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IXARC Absolute Rotary Encoder

UCD-S101G-0013-G10G-2AW



Interface

Interface	SSI with Preset
Programming Functions	Absolute: Resolution, Revolution, Code, Preset
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	$\geq 25 \mu\text{s}$
Number of Preset Cycles	5,100,000
SSI Format	SSSSSSSSSSSS0
Video Manual	▶ Watch a simple installation video

Outputs

Output Driver	RS422
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Electrical Data

Supply Voltage	4.5 - 30 VDC
Current Consumption	Typical 50 mA
Power Consumption	$\leq 1.0 \text{ W}$
Start-Up Time	$< 250 \text{ ms}$
Clock Input	RS 422, via Optocoupler
Clock Frequency	100 kHz - 2 MHz
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes
EMC: Emitted Interference	DIN EN 61000-6-4

Data Sheet

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EMC: Noise Immunity	DIN EN 61000-6-2
MTTF	500 years @ 40 °C

Sensor

Technology	Magnetic
Resolution Singleturn	13 bit
Resolution Multiturn	0 bit
Accuracy (INL)	$\pm 0.0878^\circ$ (≤ 12 bit)
Sense Signal (Default)	Clockwise shaft movement (front view on shaft)
Code	Gray

Environmental Specifications

Protection Class (Shaft)	IP68/IP69K
Protection Class (Housing)	IP68/IP69K
Operating Temperature	-40 °C fixed (-40 °F), -30 °C flexible (-22 °F) - +80 °C (+176 °F)
Humidity	98% RH, no condensation

Mechanical Data

Housing Material	Stainless Steel V4A (1.4404, 316 L)
Housing Coating	No Coating
Flange Type	Synchro, $\varnothing$ 42 mm Heavy Duty
Flange Material	Stainless steel V4A (1.4404, 316 L)
Shaft Type	Solid, Length = 20 mm
Shaft Diameter	$\varnothing$ 10 mm (0.39")
Shaft Material	Stainless Steel V4A (1.4112, 440 B), hardened
Max. Shaft Load	Axial 300 N, Radial 300 N
Minimum Mechanical Lifetime (10^8 revolutions with Fa/Fr)	7.6 (300N / 300 N), 10 (270 N / 270 N), 200 (100 N / 100 N)
Friction Torque	≤ 3 Ncm @ 20 °C (4.2 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	≤ 6000 1/min
Shock Resistance	≤ 200 g (half sine 11 ms, EN 60068-2-27)
Permanent Shock Resistance	≤ 30 g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	≤ 30 g (10 Hz - 1000 Hz, EN 60068-2-6)
Length	64,9 mm (2.56")
Weight	550 g (1.21 lb)



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Electrical Connection

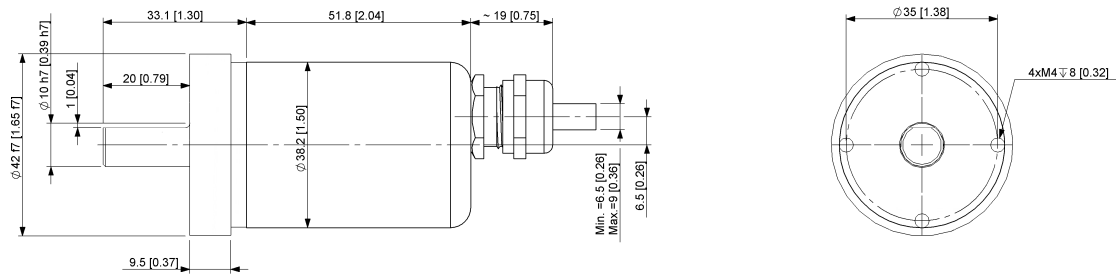
Connection Orientation	Axial
Cable Length	2 m [79"]
Wire Cross Section	0.34 mm ² / AWG 22
Material / Type	PUR / PU
Cable Diameter	7.5 mm (0.30 in)
Minimum Bend Radius	56 mm (2.2") fixed, 75 mm (3") flexing

Certification

Approval	CE + cULus listed, Industrial Control Equipment
Product Life Cycle	Established

Connection Plan

SIGNAL	CABLE COLOR
Power Supply	Brown
GND	White
Data+	Gray
Data-	Pink
Clock+	Green
Clock-	Yellow
Preset	Blue
DIR	Red
Shielding	Shield



[2D Drawing](#)

Accessories

Coupling Disc Type-10-12
Coupling Bellow Type-10-10
Coupling Bellow Type-06-10
Coupling Bellow Type-08-10
Coupling Bellow Type-10-12
Coupling Bellow Type-10-(1/4")
Coupling Bellow Type-10-(3/8")
Coupling Jaw Type-06-10
Coupling Jaw Type-08-10
Coupling Jaw Type-10-12
Coupling Jaw Type-10-(1/4")
Coupling Jaw Type-10-(3/8")
Coupling Jaw Type-10-10
Coupling Disc Type-06-10
Coupling Disc Type-10-10

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The picture and drawing are for general presentation purposes only. Please refer to the "Download" section for detailed technical drawings. All dimension in [inch] mm. © FRABA B.V., All rights reserved. We do not assume responsibility for technical inaccuracies or omissions. Specifications are subject to change without notice.