



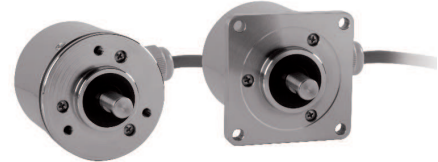
## EL - ER 63 AX / DX

### STAINLESS STEEL SOLID SHAFT INCREMENTAL ENCODER

#### MAIN FEATURES

Thanks to the stainless steel enclosure, this encoder is suitable for food and beverage machinery, cranes and winches for ships, offshore applications, washing systems and for all those environments where high corrosion resistance is required.

- 3 channel encoder (A / B / Z) up to 24000 ppr
- Power supply up to +28 VDC with several electronic interfaces available
- Up to 500 kHz output frequency
- Solid shaft diameter up to 10 mm
- Mounting by clamping or centering 2,5" square flange



#### ORDERING CODE

ER 63DX 500 S 5/28 N 8 S 3 PR .XXX

**SERIES**  
incremental encoder series **EL**  
incremental encoder series **ER**

**MODEL**  
clamping flange  $\varnothing$  31,75 mm **63AX**  
centering square flange  $\varnothing$  31,75 mm **63DX**

**RESOLUTION**  
ppr from 1 to 24000  
see table for pulses availability

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

**POWER SUPPLY**  
(with L electronic interface) 5 V DC **5**  
(with L or PC electronic interface) 8 ... 24 V DC **8/24**  
5 ... 28 V DC **5/28**

**ELECTRONIC INTERFACE**  
NPN **N**  
NPN open collector **C**  
push-pull **P**  
push-pull protected (AEC-7272) **PC**  
line driver **L**  
power supply 5/28V - output RS-422 **RS**

**SHAFT DIAMETER**  
9,52 (3/8") mm **9**  
mm **10**

**ENCLOSURE RATING**  
IP 66 **S**

**MAX ROTATION SPEED**  
3000 rpm **3**

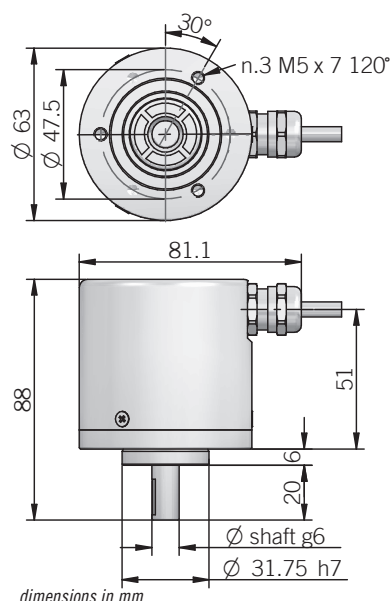
**OUTPUT TYPE**  
radial cable (standard length 1,5 m) **P**

**VARIANT**  
custom version **XXX**



## OPTICAL SOLID SHAFT INCREMENTAL ENCODERS | EL - ER 63 AX / DX

## EL - ER 63 AX



## ELECTRICAL SPECIFICATIONS

|                                      |   |
|--------------------------------------|---|
| <b>Resolution</b>                    | from 1 to 24000 ppr   |
| <b>Power supply</b>                  | 5 = 4,5 ... 5,5 V DC<br>5/28 = 4,75 ... 29,4 V DC<br>8/24 = 7,6 ... 25,2 V DC (reverse polarity protection) |
| <b>Power draw without load</b>       | 800 mW  |
| <b>Max load current</b>              | N / C / P / PC = 50 mA / channel<br>L / RS = 20 mA / channel  |
| <b>Output type*</b>                  | NPN / NPN open collector / push-pull / line driver  |
| <b>Max output frequency</b>          | 250 kHz up to 6000 ppr<br>500 kHz from 7200 ppr   |
| <b>Counting direction</b>            | A leads B clockwise (shaft view)  |
| <b>Electromagnetic compatibility</b> | IEC 61000-6-2<br>IEC 61000-6-4  |

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

## EL SERIES RESOLUTIONS

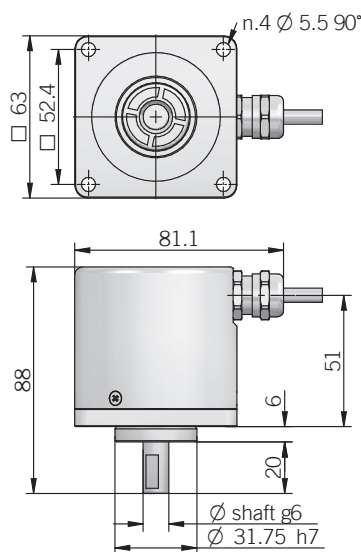
1 - 2 - 4 - 5 - 10 - 15 - 16 - 20 - 25 - 30 - 32 - 40 - 50 - 60 - 70 - 80 - 90 - 160 - 180 - 350 - 450 - 660 - 700

## ER SERIES RESOLUTIONS

100 - 120 - 128 - 150 - 200 - 240 - 250 - 256 - 300 - **360** - 400 - 480 - **500** - 512 - 600 - 625 - **720** - 750 - 800 - 900 - **1000** - **1024** - 1200 - 1250 - 1440 - 1500 - 1600 - 1800 - **2000** - **2048** - **2500** - 3000 - **3600** - 4000 - 4096 - **5000** - 6000 - **7200** - 8000 - 8192 - 9000 - **10000** - 10240 - 12000 - **14400** - 16000 - 16384 - 18000 - **20000** - 20480 - 24000

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

## EL - ER 63 DX



## MECHANICAL SPECIFICATIONS

|   |  |
|---|--|
| <b>Shaft diameter</b>                     | Ø 9,52 (3/8") / 10 mm  |
| <b>Enclosure rating</b>                   | S = IP 66 (IEC 60529)  |
| <b>Max rotation speed</b>                 | EL 3000 rpm / 60° C<br>ER 3000 rpm / 70° C - 2000 rpm / 85° C                            |
| <b>Max shaft load</b>                     | 200 N axial / radial   |
| <b>Shock</b>                              | 50 G, 11 ms (IEC 60068-2-27)   |
| <b>Vibration</b>                          | 10 G, 10 ... 2000 Hz (IEC 60068-2-6)   |
| <b>Moment of inertia</b>                  | 1,5 x 10 <sup>-6</sup> kgm <sup>2</sup>  |
| <b>Starting torque (at +20°C / +68°F)</b> | < 0,06 Nm  |
| <b>Body material</b>                      | 1.4305 / AISI 303 stainless steel  |
| <b>Shaft material</b>                     | 1.4305 / AISI 303 stainless steel  |
| <b>Housing material</b>                   | 1.4305 / AISI 303 stainless steel  |
| <b>Bearings</b>                           | 2 ball bearings  |
| <b>Bearings life</b>                      | 10 <sup>9</sup> revolutions  |
| <b>Operating temperature</b>              | -10° ... +60°C (+14° ... +140°F) EL series<br>-25° ... +85°C (-13° ... +185°F) ER series |
| <b>Storage temperature</b>                | -25° ... +70°C (-13° ... +158°F)   |
| <b>Weight</b>                             | 650 g (22,92 oz)   |

## CONNECTIONS

| Function | Cable output<br>N / C / P / PC | Cable output<br>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                      |



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