EAMX 80 A / D SSI
EXPLOSION PROOF ATEX MULTITURN ABSOLUTE ENCODER

SPECIFICATIONS

Explosion proof encoder for applications within explosive and hazardous areas.

- Optical sensor technology (OptoASIC + gears)
- Resolution up to 27 bit (13 bit single turn (8192 ppr) + 14 bit multiturn (16384 turns))
- Power supply up to +28 VDC with SSI as electronic interface
- Cable output
- Solid shaft diameter up to 10 mm
- Mounting with synchronous or centering square flange

EX CLASSIFICATION

It has been assured with EC-TYPE Examination Certificate CESI 04 ATEX 082 that the EAMX 80 comply with essential health and safety requirements according to

- EN 60079-0:2012+A11:2013
- EN 60079-1:2007
- EN 60079-31:2014

<table>
<thead>
<tr>
<th>ORDERING CODE</th>
<th>EAMX 80A 256 / 256 G 8/28 S X X 10 S 3 PR . XXX</th>
</tr>
</thead>
<tbody>
<tr>
<td>SERIES</td>
<td>multiturn absolute explosion proof encoder EAMX</td>
</tr>
<tr>
<td>MODEL</td>
<td>synchronous flange ø 40 mm 80A centering square flange ø 40 mm 80D</td>
</tr>
<tr>
<td>MULTITURN RESOLUTION (powers of 2) turns from 2 to 16384</td>
<td></td>
</tr>
<tr>
<td>SINGLETURN RESOLUTION (powers of 2) ppr from 2 to 8192</td>
<td></td>
</tr>
<tr>
<td>CODE TYPE</td>
<td>binary B gray G</td>
</tr>
<tr>
<td>POWER SUPPLY</td>
<td>8 ... 28 V DC 8/28</td>
</tr>
<tr>
<td>ELECTRONIC INTERFACE</td>
<td>Serial Synchronous Interface - SSI S</td>
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<tr>
<td>LOGIC</td>
<td>to be reported X</td>
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<tr>
<td>OPTION</td>
<td>to be reported X</td>
</tr>
<tr>
<td>SHAFT DIAMETER</td>
<td>mm 10</td>
</tr>
<tr>
<td>ENCLOSURE RATING</td>
<td>IP 65 X</td>
</tr>
<tr>
<td>MAX ROTATION SPEED</td>
<td>3000 rpm 3</td>
</tr>
<tr>
<td>OUTPUT TYPE</td>
<td>radial cable (standard length 1,5 m) PR</td>
</tr>
<tr>
<td>VARIANT</td>
<td>custom version XXX</td>
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e-mail: info@eltra-trade.com

www.eltra-trade.com
**ELECTRICAL SPECIFICATIONS**

- **Multiturn resolution**: from 2 to 16384 turns
- **Singleturn resolution**: from 2 to 8192 ppr
- **Power supply**: 8/28 = 7.6 ... 29.4 V DC
- **Current consumption without load**: 100 mA
- **Output type**: RS-422
- **Auxiliary inputs (U/D)**: active high (+Vdc) connect to 0V if not used
- **Clock frequency**: 100 kHz ... 1 MHz
- **SSI monostable time (Tm)**: 18 µs
- **SSI pause time (Tp)**: > 35 µs
- **SSI frame**: Tree format (MSB ... LSB) up to 12 bit multiturn = length 25 bit (12MT + 13ST) 13 to 14 bit multiturn = length 27 bit (14MT + 13ST)
- **Accuracy**: ± 1/2 LSB
- **Counting direction**: decreasing clockwise (shaft view)
- **Start-up time**: 150 ms
- **Electromagnetic compatibility**: IEC 61000-6-2

**MECHANICAL SPECIFICATIONS**

- **Shaft diameter**: ø 10 mm
- **Enclosure rating**: IP 65 (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)
- **Moment of inertia**: 1.5 x 10^-6 kgm²
- **Starting torque (at 20°C / +68°F)**: < 0.03 Nm
- **Body material**: anodized aluminum
- **Shaft material**: 1.4305 / AISI 303 stainless steel
- **Housing material**: anodized aluminum
- **Bearings**: 2 ball bearings
- **Bearings life**: 10^6 revolutions
- **Operating temperature**: 0° ... +50°C (+32° ... +122°F)
- **Storage temperature**: -15° ... +70°C (+5° ... +158°F)
- **Weight**: 1200 g (42.33 oz)
ATEX MARKING

II 2GD
Ex d IIIC T6 Gb
Ex tb IIIC T85°C Db
IP 65

II 2GD
II: group II: different than mines
2: category 2: high level of protection
GD: areas containing gas (G) and dust (D)

Ex d IIIC T6 Gb
Ex d: flameproof enclosure for explosive atmospheres with gases, vapours and mists
IIIC: group of gas IIIC
T6: max surface temperature +85°C of the device for atmospheres with gas
Gb: product with a high level of protection

Ex tb IIIC T85°C Db
Ex tb: flameproof enclosure safety type
IIIC: group of dust combustibles IIIC
T85°C: max surface temperature +85°C of the device in the presence of dust
Db: product with a high level of protection

ACCESSORIES

set n.3 fixing clamps for model 80 A
P/N 94080001

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CONNECTIONS

<table>
<thead>
<tr>
<th>Function</th>
<th>Cable output</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Vdc</td>
<td>red</td>
</tr>
<tr>
<td>0 Volt</td>
<td>grey</td>
</tr>
<tr>
<td>data +</td>
<td>green</td>
</tr>
<tr>
<td>data -</td>
<td>brown</td>
</tr>
<tr>
<td>clock +</td>
<td>yellow</td>
</tr>
<tr>
<td>clock -</td>
<td>pink</td>
</tr>
<tr>
<td>U / D</td>
<td>blue</td>
</tr>
<tr>
<td>shield</td>
<td></td>
</tr>
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</table>