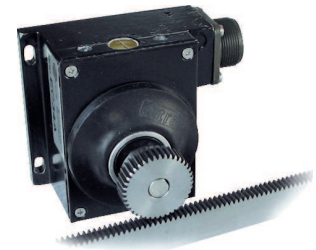


MAIN FEATURES

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.

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

- 3 channel encoder (A / B / Z) up to 2500 ppr
- Power supply up to +28 VDC with several electronic interfaces available
- Up to 220 kHz output frequency
- Cable or connector output



ORDERING CODE

EC 34A 500 S 8/24 N 10 P .XXX

SERIES
encoder for rack **EC**

MODEL
flange **34A**

RESOLUTION
ppr **100 ... 2500**
see table for pulses availability

ZERO PULSE
without zero pulse **S**
with zero pulse **Z**

POWER SUPPLY
5 V DC **5**
8 ... 24 V DC **8/24**

ELECTRONIC INTERFACE
NPN **N**
NPN open collector **C**
push-pull **P**
line driver **L**
power supply 8/24V - output RS-422 **RS**

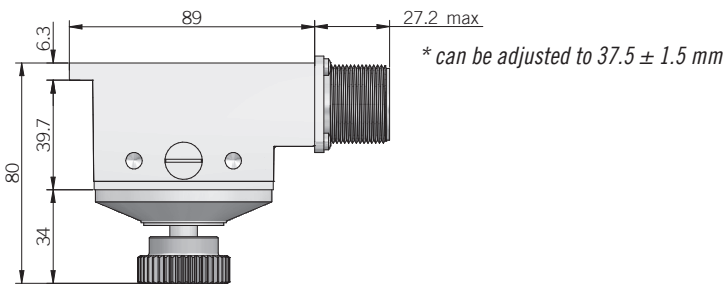
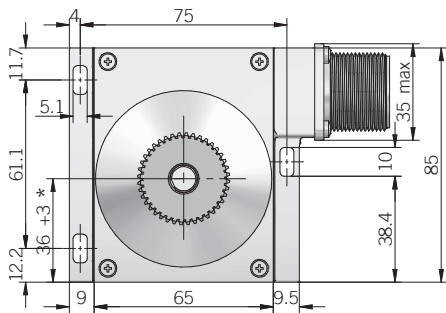
SHAFT DIAMETER
mm **10**

OUTPUT TYPE
cable (standard length 1,5 m) **P**
MIL connector **M**
JIS-C-5432 connector **J**

female connector included, without female please add 162 as variant code

VARIANT
custom version **XXX**

EC 34



rack and cogged wheel
supplied available as accessories

dimensions in mm

MECHANICAL SPECIFICATIONS

Shaft diameter	∅ 10 mm
Enclosure rating	IP 64 (IEC 60529)
Max rotation speed	3000 rpm
Max shaft load	200 N axial / radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Starting torque (at +20°C / +68°F)	< 0,06 Nm
Housing material	painted aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Rack and cogged wheel material	steel
Bearings	2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature	-20° ... +70°C (-4° ... +158°F)
Storage temperature	-25° ... +70°C (-4° ... +158°F)
Weight	700 g (24,69 oz)

ELECTRICAL SPECIFICATIONS

Resolution	from 100 to 2500 ppr
Power supply	5 = 4,5 ... 5,5 V DC 8/24 = 7,6 ... 25,2 V DC (reverse polarity protection)
Current consumption without load	100 mA max
Max load current	50 mA / channel 20 mA / 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

*output levels according to power supply, for further details please see under Technical basics section

RESOLUTIONS

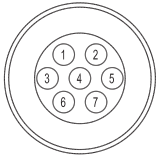
100 - **200** - 300 - 360 - 400 - **500** - 512 - 600 - 720 - **1000** - 1024 - 1200 - 1440 - **2000** - 2048 - 2500 ppr

please directly contact our offices for other pulses, preferred resolutions in bold

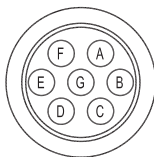
CONNECTIONS

Function	Cable output N / C / P / PC	Cable output Line driver	7 pin J output N / C / P / PC	7 pin J output Line Driver no Zero	7 pin M output N / C / P / PC	7 pin M output Line Driver no Zero	10 pin J output Line Driver with Zero	10 pin M output 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

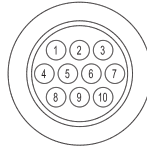
J connector (7 pin)
JIS-C-5432 Size 16
solder side view FV



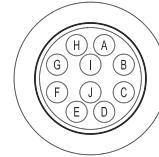
M connector (7 pin)
Amphenol MS3102-E-16-S
solder side view FV



J connector (10 pin)
JIS-C-5432 Size 16
solder side view FV

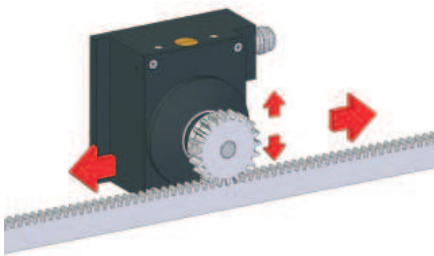


M connector (10 pin)
Amphenol MS3102-E-18-1
solder side view FV

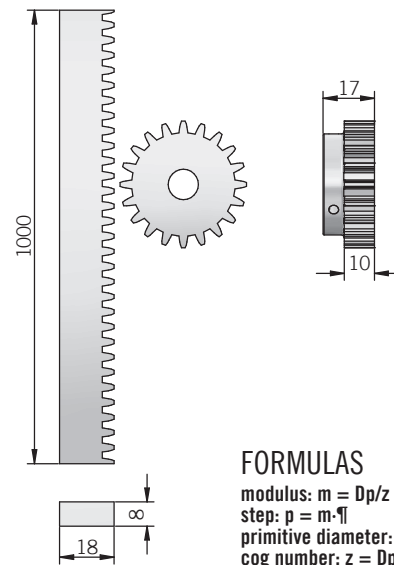


ACCESSORIES

Description	P / N
Cogged wheel - M = 0,796 / P = 2,5 / Z = 40	94080003
Rack - P = 2,5 / 1m lenght	23280006



Rack and cogged wheel
 $p = 2,5$ $z = 40$ $m = 0,796$



FORMULAS

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

dimensions in mm