

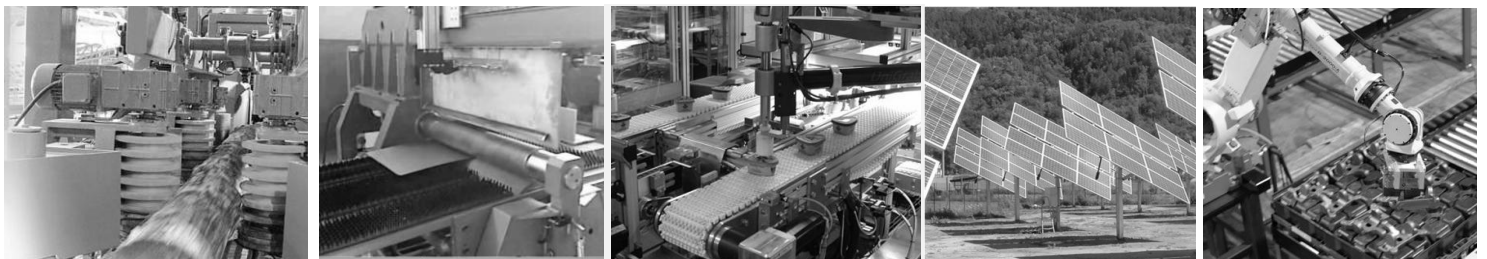
# elap



## INCREMENTAL & ABSOLUTE ROTARY ENCODERS

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- *INCREMENTAL ENCODERS*
- *SINGLE & MULTI TURN ABSOLUTE ENCODERS*
- *FIELD BUS ENCODERS*
- *MAGNETIC ENCODERS*
- *PROGRAMMABLE ENCODERS*



# elap

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# INCREMENTAL

SMALL



RM22-I      RM36-I      E30      E40      E40A

<b>Body dimension</b>	∅ 22 mm	∅ 36 mm	∅ 30 mm	∅ 40 mm	
<b>Flange</b>		∅ 36 mm	Round ∅ 30 mm	Round ∅ 40 mm	
<b>Fixing</b>	2 holes	4 holes on ∅ 26 mm	2 holes on ∅ 22 mm	6 holes on ∅ 30 mm	4 holes on ∅ 25.4 mm
<b>Connections</b>	Radial cable L 1 m	Radial cable L 1 m	Axial or radial cable L 1 m		
<b>Shaft ∅</b>	6 mm		4 mm	6 mm	
<b>Case material</b>	Aluminium		ABS	ABS - Optional: aluminium	
<b>Protection degree</b>	IP64		IP54		
<b>Pulses/revolution</b>	128	128, 512, 1024	2 ÷ 12500		
<b>Zero reference pulse</b>	On request: 1 pulse/revolution (types E31/E41)				
<b>Supply voltage</b>	5 Vdc	5 Vdc	5 Vdc – 8/24 Vdc		
<b>Output signals</b>	5 V Line driver	5 V Line driver	NPN open collector – push pull – line driver		

**Series RM22 - RM36: Magnetic encoder - Incremental or absolute version available**

<b>RM22-I</b>	<b>Incremental encoder 128 ppr</b> – 5V line driver output
<b>RM36-I</b>	<b>Incremental encoder 128, 512, 1024 ppr</b> – 5V line driver output
<b>RM22-P</b>	<b>Absolute encoder 9 bit binary code</b> – parallel output
<b>RM22-S</b>	<b>Absolute encoder 9 bit binary code</b> – SSI output
<b>RM22-A</b>	<b>Sin/cos encoder</b> – 1 Vpp ±0,1 mV analogue output
<b>RM22-V</b>	<b>Encoder with voltage analogue output 0/5 Vdc</b> on 360° with clockwise rotation
<b>RM36-V</b>	<b>Encoder with voltage analogue output 0/10 Vdc</b> on 360°, 180°, 90°, 45° with clockwise or cc rotation



# ENCODERS

SIZE



E40V



E40M



E40S



E40Q

∅ 40 mm			
Round ∅ 40 mm	Hollow shaft	Hollow shaft	Squared 44x44 mm
M18x1 screw fixing	Antirotational support	Antirotational elastic support	4 fixing holes
Axial or radial cable L 1 m			
6 mm	Hole ∅ 6 or 8 mm		6 mm
ABS - Optional: aluminium			
IP54	IP54	IP54	IP54
2 ÷ 12500			
On request: 1 pulse/revolution (type E41)			
5 Vdc – 8/24 Vdc			
NPN open collector – push pull – line driver			



## INCREMENTAL

COMPACT SIZE • M12 CONNECTOR

SQUARE FLANGE

elap



REC520

REC620

REC440

E620

E650

<b>Body dimension</b>	Ø 58 mm H 38 mm			Ø 58 mm	
<b>Flange</b>	Ø 58 mm	63.5x63.5 mm	Hollow shaft	63.5x63.5 mm	
<b>Centering mask</b>	Ø 50 mm	Ø 31.75 mm	-	Ø 31.75 mm	Ø 50 mm
<b>Fixing</b>	Servo	4 holes		4 holes	
<b>Connections</b>	M12 radial connector			Axial/radial cable/connector	
<b>Shaft Ø</b>	6 - 8 - 10 mm		Hole Ø 8-10-12-14 mm	6 - 8 - 9.52 - 10 mm	
<b>Case material</b>	Aluminium			ABS or aluminium	
<b>Protection degree</b>	IP64			IP64 optional IP65 with O-ring on the shaft	
<b>Pulses/revolution</b>	2 ÷ 12500			2 ÷ 12500 / 36000 (REV type)	
<b>Zero reference pulse</b>	On request: 1 pulse/revolution				
<b>Supply voltage</b>	8/24 Vdc - 5 Vdc				
<b>Output signals</b>	Push pull - line driver			NPN Open collector- push pull line driver - sinusoidal output	
<b>Mechanical versions also available in the following series:</b>					
REV 36000 i/g				•	•
EM				•	•
EP				•	•

### Series REC:

Compact sized encoder • Body high: 38 mm  
Connections by M12 connector 5 or 8 pins (socket connector excluded)  
Optional: 5 or 10 m cable ended with flying socket connector



## ENCODERS

ROUND FLANGE



SEB

E520

E540

E510

RE530

Ø 50 mm	Ø 58 mm			
	Ø 58 mm			RE0444 Ø 110 mm
	Ø 50 mm	Ø 36 mm	Ø 31.75 mm	
3 holes on Ø 36 mm	Servo		Servo	
Axial cable/connector	Axial/radial cable/connector			
10 mm	6 - 8 - 9.52 - 10 mm			11 mm
ABS	ABS or aluminium			Aluminium
IP64 optional IP65 with O-ring applied to the shaft				
2 ÷ 12500	2 ÷ 12500 / 36000 (REV type)			
On request: 1 pulse/revolution				
8/24Vdc - 5Vdc				
NPN open collector- push pull - line driver	NPN open collector- push pull - line driver - sinusoidal outputs			
	•	•	•	•
	•	•	•	•
	•	•	•	•

### Series REV

**HIGH PPR Number**  
**1000÷36000 ppr**  
Glass disk - Aluminium case  
Supply voltage: 8÷24 Vdc or 5 Vdc  
Output signals: push-pull or line driver  
Axial/radial cable/connector  
Protection degree IP64, optional IP65

### Series EM

**MAGNETIC ENCODERS**  
8÷2048 ppr  
**Magnetic operating principle**  
ABS or aluminium case  
Supply voltage: 8÷24 Vdc or 5Vdc or 5÷24 Vdc  
Output signals: push-pull or line driver  
Axial/radial cable/connector  
Protection degree IP64, optional IP65

### Series EP

**PROGRAMMABLE ENCODERS**  
8÷2048 ppr **programmable** by the user  
Zero reference pulse  
Magnetic operating principle  
ABS or aluminium case  
Supply voltage: 5÷28 Vdc  
Output signals: push-pull or line driver  
Axial/radial cable/connector  
Protection degree IP64, optional IP65

# INCREMENTAL ENCODERS

## HOLLOW SHAFT



E400

E470

E410

E430

<b>Body dimension</b>	Ø 58 mm	Ø 58 mm	Ø 58 mm	Ø 58 mm
<b>Flange</b>	Ø 53.5 mm	Ø 72 mm	Ø 58 mm	Ø 58 mm
<b>Fixing</b>	3 holes on Ø 30 mm	4 holes on Ø 63.5 mm	Antirotational support	Antirotational elastic support
<b>Connections</b>	Axial/radial cable/connector			
<b>Shaft Ø</b>	6, 8, 10 mm		8, 10, 12, 14, 15 mm	
<b>Case material</b>	ABS or aluminium			
<b>Protection degree</b>	IP64			
<b>Pulses/revolution</b>	2 ÷ 12500			
<b>Zero reference pulse</b>	On request: 1 pulse/revolution			
<b>Supply voltage</b>	8/24 Vdc – 5 Vdc			
<b>Output signals</b>	NPN open collector – push pull – line driver – sinusoidal outputs			
<b>Mechanical versions also available in the following series:</b>				
REV				
EM	•	•	•	•
EP	•	•	•	•



# ABSOLUTE ENCODERS

## SINGLE & MULTI TURN



MEM-BUS

MEM

MRE

EMA

	Single/Multi turn	Single/Multi turn	Single turn	Single Turn
<b>Fieldbus type</b>	PROFIBUS CANopen			
<b>Resolution</b>	13 bit / 8192 info/rev.	5 ÷ 13 bit info/rev.	8 ÷ 13 bit*	5÷13 bit
<b>N.turns (multiturn only)</b>	16 bit / 65536	15 bit		
<b>Code</b>	Binary or Gray			Binary
<b>Supply voltage</b>	5/28 Vdc		5/28 Vdc / 18 ÷ 24 Vdc*	5 Vdc / 8÷24Vdc
<b>Output signals</b>		SSI	SSI, push-pull parallel, 0÷10V* analogue	SSI
<b>Connections</b>	3 / 2 cableglands	Axial/radial cable/connector	Axial cable L 1m	Axial/radial cable/connector
<b>Case</b>	Aluminium			ABS or aluminium
<b>Protection degree</b>	IP64 - optional IP65 with O-ring mounted on the shaft			
<b>Available MECHANICAL VERSIONS:</b>				
<b>Square flange 620</b>	•	•	•	•
<b>Square flange 650</b>		•	•	•
<b>Round flange 520</b>	•	•	•	•
<b>Round flange 510</b>		•	•	•
<b>Flangia tonda 540</b>	•	•	•	•
<b>Round flange 530</b>		•	•	•
<b>Hollow shaft 400</b>				
<b>Hollow shaft 470</b>				
<b>Hollow shaft 410</b>	•	•	•	•
<b>Hollow shaft 430</b>	•	•	•	•

\*Series MRE analogue output 0÷10V on 360°, 9 bit resolution, 18÷24Vdc supply voltage

# ENCODER FITTINGS

## JOINTS



JOINTS series **BSS / WA**,  
aluminium  
Hole Ø mm 4 – 6 , 6-6, 8-8,  
10-10

JOINTS series **SK**  
Polyamid fiberglass reinforced  
Aluminium connecting element  
Hole Ø mm 4-4, 6-6, 8-8, 10-  
10

JOINTS series **FK**  
Nickel plated steel  
Hole Ø mm 6-6, 6-8, 8-8

JOINTS **PAGUFLEX**  
**PF0606**  
Galvanized steel-  
polyurethane connecting  
element  
Hole Ø mm 6-6, 8-8,

## MEASURING WHEELS

## SUPPORTING ARM



**Measuring wheel Ruota552**  
Development 500 mm, Ø 159.23 mm  
aluminium wheel, smooth rubber surface  
Hole Ø 8 or 10 mm

**Measuring wheel Ruota251**  
Development 200 mm, Ø 63,69 mm  
aluminium wheel, smooth rubber surface  
Hole Ø 8 or 10 mm

**Supporting arm B100**

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