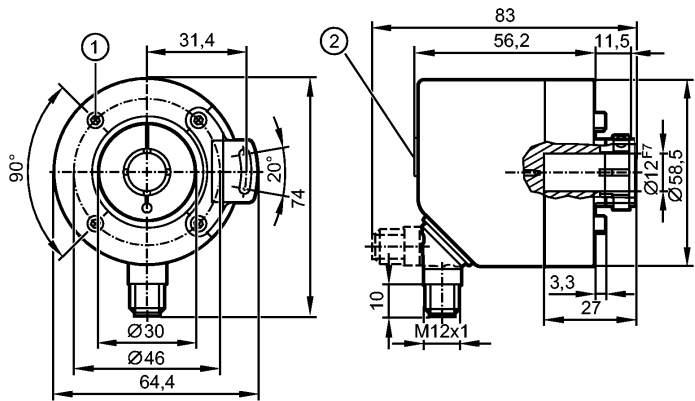


ROP520

INCREMENTAL ENCODER PERFORMANCE
LINE

Encoders



1: M3
2: display

CE IO-Link

Product characteristics

Hollow shaft encoder open to one side

HTL, TTL 50 mA

Connector

display

Magnetic detection system

Resolution 1...10000

Application

Application encoder - speed monitor - counter function

Electrical data

Operating voltage [V] 4.75...30 DC

Current consumption [mA] < 350

Max. permissible rpm / elec. [1/min] 12000

Phase difference A und B [°] 90

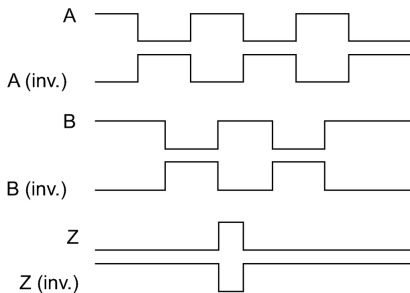
Switching frequency [kHz] 1000

Reverse polarity protection yes

Short-circuit protection yes

Protection class III

Pulse diagram



Direction of rotation clockwise (looking at the shaft)

Outputs

Output function HTL, TTL 50 mA

Measuring / setting range

Encoders

Resolution programmable, factory setting 1024

ROP520

INCREMENTAL ENCODER PERFORMANCE

LINE

Speed monitor

Set point, SP	-9994...9999 [1/min]	-166.6...166.7 [Hz]
Reset point, rP	-9999...9994 [1/min]	-166.7...166.6 [Hz]
Counter		
Preset point	1...9999	

Accuracy / deviations

Accuracy	< 0.1°
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Software / programming

Programming options	encoder: Resolution, rotational direction, HTL, TTL; Speed monitor; Resolution
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Interfaces

IO-Link device	
Transfer type	COM 2
IO-Link revision	V1.1
SIO mode	yes
Min. process cycle time [ms]	2.3

Mechanical data

Max. permissible rpm / mech. [1/min]	12000
Starting torque [Ncm]	< 2 (20 °C)
Shaft, material [mm]	hollow shaft open to one side Ø 12 F7, stainless steel
Installation depth/shaft [mm]	27
Max. axial shaft alignment [mm]	0.5
Vibration resistance	30 g
Shock resistance	200 g
Housing materials	flange: aluminium; housing: stainless steel 444/1.4521; connector: stainless steel 316/1.4401; display window: PEI
Weight [kg]	0.475

Environment

Max. relative air humidity [%]	95, Condensation not permissible
Ambient temperature [°C]	-40...85
Storage temperature [°C]	-40...85
Protection	IP 65; IP 67 (housing); IP 64 (shaft)

Tests / approvals

MTTF [Years]	218.3
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Displays / operating elements

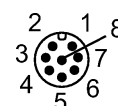
Display	4-digit 10-segment display red/green programmable 2 LEDs yellow 6 LEDs green (5 active)
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Electrical connection

Connection	M12 connector; radial, can also be used axially; 8 pole
Max. cable length [m]	100

Wiring

IO-Link:		preset counter:	
1:	L+	1:	UB
2:	not to be used	2:	IN1
3:	L-	3:	GND



ROP520

INCREMENTAL ENCODER PERFORMANCE LINE

4:	IO-Link	4:	not to
5:	not to be		be
	used		used
6:	not to be	5:	OUT1
	used	6:	not to
7:	not to be		be
	used		used
8:	not to be	7:	not to
	used		be
screen:	plug		used
		8:	not to
			be
encoder:			used
1:	UB		
2:	A	screen:	plug
3:	GND		
4:	Z/0-Pulse	Speed	
	(90 deg)	monitor:	
5:	B	1:	UB
6:	A-	2:	OUT2
7:	B-	3:	GND
8:	Z-	4:	not to
screen:	plug		be
			used
		5:	OUT1
		6:	OUT2-
		7:	OUT1-
		8:	not to
			be
			used
		screen:	plug

Remarks

Pack quantity [piece] 1