



# POSITAL

## FRABA

### IXARC Incremental Encoder

### UCD-IPT00-00256-R100-PRL

#### Interface

Interface	Programmable Incremental
Programming Functions	PPR (1-16384), Output, Counting Direction
Configuration Tool	UBIFAST Configuration Tool (Version $\geq$ 1.6.3)

#### Outputs

Output Driver	RS 422 (TTL)
Quadrature Phasing	$90^\circ \pm 4.5^\circ$ electrical
Output Voltage High Level Push-Pull (HTL)	$> 4\text{ V}$ @ 4.75-9 V Supply Voltage $> 3\text{ V}$ @ 9-30 V Supply Voltage
Output Voltage Low Level Push-Pull (HTL)	$< 0.5\text{ V}$
Output Voltage High Level RS422 (TTL)	$> 4\text{ V}$
Output Voltage Low Level RS422 (TTL)	$< 0.5\text{ V}$
Maximum Frequency Response	1 MHz
Maximum Switching Current	50 mA per Channel

#### Electrical Data

Supply Voltage	4.75 - 30 VDC
Current Consumption	$\leq 140\text{mA}$ @ 5V DC, $\leq 70\text{mA}$ @ 10V DC, $\leq 40\text{mA}$ @ 24V DC
Power Consumption	$\leq 1.0\text{ W}$
Start-Up Time	$< 250\text{ ms}$
Min. Load Resistance	120 $\Omega$
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	280 years @ 40 $^\circ\text{C}$

#### Sensor

Technology	Magnetic
Accuracy (INL)	$\pm 0.0878^\circ$ ( $\leq 12$ bit)
Duty Cycle	$180^\circ \pm 27^\circ$ (Speed $> 100\text{RPM}$ )
Phase Angle	$90^\circ \pm 14^\circ$ (Speed $> 100\text{RPM}$ )

Data Sheet

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### 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

#### Mechanical Data

Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Synchro, ø 36 mm
Flange Material	Aluminum
Shaft Type	Solid, 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
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 mm (2.05")
Weight	155 g (0.34 lb)
Minimum Mechanical Lifetime (10 <sup>8</sup> revolutions with Fa/Fr)	30 (20 N / 40 N), 10 (40 N / 60 N), 7 (40 N / 80 N), 3 (40 N / 110 N)

### Electrical Connection

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

### Certification

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

Product Life Cycle	Established
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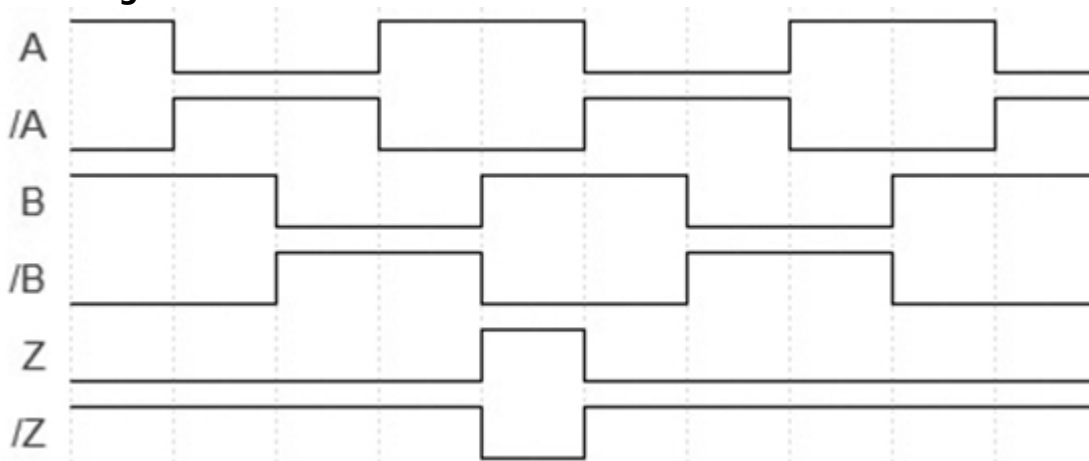


### Connection Plan

SIGNAL	PIN NUMBER
Power Supply	12
GND	10
A	5
/A	6
B	8
/B	1
Z	3
/Z	4
Shielding	Connector housing

Connector-View on Encoder

### Pulse Diagram



Data Sheet

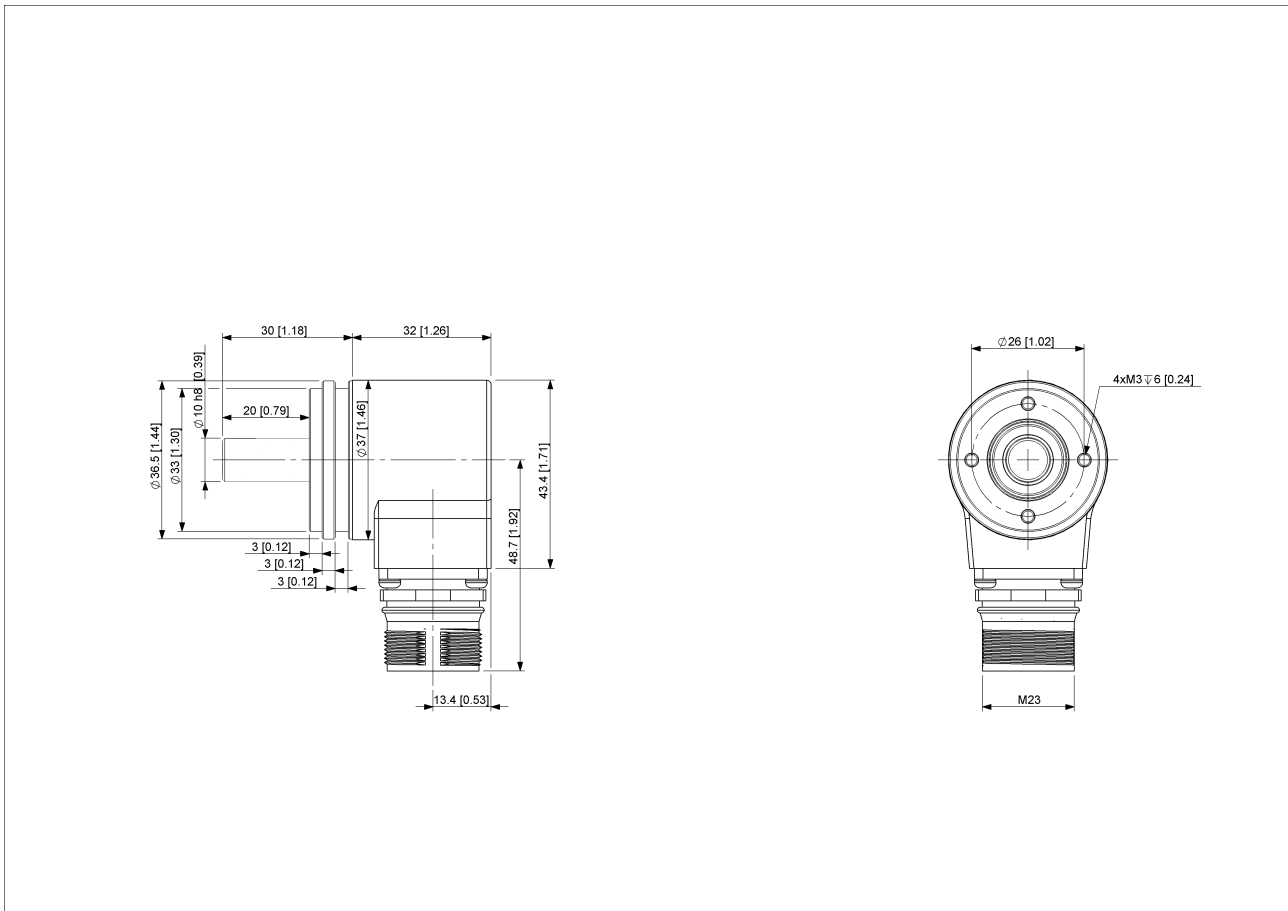
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Rotation Clockwise (seen on shaft)



### 2D Drawing

### Accessories

Configuration/Programming Tools

UBIFAST Configuration Tool

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

Couplings

Coupling Disc Type-10-12

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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

Measuring Wheels

Measuring Wheels 200mm-Knurled Alu Surface  
Measuring Wheels 200mm-Smooth PUR Surface  
Measuring Wheels 200mm-Studded PUR Surface  
Measuring Wheels 200mm-Corrugated PUR Surface  
Measuring Wheels 500mm-Knurling Alu Surface  
Measuring Wheels 500mm-Smooth PUR Surface  
Measuring Wheels 500mm-Studded PUR Surface  
Measuring Wheels 500mm-Corrugated PUR Surface

More

Displays

AP20-00 Counter  
AP20-D0 Counter (4 dig. o/p)  
AP20-0A Counter (analog o/p)  
AP20-DA Counter (4 dig. + analog o/p)  
DiMod Counter (Relay o/p)

More

Clamping Rings

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

**Contact**



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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.