POSITAL
FRABA

IXARC Absolute Rotary Encoder

OCD-S5A1B-1416-CA30-PRP



Interface	
Interface	SSI with Preset + Incremental RS422
Optional Incremental Pulses	1024
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	≥ 25 µs

Outputs	
Output Driver	SSI (RS422) / Incr. (RS422)
Output Incremental	A, /A, B, /B, Z, /Z
Quadrature Phasing	90° ± 4.5° electrical
Max. Frequency Response	2 MHz

Electrical Data	
Supply Voltage	4.5 – 30 VDC
Power Consumption	≤ 1.5 W
Start-Up Time	< 250 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

MTTF	16.2 years @ 40 °C

Sensor

Technology	Optical
Resolution Singleturn	16 bit
Resolution Multiturn	14 bit
Multiturn Technology	Mechanical Gearing (no Battery)
Accuracy (INL)	±0.0220° (14 – 16 bit), ±0.0439° (≤13 bit)
Sense Signal (Default)	Clockwise shaft movement (front view on shaft)
Code	Binary
Incremental Pulses	1024

Environmental Specifications

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

Mechanical Data

Housing Material	Steel
Housing Coating	Wet coating (RAL 9006 White Aluminium) + Cathodic corrosion protection (>720 h salt spay resistance)
Flange Type	Clamp, ø 58 mm (C)
Flange Material	Aluminum
Shaft Type	Solid, Single Flat, Length = 20 mm
Shaft Diameter	ø 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	≤ 30 gcm² [≤ 0.17 oz-in²]
Friction Torque	≤ 3 Ncm @ 20 °C (4.2 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	≤ 12000 1/min
Shock Resistance	≤ 100 g (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	≤ 10 g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	≤ 10 g (10 Hz – 1000 Hz, EN 60068-2-6)
Length	52,7 mm (2.07")

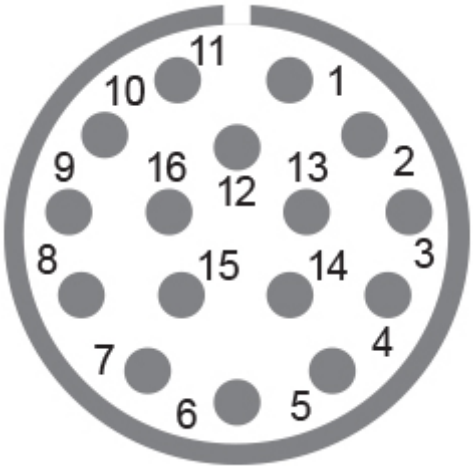
Weight	285 g (0.63 lb)

Electrical Connection

Connection Orientation	Radial
Connector	M23, Male, 16 pin

Certification

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



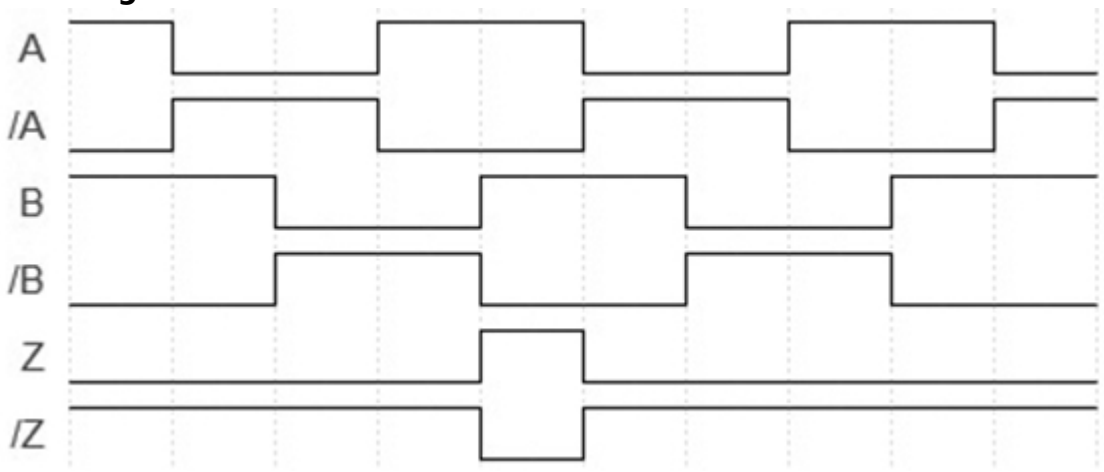
Connection Plan

SIGNAL	PIN NUMBER
Power Supply	11
GND	12
Data+	3
Data-	4
Clock+	2
Clock-	1
DIR	8
Preset	9
A	5
/A	6
B	7
/B	10
Z	13
/Z	14

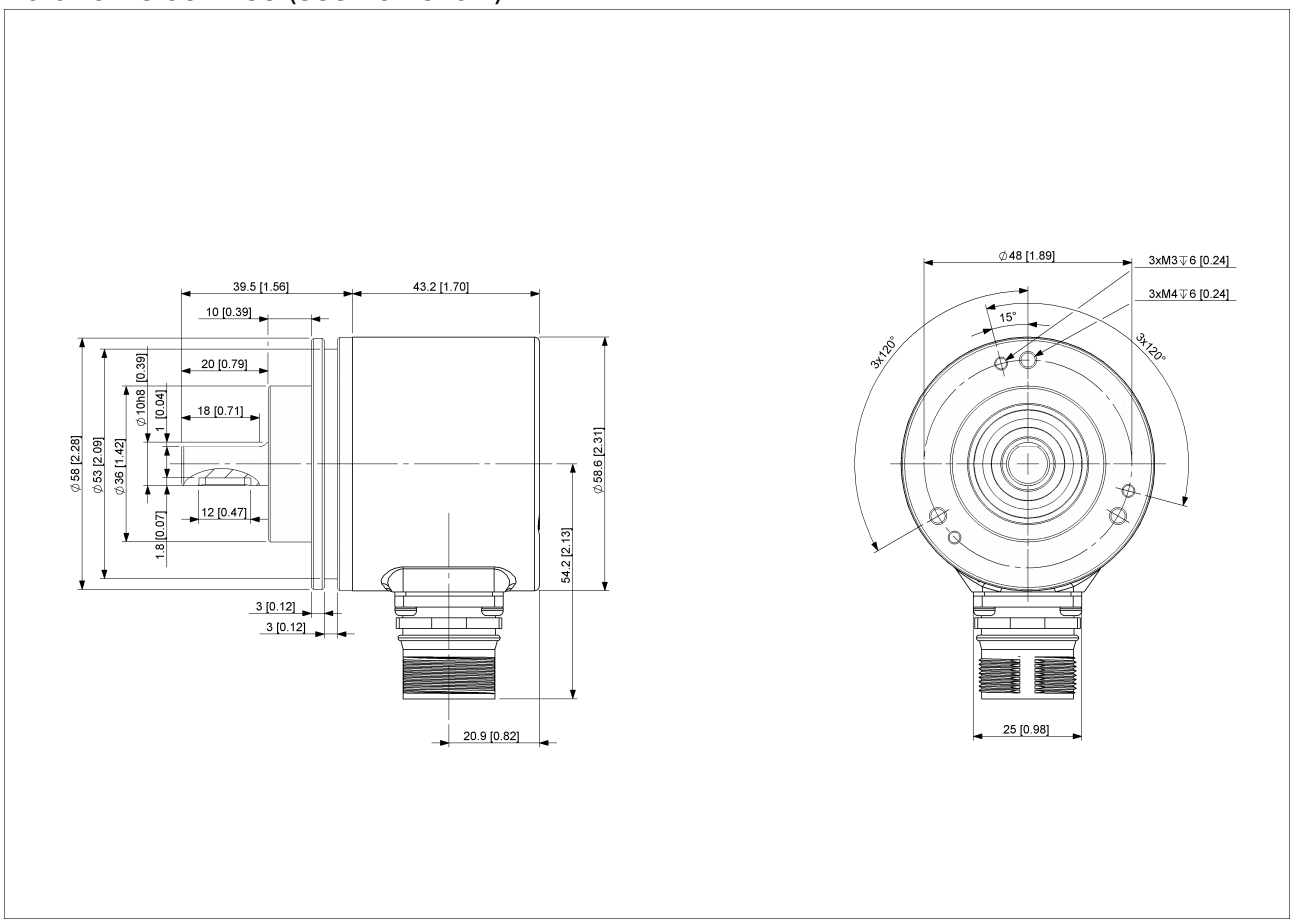
Shielding	Housing

Connector-View on Encoder

Pulse Diagram



Rotation Clockwise (seen on shaft)



2D Drawing

Accessories

Connectors & Cables
5m PVC Cable, 16pin, f
1m PVC Cable, 16pin, f
2m PVC Cable, 16pin, f
10m PVC Cable, 16pin, f
M23, 16pin, Female
More

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

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
More

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

Contact

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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.