

# XCC1510PSM50Y

incremental encoder Ø 58 - solid shaft 10 mm -  
5000..80K points - push-pull



## Main

|                              |                                     |
|------------------------------|-------------------------------------|
| Range of product             | OsiSense XCC                        |
| Encoder type                 | Incremental encoder                 |
| Encoder name                 | XCC                                 |
| Product specific application | -                                   |
| Diameter                     | 2.28 in (58 mm)                     |
| Complementary function       | Parameterable                       |
| Shaft diameter               | 0.39 in (10 mm)                     |
| Shaft type                   | Solid shaft                         |
| Resolution                   | 5000...80000 points                 |
| Output stage                 | Type Y                              |
| Type of output stage         | Driver push-pull                    |
| Electrical connection        | 1 male connector M23 radial 12 pins |
| [Us] rated supply voltage    | 5...30 V DC                         |
| Enclosure material           | Zamak                               |

## Complementary

|                          |                                                                              |
|--------------------------|------------------------------------------------------------------------------|
| Residual ripple          | 500 mV                                                                       |
| Maximum revolution speed | 9000 rpm                                                                     |
| Shaft moment of inertia  | 0.00 lb.in <sup>2</sup> (10 g.cm <sup>2</sup> )                              |
| Torque value             | 0.04 lbf.in (0.004 N.m)                                                      |
| Maximum load             | 10 daN radial<br>5 daN axial                                                 |
| Output frequency         | 300 kHz                                                                      |
| Number of channels       | 3                                                                            |
| Current consumption      | 0...75 mA no-load                                                            |
| Protection type          | Reverse polarity protection<br>Short-circuit protection                      |
| Maximum output current   | 40 mA                                                                        |
| Output level             | Low level: 0.5 V maximum 20 mA<br>High level: V supply - 2.5 V minimum 20 mA |
| Surge withstand          | 1 kV, level 2 IEC 61000-4-5                                                  |
| Base material            | Aluminium                                                                    |
| Shaft material           | Stainless steel                                                              |
| Type of ball bearings    | 6000ZZ1                                                                      |
| Net Weight               | 1.03 lb(US) (0.465 kg)                                                       |

## Environment

|                                       |                                                                                            |
|---------------------------------------|--------------------------------------------------------------------------------------------|
| Marking                               | CE                                                                                         |
| Ambient air temperature for operation | -22...212 °F (-30...100 °C)                                                                |
| Ambient air temperature for storage   | -22...185 °F (-30...85 °C)                                                                 |
| IP degree of protection               | IP65 IEC 60529                                                                             |
| Vibration resistance                  | 10 gn 55...2000 Hz)IEC 60068-2-6                                                           |
| Shock resistance                      | 30 gn 11 ms IEC 60068-2-27                                                                 |
| Resistance to electrostatic discharge | 4 KV contact discharge) level 3 IEC 61000-4-2<br>8 kV air discharge) level 3 IEC 61000-4-2 |

|                                      |                                                                                   |
|--------------------------------------|-----------------------------------------------------------------------------------|
| Resistance to electromagnetic fields | 9.14 V/m (10 V/m) level 3 IEC 61000-4-3                                           |
| Resistance to fast transients        | 1 kV signal ports level 3 IEC 61000-4-4<br>2 kV power ports level 3 IEC 61000-4-4 |

## Ordering and shipping details

|                       |                       |
|-----------------------|-----------------------|
| Category              | 21581 - ENCODERS, XCC |
| Discount Schedule     | DS2                   |
| GTIN                  | 03389119014960        |
| Nbr. of units in pkg. | 1                     |
| Package weight(Lbs)   | 1.02 lb(US) (0.46 kg) |
| Returnability         | No                    |
| Country of origin     | FR                    |

## Packing Units

|                  |          |
|------------------|----------|
| Package 1 Height | 0.850 dm |
| Package 1 width  | 1.400 dm |
| Package 1 Length | 2.700 dm |

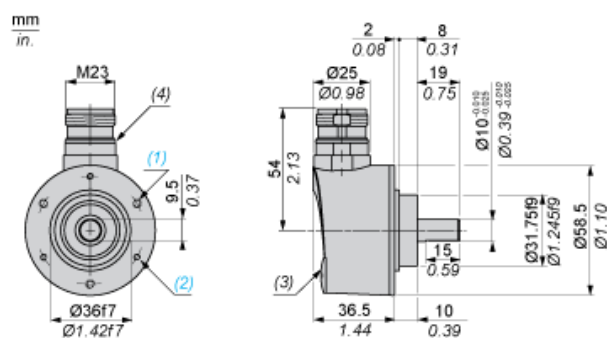
## Offer Sustainability

|                            |                                                                                                                                                                                                                                                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| California proposition 65  | WARNING: This product can expose you to chemicals including: Di-isodecyl phthalate (DIDP) and Diisononyl phthalate (DINP) which is known to the State of California to cause Carcinogen and Reproductive harm. For more information go to <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a> |
| 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 |  Yes                                                                                                                                                                                                                      |

## Contractual warranty

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

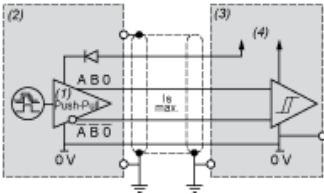
## Dimensions



- (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) Blanking plug
- (4) Nitrile seal

Wiring Diagram

Type Y Output Stage

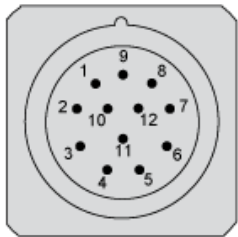


- (1) RS 422 compatible on 5 V supply
- (2) Encoder
- (3) Processing
- (4) Supply 5 V/30 V

Wiring Diagram

M23, 12-pin Connector Connections

Male Connector on Encoder

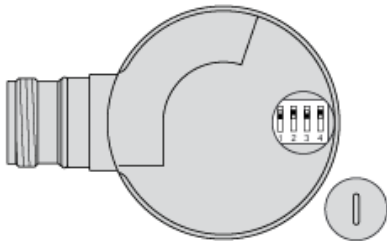


| Pin number    | 1              | 2  | 3 | 4              | 5 | 6              | 7 | 8 | 9 | 10  | 11  | 12 |
|---------------|----------------|----|---|----------------|---|----------------|---|---|---|-----|-----|----|
| Signal Supply | A <sup>-</sup> | +V | 0 | 0 <sup>-</sup> | B | B <sup>-</sup> | R | A | R | 0 V | 0 V | +V |

R = reserved, do not connect

Wiring Diagram

Resolutions for Parameterable Ø 58 mm Encoders



| Interpolation factor |       | Basic resolution |      |      |      |        | Position of dip switches |     |     |    |
|----------------------|-------|------------------|------|------|------|--------|--------------------------|-----|-----|----|
| Counting             | Speed | 256              | 360  | 500  | 1024 | 5000   | 1                        | 2   | 3   | 4  |
| x1                   | x1    | 256              | 360  | 500  | 1024 | 5000   | Off                      | On  | Off | On |
| x2                   | x2    | 512              | 720  | 1000 | 2048 | 10,000 | On                       | On  | Off | On |
| x3                   | x3    | 768              | 1080 | 1500 | 3072 | 15,000 | On                       | Off | Off | On |
| x4                   | x4    | 1024             | 1440 | 2000 | 4096 | 20,000 | Off                      | On  | On  | On |
| x5                   | -     | 1280             | 1800 | 2500 | 5120 | 25,000 | On                       | On  | On  | On |
| x8                   | -     | 2048             | 2880 | 4000 | 8192 | 40,000 | On                       | Off | On  | On |

| Interpolation factor |   | Basic resolution |      |      |        |        | Position of dip switches |     |    |     |
|----------------------|---|------------------|------|------|--------|--------|--------------------------|-----|----|-----|
| x10                  | - | 2560             | 3600 | 5000 | 10,240 | 50,000 | Off                      | On  | On | Off |
| x12                  | - | 3072             | 4320 | 6000 | 12,288 | 60,000 | On                       | On  | On | Off |
| x16                  | - | 4096             | 5760 | 8000 | 16,384 | 80,000 | On                       | Off | On | Off |