POSITAL
FRABA

IXARC Absolute Rotary Encoder

OCD-DPC1B-0016-B10S-H72



Interface	
Interface	Profibus DP
Profile	DPV0, DPV1 and DPV2 Class 2 (EN50170 + EN50254)
Diagnostics	Memory
Programming Functions	Resolution, gearing factor (physical resolution) , velocity scaling + filter, preset (zero point), counting direction, limit switches , node number, teach-in, diagnosis
Manual Functions	Address selector switch 0-99 and terminal resistor (with connection cap)
Features	Round Axis
Transmission Rate	≤12 Mbaud
Interface Cycle Time	≥ 1 ms

Outputs	
Output Driver	Profibus Data Interface, galvanically isolated via opto-couplers

Electrical Data	
Supply Voltage	10 – 30 VDC
Current Consumption	≤ 115 mA @ 10 V DC, ≤ 50 mA @ 30 V DC
Power Consumption	≤ 1.5 W
Start-Up Time	< 1 s

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	13.5 years @ 40 °C

Sensor

Technology	Optical
Resolution Singleturn	16 bit
Accuracy (INL)	±0.0220° (14 – 16 bit), ±0.0439° (≤13 bit)
Code	Binary

Environmental Specifications

Protection Class (Shaft)	IP66/IP67
Protection Class (Housing)	IP66/IP67
Operating Temperature	-40 °C (-40 °F) - +85 °C (+185 °F)
Storage Temperature	-40 °C (-40 °F) – +85 °C (+185 °F)
Humidity	98% RH, no condensation

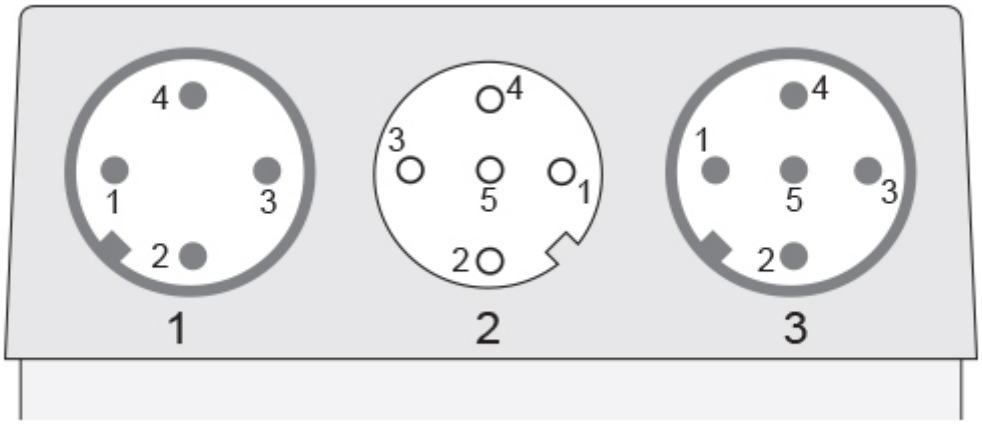
Mechanical Data

Connection Cap Material	Aluminum
Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Blind Hollow, ø 58 mm (B)
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 30 mm
Shaft Diameter	ø 10 mm (0.39")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Rotor Inertia	≤ 30 gcm² [≤ 0.17 oz-in²]
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	88 mm (3.46")
Weight	485 g (1.07 lb)

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Electrical Connection	
Connection Orientation	Radial
Connection Type	3 x M12 Connector (Profibus)
Connection Cap Type	Rotary switches with visible node number, No active components, Terminal resistor switch cut the outgoing bus too
Connector 1	M12, Male, 4 pin, a coded
Connector 2	M12, Female, 5 pin, b coded
Connector 3	M12, Male, 5 pin, b coded

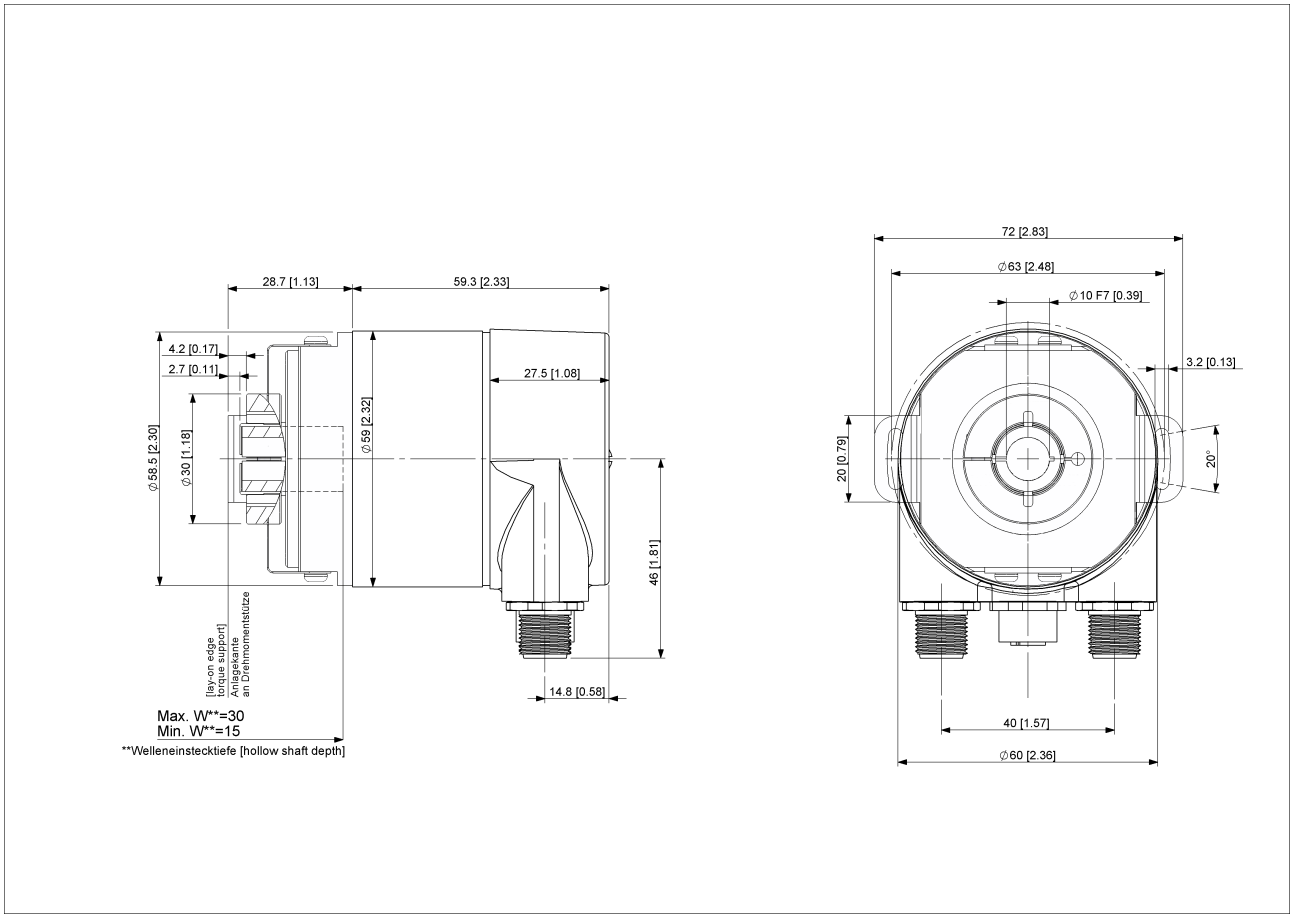
Certification	
Approval	CE + cULus listed, Industrial Control Equipment
Product Life Cycle	Established



Connection Plan

SIGNAL	CONNECTOR	PIN NUMBER
Power Supply	Connector 1	1
Not Connected	Connector 1	2
GND	Connector 1	3
Not Connected	Connector 1	4
Not Connected	Connector 2	1
Bus line A (Bus out)	Connector 2	2
Not Connected	Connector 2	3
Bus line B (Bus out)	Connector 2	4
Not Connected	Connector 2	5
Not Connected	Connector 3	1
Bus line A (Bus in)	Connector 3	2
Not Connected	Connector 3	3
Bus line B (Bus in)	Connector 3	4
Not Connected	Connector 3	5

Connector-View on Encoder



2D Drawing

Accessories

Connectors & Cables
10m PUR Cable, 5pin, A-Coded, f
2m PUR Cable, 5pin, A-Coded, f
5m PUR Cable, 5pin, A-Coded, f
M12, 4pin A-Coded, Female
Profibus Termination Resistor-M12S-M04B-PL
M12, 5pin B-Coded, Female
M12, 5pin B-Coded, Male
2m PUR Cable, 5pin, B-Coded, m
5m PUR Cable, 5pin, B-Coded, m
10m PUR Cable, 5pin, B-Coded, m
2m PUR Cable, 5pin, B-Coded, f
5m PUR Cable, 5pin, B-Coded, f
10m PUR Cable, 5pin, B-Coded, f
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.