

EC34 SERIES OF ENCODERS FOR RACKS

Encoders for racks

Encoders for racks with automatic recovery of slack. This type of encoder was made to simplify the linear measurements instead of incremental linear system and to overcome the problematics of measurements over long distances. The encoder, closed within a robust aluminium body is produced with a preload system which allows the automatic recovery of slack between pinion and rack.

- Resolutions up to 2000 imp/turn with zero
- Different electronic configurations available with power supply up to 24 Vdc
- Max output frequency up to 100 KHz
- Output : cable and connector



Ordering Codes

EC34 A 100 Z 5 N 10 M . XXX

EC34 = encoder for racks

A = mod. EC34A

Type of flange

from **1** to **2000** imp./turn

Resolutions

N.B.: For impulse availability contact directly our offices

S = without zero impulse

Z = with zero impulse

Zero Impulse

5
8 ÷ 24

Encoder power supply (Vdc)

N.B.: LINE DRIVER available only with 5 Vdc or 8÷24 Vdc power supply

In case of particular Customer variant separate with a full stop

XXX = Particular Customer variants indicated by a progressive number from 001 to 999

P = standard cable length 1.5m

M = connector MS3106E 16S-1S or 18-1S

J = connector JMSP 1607 F or 1610 F

10 = ø 10 mm

Shaft diameter

N = NPN

C = NPN OPEN COLLECTOR

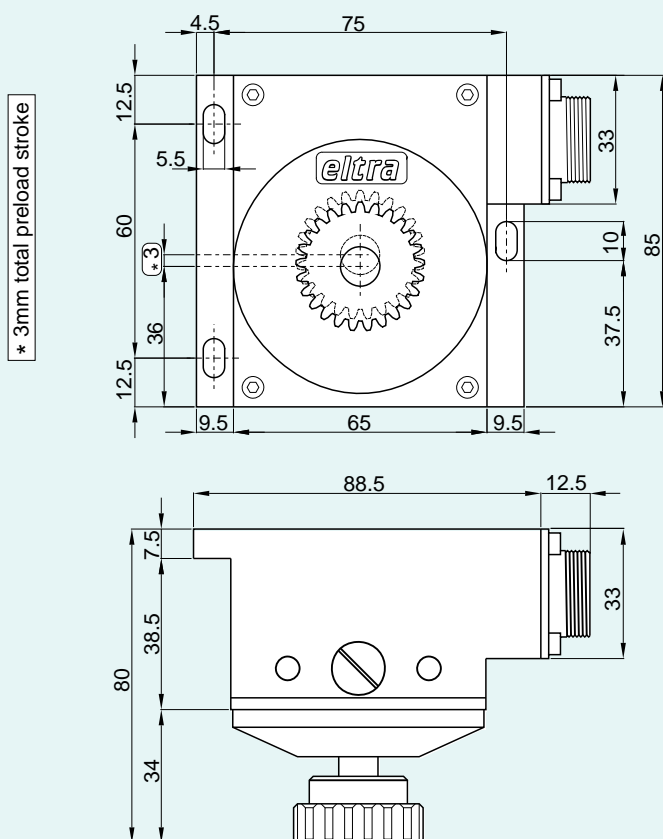
P = PUSH PULL

L = LINE DRIVER

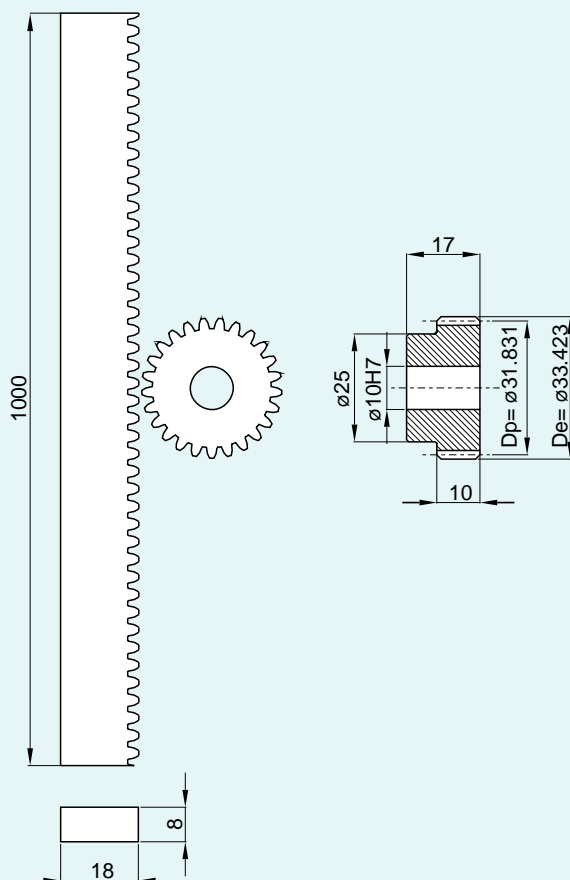
Electronic output configuration

N.B.: For the optionals on output configurations see the output incremental connections card

EC34A



Rack and Spur Gear Tooth to Tooth: $p=2.5 / z=40 / m=0.796$



Electronic Characteristics

Resolutions	From 1 to 2000 impulses / turn
Power Supply	5 Vdc / 8 ÷ 24 Vdc N.B.: LINE DRIVER only with 5/ 8 ÷ 24 Vd cpower supply
Current consumption without load	50 mA bidirectional 100 mA bidirectional with zero
Max output current	50 mA per channel 20 mA per channel LINE DRIVER
Electronic output configuration	NPN / NPN OPEN COLLECTOR / PUSH PULL / LINE DRIVER
Max output frequency	Max 100 KHz
Frequency calculation	$F = \frac{\text{RPM} \times \text{Resolution}}{60}$

Mechanical Characteristics

Shaft Diameter(mm)	ø10 g6
Protection	IP64 - Standard
R.P.M. Max	3000 continuous
Max shaft load	200 N (20 Kp) axial 200 N (20 Kp) radial
Shock	50 G per 11 msec
Vibrations	10G 10 ÷ 2000 Hz
Bearings Life	10 ⁹ revolutions
Bearings	n°2 ball bearings
Shaft Material	Stainless steel AISI303
Cover Material	Oven painted aluminum with Epoxidic Powders
Material of rack and spur gear	Steel
Operating Temperature	0° ÷ +60°C
Storage Temperature	-25° ÷ +70°C
Weight	700 g