



IXARC Absolute Rotary Encoder

OCD-S6E1B-0016-B100-2AW



Interface

Interface	SSI with Preset + Incremental Push Pull
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	≥ 25 μs

Outputs

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

Electrical Data

Supply Voltage	10 - 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

Data Sheet

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Sensor

Technology	Optical
Resolution Singleturn	16 bit
Accuracy (INL)	$\pm 0.0220^\circ$ (14 - 16 bit), $\pm 0.0439^\circ$ (≤ 13 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	-30 °C fixed (-22 °F), -5 °C flexible (+23 °F) - +70 °C (+158 °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 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	≤ 30 gcm ² [≤ 0.17 oz-in ²]
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	60,2 mm (2.37")
Weight	295 g (0.65 lb)

Electrical Connection

Connection Orientation	Axial
Cable Length	2 m [79"]
Wire Cross Section	0.14 mm ² / AWG 26
Material / Type	PVC

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Cable Diameter	8 mm (0.31 in)
Minimum Bend Radius	35 mm (1.38) fixed, 70 mm (2.76)

Certification

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

Connection Plan

SIGNAL	CABLE COLOR
Power Supply	Brown
GND	White
Data+	Gray
Data-	Pink
Clock+	Green
Clock-	Yellow
DIR	Red
Preset	Blue
A	Black
/A	Violet
B	Gray-Pink
/B	Red-Blue
Z	White-Green
/Z	Brown-Green
Shielding	Shield

Connector-View on Encoder

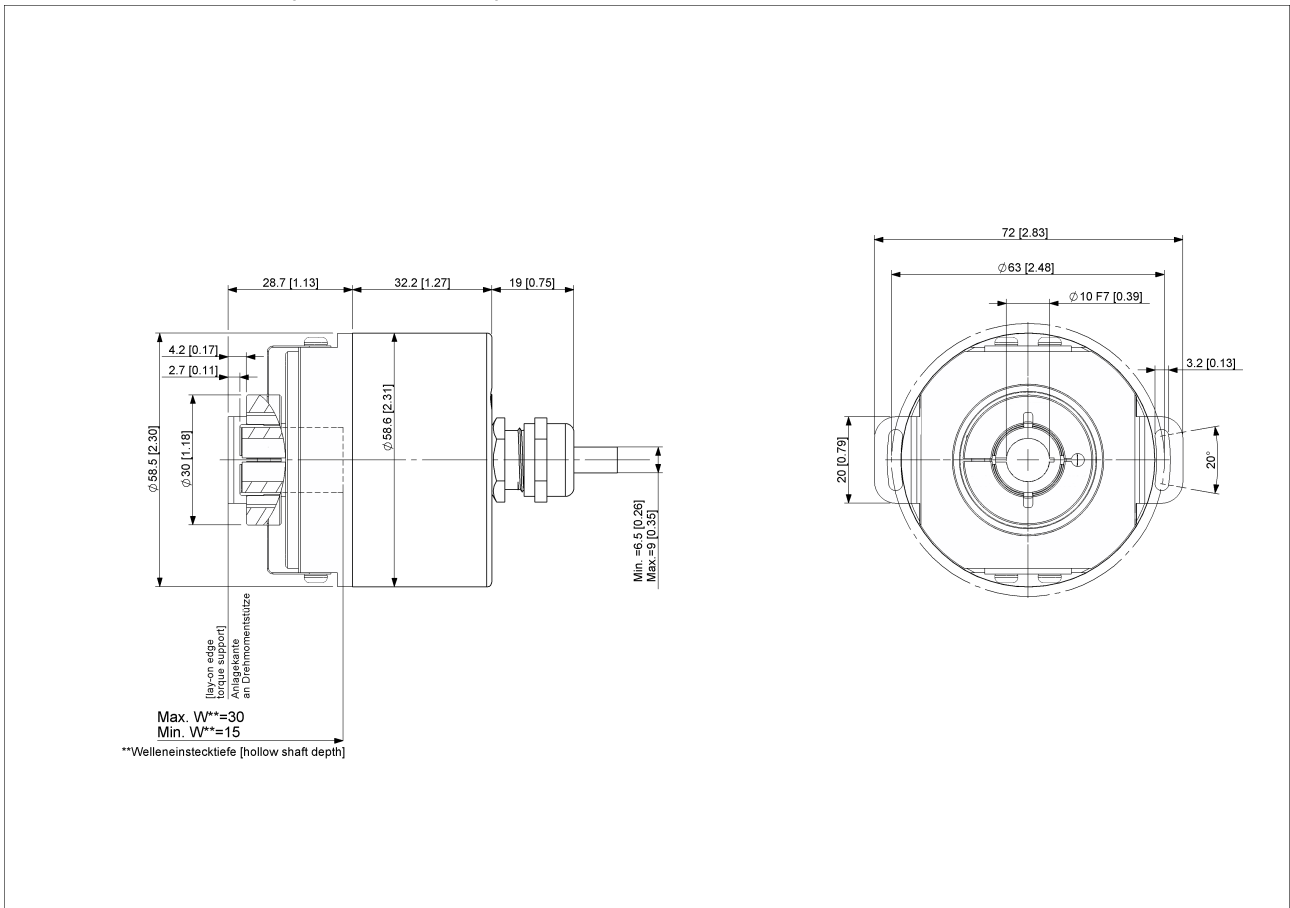
Pulse Diagram

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Rotation Clockwise (seen on shaft)



[2D Drawing](#)

Accessories

Clamping Rings
Clamping Ring B15

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Displays

AP21-00 SSI Display

AP21-DA SSI Display (4 dig. + analog o/p)

DiMod-P SSI Display

Configuration/Programming Tools

SSI2USB Adapter DB15 (VA01)

Contact



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.