



EH 38 A / B / D

SOLID SHAFT INCREMENTAL ENCODER

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 +24 VDC with several electronic interfaces available
- Up to 100 kHz output frequency
- Cable output, connectors available on cable end
- Solid shaft diameter up to 6 mm
- Mounting by clamping or centering square flange



ORDERING CODE

EH 38A 500 S 8/24 P 6 X 3 PR .XXX

SERIES
incremental encoder series **EH**

MODEL
clamping flange \varnothing 20 mm **38A**
centering square flange \varnothing 20 mm **38B**
centering square flange \varnothing 17,46 mm **38D**

RESOLUTION
ppr from **50** to **1024**
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**
push-pull protected (AEIC-7272) **PC**
line driver **L**

SHAFT DIAMETER
mm **6**

ENCLOSURE RATING
IP 54 **X**

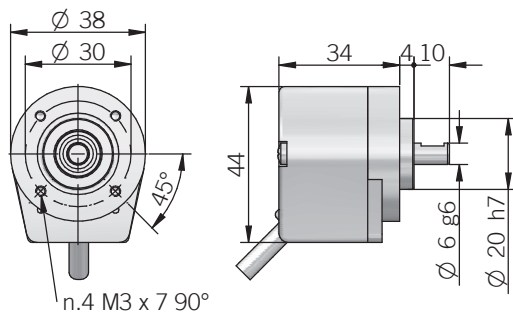
MAX ROTATION SPEED
3000 rpm **3**

OUTPUT TYPE
radial cable (standard length 0,5 m) **PR**

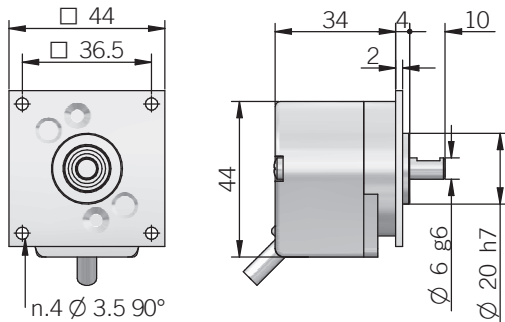
VARIANT
custom version **XXX**



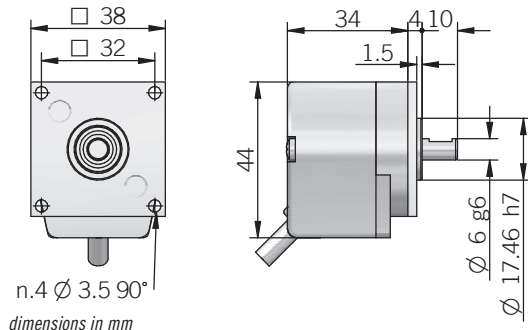
EH 38 A



EH 38 B



EH 38 D



n.4 $\varnothing 3.5$ 90°
dimensions in mm

OPTICAL SOLID SHAFT INCREMENTAL ENCODERS | EH 38 A / B / D

ELECTRICAL SPECIFICATIONS

Resolution	from 50 to 1024 ppr
Power supply	5 = 4,5 ... 5,5 V DC 8/24 = 7,6 ... 25,2 V DC (reverse polarity protection only with PC electronic)
Current consumption without load	100 mA max
Max load current	N / C / P / PC = 50 mA / channel L = 20 mA / channel
Output type*	NPN / NPN open collector / push-pull / line driver
Max output frequency	100 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	IEC 61000-6-1 IEC 61000-6-4

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

MECHANICAL SPECIFICATIONS

Shaft diameter	$\varnothing 6$ mm
Enclosure rating	IP 54 (IEC 60529)
Max rotation speed	3000 rpm
Max shaft load	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	$0,05 \times 10^{-6}$ kgm ²
Starting torque (at +20°C / +68°F)	< 0,01 Nm
Body material	aluminum UNI 5076
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	PA66 glass fiber reinforced
Bearings	2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature	-20° ... +70°C (-4° ... +158°F)
Storage temperature	-20° ... +70°C (-4° ... +158°F)
Weight	150 g (5,29 oz)

CONNECTIONS

Function	Cable output N / C / P / PC	Cable output Line driver
+V DC	red	red
0 V	black	black
Ch. A	green	green
Ch. A-	/	brown
Ch. B	yellow	yellow
Ch. B-	/	orange
Ch. Z	blue	blue
Ch. Z-	/	white
⊖	shield	shield

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

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