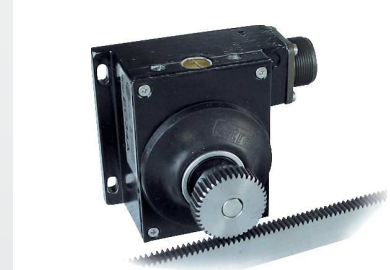


MAIN FEATURES

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 +30 V DC with several electrical interfaces available
- Up to 220 kHz output frequency
- Cable or connector output



ORDERING CODE

EC 34A 500 S 5/28 P 10 M .162 +XXX

SERIES
encoder for rack **EC**

MODEL
flange **34A**

RESOLUTION
ppr **100 ... 2500**
refer to the available pulses list

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

POWER SUPPLY
(with L electrical interface) 5 V DC **5**
5 ... 28 V DC **5/28**

ELECTRICAL INTERFACE
NPN open collector **C**
push-pull **P**
line driver **L**
power supply 5/28 V DC - output RS-422 **RS**

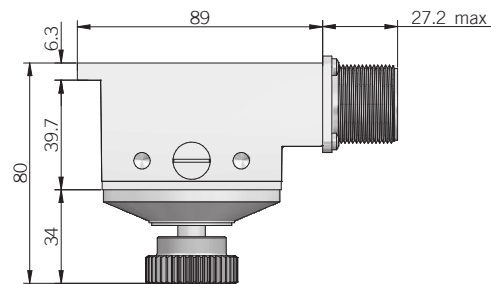
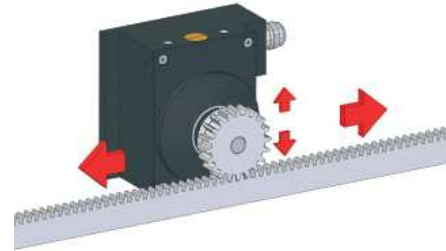
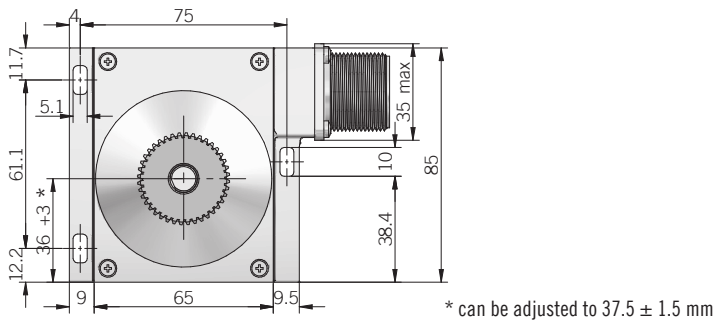
SHAFT DIAMETER
mm **10**

OUTPUT TYPE
cable (standard length 1,5 m) **P**
preferred cable lengths 2 / 3 / 5 / 10 m, to be added after output type
MIL plug connector **M**
JIS-C-5432 plug connector **J**

SOCKET
socket not included **.162**
to be reported only with connector output (eg. M.162), for socket see Accessories

VARIANT
custom version **XXX**

34A



for rack and cogged wheel please refer to Accessories

dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	from 100 to 2500 ppr
Power supply¹	5 = 4,5 ... 5,5 V DC 5/28 = 4,5 ... 30 V DC (reverse polarity protection)
Power draw without load	800 mW max
Max load current	C / P = 50 mA / channel L / RS = 20 mA / channel
Electrical interface²	NPN open collector (AEIC-7273, pull-up max +30 V DC) push-pull / line driver HTL (AEIC-7272 or similar) line driver RS-422 (AELT-5000 or similar)
Max output frequency	220 kHz
Counting direction	A leads B clockwise (shaft view)
Index signal	180°e (gated A)
Mean time to dangerous failure (MTTF)_d³ according to EN ISO 13849-1	263 years
Mission time (T_m)³	20 years
Diagnostic coverage (DC)³	0%
Cable type	shielded - fixed installation conductors section 0,22 mm ² / AWG 24 bending radius min 60 mm
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive
UL / CSA	file n. E212495

RESOLUTIONS

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

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

MECHANICAL SPECIFICATIONS

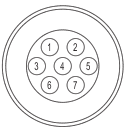
Shaft diameter	∅ 10 mm
Enclosure rating	IP 64 (IEC 60529)
Max rotation speed	3000 rpm
Max shaft load⁴	200 N (45 lbs) axial / radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Starting torque (at +20°C / +68°F)	< 0,06 Nm (8,50 Ozin)
Housing material	painted aluminum
Shaft material	stainless steel
Bearings	n.2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature^{5, 6}	-20° ... +70°C (-4° ... +158°F)
Storage temperature⁶	-25° ... +70°C (-4° ... +158°F)
Weight	700 g (24,69 oz)

¹ as measured at the transducer without cable influences² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section³ this product is not a safety component, for further details refer to TECHNICAL BASICS section⁴ maximum load for static usage⁵ measured on the transducer flange⁶ condensation not allowed

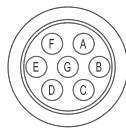
CONNECTIONS

Function	Cable C / P	Cable L / RS	7 pin J C / P	7 pin J L / RS no Zero	7 pin M C / P	7 pin M L / RS no Zero	10 pin J L / RS with Zero	10 pin M L / RS with Zero
+V DC	red	red	6	4	F	D	4 - 5	D - E
0 V	black	black	1	6	A	F	6	F
A+	green	green	3	1	C	A	1	A
A-	/	brown or grey	/	3	/	C	7	G
B+	yellow	yellow	5	2	E	B	2	B
B-	/	orange	/	5	/	E	8	H
Z+	blue	blue	4	/	D	/	3	C
Z-	/	white	/	/	/	/	9	I
⏏	shield	shield	7	7	G	G	10	J

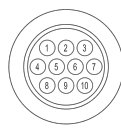
J connector (7 pin)
JIS-C-5432 Size 16
front view



M connector (7 pin)
Amphenol MS3102-E-16-S
front view



J connector (10 pin)
JIS-C-5432 Size 16
front view



M connector (10 pin)
Amphenol MS3102-E-18-1
front view

