



IXARC Absolute Rotary Encoder

OCD-S6E1B-1416-B06S-PAP



Interface

Interface	SSI with Preset + Incremental Push Pull
Optional Incremental Pulses	16384
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	$\geq 25 \mu\text{s}$

Outputs

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

Electrical Data

Supply Voltage	10 - 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

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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)	$\pm 0.0220^\circ$ (14 - 16 bit), $\pm 0.0439^\circ$ (≤ 13 bit)
Sense Signal (Default)	Clockwise shaft movement (front view on shaft)
Code	Binary
Incremental Pulses	16384

Environmental Specifications

Protection Class (Shaft)	IP66/IP67
Protection Class (Housing)	IP66/IP67
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	Blind Hollow, \varnothing 58 mm (B)
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 30 mm
Shaft Diameter	\varnothing 6 mm (0.24")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Rotor Inertia	≤ 30 gcm ² [≤ 0.17 oz-in ²]
Friction Torque	≤ 5 Ncm @ 20 °C, (7.1 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	≤ 3000 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	71,2 mm (2.80")
Weight	335 g (0.74 lb)

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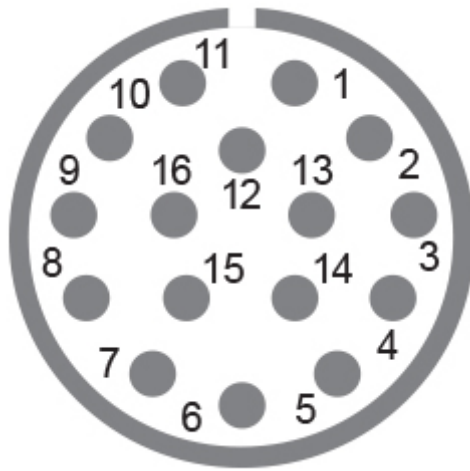


Electrical Connection

Connection Orientation	Axial
Connector	M23, Male, 16 pin

Certification

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



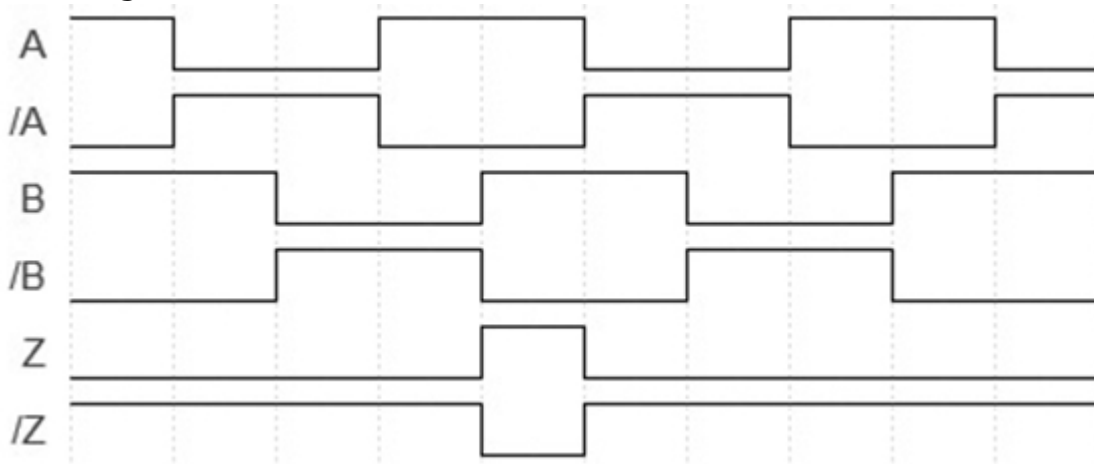
Connection Plan

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

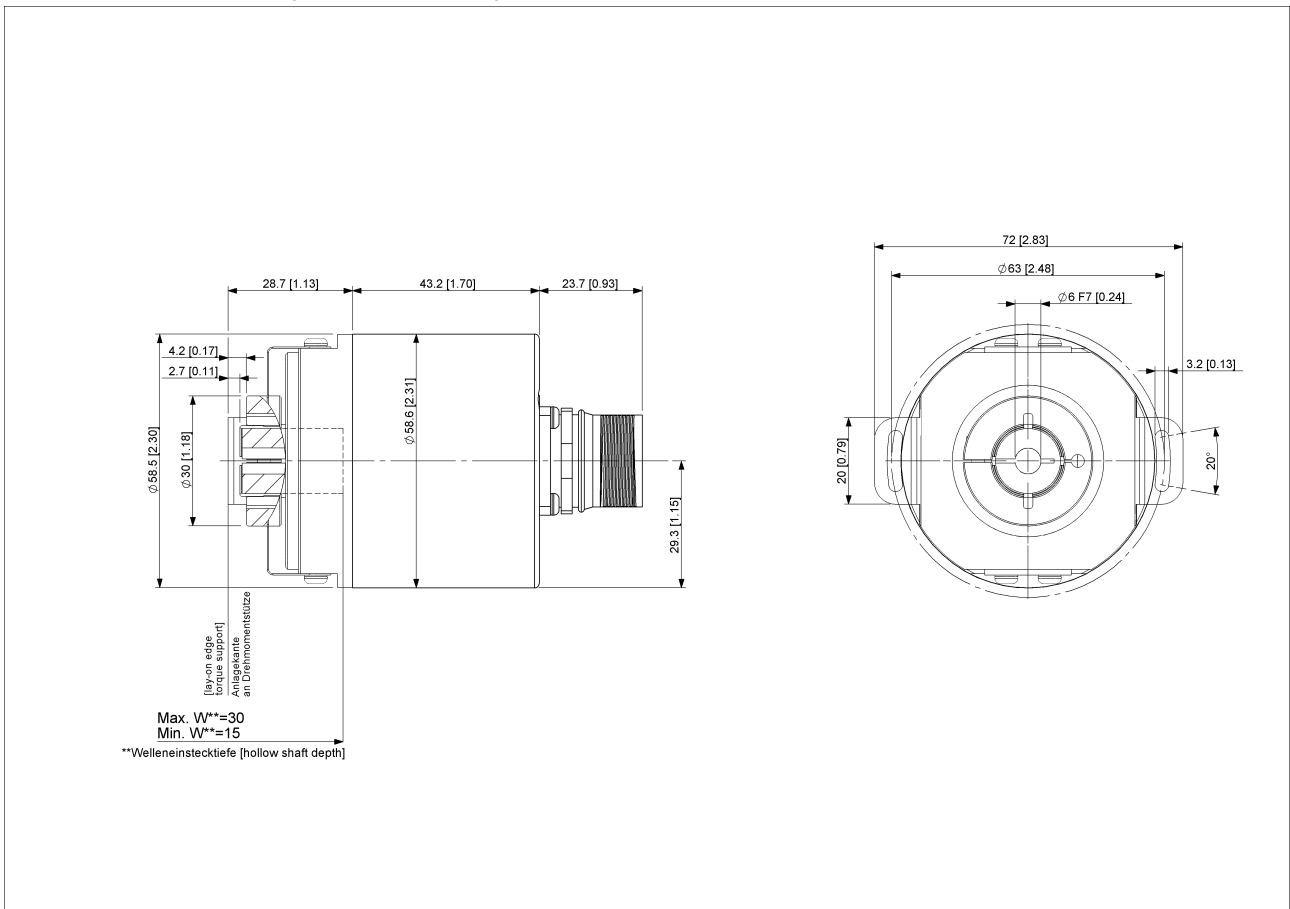


Connector-View on Encoder

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

Clamping Ring B15

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.