### XCC2930TS81KBN

Opto-electronic rotary encoders XCC, absolute encoder Ø 90 single turn, through shaft 30 mm, push pull 13 bit binary



#### Main

| Range of product             | OsiSense XCC                        |  |  |  |  |  |
|------------------------------|-------------------------------------|--|--|--|--|--|
| Encoder type                 | Single turn absolute encoder        |  |  |  |  |  |
| Device short name            | XCC                                 |  |  |  |  |  |
| Product specific application | -                                   |  |  |  |  |  |
| Diameter                     | 90 mm                               |  |  |  |  |  |
| Shaft diameter               | 30 mm                               |  |  |  |  |  |
| Shaft type                   | Through shaft                       |  |  |  |  |  |
| Resolution                   | 8192 points                         |  |  |  |  |  |
| Electrical connection        | 1 male connector M23 radial 16 pins |  |  |  |  |  |
| Output stage                 | Type KB                             |  |  |  |  |  |
| Type of output stage         | Driver push-pull binary             |  |  |  |  |  |
| [Us] rated supply voltage    | 1130 V DC                           |  |  |  |  |  |
| Enclosure material           | Zamak                               |  |  |  |  |  |

### Complementary

| Shaft tolerance          | H7   |  |  |  |  |  |
|--------------------------|--|--|--|--|--|--|
| Residual ripple          | 500 mV   |  |  |  |  |  |
| Maximum revolution speed | 3600 rpm   |  |  |  |  |  |
| Shaft moment of inertia  | 500 g.cm <sup>2</sup>  |  |  |  |  |  |
| Torque value             | 0.025 N.m  |  |  |  |  |  |
| Maximum load             | 5 daN axial<br>8 daN radial  |  |  |  |  |  |
| Output frequency         | 100 kHz  |  |  |  |  |  |
| Current consumption      | 0100 mA no-load  |  |  |  |  |  |
| Protection type          | Short-circuit protection Reverse polarity protection                       |  |  |  |  |  |
| Maximum output current   | 20 mA  |  |  |  |  |  |
| Output level             | Low level: 0.5 V maximum 20 mA<br>High level: V supply - 3 V minimum 20 mA |  |  |  |  |  |
| Surge withstand          | 1 kV, level 2 conforming to IEC 61000-4-5                                  |  |  |  |  |  |
| Base material            | Aluminium  |  |  |  |  |  |
| Shaft material           | Stainless steel  |  |  |  |  |  |
| Type of ball bearings    | 6807   |  |  |  |  |  |
| Net weight               | 0.975 kg   |  |  |  |  |  |

#### Environment

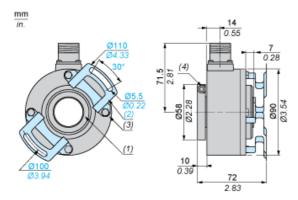
| Marking                               | CE  |  |  |  |  |  |  |  |
|---------------------------------------|---|--|--|--|--|--|--|--|
| Ambient air temperature for operation | -2085 °C  |  |  |  |  |  |  |  |
| Ambient air temperature for storage   | -4085 °C  |  |  |  |  |  |  |  |
| IP degree of protection               | IP65 conforming to IEC 60529  |  |  |  |  |  |  |  |
| Vibration resistance                  | 10 gn (f= 102000 Hz) conforming to IEC 60068-2-6  |  |  |  |  |  |  |  |
| Shock resistance                      | 30 gn for 11 ms conforming to IEC 60068-2-27  |  |  |  |  |  |  |  |
| Resistance to electrostatic discharge | 4 KV (contact discharge) level 3 conforming to IEC 61000-4-2 8 kV (air discharge) level 3 conforming to IEC 61000-4-2 |  |  |  |  |  |  |  |

| 10 V/m level 3 conforming to IEC 61000-4-3  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
| 1 KV signal ports level 3 conforming to IEC 61000-4-4<br>2 kV power ports level 3 conforming to IEC 61000-4-4   |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |
| PCE   |  |  |  |  |  |  |  |
| 1   |  |  |  |  |  |  |  |
| WARNING: This product can expose you to chemicals including: Diisononyl   |  |  |  |  |  |  |  |
| phthalate (DINP), which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov |  |  |  |  |  |  |  |
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|   |  |  |  |  |  |  |  |

## Product data sheet **Dimensions Drawings**

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### **Dimensions**



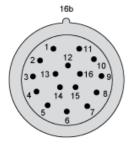
- (1) (2) (3) Through shaft, Ø 30 (H7) Anti-rotation device, 1 x XCCRF9N, mounted
- 4 M5 x 6 on 78 PCD
- (4) 1 CHC M5 x 12 stainless steel A2 locking screw

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### Wiring Diagram

### M23, 16-pin Connector, Anticlockwise Connections

Male Connector on Encoder



| Pin number    | 1   | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13  | 14  | 15  | 16  |
|---------------|-----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|
| Signal Supply | 0 V | +V | d0 | d1 | d2 | d3 | d4 | d5 | d6 | d7 | d8 | d9 | d10 | d11 | d12 | Dir |
|               |     |    |    |    |    |    |    |    |    |    |    |    |     |     |     | 7   |
|               |     |    |    |    |    |    |    |    |    |    |    |    |     |     |     | (1) |

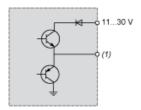
(1) Clockwise direction, 16 to + V

T: Anticlockwise direction, 16 to 0 V

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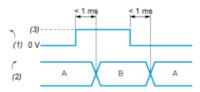
### **Technical Description**

### Type KB and KG (N) Output Stage



(1) Output

#### KB and KG (N) DIRECTION Input



**A** : Anticlockwise

B : Clockwise

(1) DIRECTION input(2) DIRECTION of counting

(3) V supply