

# XCC2506PS81SBN

Opto-electronic rotary encoders XCC, absolute encoder Ø 58 single turn, solid shaft 6 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                     | 58 mm                               |
| Shaft diameter               | 6 mm                                |
| Shaft type                   | Solid shaft                         |
| Resolution                   | 8192 points                         |
| Electrical connection        | 1 male connector M23 radial 12 pins |
| Output stage                 | Type SB                             |
| Type of output stage         | SSI 13-bit binary                   |
| [Us] rated supply voltage    | 11...30 V DC                        |
| Enclosure material           | Zamak                               |

## Complementary

|                          |   |
|--------------------------|---|
| Shaft tolerance          | G7  |
| Residual ripple          | 500 mV  |
| Maximum revolution speed | 9000 rpm  |
| Shaft moment of inertia  | 10 g.cm <sup>2</sup>                                    |
| Torque value             | 0.004 N.m   |
| Maximum load             | 10 daN radial<br>5 daN axial                            |
| Output frequency         | 100...1000 kHz  |
| Current consumption      | 0...100 mA no-load                                      |
| Protection type          | Short-circuit protection<br>Reverse polarity protection |
| Maximum output current   | 20 mA   |
| Physical interface       | RS422   |
| Output level             | High level: 2 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    | 6000ZZ1   |
| Net weight               | 0.49 kg   |

## Environment

|                                       |  |
|---------------------------------------|--|
| Marking                               | CE   |
| Ambient air temperature for operation | -20...90 °C  |
| Ambient air temperature for storage   | -30...95 °C  |
| IP degree of protection               | IP65 conforming to IEC 60529   |
| Vibration resistance                  | 10 gn (f= 10...2000 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<br>8 kV (air discharge) level 3 conforming to IEC 61000-4-2 |

|                                      |   |
|--------------------------------------|---|
| Resistance to electromagnetic fields | 10 V/m level 3 conforming to IEC 61000-4-3  |
| Resistance to fast transients        | 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 |

## Packing Units

|                              |        |
|------------------------------|--------|
| Unit Type of Package 1       | PCE    |
| Number of Units in Package 1 | 1      |
| Package 1 Weight             | 490 g  |
| Package 1 Height             | 8.5 cm |
| Package 1 width              | 14 cm  |
| Package 1 Length             | 27 cm  |

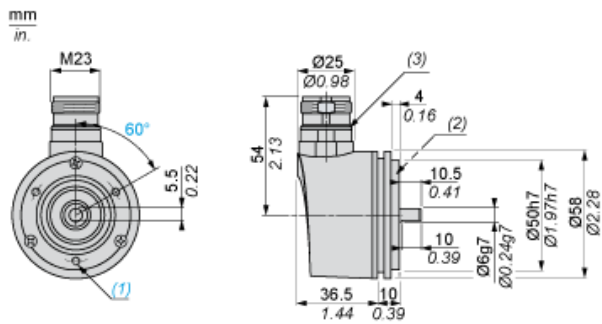
## Offer Sustainability

|                            |  |
|----------------------------|--|
| REACH Regulation           | <a href="#">REACH Declaration</a>  |
| REACH free of SVHC         | Yes  |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a> |
| Toxic heavy metal free     | Yes  |
| Mercury free               | Yes  |
| RoHS exemption information | <a href="#">Yes</a>  |

## Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

Dimensions

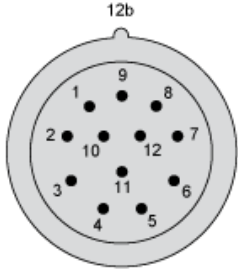


- (1) 3 M4 holes at 120° on 42 PCD, depth: 10 mm
- (2) Collar XCCRB1 mounted
- (3) Nitrile seal



Wiring Diagram

M23, 12-pin Connector, Anticlockwise Connections

Male Connector on Encoder



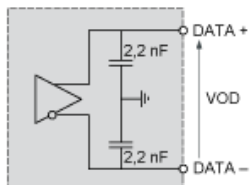
| Pin number    | 1   | 2      | 3     | 4 | 5                | 6 | 7 | 8   | 9 | 10     | 11    | 12 |
|---------------|-----|--------|-------|---|------------------|---|---|-----|---|--------|-------|----|
| Signal Supply | 0 V | Data + | Clk + | R | Direction<br>(1) | R | R | + V | R | Data - | Clk - | R  |

- (1)  : Clockwise direction, 5 to 0 V  
 : Anticlockwise direction, 5 to + V

R = Reserved (do not connect)

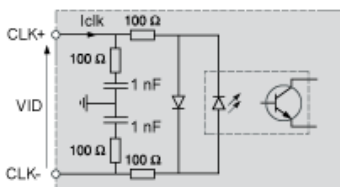
Technical Description

RS 422 Data Output



(1)  $I_{data} = 20 \text{ mA}$   $|VOD| > 2 \text{ V}$

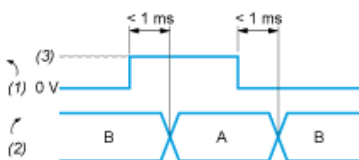
Isolated Clock Input



VID maximum: 5 V

Iclk maximum: 15 mA

DIRECTION Input



A : Anticlockwise

B : Clockwise

(1) DIRECTION input

(2) DIRECTION of counting

(3) V supply