



IXARC Absolute Rotary Encoder

UCD-SSPPP-PPPP-L10S-PRL



Interface

Interface	Programmable SSI + Incremental RS422 5V
Optional Incremental Pulses	Programmable Pulses, Default = 1024
Programming Functions	Absolute: Resolution, Revolution, Code Incremental: Pulses per Revolution, Counting Direction
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	> 25 μ s

Outputs

Output Driver	RS422
Output Incremental	A, B, Z
Quadrature Phasing	90° \pm 4.5° electrical

Electrical Data

Supply Voltage	4.75 - 5.5 VDC (On power supplies comply with EN 50178)
Power Consumption	\leq 1.0 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	350 years @ 40 °C

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Sensor

Technology	Magnetic
Resolution Singleturn	Programmable max. 16 bit, pre-programmed 13 bit
Resolution Multiturn	Programmable max. 16 bit, pre-programmed 12 bit
Multiturn Technology	Self powered magnetic pulse counter (no battery, no gear)
Accuracy (INL)	$\pm 0.0878^\circ$ (≤ 12 bit)
Sense Signal (Default)	Clockwise shaft movement (front view on shaft)
Code	Programmable Gray or Binary, preprogrammed Binary
Incremental Pulses	Programmable Pulses, Default = 1024

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	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Clamp, \varnothing 58 mm (L)
Flange Material	Aluminum
Shaft Type	Solid, Single Flat, Length = 20 mm
Shaft Diameter	\varnothing 10 mm (\varnothing 0.39")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Max. Shaft Load	Axial 40 N, Radial 110 N
Minimum Mechanical Lifetime (10^8 revolutions with Fa/Fr)	430 (20 N / 40 N), 150 (40 N / 60 N), 100 (40 N / 80 N), 55 (40 N / 110 N)
Rotor Inertia	≤ 30 gcm ² [≤ 0.17 oz-in ²]
Friction Torque	≤ 5 Ncm @ 20 °C, (0.11 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	52,7 mm (2.07")
Weight	290 g (0.64 lb)

Electrical Connection

Connection Orientation	Radial
Connector	M23, Male, 12 pin

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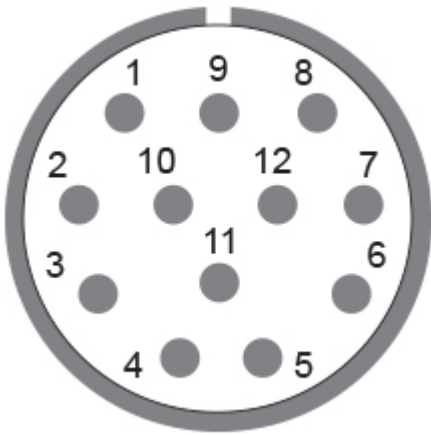
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Product Life Cycle

Product Life Cycle	Established
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Safety Data



Connection Plan

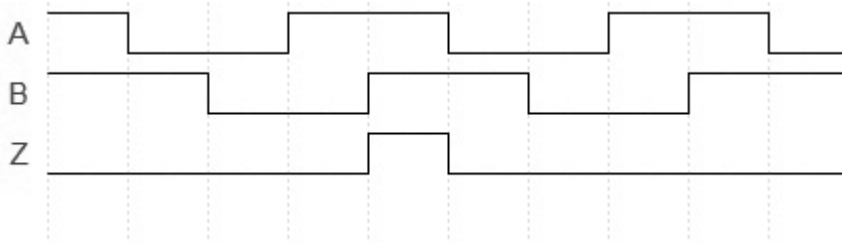
SIGNAL	PIN NUMBER
Power Supply	11
GND	12
Data+	3
Data-	4
Clock+	2
Clock-	1
DIR	8
Preset	9
A	5
B	7
Z	6
/Error	10
Shielding	Housing

Connector-View on Encoder

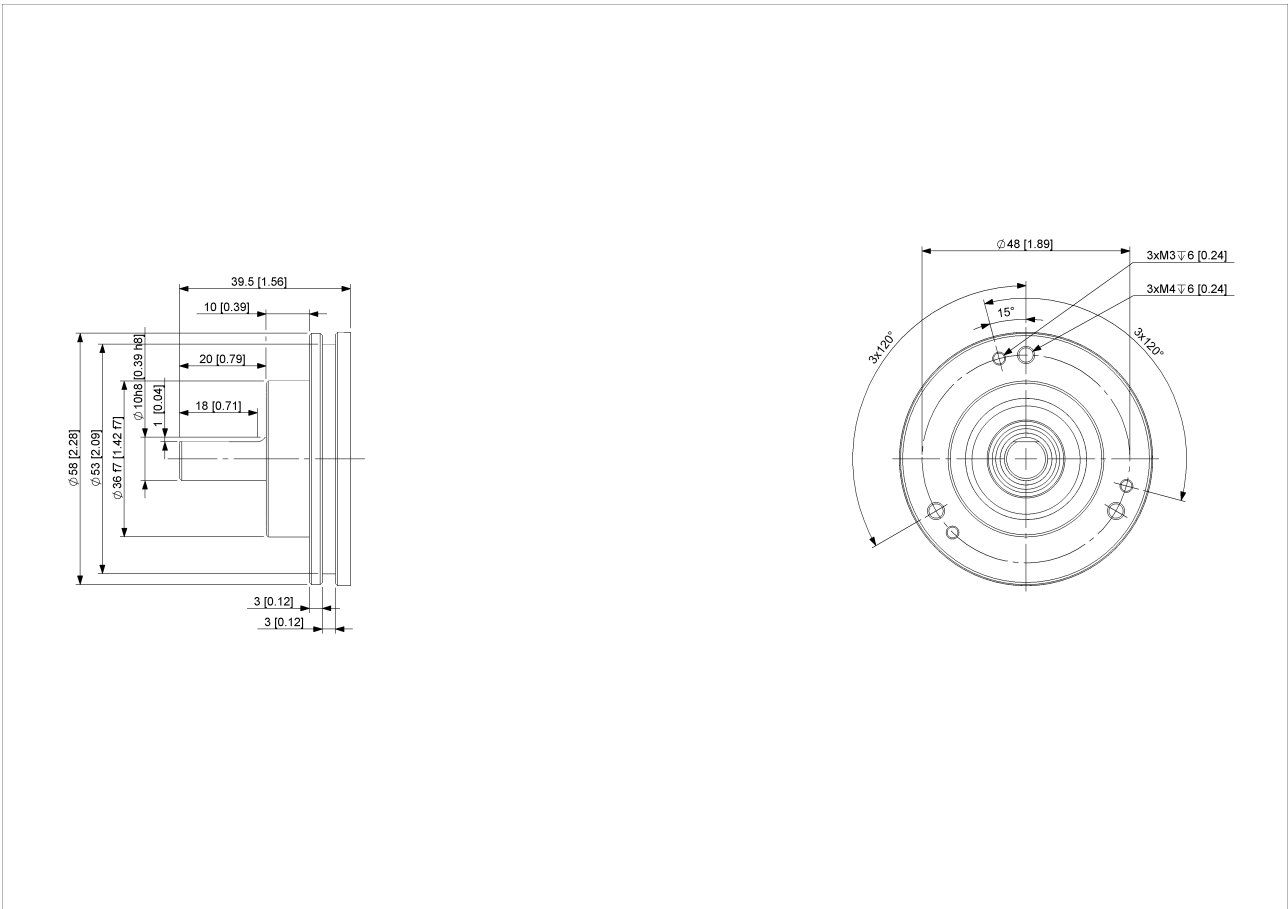
Pulse Diagram

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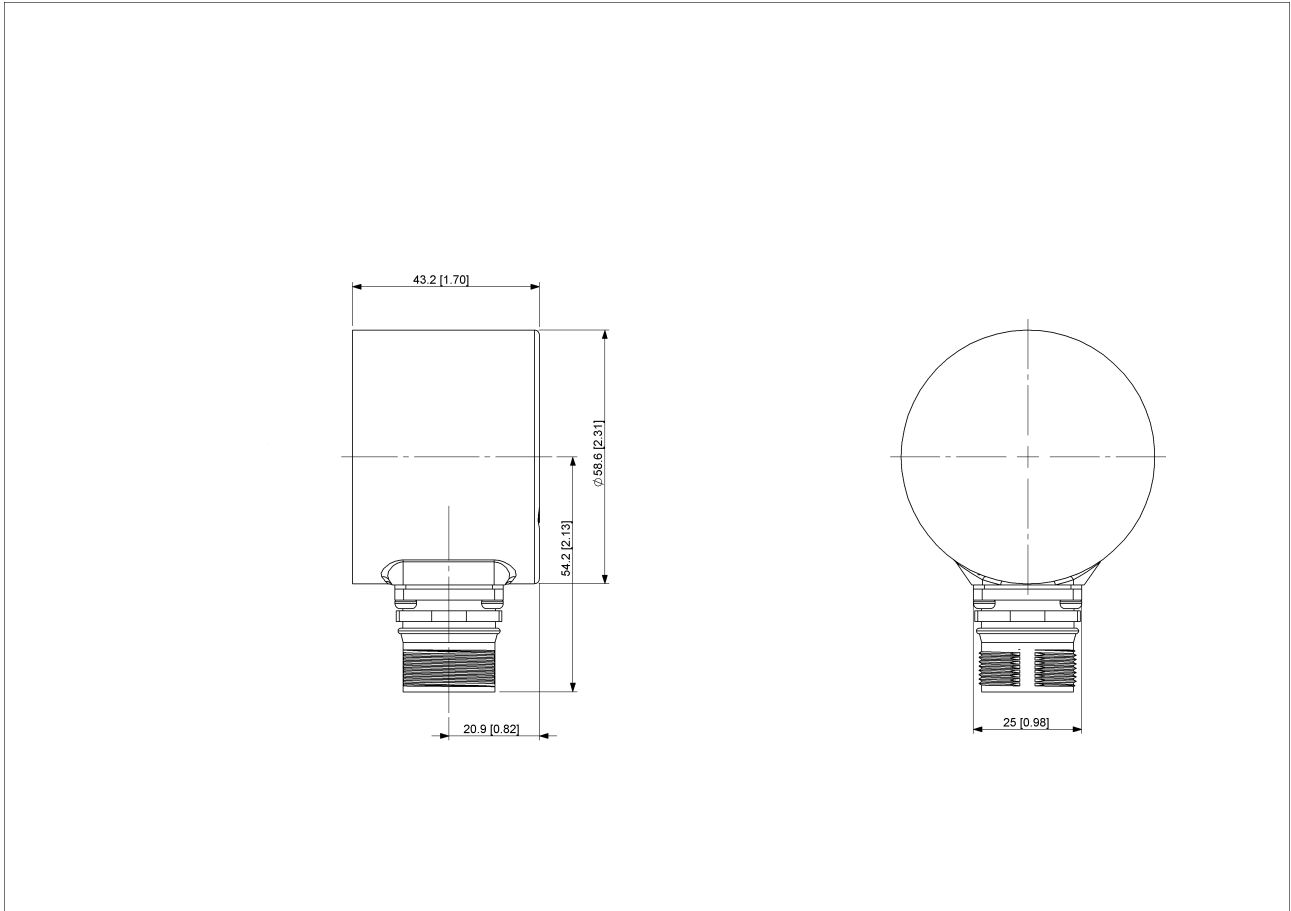


Dimensional Drawing



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Contact



BOR Elektronik A.Ş.
+90 (216) 504 05 20
info@borelektronik.com.tr

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Data Sheet
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