



**EMA**



**Description**

- High resolution, Binary code
- SSI output
- Different mechanical versions available
- ABS plastic (EMA) or metal case (REMA)
- Strong, accurate, affordable

**Mechanical versions**

Series EMA520:	Series EMA540	Series EMA510	Series REMA530
Ø 58 mm round flange	Ø 58 mm round flange	Ø 58 mm round flange	Flange type RE0444
Servo coupling	Servo coupling	Servo coupling	Shaft Ø 11 mm
Ø 50 mm centering mask	Ø 36 mm centering mask	Ø 31.75 mm centering mask	Aluminium case
Shaft Ø 6, 8, 9.52 or 10 mm	3 M4 holes 120° on Ø 48 mm	Shaft Ø 6, 8, 9.52 or 10 mm	
Series EMA410	Series EMA430	Series EMA620:	Series EMA650:
Hollow shaft for motor shaft	Hollow shaft for motor shaft	63.5x63.5 square flange	63.5x63.5 square flange
coupling – hole Ø 8, 10, 12,	coupling – hole Ø 8, 10, 12,	Ø 31.75 mm centering mask	Ø 50 mm centering mask
14 or 15 mm	14 or 15 mm	Shaft Ø 6, 8, 9.52 or 10 mm	Shaft Ø 6, 8, 9.52 or 10 mm
	Antirotational elastic support		

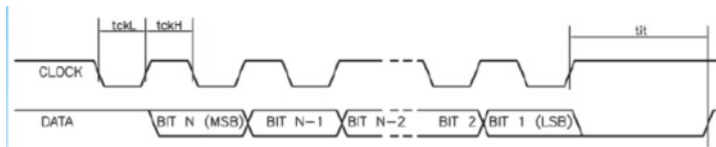
**Mechanical and environmental specifications**

	TYPE	EMA520/EMA510/EMA540	EMA620/EMA650	REMA 530	EMA410/EMA430
Weight		500 g ca.			
Materials: case shaft		Series EMA: ABS plastics – Series REMA: aluminium stainless steel			
Shaft / Joint hole diameter		6, 8, 9.52 or 10 mm		11 mm	Joint hole Ø 8, 10, 12, 14, 15 mm
Revolutions / minute		6000			
Starting torque		0.8 Ncm			
Inertia		25 g cm <sup>2</sup>			
Max. load		80 N axial / 1000 N radial			
Shock resistance (11 ms)		50 G			
Vibrations resistance (10÷2000 Hz)		100 m/sec <sup>2</sup>			
Protection degree		IP64, optional IP65 (version K)			
Operating temperature		-30 ÷ +70°C			
Stocking temperature		-30 ÷ +85°C			

**Electrical & Operating Specifications**

TYPE	EMA520/EMA510/EMA540	EMA620/EMA650	REMA 530	EMA410/EMA430
Resolution	5 ÷ 13 bit			
Code	Binary			
Output signals	SSI 5V			
Supply voltage	5Vdc ±5% or 10/24Vdc or 5/24Vdc 5 ÷ 28 Vdc Protection against polarity reversal			
Power consumption	60 mA			
Max frequency	200 KHz			
SSI Clock max. frequency	1 MHz			
Accuracy	±1 ÷ ±1/2 LSB			
Frequency	100 KHz			
Interference immunity	EN 61000-6-2			
Emitted interference	EN 61000-6-4			
Connections	axial or radial cable lg.1 m or axial/radial 7-pin connector 12/13 bit with parallel output version: radial cable outlet- cable length 1 m			

**SSI Interface Signals**



MSB: bit Most Significant Bit  
LSB: bit Less Significant Bit  
tckL: 0.5 µs min.  
tckH: 0.5 µs max  
tit: 30 µs typical

(tit: when the tit time lag expires the encoder considers the interrogation ended)

**Input & Output signals**

SSI OUTPUT SIGNALS	CABLE COLOURS	7-PIN CONNECTOR
Clock+	Brown	PIN 1
Clock-	White	PIN 2
Data+	Green	PIN 3
Data-	Yellow	PIN 4
Reset	Pink	PIN 5
0V	Blue	PIN 12
+Vdc	Red	PIN 11

The output code is increasing with shaft rotating clockwise (shaft side sight).

**Ordering information**

<b>EMA520</b>	<b>C</b>	<b>12B</b>	<b>2/24</b>	<b>R</b>	<b>8</b>	<b>SSI</b>
						<b>OUTPUT SIGNALS</b> SSI = SSI
						<b>SHAFT DIAMETER/JOINT HOLE</b> Shaft 6 – 8 – 9.52 – 10 mm -11 mm (MRE530) Joint hole 8 – 10 – 12- 14 – 15 mm
						<b>CONNECTIONS OUTLET</b> A axiale /R radial 7-pin connector / 1 m cable
						<b>SUPPLY</b> 5/28 Vdc 18/24 Vdc (analogue output only)
						<b>RESOLUTION &amp; CODE</b> 8 – 9 – 10 – 11 – 12 -13 bit B = Binary code G = Gray code
						<b>MECHANICAL PECULIARITIES (Optional field)</b> - = Standard version C = Cable outlet K = Sealing O-ring
<b>TYPE</b>						
EMA520 – EMA540 – EMA510 – EMA530 Round flange						
EMA620 – EMA650 Square flange						
EMA410 – EMA430 Hollow shaft						

Variations admitted without notice