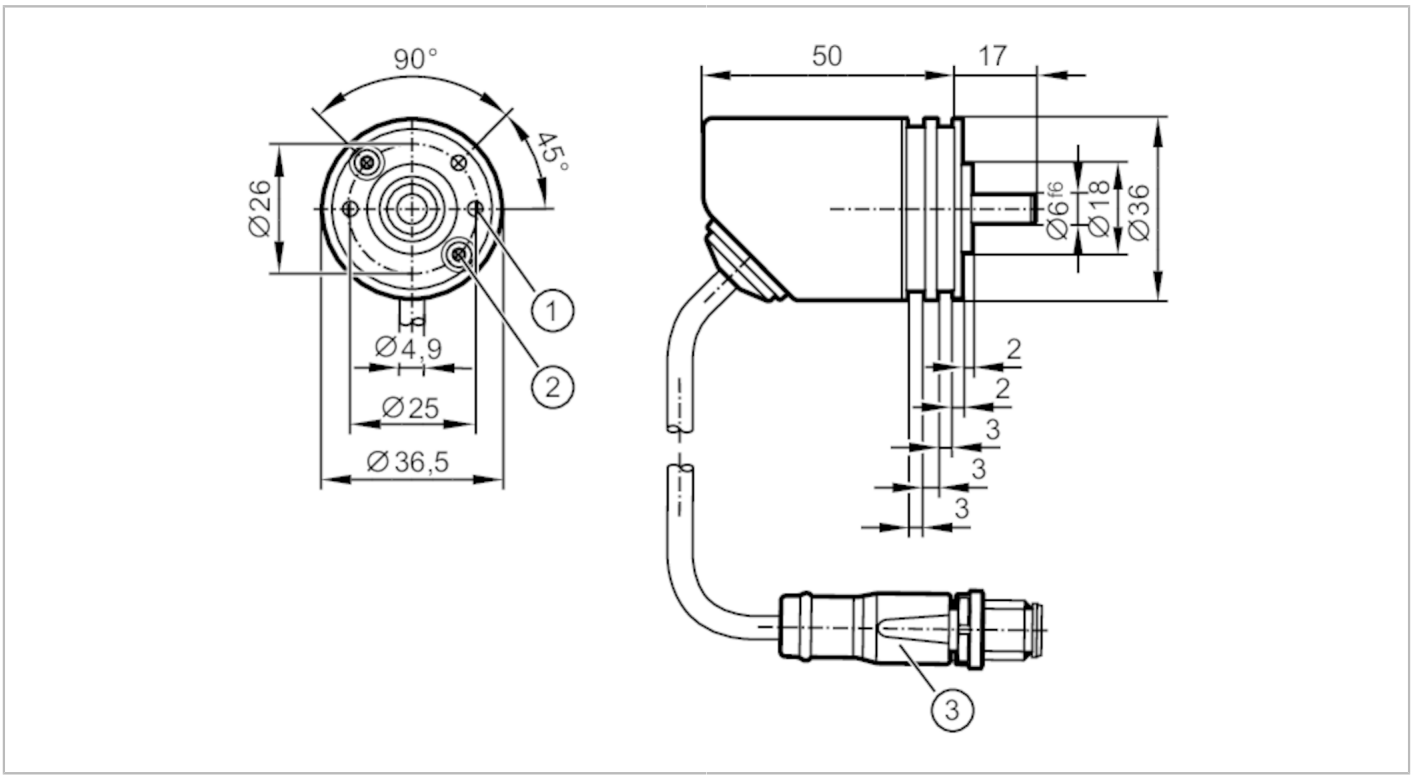
RB3560

Incremental encoder with solid shaft

RNB06SPU800250IOI



Product characteristics		
Resolution		1...10000; (programmable; Factory setting: 250, HTL, CW) resolution
Communication interface		IO-Link
Shaft design		solid shaft
Shaft diameter	[mm]	6
Application		
Special feature		Screened cable
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
Max. current load per output	[mA]	50
Switching frequency	[kHz]	1000
Short-circuit protection		yes
Phase difference A and B	[°]	90
Measuring/setting range		
Resolution		1...10000; (programmable; Factory setting: 250, HTL, CW) resolution

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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		200 g
Vibration resistance		30 g
MTTF	[years]	292
Mechanical data		
Weight	[g]	251.5
Dimensions	[mm]	Ø 36.5 / L = 65
Materials		flange: aluminium; housing: stainless steel (444/1.4521); cable plug: PA
Max. revolution, mechanical	[U/min]	12000
Max. starting torque	[Nm]	1
Reference temperature torque	[°C]	20
Shaft design		solid shaft
Shaft diameter	[mm]	6
Shaft material		stainless steel
Max. shaft load axial (at the shaft end)	[N]	40
Max. shaft load radial (at the shaft end)	[N]	60
Fixing flange		Ø 36.5 mm

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Electrical connection

IO-Link

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

encoder

1 L-
2 L+
3 A
4 not to be used
5 not to be used
6 Z/0-pulses (90 deg)
7 B
8 not to be used
Screen housing
plug

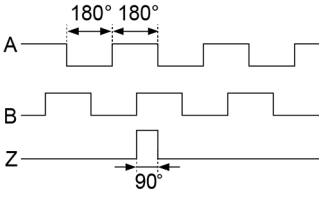
Electrical connection - plug

Cable: 0.15 m; Maximum cable length: 100 m

Connector: 8 x M12x1, straight; coding: A; Moulded body: PUR

Diagrams and graphs

Pulse diagram



direction of rotation clockwise (looking at the shaft)