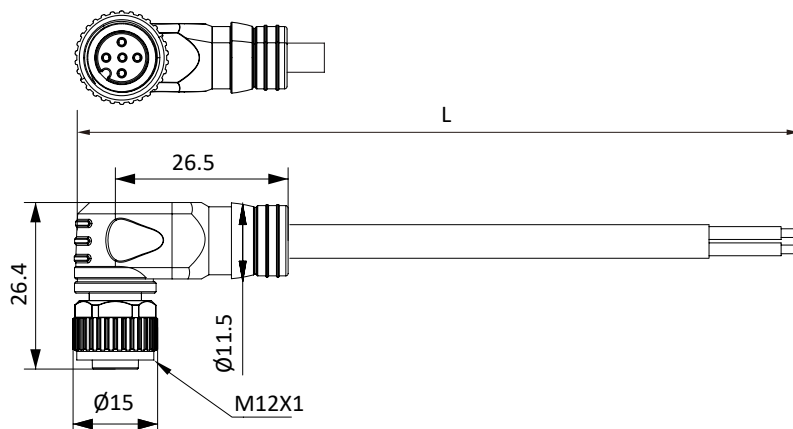
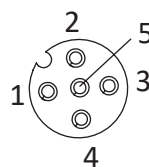




## ARTICLE PROPERTIES

|                |                     |
|----------------|---------------------|
| ARTICLE NUMBER | CBO12.5-X.YYY*      |
| SHAPE TYPE 1   | Female, M12, angled |
| SHAPE TYPE 2   | single-ended        |
| NUMBER OF PINS | 5                   |
| INTERFACE TYPE | A                   |



## MECHANICAL DATA

|                   |                                 |
|-------------------|---------------------------------|
| LOCKING           | union nut, SW13, vibration lock |
| MATERIAL LOCKING  | Zinc die casting, nickel plated |
| TIGHTENING TORQUE | 0.6 Nm                          |
| LOCKING           |                                 |
| MATERIAL GRIP     | PUR                             |
| SYSTEM            | moulded                         |

## ELECTRICAL DATA

|                     |                   |
|---------------------|-------------------|
| OPERATING VOLTAGE   | 60 V DC / 60 V AC |
| RATED CURRENT       | 4.0 A             |
| INSULATION RESISTOR | > 100 MΩ          |
| POLLUTION DEGREE    | 3                 |

## ENVIRONMENTAL CONDITIONS

|                     |                                     |
|---------------------|-------------------------------------|
| PROTECTION CLASS    | IP67 inserted and tightened         |
| AMBIENT TEMPERATURE | -30 ... +90 °C (depending on cable) |

## STANDARDS AND DIRECTIVES

|                     |                                                     |
|---------------------|-----------------------------------------------------|
| CIRCULAR CONNECTORS | SPECIFICATION FOR M12 CONNECTORS WITH SCREW-LOCKING |
|                     | IEC 61076-2-101                                     |

## APPROVALS



## GENERAL CABLE PROPERTIES

**CABLE CONSTRUCTION (ONLY FOR PUR PRODUCT)** according to UL-AWM Style 20549

**THERMAL RESISTANCE (ONLY FOR PUR PRODUCT)** according to UL FT2

**PROTECTION CLASS** according to IEC 60529 or ISO 20653, only when screwed together with the corresponding counterpart

## CABLE LENGTHS X

All cable lengths are available on request.

**EXAMPLE:**

cable lengths 0.5 m -> CBO12.5-**0.5**

cable lengths 10 m -> CBO12.5-**10**

## TOLERANCE CABLE LENGTHS

0 m < X ≤ 1.0 m +0.05 m

1.0 m < X ≤ 5.0 m +0.1 m

5.0 m < X +0.15 m

## CABLE VARIANTS AND ASSIGNMENT OF WIRE INSULATION COLOR

| Article number cable .YY | Article number suffix * | Material jacket | Color jacket | Wire insulation | Wire cross-section           | Cable-jacket-Ø | Temperature range | Bending cycles | Torsion         | Pin variant |
|--------------------------|-------------------------|-----------------|--------------|-----------------|------------------------------|----------------|-------------------|----------------|-----------------|-------------|
|                          |                         | PVC             | grey         | PVC             | 5 x 0.34 mm <sup>2</sup> (B) | 4.8±0.2 mm     | -40 ... +105 °C   | no             | no              | 1           |
|                          | /P                      | PUR             | grey         | PP              | 5 x 0.34 mm <sup>2</sup> (B) | 4.8±0.2 mm     | -40 ... +80 °C    | ≥ 5 Million    | max. 2 Mio. (C) | 1           |
| <b>.21</b>               |                         | PVC             | grey         | PVC             | 5 x 0.25 mm <sup>2</sup> (A) | 4.6±0.2 mm     | -40 ... +105 °C   | no             | no              | 1           |
|                          | /P                      | PUR             | grey         | PP              | 5 x 0.25 mm <sup>2</sup> (A) | 4.6±0.2 mm     | -40 ... +80 °C    | ≥ 5 Million    | max. 2 Mio. (C) | 1           |
| <b>.22</b>               |                         | PVC             | black        | PVC             | 5 x 0.25 mm <sup>2</sup> (A) | 4.6±0.2 mm     | -40 ... +105 °C   | no             | no              | 1           |
|                          | /P                      | PUR             | black        | PP              | 5 x 0.25 mm <sup>2</sup> (A) | 4.6±0.2 mm     | -40 ... +80 °C    | ≥ 5 Million    | max. 2 Mio. (C) | 1           |
| <b>.23</b>               |                         | PVC             | yellow       | PVC             | 5 x 0.25 mm <sup>2</sup> (A) | 4.6±0.2 mm     | -40 ... +105 °C   | no             | no              | 1           |
|                          | /P                      | PUR             | yellow       | PP              | 5 x 0.25 mm <sup>2</sup> (A) | 4.6±0.2 mm     | -40 ... +80 °C    | ≥ 5 Million    | max. 2 Mio. (C) | 1           |
| <b>.32</b>               |                         | PVC             | black        | PVC             | 5 x 0.34 mm <sup>2</sup> (B) | 4.8±0.2 mm     | -40 ... +105 °C   | no             | no              | 1           |
|                          | /P                      | PUR             | black        | PP              | 5 x 0.34 mm <sup>2</sup> (B) | 4.8±0.2 mm     | -40 ... +80 °C    | ≥ 5 Million    | max. 2 Mio. (C) | 1           |

## CABLE VARIANTS AND ASSIGNMENT OF WIRE INSULATION COLOR

| Article number cable .YY | Article number suffix * | Material jacket | Color jacket | Wire insulation | Wire cross-section           | Cable-jacket-Ø | Temperature range | Bending cycles | Torsion         | Pin variant |
|--------------------------|-------------------------|-----------------|--------------|-----------------|------------------------------|----------------|-------------------|----------------|-----------------|-------------|
| <b>.33</b>               |                         | PVC             | yellow       | PVC             | 5 x 0.34 mm <sup>2</sup> (B) | 4.8±0.2 mm     | -40 ... +105 °C   | no             | no              | 1           |
|                          | <b>/P</b>               | PUR             | yellow       | PP              | 5 x 0.34 mm <sup>2</sup> (B) | 4.8±0.2 mm     | -40 ... +80 °C    | ≥ 5 Million    | max. 2 Mio. (C) | 1           |
| <b>.312</b>              |                         | PVC             | grey         | PVC             | 5 x 0.34 mm <sup>2</sup> (B) | 4.8±0.2 mm     | -40 ... +105 °C   | no             | no              | 2           |
|                          | <b>/P</b>               | PUR             | grey         | PP              | 5 x 0.34 mm <sup>2</sup> (B) | 4.8±0.2 mm     | -40 ... +80 °C    | ≥ 5 Million    | max. 2 Mio. (C) | 2           |

(A) similar to AWG 24    (B) similar to AWG 22    (C) Frequency: 3 times/min., no lifting, ±180°

## CABLE VARIANTS AND ASSIGNMENT OF WIRE INSULATION COLOR

|                                                                                   | Pin variant | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5          |
|-----------------------------------------------------------------------------------|-------------|-------|-------|-------|-------|----------------|
|  | <b>1</b>    | brown | white | blue  | black | grey           |
|                                                                                   | <b>2</b>    | brown | white | blue  | black | green / yellow |

## SALES AND SERVICE

**Tianjin Elco Automation Co., Ltd**

No. 12, 4th XEDA Branch Road  
Xiqing Economic-Technological Development Area  
Tianjin 300385, P.R. China  
Office Phone: 022 23788282  
E-Mail: [info@elco.cn](mailto:info@elco.cn)  
[www.elco-holding.com.cn](http://www.elco-holding.com.cn)

**Elco Industrie Automation GmbH**

Benzstrasse 7  
71720 Oberstenfeld,  
Deutschland  
Office Phone: +49 7062 / 6599-260  
E-Mail: [info@elco-automation.de](mailto:info@elco-automation.de)  
[www.elco-automation.de](http://www.elco-automation.de)

**Elco Automation LLC**

1097 Highway 101 South, Suite D-3 Greer  
South Carolina 29651, USA  
Office Phone: +1 864-581-7431  
E-Mail: [infousa@elcoautomation.com](mailto:infousa@elcoautomation.com)  
[www.elcoautomation.com](http://www.elcoautomation.com)

**Elco Industrial Automation Pvt Ltd.**

No 80, 1<sup>st</sup> Main, 2<sup>nd</sup> Cross, Royal Enclave,  
Sidedahalli, Nagasandra Bangalore 560073, India  
Office Phone: +91-7259931777  
E-Mail: [info@elcoautomation.in](mailto:info@elcoautomation.in)  
[www.elcoautomation.com](http://www.elcoautomation.com)

**Elco Automation Korea Ltd.**

706, 17 Daehak 4-ro, Yeongtong-gu, Suwon-si,  
Gyeonggi-do, Republic of Korea, 16226  
Office Phone: +82-31-216-7890  
E-Mail: [sales@elcoautomation.co.kr](mailto:sales@elcoautomation.co.kr)  
[www.elcoautomation.com](http://www.elcoautomation.com)