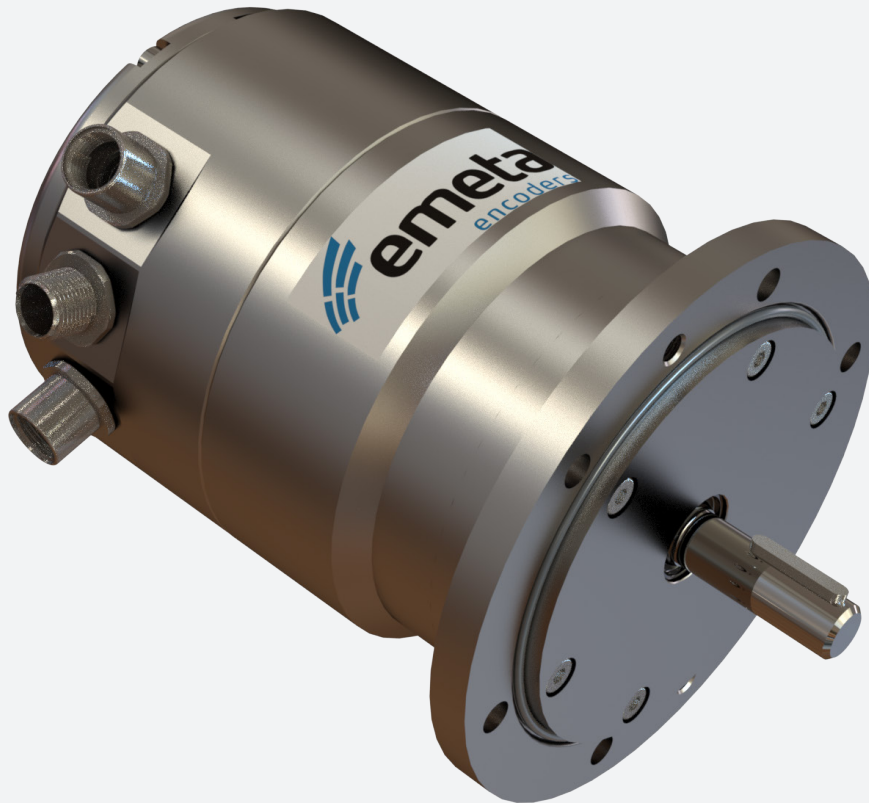


MA4401 - SERIES



HEAVY DUTY ABSOLUTE ENCODER Ø 115 MM, SINGLE OR MULTI-TURN PROFINET

Encoder with EURO-flange B10, breathable membrane, double shaft seal

- Offshore and salt water firm
- Ø 115 mm EURO-flange B10
- Available in anodized aluminium or B10 stainless steel AISI 316
- Ø 11 mm shaft with key, stainless steel 1.4057
- Profinet Absolute interface
- Enlarged sturdy bearings
- Short circuit and reversed polarity proof
- Dust and splash proof IP67
- Breathable membrane
- Double shaft seal with protective lip



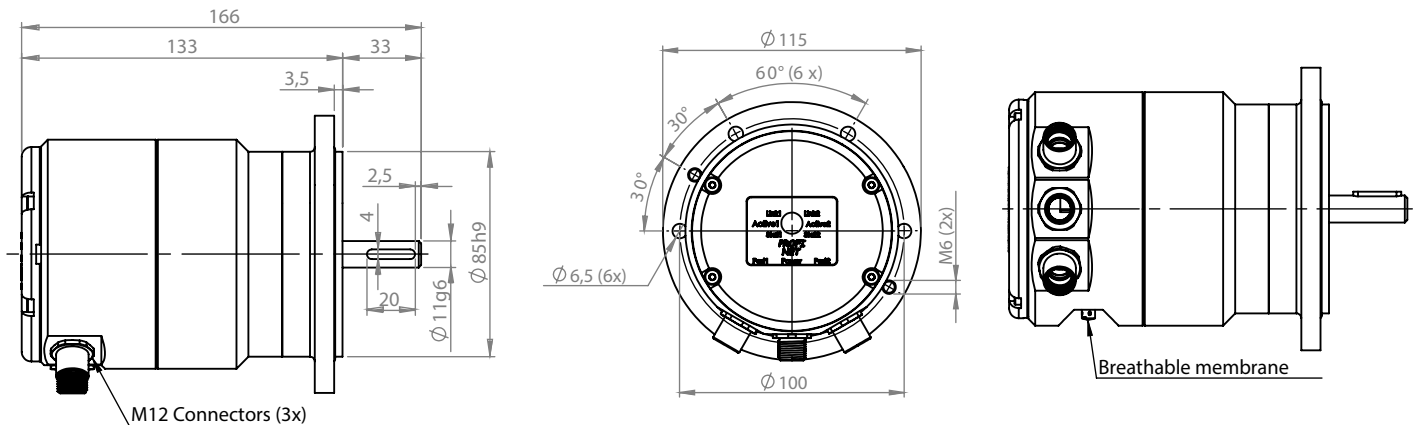
*Flexible and durable
encoder for demanding
applications*

CE **UL** **US** File E342441



Conforms to european EMC directive
89/336/EEC standards:
EN61000-6-4 emission in industrial environments
EN61000-6-2 immunity in industrial environments

Radial M12 (E)



MECHANICAL SPECIFICATIONS

Housing	Stainless steel AISI 316
Shaft	Stainless steel 1.4057 (Ø 11mm)
Encapsulation	IP67
Operating temperature	-40°C to +85°C
Humidity	98% RH, no condensation
Bearings	Permanently greased
Bearing load at	1 000 rpm
Radial	<350 N
Axial	<250 N
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), 1,5 kg (Aluminium)

INTERFACE

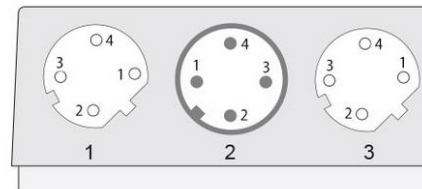
Interface	Profinet
Speed	Real Time (RT), Isochronous Real Time (IRT)
Profile	Profidrive Profile 4.x, Encoder Profile 4.0, 4.1, 4.2
Diagnostics	Different faults and warnings for Memory, Temperature, Synchronization, Commissioning diagnostics, Commissioning invalid scaling, Communication, Master's sign of life
Features	Boot-Loader, Round Axis, Flashing LEDs, MRP, MRPD, Acceleration values
Transmission Rate	100 Mbit
Interface Cycle 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

ELECTRICAL SPECIFICATION

Supply Voltage	10 – 32 VDC
Start-Up Time	< 15 s
Power Consumption	≤ 3 W
Max. Permissible Electric Speed	12000 1/min (12bit), 1000 1/min (16bit)
Reversed polarity and shortcircuit protection	Yes
EMC: Emitted Interference	DIN EN 61000-6-4
EMC: Noise Immunity	DIN EN 61000-6-2
MTTF:	95 years @ 40 °C
Output driver	Ethernet
Resolution Singleturn	16 bit
Revolutions Multiturn	12 bit
Multiturn Technology	Mechanical Gearing (no battery)
Accuracy	±0.0220° (14 – 16 bit), ±0.0439° (≤13 bit)
Code	Binary
Approval	CE

CONNECTION PLAN M12

Connection Orientation	Radial
Connector 1	M12, Female, 4pin, d coded
Connector 2	M12, Male, 4pin, d coded
Connector 3	M12, Female, 4pin, d coded



CONNECTION PLAN M12

SIGNAL	CONNECTOR	PIN NUMBER
Tx+	Connector 1	1
Rx+	Connector 1	2
Tx-	Connector 1	3
Rx-	Connector 1	4
Power Supply	Connector 2	1
Not Connected	Connector 2	2
GND	Connector 2	3
Not Connected	Connector 2	4
Tx+	Connector 3	1
Rx+	Connector 3	2
Tx-	Connector 3	3
Rx-	Connector 3	4

ORDERING CODE

Model	MA4401
Material	S Stainless steel
Connection	E (Radial M12 connectors x3)
Output	EI (Ethernet)
Multi Turn	12 bit
Single Turn	16 bit

ORDERING KEY

MA4401-SE-E1216



Skogsvägen 1, SE-645 34 Strängnäs, Sweden
 Tel: +46 152 33 11 90 Fax: +46 152 33 11 91
 E-mail: info@emetaencoders.com
 www.emetaencoders.com