

MAIN FEATURES

Miniaturized \varnothing 38 mm encoder series for application in small devices.
Recommended when a minimal size is required even providing excellent performances.

- 3 channel encoder (A / B / Z) up to 1024 ppr
- Power supply up to +30 V DC with several electrical interfaces available
- Up to 105 kHz output frequency
- Cable output, connector available on cable end
- Solid shaft diameter up to 6 mm
- Mounting by clamping or centering square flange



ORDERING CODE

EH 38A 500 S 5/28 P 6 X 3 PR .XXX

SERIES
incremental encoder series **EH**

MODEL
clamping flange \varnothing 20 mm **38A**
square flange \square 36,5 mm **38B**
square flange \square 32 mm **38D**

RESOLUTION
ppr from **50** to **1024**
refer to the available pulses list

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

POWER SUPPLY
5 V DC **5**
5 ... 28 V DC **5/28**

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

SHAFT DIAMETER
mm **6**

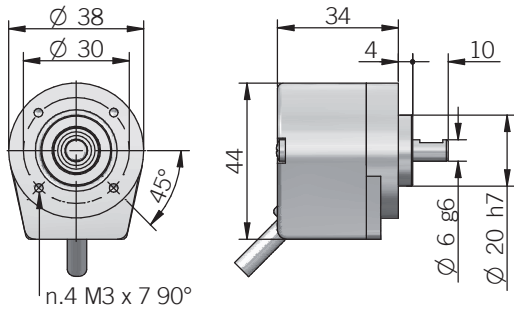
ENCLOSURE RATING
IP 54 **X**

MAX ROTATION SPEED
3000 rpm **3**

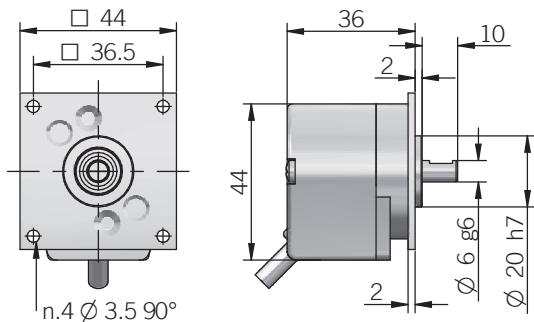
OUTPUT TYPE
radial cable (standard length 0,5 m) **PR**
preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)

VARIANT
custom version **XXX**

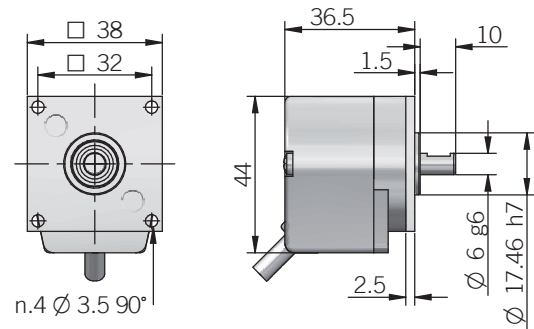
38 A



38 B



38 D



dimensions in mm

RESOLUTIONS

50* - 100 - 200 - 250 - 256 - 360 - 400 - 500 - 512 - 1000 - 1024

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

*available only without zero pulse

ELECTRICAL SPECIFICATIONS

Resolution	from 50 to 1024 ppr
Power supply ¹	5 = 4,5 ... 5,5 V DC 5/28 = 4,5 ... 30 V DC (reverse polarity protection)
Current consumption without load	100 mA max
Max load current	C / P = 50 mA / channel L = 20 mA / channel
Electrical interface ²	NPN open collector (AEIC-7273, pull-up max +30 V DC) push-pull / line driver HTL (AEIC-7272) line driver RS-422 (AELT-5000 or equivalent)
Max output frequency	105 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2015/863/EU directive
UL / CSA	certificate n. E212495

MECHANICAL SPECIFICATIONS

Shaft diameter	Ø 6 mm
Enclosure rating	IP 54 (IEC 60529)
Max rotation speed	3000 rpm
Max shaft load ³	5 N axial / radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	0,05 x 10 ⁻⁶ kgm ² (1,2 x 10 ⁻⁶ lbft ²)
Starting torque (at +20°C / +68°F)	< 0,01 Nm (1,42 Ozin)
Bearing stage material	aluminum UNI 5076
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	PA66 glass fiber reinforced
Bearings	n.2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature ^{4,5}	-20° ... +70°C (-4° ... +158°F)
Storage temperature ⁵	-20° ... +70°C (-4° ... +158°F)
Weight	150 g (5,29 oz)

¹ as measured at the transducer without cable influences

² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

³ maximum load for static usage

⁴ measured on the transducer flange

⁵ condensation not allowed

CONNECTIONS

Function	Cable C / P	Cable L
+V DC	red	red
0 V	black	black
A+	green	green
A-	/	brown or grey
B+	yellow	yellow
B-	/	orange
Z+	blue	blue
Z-	/	white
⊖	shield	shield