

INCREMENTAL & ABSOLUTE ROTARY ENCODERS



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



INCREMENTAL

SMALL



RM22-I

RM36-I

E30

E40

E40A

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

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



ENCODERS

SIZE



E40V



E40M



E40S



E40Q

Ø 40 mm

Round Ø 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 Ø 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



REC520



REC620



REC440



E620

E650

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

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

Mechanical versions also available in the following series:

REV				
EM	•	•	•	•
EP	•	•	•	•



ABSOLUTE ENCODERS

SINGLE & MULTI TURN



MEM-BUS

MEM

MRE

EMA

Single/Multi turn

Single/Multi turn

Single turn

Single Turn

Fieldbus type



Resolution

13 bit / 8192 info/rev.

5 ÷ 13 bit info/rev.

8 ÷ 13 bit*

5÷13 bit

N.turns (multiturn only)

16 bit / 65536

15 bit

Code

Binary or Gray

Binary

Supply voltage

5/28 Vdc

5/28 Vdc / 18 ÷ 24 Vdc*

5 Vdc / 8÷24Vdc

Output signals

SSI

SSI, push-pull parallel,
0÷10V* analogue

SSI

Connections

3 / 2 cableglands

Axial/radial
cable/connector

Axial cable L 1m

Axial/radial
cable/connector

Case

Aluminium

ABS or aluminium

Protection degree

IP64 - optional IP65 with O-ring mounted on the shaft

Available MECHANICAL VERSIONS:

Square flange 620	•	•	•	•
Square flange 650		•	•	•
Round flange 520	•	•	•	•
Round flange 510		•	•	•
Flangia tonda 540	•	•	•	•
Round flange 530		•	•	•
Hollow shaft 400				
Hollow shaft 470				
Hollow shaft 410	•	•	•	•
Hollow shaft 430	•	•	•	•

*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
Polyurethane or aluminium wheel,
smooth rubber surface
Hole Ø 8 or 10 mm

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

Supporting arm B100

elap