

NORMAND®

INCREMENTAL ENCODERS

Normand Incremental Encoder

NORXX-XXXXX-L10-PRL



Electrical Data

Interface	Incremental
Supply Voltage	4.75 – 30 VDC (On power supplies comply with EN 50178)
Current Consumption	≤ 70 mA @ 10 V DC, ≤ 40 mA @ 24 V DC
Power Consumption	≤ 1.0 W
Start-Up Time	< 250 ms
Min. Load Resistance	120 Ω
Output Driver	Push-Pull (HTL) or RS422 (TTL)
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

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Parker **SSD** DRIVES

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Sensor

Technology	Magnetic
Pulses per Revolution	1 - 16 384
Accuracy (DNL)	$\pm 0.003^\circ$ (PPR > 2048 @ 100RPM) or $\pm 0.006^\circ$ (PPR > 1024 @ 100RPM)
Accuracy (INL)	$\pm 0.0878^\circ$ (≤ 12 bit)
Duty Cycle	$180^\circ \pm 27^\circ$ (Speed > 100RPM)
Phase Angle	$90^\circ \pm 14^\circ$ (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
Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 h salt spray resistance) + Wet Painted
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
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)

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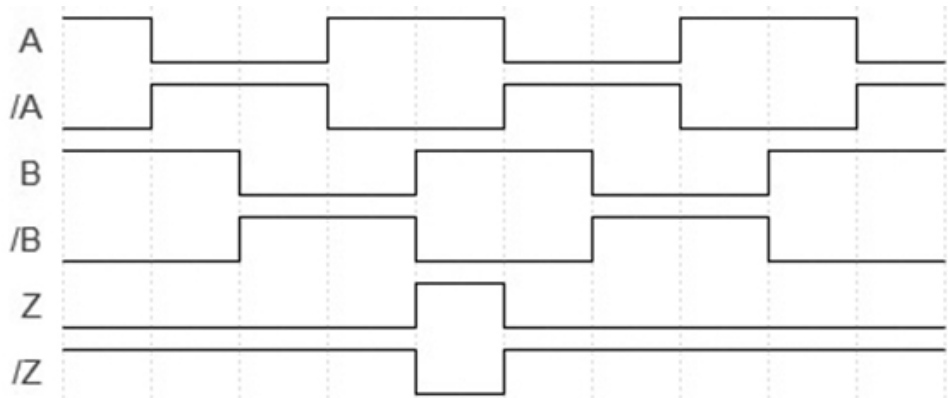
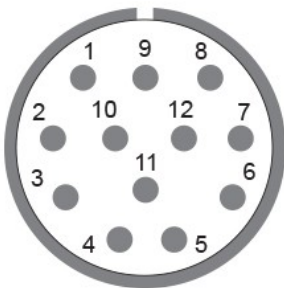
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Electrical Connection

Connection Orientation	Radial
Connector	M23, Male, 12 pin

Pulse Diagram



Connection Plan

SIGNAL	PIN NUMBER
Power Supply	12
GND	10
A	5
/A	6
B	8
/B	1
Z	3
/Z	4
Shielding	Connector housing

Connector-View on Encoder

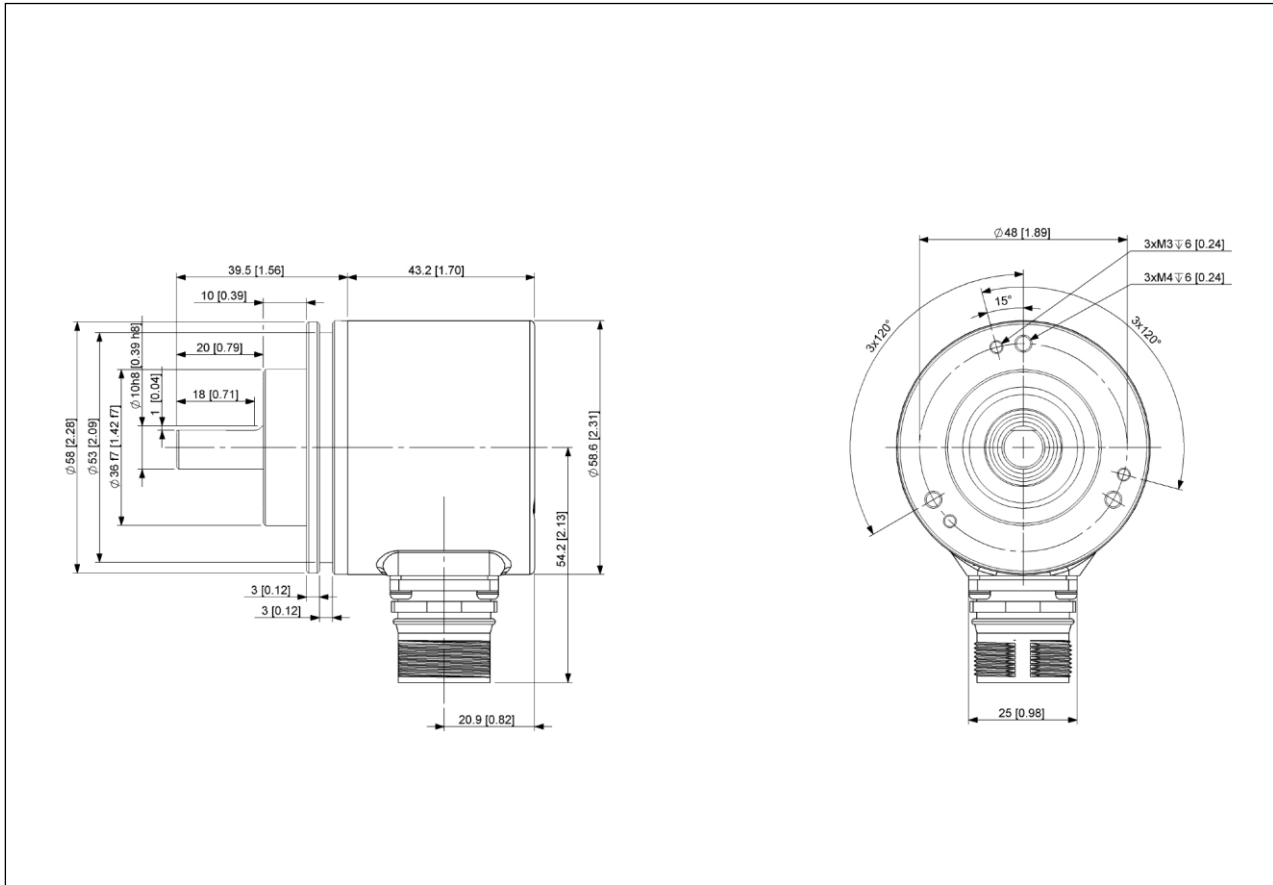
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Rotation Clockwise (seen on shaft)



Accessories



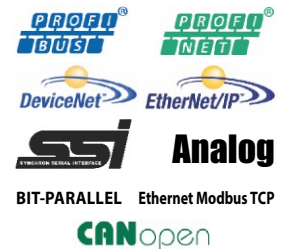
Normand Power Supplies



Encoder Couplings



Measuring Wheel



Encoder Interfaces

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