

## MA110 - SERIES



### HEAVY DUTY INCREMENTAL ENCODER Ø 58 MM


*Encoder with synchroflange and 3 mounting holes M4*

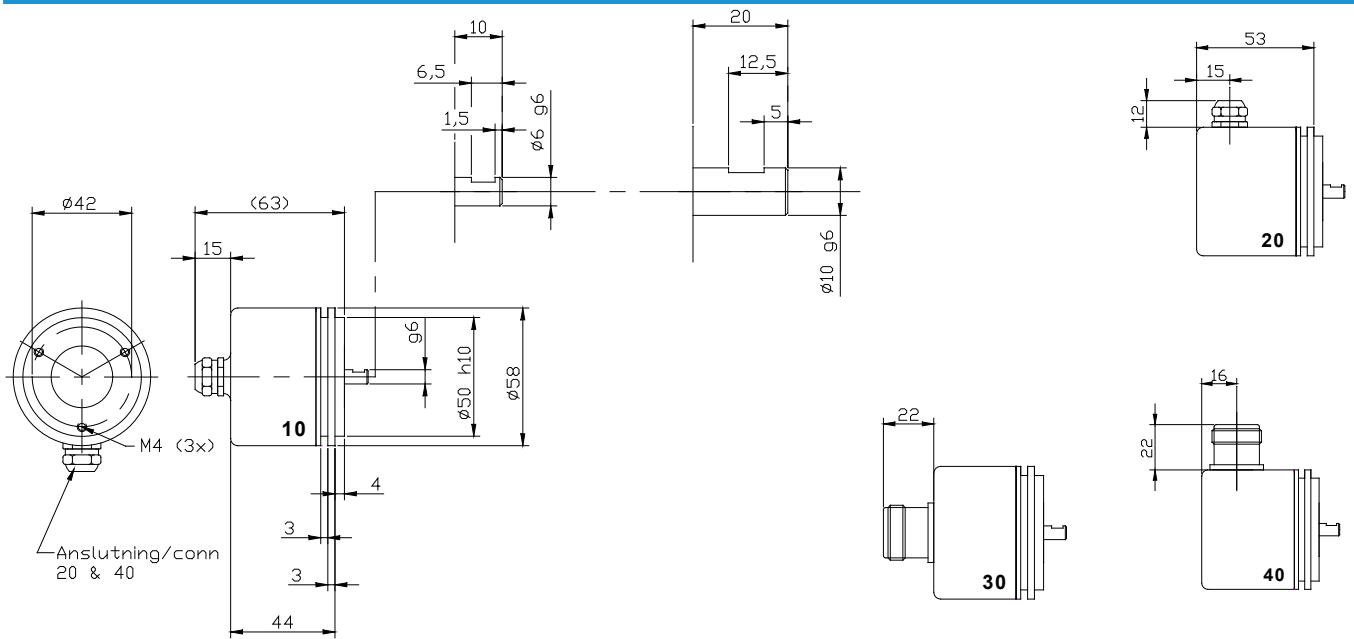
- Ø 58 mm
- 6 or 10 mm solid shaft with face
- Enlarged sturdy bearings
- Short circuit and reversed polarity proof
- Dust and splash proof IP65
- Standard 5-30V Power Supply, 300kHz  
2 Square Wave Signals  
Marker Pulse, Inverted Signals and Sense
- Option Customization upon request

The logo for emeta encoders, featuring a stylized blue wave icon to the left of the text "emeta" in a bold, black, sans-serif font, with "encoders" in a smaller, blue, sans-serif font below it.

*Flexible and durable  
encoder for demanding  
applications.*

 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.

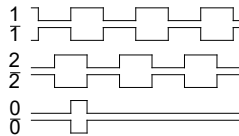


## ELECTRICAL SPECIFICATION, STANDARD

Supply voltage	Vcc 5–30 V
Current consumption	Max 40 mA without load
Output circuit	Linedriver RS422A compatible
Low level output volt.	Max <0,5 V at 20 mA load and 20°C
High level output volt.	Min >Vcc-1V at 20mA load and 20°C
Short circuit protected	Yes
Polarity protected	Yes
Transient protected	Yes
Max load	70 mA

## OUTPUT SIGNALS, STANDARD

CCW rotation viewed from shaft end



## SIGNAL ACCURACY

Dividing error max	±50 el°
Channel separation	90 ±25 el°
Max frequency	300 kHz
Operating temperature	-40° to +80°C

## MECHANICAL SPECIFICATION

Housing	Aluminum, electrically conductive for increased interference protection
Sealing	IP65 dust and splash proof
Bearings	Permanently greased
Bearing load at Radial	1 000 rpm: 180 N Gives 50 000 hrs
Axial	130 N bearing life
Max rpm	6 000 (12 000)
Vibration	20g 20-2000 Hz
Chock	200g at 11 ms
Weight	approx: 275 g (without cable)

## CONNECTIONS

- 10. Axial cable 1 m, 10x0,25TPUR
- 20. Radial cable 1 m, 10x0,25TPUR
- 30. Axial 12-pin male connector CON-FM12P
- 40. Radial 12-pin male connector CON-FM12P
- 70. Axial cable 1 m with male connector CON-CF12P
- 80. Radial cable 1 m with male connector CON-CF12P

## FUNCTIONS

	Cable	Connector	Cable/Conn
<b>1</b>	Brown	5	5
<b>2</b>	Grey	8	8
<b>0</b>	Red	3	3
<b>1 inv</b>	Green	6	6
<b>2 inv</b>	Pink	1	1
<b>0 inv</b>	Black	4	4
<b>+V</b>	Brown/Green	12	12
<b>0 V</b>	White/Green	10	10
<b>+V sens</b>	Blue	2	2
<b>0V sens</b>	White	11	11
<b>Gnd</b>	Shield	Chassi	9

## MATING CONNECTORS

For 30 and 40, CON-CF12S female connector  
For 70 and 80, CON-CM12S female connector

## ORDERING KEY

Model  
Shaft 6 or 10 mm  
Pulse rate 1-5 000  
Connection  
X= meter cable

