POSITAL
FRABA

IXARC Incremental Encoder

UCD-IPH00-XXXXX-8R1S-PRQ

The picture is for presentation purposes only. Please refer to the detailed technical drawing at the end of the page.

Interface	
Interface	Programmable Incremental
Programming Functions	PPR (1-16384), Output, Counting Direction
Configuration Tool	UBIFAST Configuration Tool (Version ≥ 1.6.3)

Outputs	
Output Driver	Push-Pull (HTL)
Output Voltage High Level Push-Pull (HTL)	> 4 V @ 4.75-9 V Supply Voltage > V-3 V @ 9-30 V Supply Voltage
Output Voltage Low Level Push-Pull (HTL)	< 0.5 V
Output Voltage High Level RS422 (TTL)	> 4 V
Output Voltage Low Level RS422 (TTL)	< 0.5 V
Maximum Frequency Response	1 MHz
Maximum Switching Current	50 mA per Channel

Electrical Data	
Supply Voltage	4.75 – 30 VDC
Current Consumption	≤140mA @ 5V DC, ≤70mA @ 10V DC, ≤40mA @ 24V DC

Power Consumption	≤ 1.0 W
Start-Up Time	< 1 s
Min. Load Resistance	120 Ω
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	280 years @ 40 °C

Sensor

Technology	Magnetic
Accuracy (INL)	±0.0878° (≤ 12 bit)
Duty Cycle	180° ± 27° (Speed > 100RPM)
Phase Angle	90° ± 14° (Speed > 100RPM)

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

Mechanical Data

Housing Material	Aluminum
Housing Coating	Chromated
Flange Type	Square, □ 2.25"
Flange Material	Aluminum
Flange Coating	Chromated
Shaft Type	Solid, Single Flat, Length = 15 mm
Shaft Diameter	ø 6.35 mm (1/4")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Max. Shaft Load	Axial 40 N, Radial 110 N
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	110,8 mm (4.36")
Weight	380 g (0.84 lb)
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)

Electrical Connection

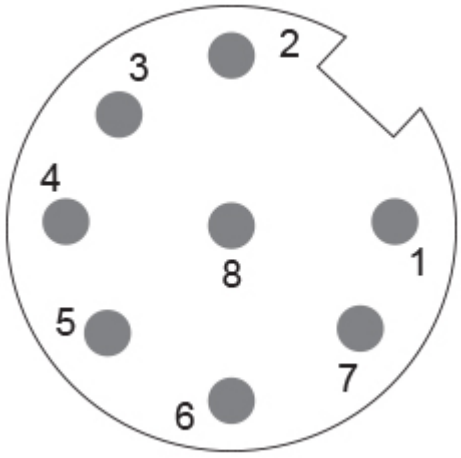
Connection Orientation	Radial
Connector	M12, Male, 8 pin, a coded

Certification

Approval	CE + cULus

Product Life Cycle

Product Life Cycle	New



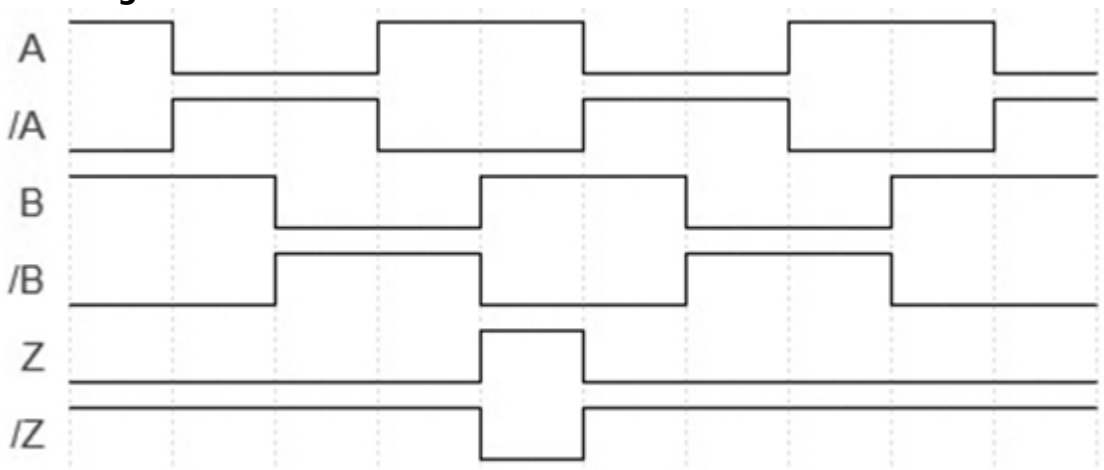
Connection Plan

SIGNAL	PIN NUMBER
A	3
/A	4
B	5
/B	6
Z	7
/Z	8

Power Supply	2
GND	1
Shielding	Connector housing

Connector-View on Encoder

Pulse Diagram



Rotation Clockwise (seen on shaft)

Dimensional Drawing

2D Drawing

Accessories

Configuration/Programming Tools
UBIFAST Configuration Tool
Connectors & Cables
10m PUR Cable, 8pin, A-Coded, f
POS M12 8pin-A Female+5m PUR Cable
POS M12 8pin-A Female+2m PUR Cable
POS M12 8pin-A Female+10m PUR Cable
M12, 8pin A-Coded, Female
More
Couplings
Coupling Bellow Type-10-(1/4")
Coupling Bellow Type-06-(1/4")
Coupling Jaw Type-10-(1/4")
Coupling Jaw Type-06-(1/4")

More
Displays
AP20-00 Counter
AP20-D0 Counter (4 dig. o/p)
AP20-0A Counter (analog o/p)
AP20-DA Counter (4 dig. + analog o/p)
DiMod Counter (Relay o/p)
More

Got questions? Need an individual solution? We are here to help!