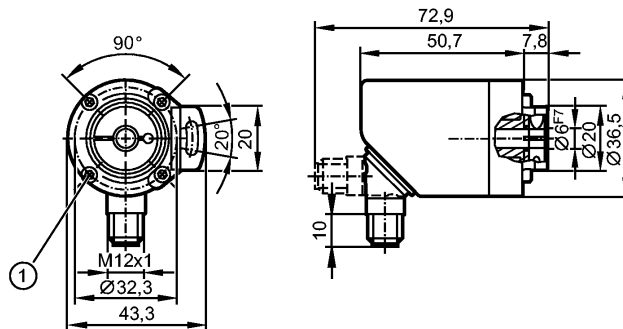


RA3100

INCREMENTAL ENCODER BASIC LINE

Encoders



1: M3 x 0.5 6 mm deep



Product characteristics

Hollow shaft encoder open to one side

HTL, TTL 50 mA

Connector

Magnetic detection system

Resolution 1...9999

Electrical data

Operating voltage [V] 4.5...30 DC

Current consumption [mA] < 150

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

Phase difference A und B [°] 90

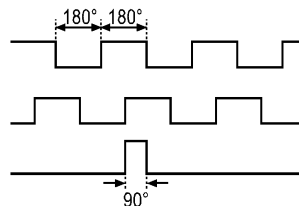
Switching frequency [kHz] 1000

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

Accuracy / deviations

Accuracy < 0.1°

Reaction times

Power-on delay time [s] 0.5

Software / programming

Programming options Resolution, rotational direction, HTL, TTL

RA3100

INCREMENTAL ENCODER BASIC LINE

Encoders

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]	< 1 (20 °C)
Shaft, material [mm]	hollow shaft open to one side Ø 6 H7, stainless steel
Installation depth/shaft [mm]	18
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
Tightening torque [Nm]	< 0.7 (Screw)
Weight [kg]	0.257
Environment	
Max. relative air humidity [%]	95, Condensation not permissible
Ambient temperature [°C]	-40...85
Storage temperature [°C]	-40...85
Protection	IP 65 / IP 66; IP 67 (housing); IP 64 (shaft)
Tests / approvals	
MTTF [Years]	292.2
Electrical connection	
Connection	M12 connector; radial, can also be used axially; 5-pole
Wiring	
IO-Link:	
1:	L+
2:	not to be used
3:	L-
4:	IO-Link
5:	not to be used
screen:	plug
encoder:	
1:	UB
2:	A
3:	GND
4:	Z/0-Pulse (90 deg)
5:	B
screen:	plug
Remarks	
Pack quantity [piece]	1