



UCD-S101P-PPPP-L100-PRL



Interface

Interface	Programmable SSI
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	$\geq 25 \mu s$
Multiple Transmissions	None
Number of Preset Cycles	5,100,000
Configuration Tool	UBIFAST Configuration Tool (Version $\geq 1.6.7$)
Programming Functions	Absolute: Resolution, Revolution, Code, Preset

Outputs

Output Driver	RS422
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Electrical Data

Supply Voltage	4.5 – 30 VDC
Current Consumption	Typical 50 mA
Power Consumption	≤ 1.0 W
Start-Up Time	< 1 s
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

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

Environmental Specifications

Protection Class (Shaft)	IP65
Protection Class (Housing)	IP66/IP67
Humidity	98% RH, no condensation
Max Temperature	+85 °C (+185 °F)
Min Temperature	-40 °C (-40 °F)

Mechanical Data

Housing Material	Steel
Housing Coating	Wet coating (RAL 9006 White Aluminium) + Cathodic corrosion protection (>720 h salt spay resistance)
Flange Type	Clamp, ø 58 mm (L)
Flange Material	Aluminum
Shaft Type	Solid, Single Flat, Length = 20 mm
Shaft Diameter	ø 10 mm (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 (20N/40N), 150 (40N/60N), 100 (40N/80N), 55 (40N/110N)
Rotor Inertia	≤ 30 gcm² [≤ 0.17 oz-in²]
Friction Torque	≤ 3 Ncm @ 20 °C (4.2 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	≤ 12000 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	285 g (0.63 lb)

Electrical Connection

Connection Orientation	Radial
Connector	M23, Male, 12 pin, CCW / left

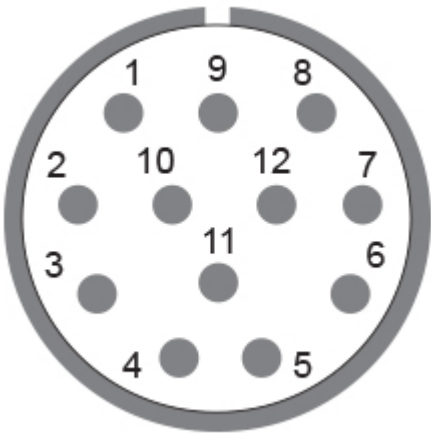
Certification

Approval	CE + cULus
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Product Life Cycle

Product Life Cycle	New
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Connection Plan

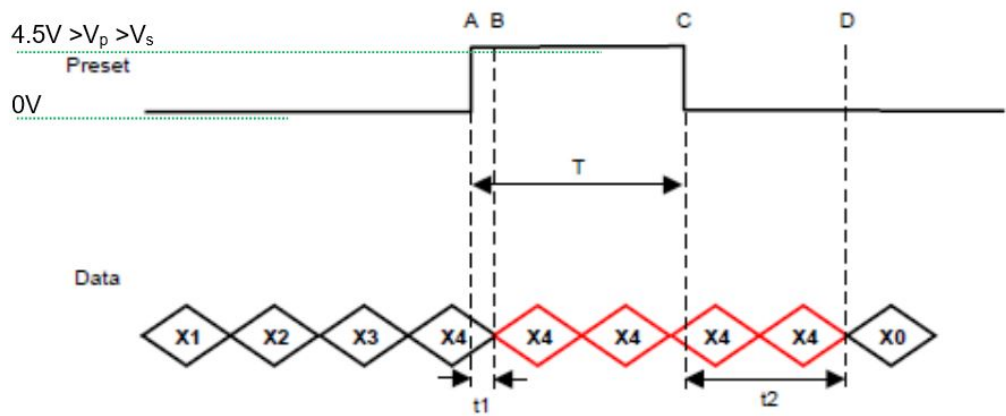


Signal	Pin Number
Power Supply	11
GND	12
Data+	3
Data-	4
Clock+	2
Clock-	1
Preset	9
DIR	8

[illegible]

Configuration Picture

The Preset function allows to set the output value to zero at the present mechanical position.
Input resistance is 110 kΩ



$T = 105 \text{ msec } (+/- 2\text{msec})$
 $t1 = 3.5 \text{ msec } +/- 2\text{msec}$
 $T + t2 = 224 \text{ msec } (+/- 4\text{msec})$

Configuration Picture

The DIR-function allows to change the encoder counting direction.

0 (open or GND)	Increasing Values Turning Clockwise (Viewed from Flange Side)
1 (4.5 V to V_s)	Decreasing Values Turning Clockwise (Viewed from Flange Side)
Min Time needed for change	40 msec
Input Resistance	60 kΩ

Online Datasheet

