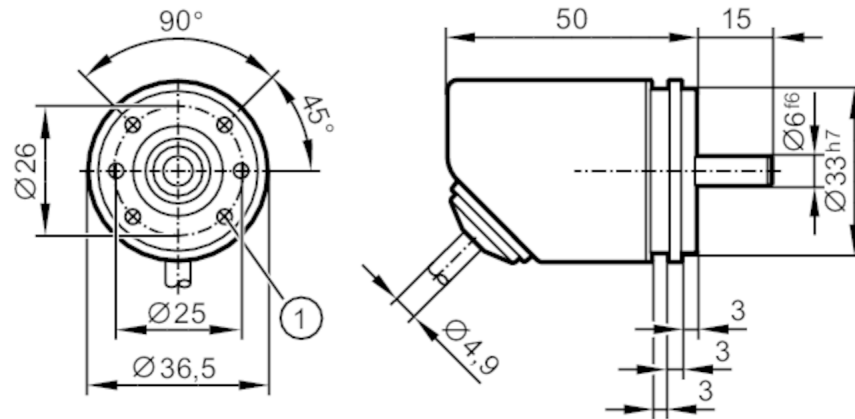


# RB3500



## Incremental encoder with solid shaft

INCREMENTAL ENCODER BASIC LINE



1 M3 x 0.5 Depth 6 mm



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



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INCREMENTAL ENCODER BASIC LINE

Interfaces		
Communication interface		IO-Link
Transmission type		COM 2
IO-Link revision		1.1
SIO mode		yes
Min. process cycle time	[ms]	2.3

Operating conditions		
Ambient temperature	[°C]	-40...80
Note on ambient temperature		for flexibly laid cable: -25 °C
Storage temperature	[°C]	-40...80
Max. relative air humidity	[%]	95; (condensation not permissible)
Protection		IP 65; IP 66; (IP 67: on the housing; IP 64: on the shaft)

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

Mechanical data		
Weight	[g]	293
Dimensions	[mm]	Ø 36.5 / L = 65
Materials		flange: aluminium; housing: stainless steel (1.4521 / 444); cable plug: PA
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]	40
Max. shaft load radial (at the shaft end)	[N]	60

Electrical connection	
Cable: 2 m, Ø 4.9 mm; radial, can also be used axially; 5 x 0.14 mm <sup>2</sup>	

IO-Link	
brown	L+
white	not to be used
blue	L-
grey	not to be used
black	IO-Link
Screen	housing

# RB3500



## Incremental encoder with solid shaft

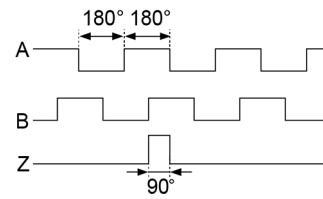
INCREMENTAL ENCODER BASIC LINE

### encoder

brown	UB
white	A
blue	GND
grey	B
black	Z/0-Pulse (90 deg)
Screen	housing

### Diagrams and graphs

Pulse diagram



direction of rotation clockwise (looking at the shaft)