



# EC34 ENCODER FOR RACKS



## Encoder for racks

Rack encoders with automatic slack recovery. If compared to an incremental linear system, this type of encoder extremely simplifies linear measurements and overcomes measurement problems on long distance. Our models are sealed in a robust aluminium body and integrate a preload system allowing the automatic slack recovery between rack and pinion.

- Up to 2.000 ppr with zero
- Several output types available. Up to 24 Vdc input voltage.
- Up to 300 kHz frequency response
- Output cable with connector.



SPECIAL PRODUCTS

## Ordering code

Full stop to separate special versions

EC34 A 100 Z 5 N 10 M . XXX

encoder for racks

EC34

Special version code numbered from 001 to 999

Type of flanges  
mod. EC34A A

P Cable output standard length 1,5 m  
M connector MS3106S-1S or 18-1S  
J connector JMSP 1607 F or 1610 F

### Resolutions

from 1 to 2000 PPR

Please, directly contact our offices for pulses availability

### Shaft diameter

10  $\varnothing$  10 mm

### Zero pulse

without zero pulse S  
with zero pulse Z

### Output types

N NPN  
C NPN OPEN COLLECTOR  
P PUSH PULL  
L LINE DRIVER

For optionals about output types please refer to incremental outputs section

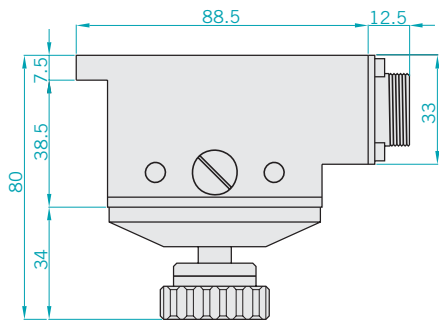
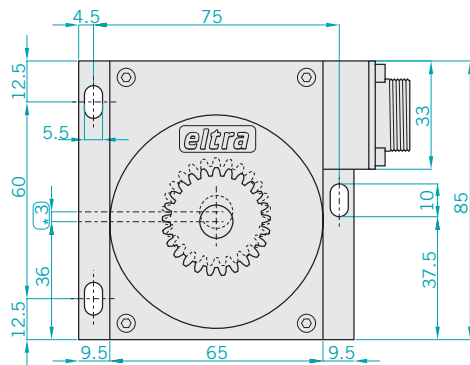
### Input voltage

5  
input voltage 8 ÷ 24

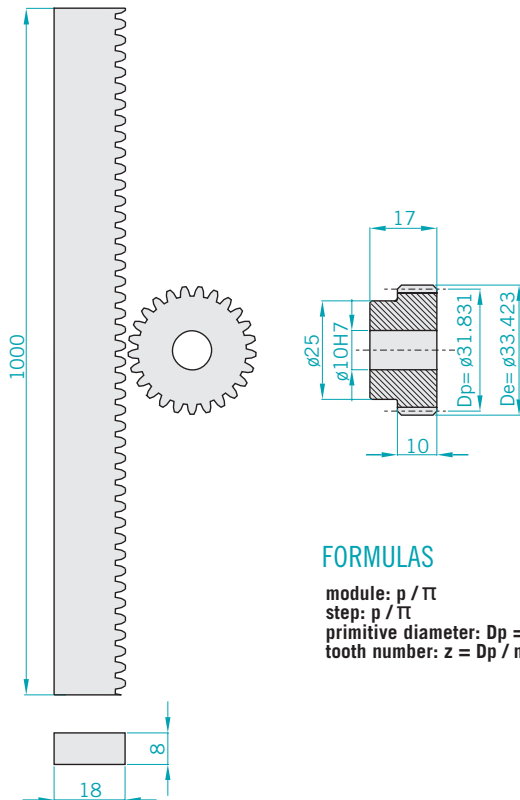
EC34

# EC34A

\*3mm total preload stroke



Rack and toothed wheel  
 $p=2.5 / z=40 / m=0.796$



### FORMULAS

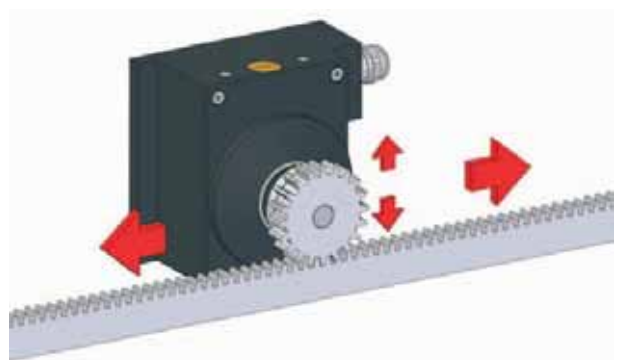
module:  $p / \pi$   
 step:  $p / \pi$   
 primitive diameter:  $Dp = mz$   
 tooth number:  $z = Dp / m$

## Electrical specifications

<b>Resolution</b>	from 1 to 2000 PPR
<b>Input voltage</b>	5Vdc / 8 ÷ 24 Vdc
<b>Input current with no output load</b>	100 mA MAX
<b>Source and sink current</b>	50 mA for channel 20 mA for channel with LINE DRIVER
<b>Output types</b>	NPN / NPN OPEN COLLECTOR / PUSH PULL / LINE DRIVER
<b>Output frequency</b>	100 KHz MAX
<b>Frequency response</b>	$F = \frac{\text{RPM} \times \text{Resolution}}{60}$

## Mechanical specifications

<b>Shaft diameter</b>	ø10 mm g6
<b>Enclosure rating</b>	IP64 - standard
<b>Shaft speed</b>	3000 RPM
<b>Allowed weights on the shaft</b>	200 N (20 Kp) axial 200 N (20 Kp) radial
<b>Shock</b>	50 G for 11 msec
<b>Vibrations</b>	10G 10 ÷ 2000 Hz
<b>Bearings life</b>	10 <sup>9</sup> revolutions
<b>Bearings</b>	n°2 ball bearings
<b>Shaft material</b>	Steel AISI303
<b>Housing material</b>	Epidoxic oven-painted aluminium
<b>Rack material</b>	Steel
<b>Operating temperature</b>	0° ÷ +60°C
<b>Storage temperature</b>	-25° ÷ +70°C
<b>Weight</b>	700gr



SPECIAL PRODUCTS

IN011IT0305A

EC34

