

MAIN FEATURES

Encoder for rack 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 solid aluminium body and integrate a preloading system that allows automatic slack recovery between rack and pinion.

- Up to 2048 ppr with zero signal
- Several output types available
- Up to 24 V DC power supply
- Up to 220 kHz output frequency
- Cable or connector output



ORDERING CODE

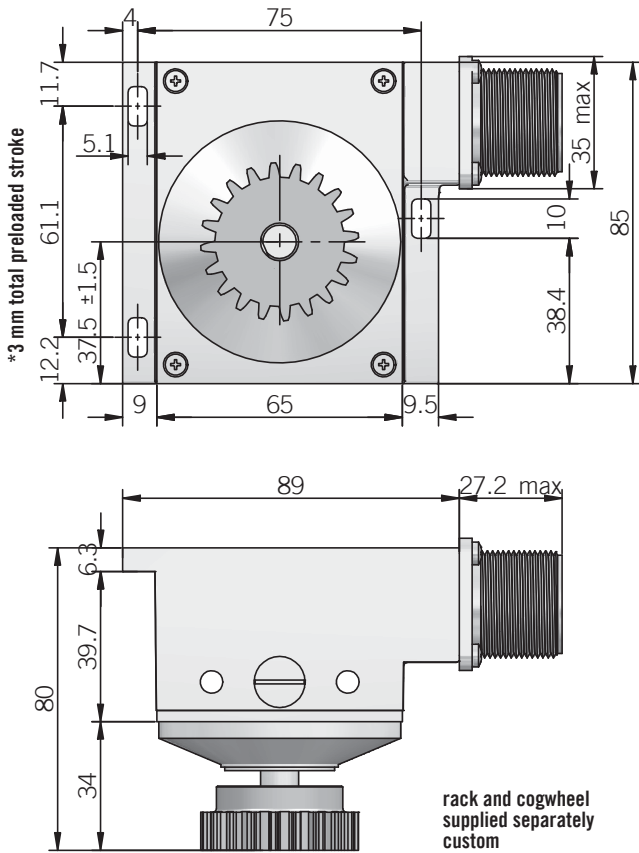
EC 34 A 100 Z 5 N 10 M . XXX

<p>SERIES encoder for rack EC</p> <p>ENCODER MODEL 34</p> <p>TYPE A</p> <p>RESOLUTION ppr 100 / 200 / 300 / 360 / 400 / 500 / 512 / 600 / 720 / 1000 / 1024 / 1200 / 1440 / 2000 / 2048</p> <p><i>N.B.: please directly contact our offices for pulses availability</i></p> <p>ZERO PULSE without zero pulse S with zero pulse Z</p> <p>POWER SUPPLY 5 V DC 5 8 ... 24 V DC 8/24</p>	<p>VARIANT XXX custom version</p> <p>OUTPUT TYPE P cable output with cable gland (standard length 1,5 m) M M connector output J J connector output</p> <p>SHAFT DIAMETER 10 mm</p> <p>OUTPUT TYPE N NPN C NPN open collector P push-pull PC protected push-pull (AEIC-7272) L line driver</p>
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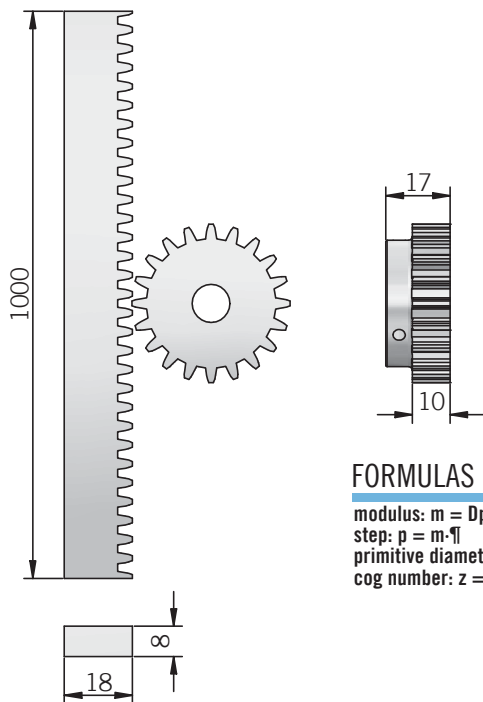
Connections

Function	N / C / P cable output	Line driver cable output	Output J7 N / C / P	Output J7 Line Driver without Zero	Output M7 N / C / P	Output M7 Line Driver without Zero	Output J10 Line Driver with Zero	Output M10 Line Driver with Zero
+V DC	red	red	6	4	F	D	4 - 5	D - E
0 V	black	black	1	6	A	F	6	F
Ch. A	green	green	3	1	C	A	1	A
Ch. A-	/	brown	/	3	/	C	7	G
Ch. B	yellow	yellow	5	2	E	B	2	B
Ch. B-	/	orange	/	5	/	E	8	H
Ch. Z	blue	blue	4	/	D	/	3	C
Ch. Z-	/	white	/	/	/	/	9	I
⏏	shield	shield	7	7	G	G	10	J

EC 34



Rack and cogwheel p = 2,5 z = 40 m = 0,796



FORMULAS

modulus: $m = Dp/z$
 step: $p = m \cdot \pi$
 primitive diameter: $Dp = m \cdot z$
 cog number: $z = Dp/m$

Electrical specifications

Resolution	100 / 200 / 300 / 360 / 400 / 500 / 512 / 600 / 720 / 1000 / 1024 / 1200 / 1440 / 2000 / 2048 ppr
Power supply	5 V DC \pm 10% 8 ... 24 V DC \pm 5% (reverse polarity protection)
Current consumption without load	100 mA max
Max load current	50 mA for channel 20 mA for channel (line driver)
Output type	NPN NPN open collector push-pull line driver
Max output frequency	220 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

Mechanical specifications

Shaft diameter	ϕ 10 mm
Enclosure rating	IP 64 (IEC 60529)
Max rotation speed	3000 rpm
Max shaft load	200 N (20 kgf) axial 200 N (20 kgf) radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Body material	painted aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Rack and cogwheel material	steel
Bearings	2 ball bearings
Bearings life	10^9 revolutions
Operating temperature	-20° ... +70°C
Storage temperature	-25° ... +70°C
Weight	700 g

