



IXARC Absolute Rotary Encoder

OCD-S5C1B-0016-B100-PRP



Interface

Interface	SSI with Preset + Incremental RS422
Optional Incremental Pulses	4096
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, Z, /Z
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

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MTTF	16.2 years @ 40 °C
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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
Incremental Pulses	4096

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	$\leq 30 \text{ gcm}^2$ [$\leq 0.17 \text{ oz-in}^2$]
Friction Torque	$\leq 3 \text{ Ncm}$ @ 20 °C (4.2 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	$\leq 12000 \text{ 1/min}$
Shock Resistance	$\leq 100 \text{ g}$ (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	$\leq 10 \text{ g}$ (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	$\leq 10 \text{ g}$ (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
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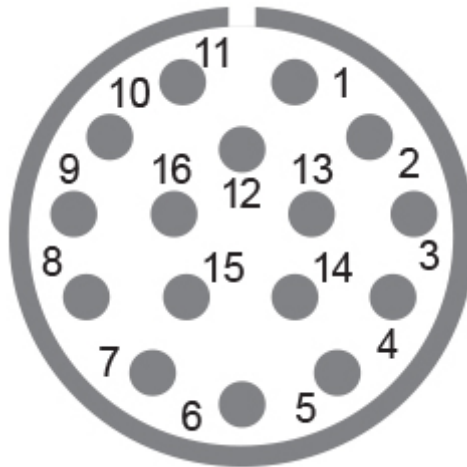
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Connector	M23, Male, 16 pin
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Certification

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

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Technical drawing of the 1000 series motor, showing three views: side, front, and top.

Side View Dimensions:

- Total length: 28.7 [1.13] + 43.2 [1.70] = 71.9 [2.83]
- Height: 54.2 [2.13]
- Mounting flange diameter: $\varnothing 63$ [2.48]
- Mounting flange thickness: 10 F7 [0.39]
- Mounting flange angle: 20°
- Mounting flange offset: 20.9 [0.82]
- Mounting flange offset (hollow shaft depth): 20.9 [0.82]

Front View Dimensions:

- Total length: 28.7 [1.13] + 43.2 [1.70] = 71.9 [2.83]
- Height: 54.2 [2.13]
- Mounting flange diameter: $\varnothing 63$ [2.48]
- Mounting flange thickness: 10 F7 [0.39]
- Mounting flange angle: 20°
- Mounting flange offset: 20.9 [0.82]
- Mounting flange offset (hollow shaft depth): 20.9 [0.82]

Top View Dimensions:

- Total length: 28.7 [1.13] + 43.2 [1.70] = 71.9 [2.83]
- Height: 54.2 [2.13]
- Mounting flange diameter: $\varnothing 63$ [2.48]
- Mounting flange thickness: 10 F7 [0.39]
- Mounting flange angle: 20°
- Mounting flange offset: 20.9 [0.82]
- Mounting flange offset (hollow shaft depth): 20.9 [0.82]

Notes:

- Max. W**=30
- Min. W**=15
- **Welleneinstecktiefe (hollow shaft depth)

- 4 / 5 -



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.
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