

# XCC3510PS48SBN

Opto-electronic rotary encoders XCC, absolute encoder Ø 58 multi turn, solid shaft 10 mm, SSI 25 bit binary



## Main

Range of product	OsiSense XCC
Encoder type	Multiturn absolute encoder
Device short name	XCC
Product specific application	-
Diameter	58 mm
Shaft diameter	10 mm
Shaft type	Solid shaft
Resolution	4096 points/8192 turns
Electrical connection	1 male connector M23 radial 12 pins
Output stage	Type SG
Type of output stage	SSI 25-bit binary
[Us] rated supply voltage	11...30 V DC
Enclosure material	Steel

## Complementary

Residual ripple	500 mV
Maximum revolution speed	6000 rpm
Shaft moment of inertia	10 g.cm <sup>2</sup>
Torque value	0.004 N.m
Maximum load	10 daN radial 5 daN axial
Output frequency	100...500 kHz
Current consumption	0...100 mA no-load
Protection type	Short-circuit protection Reverse polarity protection
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	6900ZZ1
Net weight	0.685 kg

## Environment

Marking	CE
Ambient air temperature for operation	-20...85 °C
Ambient air temperature for storage	-20...85 °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 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 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 Height	10 cm
Package 1 Width	15 cm
Package 1 Length	12.5 cm
Package 1 Weight	800 g

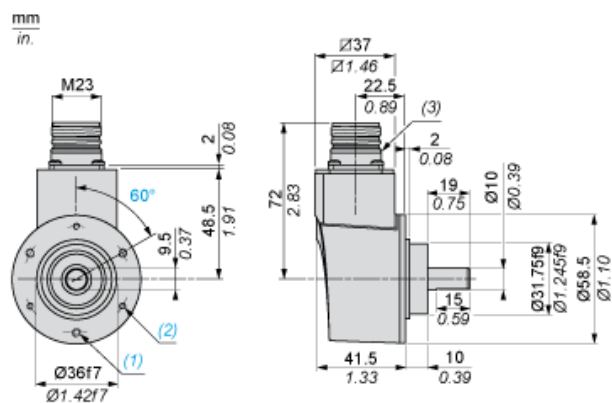
### Offer Sustainability

Toxic heavy metal free	Yes
California proposition 65	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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
For all Reach Rohs enquiries contact us at	<a href="mailto:sustainability@tesensors.com">sustainability@tesensors.com</a>

### Contractual warranty

Warranty	18 months
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## Dimensions

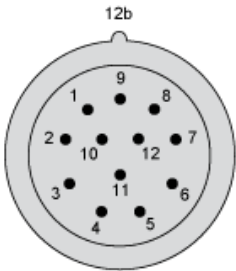


- (1) 3 M4 holes at 120° on 48 PCD, depth: 8 mm
- (2) 3 M3 holes at 120° on 48 PCD, depth: 8 mm
- (3) Nitrile seal



Wiring Diagram

M23, 12-pin Connector, Anticlockwise Connections

Male Connector on Encoder



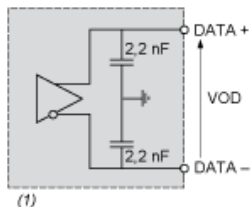
Pin number	1	2	3	4	5	6	7	8	9	10	11	12
Signal Supply	0 V	Data +	Clk +	R	Direction (1)	Reset to zero	R	+ V	R	Data -	Clk -	R

(1)  : Clockwise direction  
 : Anticlockwise direction

R = Reserved (do not connect)

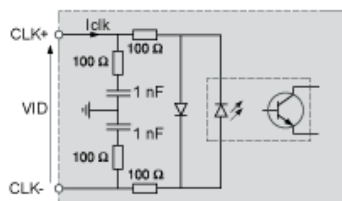
## Technical Description

### RS 422 Data Output



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

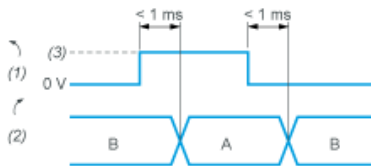
### Isolated Clock Input



VID maximum: 5 V

Iclk maximum: 15 mA

### DIRECTION Input



A : Anticlockwise

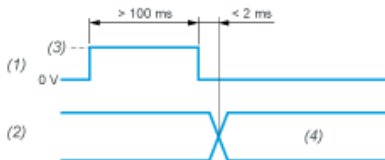
B : Clockwise

(1) DIRECTION input

(2) DIRECTION of counting

(3) V supply

### Input Stage - Reset to Zero



(1) Reset input

(2) Position

(3) V supply

(4) Position=0 (Reset to zero)