PRODUCT INTRODUCTION
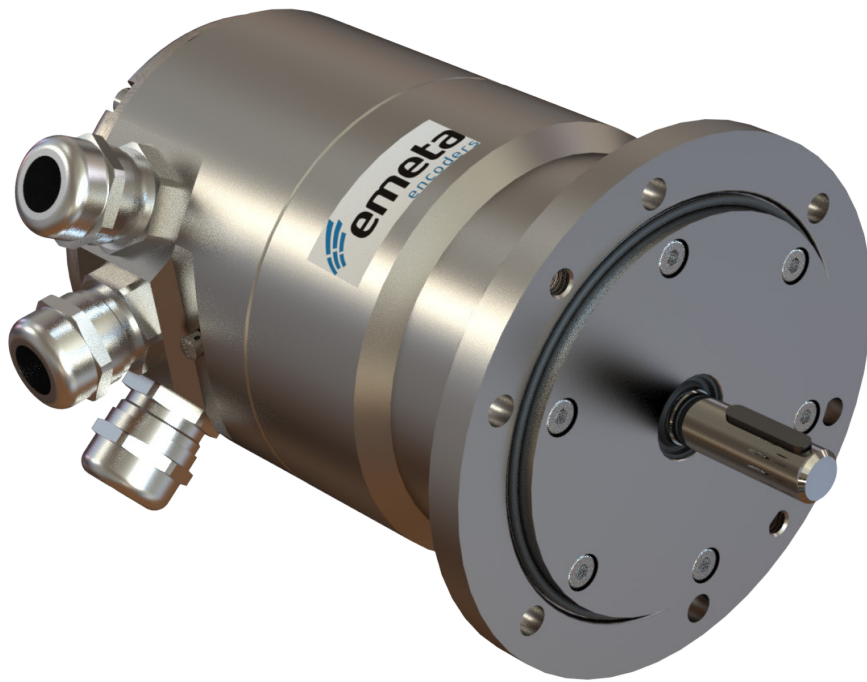
MA4401
Heavy Duty Encoder

A new series of Profinet encoders for use in harsh and demanding environments.

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PRODUCT INTRODUCTION
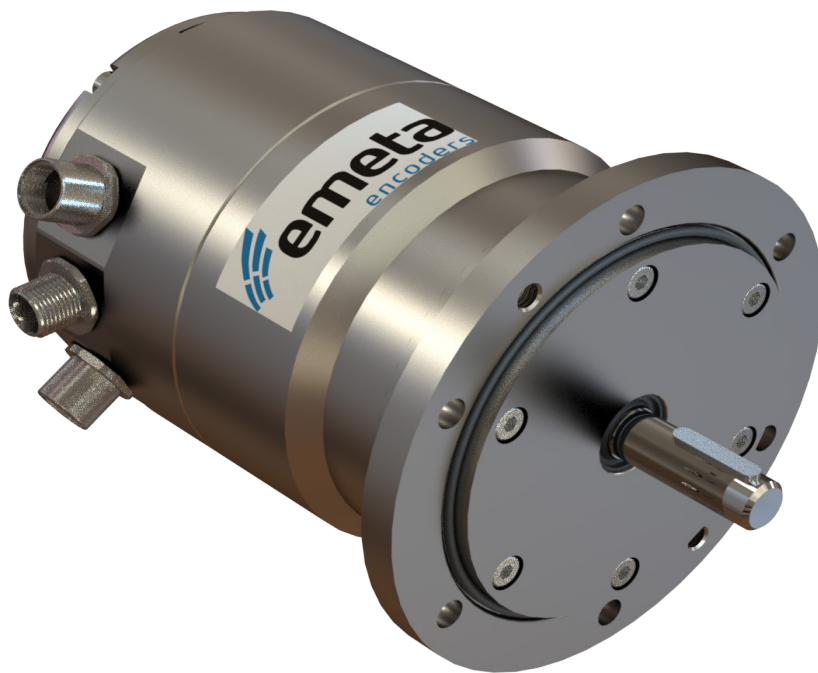
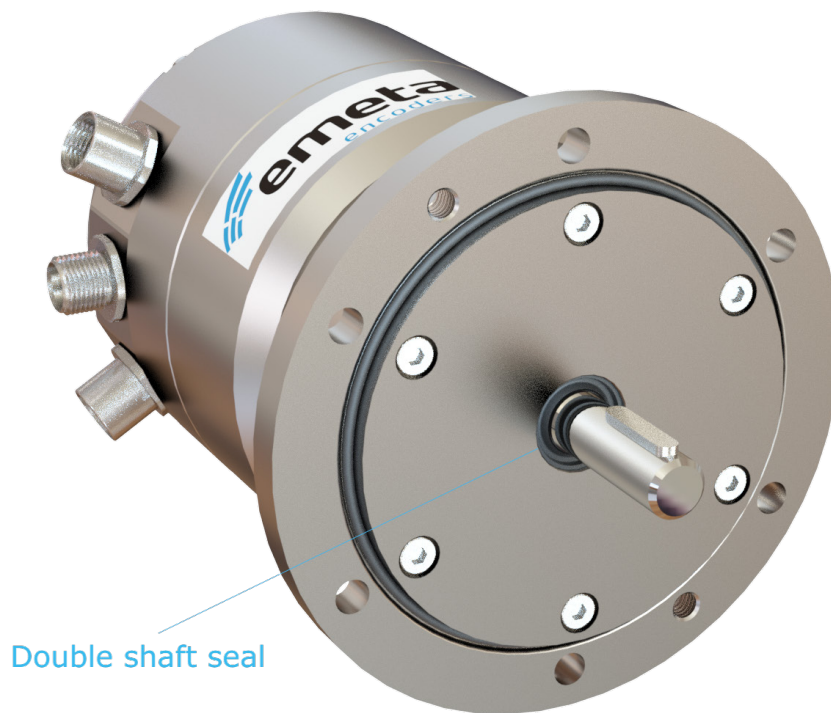
MA4401
Heavy Duty Profinet Encoder

BUILDT TO LAST

The latest encoder from Emeta is designed for harsh and demanding environments. This robust encoder is available with an aluminium or Stainless Steel AISI 316 housing. The encoder comes with 115mm B10 mounting flange and ø11mm solid shaft with key-way to prevent slip.

With features such as double shaft sealings, breathable membrane filter and mechanical locking this encoder will withstand even the harshest environments.

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PRODUCT INTRODUCTION

Double shaft seal

MA4401
Heavy Duty Profinet Encoder

Double Shaft-Sealing

Through extensive research and development for one of our customer the MA4401 has been incorporated with the latest features to benefit the usage in harsh environments.

One of these features include the shaft protection. The rotary shaft protection seal arrangement consists of 2 shaft sealings with protective lip. The sealings ensure protection aginst moisture, fluids and dust from entering via the shaft.

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PRODUCT INTRODUCTION


Breathable membrane

MA4401
Heavy Duty Profinet Encoder

Breathable Membrane Filters

Located on the side of the housing under a hollow screw.
The membrane filter acts as a vent, allowing airflow and at the same time prevents condensation due to fluctuations in temperature.

The membrane filters are incorparated in all of
Emetas heavy duty encoders used in rough environments to ensure durability.

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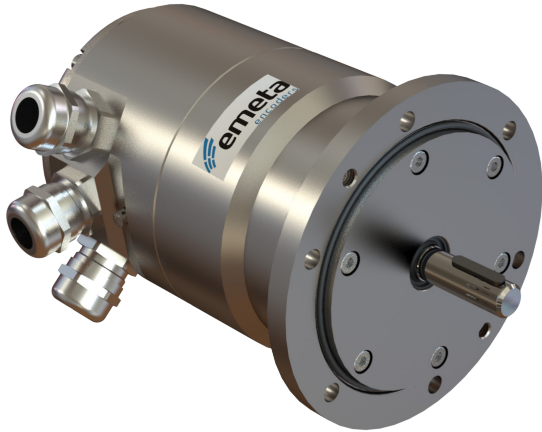
Radial Cable (D)
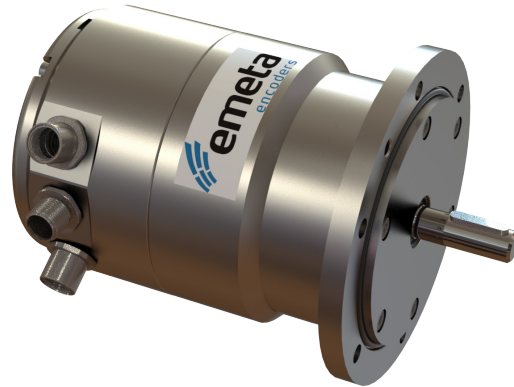
Radial M12 (E)

MA4401
Heavy Duty Profinet Encoder

Connections

The MA4401-Series can be supplied with various types of connections suitable for your application type. Standard connection types:

Radial Cable (D)

Radial M12 (E)

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SPECIFICATIONS

Mechanical

Housing	Stainless steel AISI 316
Shaft	Stainless steel 1.4057 (ø 11mm)
EncapsulationI	P67
Operating temperature	-40ºC to +85ºC
Humidity	98% RH, no condensation
Bearings	Permanently greased
Bearing load at 1 000 rpm	Radial<350N Axial<250N
Max rpm	3 000 rpm
Vibration	10g 10 - 1000 Hz (EN60068-2-6)Shock 100g at 6 ms (EN60068-2-27)
Weight	3,6kg (AISI316)

Interface

Interface	Profinet
Speed	Real Time (RT), Isochronous Real Time (IRT) Profile Profidrive Profile 4.x, Encoder Profile 4.0, 4.1, 4.2
Diagnostics	Different faults and warnings for Memory, Temperature, Synchronization, Commissioning diagnostics, Commissioning invalid scaling, Communication, Master's sign of life
Features	Boot-Loader, Round Axis, Flashing LEDs,MRP, MRPD, Acceleration values
Transmission Rate	100 Mbit
Interface Cykle Time	≥ 125 µs
Programming -Functions	Resolution, time base and filter for velocity, preset, counting direction, IP-Address, Fractional scaling, Encoder parameter control via GSDML or Non-Volatile memory

Sensor

|	
Technology	Optical
Resolution Singleturn	16 bit
Resolution Multiturn	Mechanical Gearing (no battery)
Acurracy (INL)	±0.0220° (14-16 bit) ±0.0439° (≤13 bit)
Code	Binary

Outputs

Output Driver	Ethernet

Electrical Data

Supply Voltage	10-32 VDC
Power Consumption	≤ 3W
Start-Up Time	< 15 s
Max Permissable Electric Speed	12000 1/min (12bit), 100 1/min (16bit)
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes
EMC: Emitted interface	DIN EN 61000-6-4
EMC: Noise Immunity	DIN EN 610006-2
MTTF	95 years @ 40 ° C

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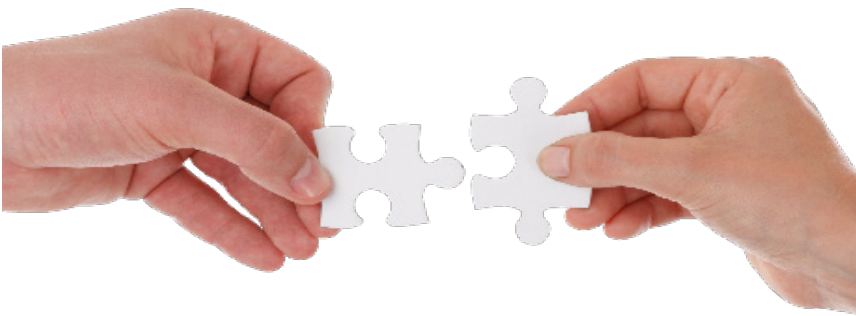
Customer satisfaction

We aim to please our customers and their needs. We offer our support regarding your Emeta products during the lifespan of the product. We at Emeta strive to have a close relatationship with our customers and are happy to help with new projects. Most of our encoders can be customized upon request so if you have special requirements feel free to contact us!

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