


LINARIX Linear Sensor
LU0-S101G-1213-2P00-PRQ
POSITAL
FRABA

General Data
General Data

Supply Voltage	4.5 - 30 VDC
Power Consumption	≤ 1.0 W
Turn On Time	< 1 s
Operating Temperature	-20 °C (-4 °F) - +80 °C (+176 °F)
Weight	415 g (0.91 lb)
Protection Class (Encoder)	IP64 / IP65
EMC: Emitted Interference	DIN EN 61000-6-4
EMC: Noise Immunity	DIN EN 61000-6-2

Mechanical Data

Max. Measurement Length	1.90 m (6.23')
Length per Revolution	150 mm
Wire Material	Coated Polyamide Stainless Steel
Wire Diameter	0.45 mm
Encoder Housing Material	Steel
Draw Wire Housing Material	Aluminum
Max. Speed of Wire Displacement	2.0 m / s
Max. Wire Acceleration	12.0 g
Max. Extension Force	5.0 N

Data Sheet

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Min. Retraction Force	3.5 N
Actuation Lifetime	1.0 mio Cycles (Estimated based on ideal conditions)
Wire Mounting	Eyelet
Max. Wire Exit Angle	±3°

Sensor Data

Technology	Magnetic ($\leq 0.09^\circ$)
Accuracy	±0.02 % FSO
Repeatability	±0.006 % FSO
Resolution [Encoder - Singleturn]	13 bit
Resolution [Encoder - Multiturn]	12 bit
Approx. Linear Resolution	18.3 μm
Output Code	Gray

Interface

Communication Interface	SSI with Preset
Manual Functions	Preset + complement via cable or connector
Cycle Time Interface	$\geq 25 \mu\text{s}$

Outputs

Output Driver	RS422
Current Consumption	Typical 50 mA
Clock Input	RS 422, via Optocoupler
Clock frequency	100 kHz - 2 MHz
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes
MTTF	350 years @ 40 °C

Electrical Connection

Connection Orientation	Radial
Connection Orientation (w.r.t Draw Wire)	Radial 0 / Axial
Connector	M12, Male, 8 pin, a coded

Product Life Cycle

Product Life Cycle	Established
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Connection Plan

SIGNAL	PIN NUMBER
Power Supply	2
GND	1
Data+	5
Data-	6
Clock+	3
Clock-	4
Preset	7
DIR	8
Shielding	Connector Housing

Connector-View on Encoder
Rotation Clockwise (seen on shaft)

Dimensional Drawing

[2D Drawing](#)

Accessories

Connectors & Cables

10m PUR Cable, 8pin, A-Coded, f
 POS M12 8pin-A Female+5m PUR Cable
 POS M12 8pin-A Female+2m PUR Cable
 POS M12 8pin-A Female+10m PUR Cable
 M12, 8pin A-Coded, Female

More

Data Sheet

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Displays
AP21-00 SSI Display
AP21-DA SSI Display (4 dig. + analog o/p)
DiMod-P SSI Display
Configuration/Programming Tools
SSI2USB Adapter DB15 (VA01)

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All dimension in [inch] mm. Encoder dimensions may vary depending on electrical interface and connector. This drawing and the information contained is for general presentation purposes only. Please refer to the "Download" section for detailed technical drawings. © FRABA B.V., All rights reserved. We do not assume responsibility for technical inaccuracies or omissions. Specifications are subject to change without notice.