



POSITAL

FRABA

IXARC Absolute Rotary Encoder

UCD-S101B-1213-L100-PAL



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	MMMMMMMMMMMMSSSSSSSSSSSSSS0
Video Manual	▶ Watch a simple installation video

Outputs

Output Driver	RS422
---------------	-------

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
EMC: Noise Immunity	DIN EN 61000-6-2

Data Sheet

Printed at 28-09-2017 00:09



POSITAL

FRABA

MTTF	350 years @ 40 °C
------	-------------------

Sensor

Technology	Magnetic
Resolution Singleturn	13 bit
Resolution Multiturn	12 bit
Multiturn Technology	Self powered magnetic pulse counter (no battery, no gear)
Accuracy (INL)	$\pm 0.0878^\circ$ (≤ 12 bit)
Sense Signal (Default)	Clockwise shaft movement (front view on shaft)
Code	Binary

Environmental Specifications

Protection Class (Shaft)	IP65
Protection Class (Housing)	IP66/IP67
Operating Temperature	-40 °C (-40 °F) - +85 °C (+185 °F)
Humidity	98% RH, no condensation

Mechanical Data

Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Clamp, $\varnothing$ 58 mm (L)
Flange Material	Aluminum
Shaft Type	Solid, Single Flat, Length = 20 mm
Shaft Diameter	$\varnothing$ 10 mm (0.39")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Max. Shaft Load	Axial 40 N, Radial 110 N
Minimum Mechanical Lifetime (10 ⁸ revolutions with Fa/Fr)	430 (20 N / 40 N), 150 (40 N / 60 N), 100 (40 N / 80 N), 55 (40 N / 110 N)
Rotor Inertia	$\leq 30 \text{ gcm}^2$ [$\leq 0.17 \text{ oz-in}^2$]
Friction Torque	$\leq 3 \text{ Ncm}$ @ 20 °C (4.2 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	$\leq 12000 \text{ 1/min}$
Shock Resistance	$\leq 100 \text{ g}$ (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	$\leq 10 \text{ g}$ (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	$\leq 10 \text{ g}$ (10 Hz - 1000 Hz, EN 60068-2-6)
Length	41,7 mm (1.64")
Weight	285 g (0.63 lb)

Data Sheet

Printed at 28-09-2017 00:09



POSITAL

FRABA

Electrical Connection

Connection Orientation	Axial
Connector	M23, Male, 12 pin, CCW / left

Certification

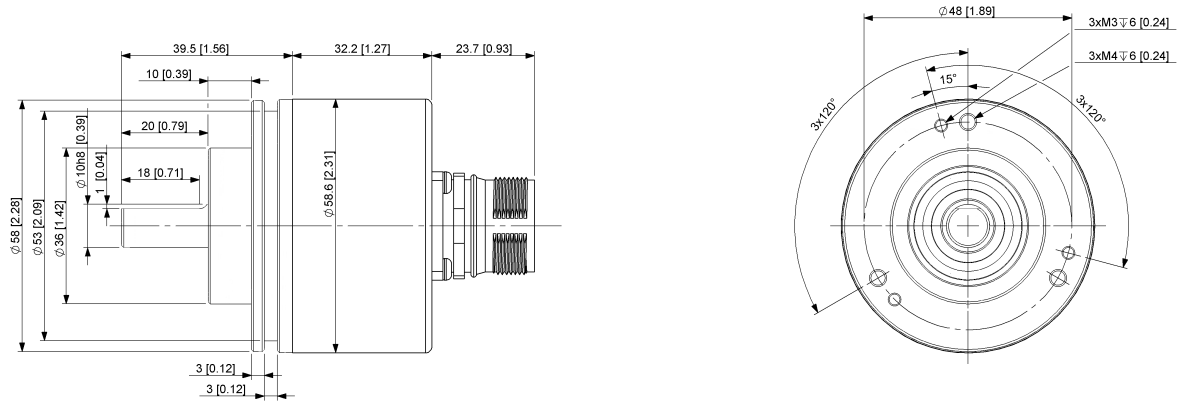
Approval	CE + cULus listed, Industrial Control Equipment
Product Life Cycle	Established



Connection Plan

SIGNAL	PIN NUMBER
Power Supply	11
GND	12
Data+	3
Data-	4
Clock+	2
Clock-	1
Preset	9
DIR	8
Not Connected	5
Not Connected	6
Not Connected	7
Not Connected	10

Connector-View on Encoder



[2D Drawing](#)

Accessories

Connectors & Cables

10m PVC Cable, 12pin, Clockwise, f
 15m PVC Cable, 12pin, Clockwise, f
 1m PVC Cable, 12pin, Clockwise, f
 20m PVC Cable, 12pin, Clockwise, f
 5m PVC Cable, 12pin, Clockwise, f
 30m PVC Cable, 12pin, Clockwise, f
 2m PVC Cable, 12pin, Clockwise, f
 M23, 12pin Clockwise, Female
 More

Clamp Disc w/ Eccentric Hole-4pcs
 Clamp Disc w/ Centred Hole-4pcs

Coupling Disc Type-10-12

Data Sheet

Printed at 28-09-2017 00:09



POSITAL

FRABA

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
More

Mounting Bracket for Clamping Flange w/ fixtures
L Mounting Bracket w/ screws
Mounting Bracket Spring Loaded f. Clamping Flange

Contact



POSITAL
Contact Us

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.