



# POSITAL

## FRABA

### IXARC Absolute Rotary Encoder

### UCD-S101B-1312-VCS0-PRQ



#### Interface

Interface	SSI with Preset
Programming Functions	Absolute: Resolution, Revolution, Code, Preset
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	≥ 25 μs
Number of Preset Cycles	5,100,000
SSI Format	MMMMMMMMMMMMSSSSSSSSSSSS0
Video Manual	<a href="#">▶ Watch a simple installation video</a>

#### Outputs

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

#### Electrical Data

Supply Voltage	4.5 - 30 VDC
Current Consumption	Typical 50 mA
Power Consumption	≤ 1.0 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

Data Sheet

Printed at 28-09-2017 01:09



# POSITAL

## FRABA

EMC: Noise Immunity	DIN EN 61000-6-2
MTTF	350 years @ 40 °C

### Sensor

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

### 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	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Blind Hollow, $\varnothing$ 36 mm / $\varnothing$ 42 mm
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 18 mm
Shaft Diameter	$\varnothing$ 12 mm (0.47")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Friction Torque	$\leq 3$ Ncm @ 20 °C (4.2 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	$\leq 12000$ 1/min
Shock Resistance	$\leq 100$ g (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	$\leq 10$ g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	$\leq 10$ g (10 Hz - 1000 Hz, EN 60068-2-6)
Length	50,2 mm (1.98")
Weight	140 g (0.31 lb)

### Electrical Connection



# POSITAL

## FRABA

Connection Orientation	Radial
Connector	M12, Male, 8 pin, a coded

### Certification

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



### Connection Plan

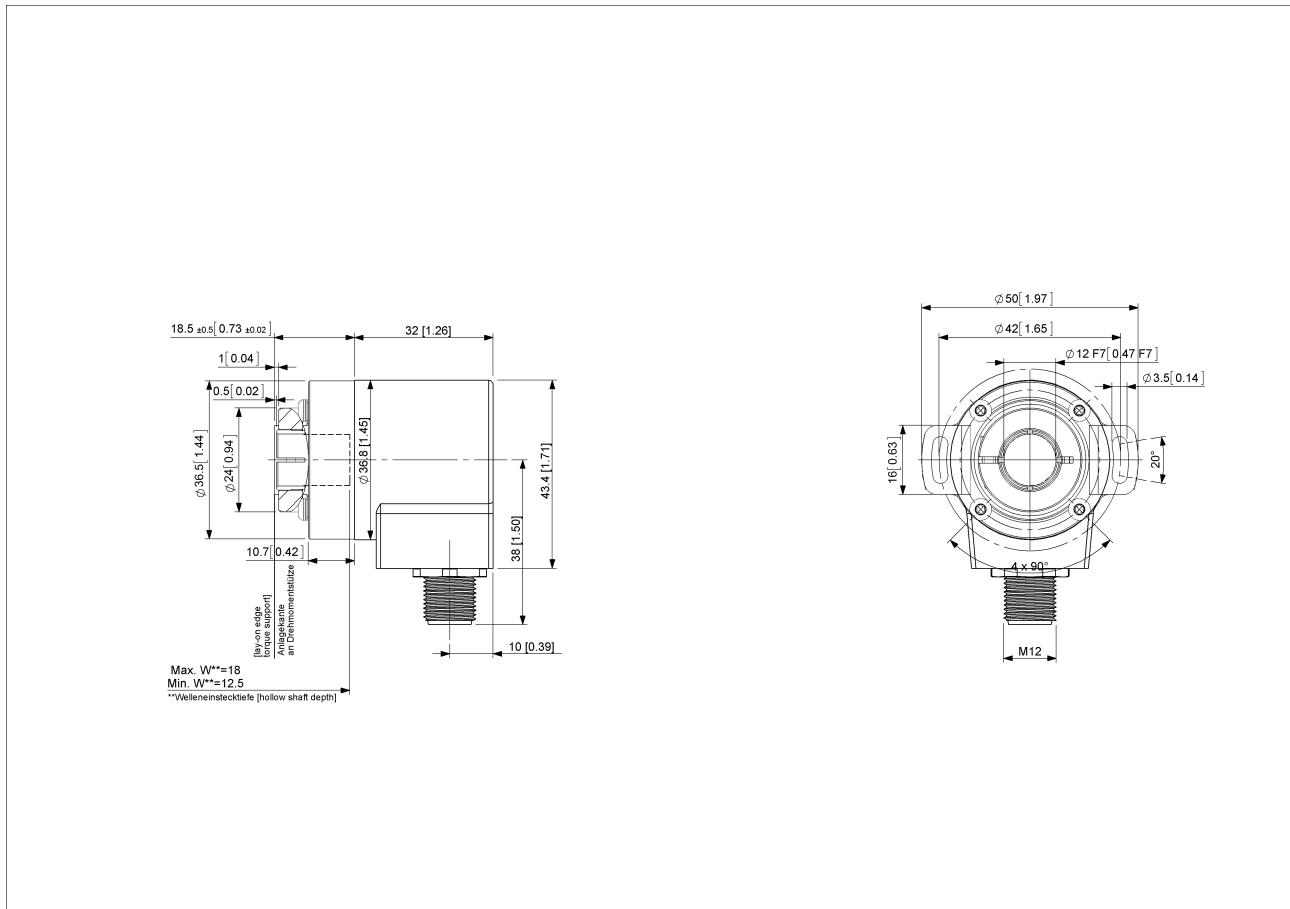
SIGNAL	PIN NUMBER
Power Supply	2
GND	1
Data+	5
Data-	6
Clock+	3
Clock-	4
Preset	7
DIR	8
Shielding	Connector Housing

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



# POSITAL

## FRABA



### [2D Drawing](#)

### Accessories

#### Connectors & Cables

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

#### Clamping Ring V12

### Contact

Data Sheet

Printed at 28-09-2017 01:09



# POSITAL

---

## FRABA



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.