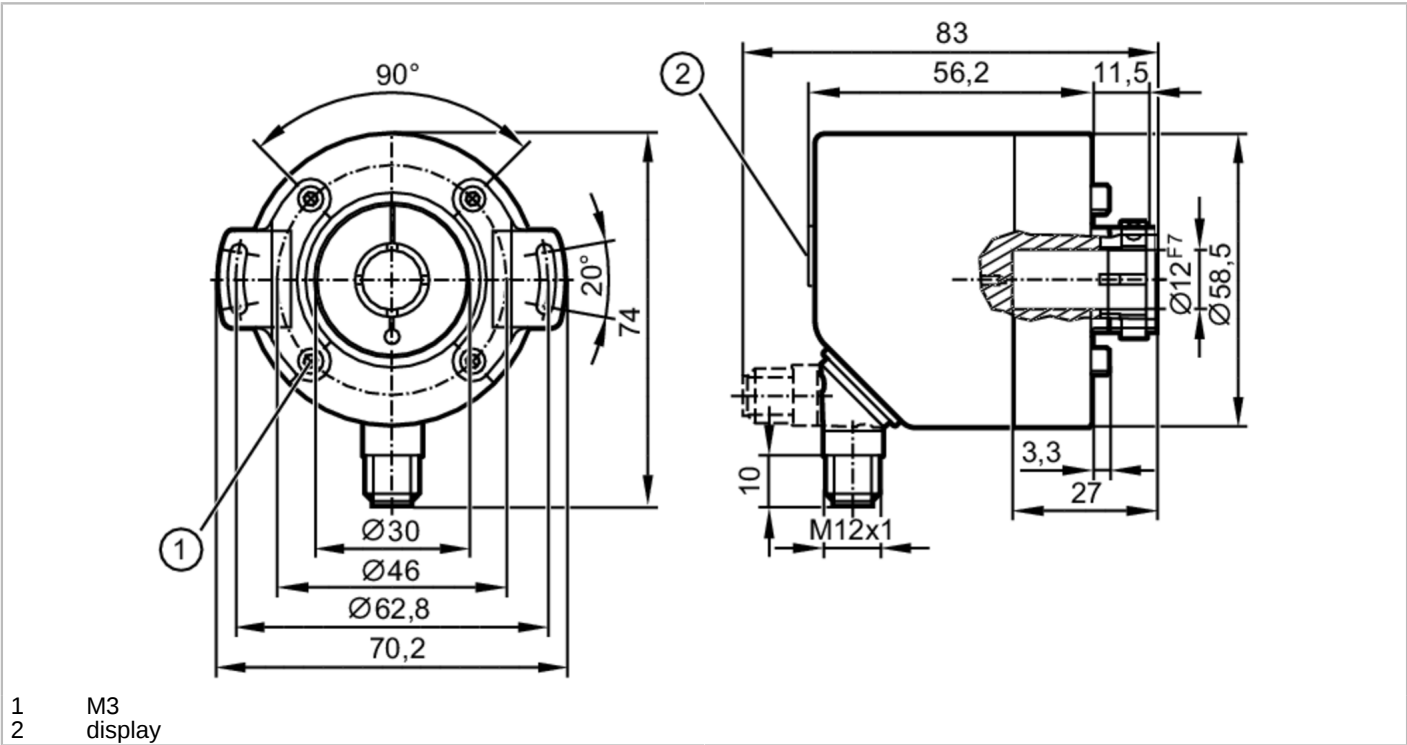


ROP521



Incremental encoder with hollow shaft and display

INCREMENTAL ENCODER PERFORMANCE LINE



- 1 M3 display
- 2 display



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
Application	encoder; Speed monitor; counter
Electrical data	
Operating voltage [V]	4.75...30 DC
Current consumption [mA]	< 350
Protection class	III
Reverse polarity protection	yes
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 and display

INCREMENTAL ENCODER PERFORMANCE LINE

Speed monitor		
Set point SP	-9994...9999 U/min	-166.6...166.7 Hz
Reset point rP	-9999...9994 U/min	-166.7...166.6 Hz
Counter		
Preset point	1...9999	
Accuracy / deviations		
Accuracy	[°]	0.1
Software / programming		
Parameter setting options	encoder; Resolution; direction of rotation; HTL; TTL; Speed monitor; Resolution	
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; (on the housing: IP 67; on the shaft: IP 65)	
Tests / approvals		
Shock resistance		100 g
Vibration resistance		20 g
MTTF	[years]	218
Mechanical data		
Weight	[g]	481.5
Dimensions	[mm]	Ø 58 / L = 56.2
Materials	flange: aluminium; housing: stainless steel (444/1.4521); display window: PEI	
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 mm	
Displays / operating elements		
Display		10-segment display, red/green 4-digit parameterisable
		2 x LED, yellow
		5 x LED, green



Incremental encoder with hollow shaft and display

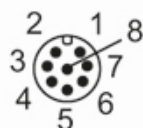
INCREMENTAL ENCODER PERFORMANCE LINE

Accessories

Items supplied	Stator coupling: 2
----------------	--------------------

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)



IO-Link

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

encoder

1	UB
2	A
3	GND
4	Z/0-Pulse (90 deg)
5	B
6	A-
7	B-
8	Z-
Screen	plug

Preset counter

1	UB
2	IN1
3	GND
4	not to be used
5	OUT1
6	not to be used
7	not to be used
8	not to be used
Screen	plug

Speed monitor

1	UB
2	OUT2
3	GND
4	not to be used
5	OUT1
6	OUT2-
7	OUT1-
8	not to be used
Screen	plug

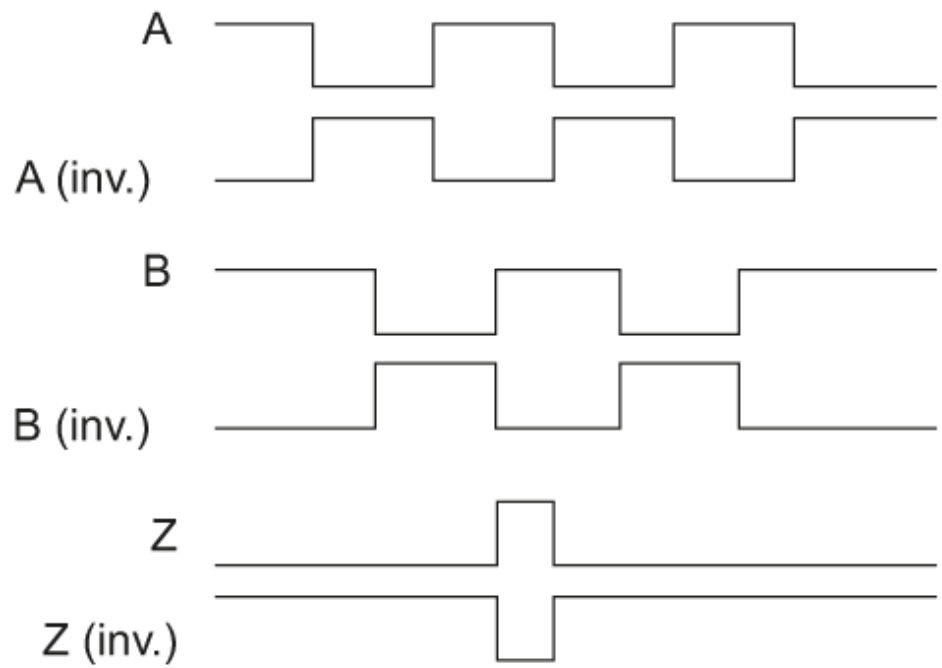


Incremental encoder with hollow shaft and display

INCREMENTAL ENCODER PERFORMANCE LINE

Diagrams and graphs

Pulse diagram



direction of rotation clockwise (looking at the shaft)