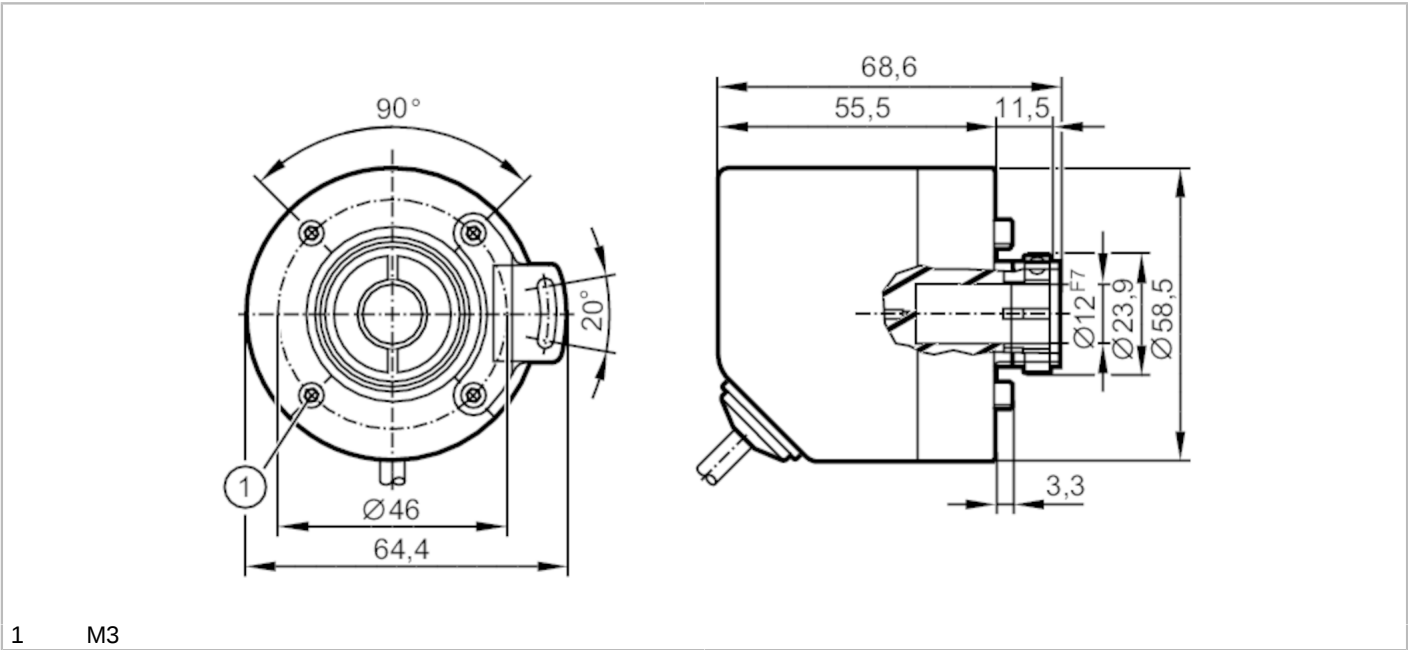


RO3500



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
Accuracy / deviations	
Accuracy [°]	0.1



Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE

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	
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...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]		478	
Housing		cylindrical	
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]		0.02	
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	
Remarks			
Pack quantity		1 pcs.	

RO3500



Incremental encoder with hollow shaft

INCREMENTAL ENCODER BASIC LINE

Electrical connection

Cable: 2 m, Ø 4.9 mm; radial, can also be used axially; 5 x 0.14 mm²

IO-Link

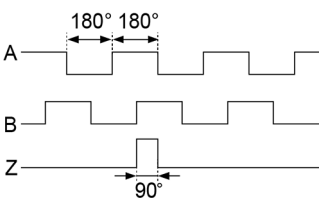
brown	L+
white	not to be used
blue	L-
grey	not to be used
black	IO-Link
Screen	housing

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)