



UCD-AC005-0013-DACD-PRM



Product Description

POSITAL IXARC absolute Singleturn encoder: Analog Current interface, Clamp, ø 58 mm Heavy Duty, ø 10 mm (0.39") shaft and IP68 / IP69K protection class.

INTERFACE



Interface

Analog Current

Manual Functions

Start and End point via Cable or Connector

ELECTRICAL DATA ✓	
Supply Voltage	8 – 32 VDC
Current Consumption	Typical 20 mA @24 V (no load)
Start-Up Time	<500 ms
Max Load Resistance	500 Ω
Analog Accuracy	@ 20 mA = ±20 µA (with an ideal power supply)
Linearity	0.15%
Settling Time	32 ms (from min value to max value jump)
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	278.3 years @ 40 °C

SENSOR



Technology	Magnetic
Resolution Singleturn	13 bit
Resolution Multiturn	0 bit
Accuracy (INL)	$\pm 0.0878^\circ$ (≤ 12 bit)
Sense Signal (Default)	Counterclockwise shaft movement (front view on shaft)
Code	Analog Current 4 - 20 mA
Cycle Time Base Sensor	$< 100 \mu\text{s}$
Minimum Measurement Range	0 - 11.25°
Resolution of Output	Max. 13 bits over entire measuring range (Fractional Turns - Resolution decreases less than 13 bits when measuring range is less than 90 degrees)
Multiturn Range	Singleturn

ENVIRONMENTAL SPECIFICATIONS



Protection Class (Shaft)	IP68/IP69K
Protection Class (Housing)	IP68/IP69K
Min Temperature	-40°C (-40°F)
Max Temperature	$+85^\circ\text{C}$ ($+185^\circ\text{F}$)
Humidity	98% RH, no condensation

MECHANICAL DATA

Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Clamp, ø 58 mm Heavy Duty
Flange Material	Aluminum
Shaft Type	Solid, Single Flat, Length = 20 mm
Shaft Diameter	ø 10 mm (0.39")
Shaft Material	Stainless Steel (1.4112, 440 B), hardened
Max. Shaft Load	Axial 180 N, Radial 180 N
Minimum Mechanical Lifetime(10 ⁸ revolutions with Fa/Fr)	10 (180N/180N), 15 (150N,150N), 30 (100N/100N)
Friction Torque	≤ 6 Ncm @ 20 °C, (8.5 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	≤ 3000 1/min
Shock Resistance	≤ 200 g (half sine 11 ms, EN 60068-2-27)
Permanent Shock Resistance	≤ 30 g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	≤ 30 g (10 Hz - 1000 Hz, EN 60068-2-6)
Weight	245 g (0.54 lb)

ELECTRICAL CONNECTION



Connection Orientation	Radial
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Connector	M12, Male, 5 pin, a coded
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CERTIFICATION



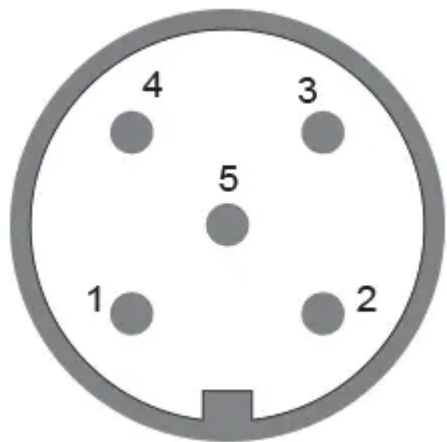
Approval	CE + cULus
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PRODUCT LIFE CYCLE



Product Life Cycle	Established
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Connection Plan



Signal	Connector	Pin Number
Power Supply	1	2
GND	1	3
Analog Output	1	1
Set1/Direction	1	5
Set2/Zero Set	1	4

Technical drawing of a mechanical part, showing a side view and a top view.

Side View Dimensions:

- Overall length: 40 ± 0.3 [1.57 ± 0.01]
- Distance from left face to first step: 10 [0.39]
- Distance from left face to second step: 20 [0.79]
- Distance from left face to third step: 16 [0.63]
- Distance from left face to fourth step: 36 [1.42]
- Distance from left face to end face: 43.4 [1.71]
- Distance from end face to mounting hole center: 10 [0.39]
- Overall diameter: $\varnothing 58$ [2.28]
- Inner diameter: $\varnothing 53$ [2.09]
- Step diameter 1: $\varnothing 36$ F7 [1.42 F7]
- Step diameter 2: $\varnothing 10$ h7 [0.39 h7]
- Step diameter 3: $\varnothing 36.8$ [1.45]
- Step diameter 4: $\varnothing 48$ [1.89]
- Step height 1: 1 [0.04]
- Step height 2: 3 [0.12]
- Step height 3: 3 [0.12]
- Step height 4: 38 [1.50]

Top View Dimensions:

- Overall diameter: $\varnothing 58$ [2.28]
- Inner diameter: $\varnothing 53$ [2.09]
- Step diameter 1: $\varnothing 36$ F7 [1.42 F7]
- Step diameter 2: $\varnothing 10$ h7 [0.39 h7]
- Step diameter 3: $\varnothing 36.8$ [1.45]
- Step diameter 4: $\varnothing 48$ [1.89]
- Step height 1: 1 [0.04]
- Step height 2: 3 [0.12]
- Step height 3: 3 [0.12]
- Step height 4: 38 [1.50]
- Step height 5: 10 [0.39]
- Step height 6: 3 [0.12]
- Step height 7: 3 [0.12]
- Step height 8: 38 [1.50]
- Step height 9: 10 [0.39]
- Step height 10: 3 [0.12]
- Step height 11: 3 [0.12]
- Step height 12: 38 [1.50]
- Step height 13: 10 [0.39]
- Step height 14: 3 [0.12]
- Step height 15: 3 [0.12]
- Step height 16: 38 [1.50]
- Step height 17: 10 [0.39]
- Step height 18: 3 [0.12]
- Step height 19: 3 [0.12]
- Step height 20: 38 [1.50]
- Step height 21: 10 [0.39]
- Step height 22: 3 [0.12]
- Step height 23: 3 [0.12]
- Step height 24: 38 [1.50]
- Step height 25: 10 [0.39]
- Step height 26: 3 [0.12]
- Step height 27: 3 [0.12]
- Step height 28: 38 [1.50]
- Step height 29: 10 [0.39]
- Step height 30: 3 [0.12]
- Step height 31: 3 [0.12]
- Step height 32: 38 [1.50]
- Step height 33: 10 [0.39]
- Step height 34: 3 [0.12]
- Step height 35: 3 [0.12]
- Step height 36: 38 [1.50]
- Step height 37: 10 [0.39]
- Step height 38: 3 [0.12]
- Step height 39: 3 [0.12]
- Step height 40: 38 [1.50]
- Step height 41: 10 [0.39]
- Step height 42: 3 [0.12]
- Step height 43: 3 [0.12]
- Step height 44: 38 [1.50]
- Step height 45: 10 [0.39]
- Step height 46: 3 [0.12]
- Step height 47: 3 [0.12]
- Step height 48: 38 [1.50]
- Step height 49: 10 [0.39]
- Step height 50: 3 [0.12]
- Step height 51: 3 [0.12]
- Step height 52: 38 [1.50]
- Step height 53: 10 [0.39]
- Step height 54: 3 [0.12]
- Step height 55: 3 [0.12]
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- Step height 57: 10 [0.39]
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- Step height 69: 10 [0.39]
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- Step height 81: 10 [0.39]
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- Step height 93: 10 [0.39]
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- Step height 97: 10 [0.39]
- Step height 98: 3 [0.12]
- Step height 99: 3 [0.12]
- Step height 100: 38 [1.50]
- Step height 101: 10 [0.39]
- Step height 102: 3 [0.12]
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- Step height 105: 10 [0.39]
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- Step height 109: 10 [0.39]
- Step height 110: 3 [0.12]
- Step height 111: 3 [0.12]
- Step height 112: 38 [1.50]
- Step height 113: 10 [0.39]
- Step height 114: 3 [0.12]
- Step height 115: 3 [0.12]
- Step height 116: 38 [1.50]
- Step height 117: 10 [0.39]
- Step height 118: 3 [0.12]
- Step height 119: 3 [0.12]
- Step height 120: 38 [1.50]
- Step height 121: 10 [0.39]
- Step height 122: 3 [0.12]
- Step height 123: 3 [0.12]
- Step height 124: 38 [1.50]
- Step height 125: 10 [0.39]
- Step height 126: 3 [0.12]
- Step height 127: 3 [0.12]
- Step height 128: 38 [1.50]
- Step height 129: 10 [0.39]
- Step height 130: 3 [0.12]
- Step height 131: 3 [0.12]
- Step height 132: 38 [1.50]
- Step height 133: 10 [0.39]
- Step height 134: 3 [0.12]
- Step height 135: 3 [0.12]
- Step height 136: 38

Online Datasheet

