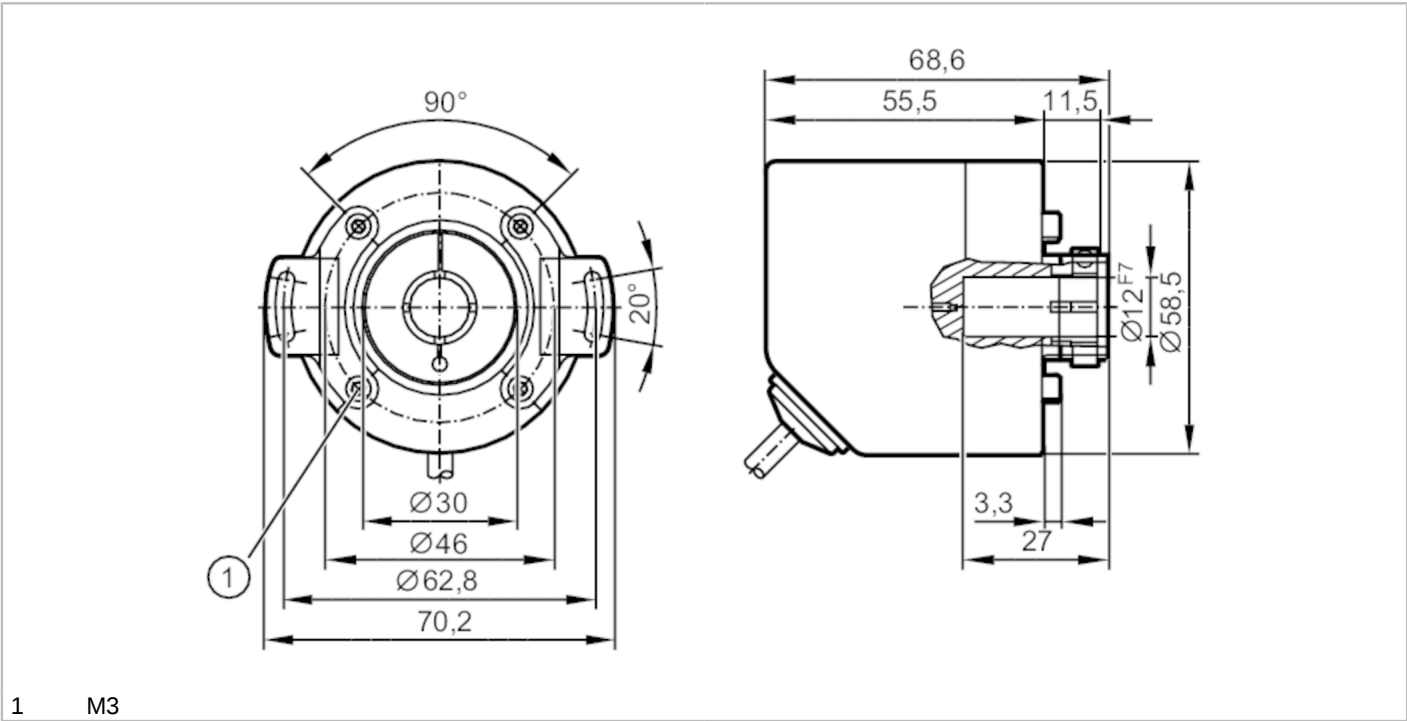


RO3501



Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE



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]	12
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



Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE

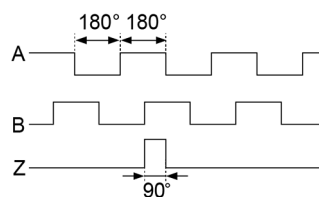
Accuracy / deviations		
Accuracy	[°]	0.1
Software / programming		
Parameter setting options	Resolution; direction of rotation; HTL; TTL	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SIO mode	yes	
Min. process cycle time	[ms]	2.3
Operating conditions		
Ambient temperature	[°C]	-40...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; (on the housing: IP 67; on the shaft: IP 65)	
Tests / approvals		
Shock resistance		100 g
Vibration resistance		20 g
MTTF	[years]	292
Mechanical data		
Weight	[g]	476
Dimensions	[mm]	Ø 58.5 / L = 68.6
Materials	flange: aluminium; housing: stainless steel (444/1.4521); cable plug: PA	
Tightening torque	[Nm]	< 0.7; (Mounting screw)
Max. revolution, mechanical	[U/min]	12000
Max. starting torque	[Nm]	2
Reference temperature torque	[°C]	20
Shaft design	hollow shaft open to one side	
Shaft diameter	[mm]	12
Shaft material	stainless steel	
Installation depth of shaft	[mm]	27
Max. axial shaft misalignment	[mm]	0,5
Fixing flange	Ø 58.5 mm	
Electrical connection		
Cable: 2 m, Ø 4.9 mm; radial, can also be used axially; 5 x 0.14 mm²		
IO-Link		
brown	L+	
white	not to be used	
blue	L-	
grey	not to be used	
black	IO-Link	
Screen	housing	

**Incremental encoder with hollow 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)