



### IXARC Absolute Rotary Encoder

**OCD-S3D1B-0016-B100-PRL**



#### Interface

Interface	SSI with Preset and Incr.
Optional Incremental Pulses	8192
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	$\geq 25 \mu\text{s}$

#### Outputs

Output Driver	SSI (RS422) / Incr. (RS422)
Output Incremental	A, /A, B, /B
Quadrature Phasing	$90^\circ \pm 4.5^\circ$ electrical
Max. Frequency Response	2 MHz

#### Electrical Data

Supply Voltage	4.5 - 30 VDC
Power Consumption	$\leq 1.5 \text{ W}$
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 27-09-2017 17:09

# POSITAL

## FRABA



MTTF	16.2 years @ 40 °C
------	--------------------

### Sensor

Technology	Optical
Resolution Singleturn	16 bit
Accuracy (INL)	$\pm 0.0220^\circ$ (14 - 16 bit), $\pm 0.0439^\circ$ ( $\leq 13$ bit)
Sense Signal (Default)	Clockwise shaft movement (front view on shaft)
Code	Binary
Incremental Pulses	8192

### 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 spray resistance)
Flange Type	Blind Hollow, $\varnothing$ 58 mm (B)
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 30 mm
Shaft Diameter	$\varnothing$ 10 mm (0.39")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Rotor Inertia	$\leq 30$ gcm <sup>2</sup> [ $\leq 0.17$ oz-in <sup>2</sup> ]
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	71,2 mm (2.80")
Weight	295 g (0.65 lb)

### Electrical Connection

Connection Orientation	Radial
------------------------	--------

# POSITAL

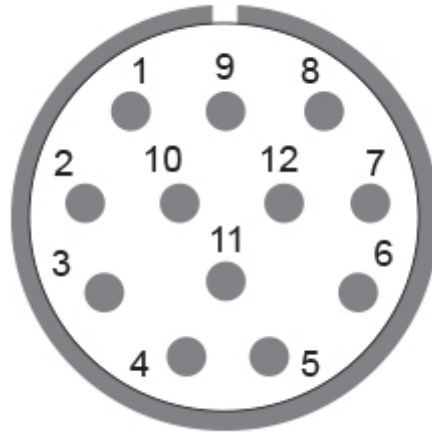
## FRABA



Connector M23, Male, 12 pin, CCW / left

### Certification

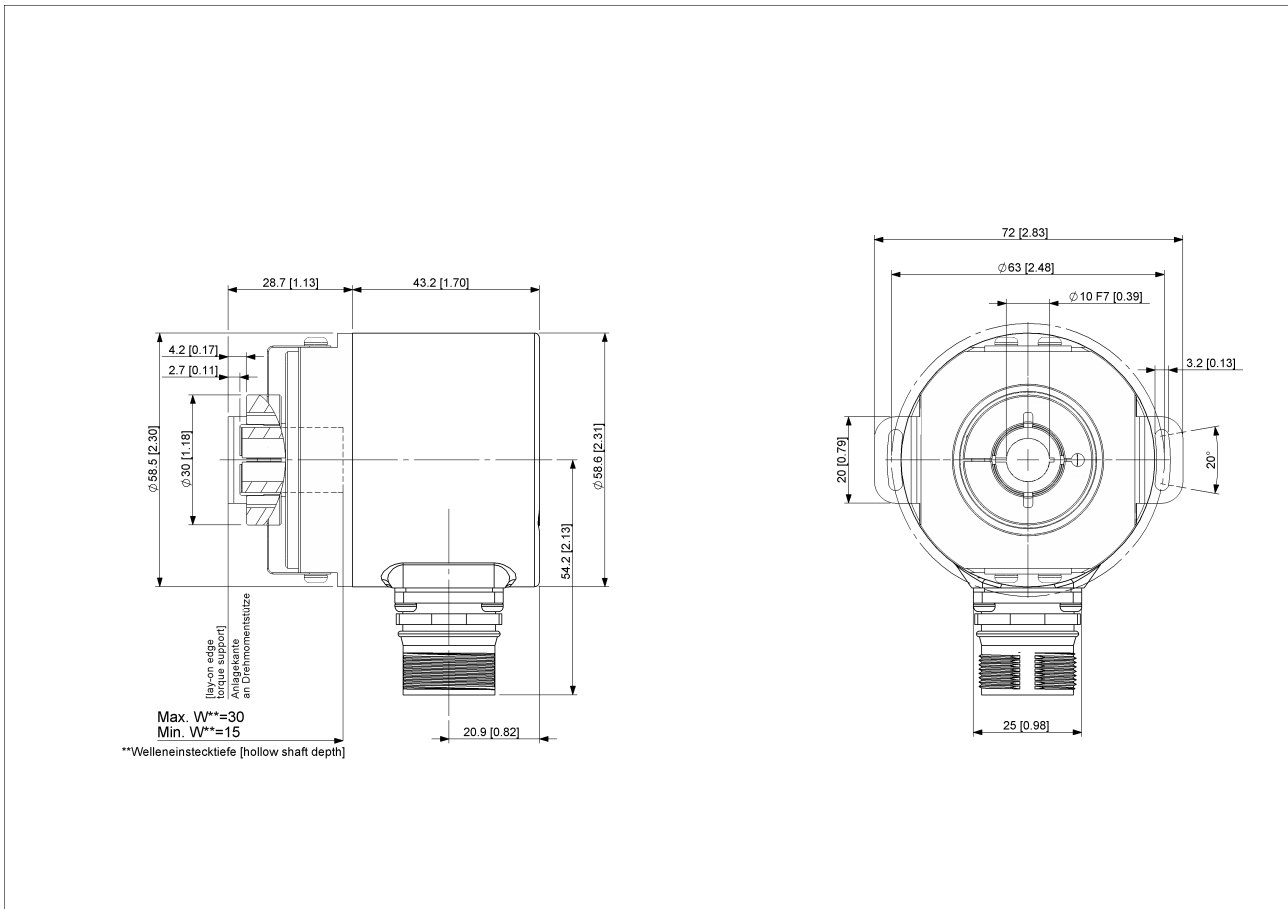
Approval CE + cULus listed, Industrial Control Equipment  
Product Life Cycle Established



### Connection Plan

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

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

#### Clamping Ring B15

### Contact

Data Sheet

Printed at 27-09-2017 17:09

# 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.