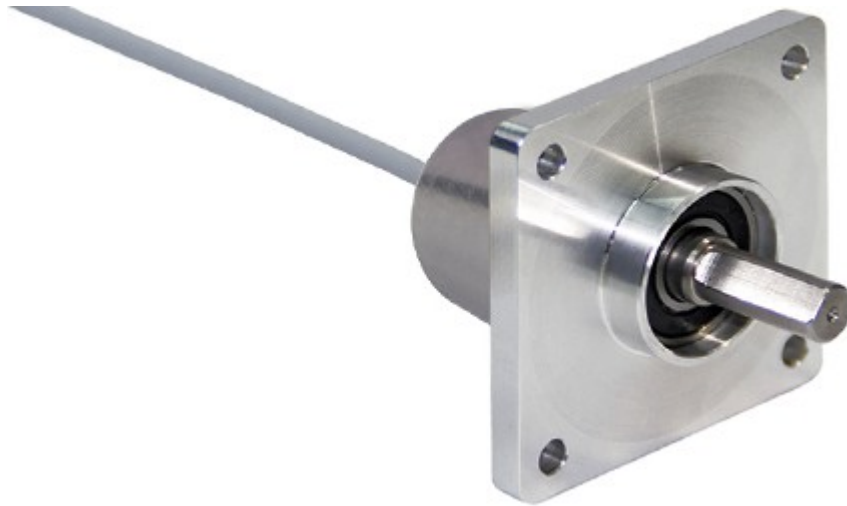


# NORMAND®

INCREMENTAL ENCODERS

Normand Incremental Encoder

NORXX-XXXXX-4A7-2AW



## 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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159 Galjoen Street, Wadeville, Germiston

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Parker **SSD** DRIVES

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## Normand Incremental Encoder NORXX-XXXXX-4A7-2AW

### 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)	$\pm 0.0878^\circ$ ( $\leq 12$ 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	-30 °C fixed (-22 °F), -5 °C flexible (+23 °F) - +70 °C (+158 °F)
Humidity	98% RH, no condensation
Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Square, $\square$ 2.5" 63.5 mm (4)
Flange Material	Aluminum
Shaft Type	Solid, Single Flat, Length = 22.4 mm
Shaft Diameter	$\varnothing$ 9.52 mm ( $\varnothing$ 3/8")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Max. Shaft Load	Axial 40 N, Radial 110 N
Max. Permissible Mechanical Speed	$\leq 3000$ 1/min
Shock Resistance	$\leq 100$ g (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	$\leq 10$ g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	$\leq 10$ g (10 Hz – 1000 Hz, EN 60068-2-6)
Length	45,5 mm (1.79")
Weight	255 g (0.56 lb)

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INCREMENTAL ENCODERS

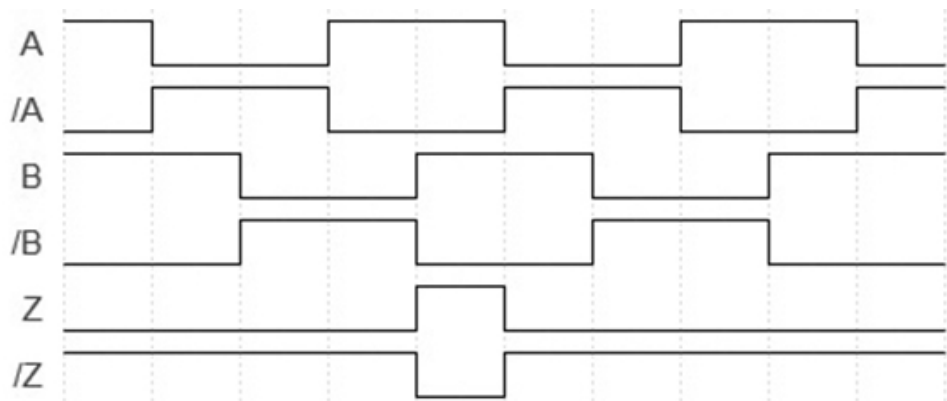
Normand Incremental Encoder

NORXX-XXXXX-4A7-2AW

## Electrical Connection

Connection Orientation	Axial
Cable Length	2 m [79"]
Wire Cross Section	0.14 mm <sup>2</sup> / AWG 26
Cable Diameter	6 mm (0.24 in)
Minimum Bend Radius	30 mm (1.18 in) fixed, 60 mm (2.36 in) flexing

## Pulse Diagram



## Connection Plan

SIGNAL	CABLE COLOR
A	Green
/A	Yellow
B	Gray
/B	Pink
Z	Blue
/Z	Red
Power Supply	Brown
GND	White
Shielding	Shield

Connector-View on Encoder

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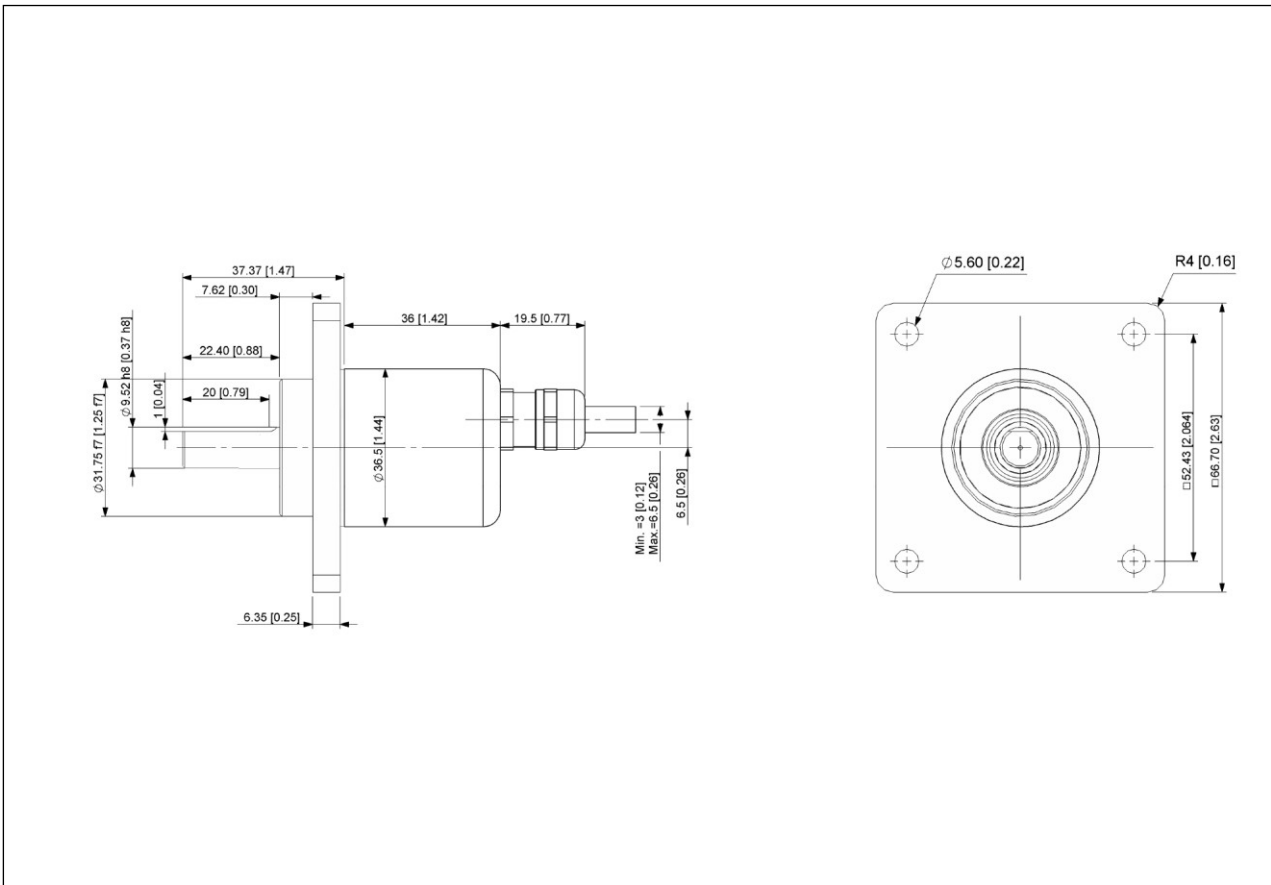
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INCREMENTAL ENCODERS

Normand Incremental Encoder

NORXX-XXXXX-4A7-2AW

Rotation Clockwise (seen on shaft)



## Accessories



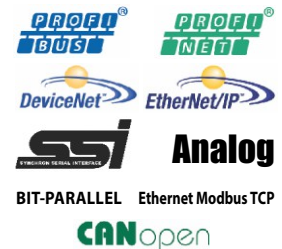
Normand Power Supplies



Encoder Couplings



Measuring Wheel



Encoder Interfaces

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