# 8BCR0015.3121A-0

## 1 General information

- Extremely flexible
- itec - Innovative connector system for fast and secure connections

## 2 Order data

| Model number | Short description | Figure |
|---|---|---|
| | **Resolver cables** | |
| 8BCR0015.3121A-0 | Resolver cable, length 15 m, 3x 2x 24 AWG (19x 0.127), 12-pin female series 615 signal connector, 9-pin male DSUB servo connector |  |

Table 1: 8BCR0015.3121A-0 - Order data

## 3 Technical data

| Model number | 8BCR0015.3121A-0 |
|---|---|
| **General information** | |
| Cable cross section | 3x 2x 0.22 GN |
| Durability | Oil resistance per DIN VDE 0281-1 (TM5) (HD 21.1 / DIN EN 60811-1-1/2-1), flame resistance per IEC 60332-1-2 [1)] |
| Certification | E130266 cURus AWM Style 2637 90°C 30 V and CSA AWM I/II A/B 90°C 30 V, FT1 [1)] |
| Certifications | |
| CE | Yes |
| UL | cULus E225616<br>Power conversion equipment |
| **Cable construction** | |
| Signal line | |
| Quantity | 6 |
| Wire insulation | PVC |
| Wire colors | White/Brown, green/yellow, gray/pink |
| Variant | Tinned copper stranded wire |
| Cross section | 0.22 mm |
| Shield | No |
| Stranding | White with brown, green with yellow, gray with pink |
| Cable stranding | The 3 pairs together covered by foil shield |
| Cable shield | Copper braiding, optical coverage ≥90% and foil shield |
| Outer jacket | |
| Material | PVC |
| Color | Green |
| Labeling | B&R 3x2x0.22 * E130266 cURus AWM STYLE 2637 * AWM I/II A/B 90°C 30 V FT1 * <Batch number> [1)] |
| **Connector** | |
| Type | 12-pin female series 615 signal connector |
| Mating cycles | <500 |
| Contacts | 12 |
| Additional connectors | 9-pin male DSUB servo connector<br>Mating cycles: <200<br>Contacts: 9<br>Degree of protection per EN 60529: IP20 when connected |
| Degree of protection per EN 60529 | IP66/67 when connected |
| **Electrical properties [1)]** | |
| Test voltage | |
| Wire - Wire | 1.5 kV |
| Wire - Shield | 0.8 kV |
| Conductor resistance | |
| Signal line | ≤86 Ω/km |
| Insulation resistance | ≥20 MΩ*km |
| **Ambient conditions [1)]** | |
| Temperature | |
| Moving | -20°C to +90°C |
| Static | -20°C to +90°C |

Table 2: 8BCR0015.3121A-0 - Technical data

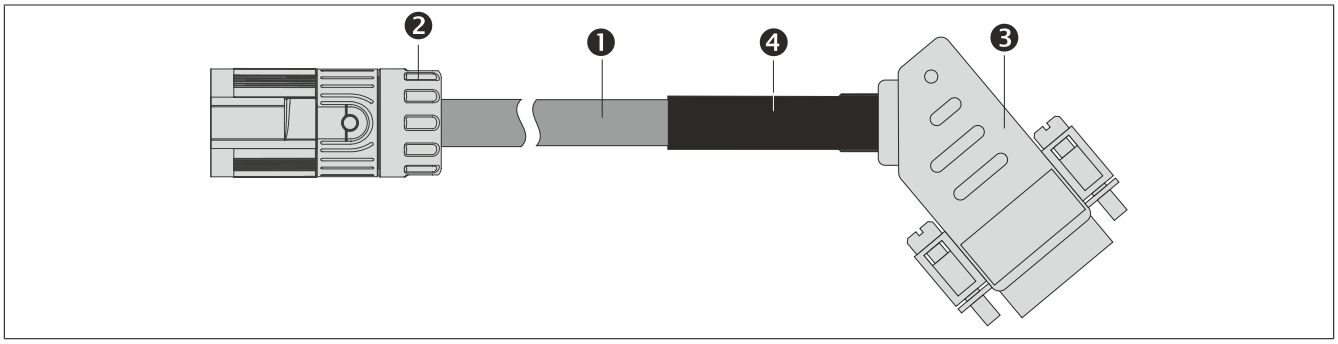
| Model number | 8BCR0015.3121A-0 |
|---|---|
| **Mechanical properties** [1] | |
| Dimensions | |
| Length | 15 m |
| Diameter | 6.3 mm ±0.2 mm |
| Bend radius | |
| Single bend | ≥26 mm |
| Moving | ≥52 mm |
| Weight | 0.9 kg |

Table 2: 8BCR0015.3121A-0 - Technical data

1) Values refer to the raw cable being used.

# 4 Wiring

## 4.1 Cable construction




| Pos. | Description | Note |
|---|---|---|
| 1 | Encoder line | 3x 2x 24 AWG/19 |
| 2 | 12-pin female resolver connector | |
| 3 | Heat shrink tubing | |
| 4 | DSUB housing 45°, metal-plated, 9-pin male servo connector | |

Table 3: Resolver cables - Cable construction

## 4.2 Pinout

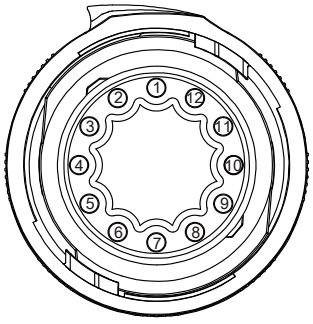
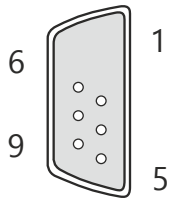
| Male connector | Pin | Description | Function | Pin | Male connector |
|---|---|---|---|---|---|
|  | 1 | --- | Coding contact | --- |  |
| | 2 | --- | --- | --- | |
| | 3 | --- | --- | --- | |
| | 4 | --- | --- | --- | |
| | 5 | --- | --- | --- | |
| | 6 | R1 | Reference output inverted | 9 | |
| | 7 | --- | --- | --- | |
| | 8 | S4 | Sine input + | 3 | |
| | 9 | S2 | Sine input - | 7 | |
| | 10 | S3 | Cosine input + | 8 | |
| | 11 | S1 | Cosine input - | 4 | |
| | 12 | R2 | Reference output | 5 | |



Table 4: Resolver cables - Pinout

## 4.3 Cable diagram

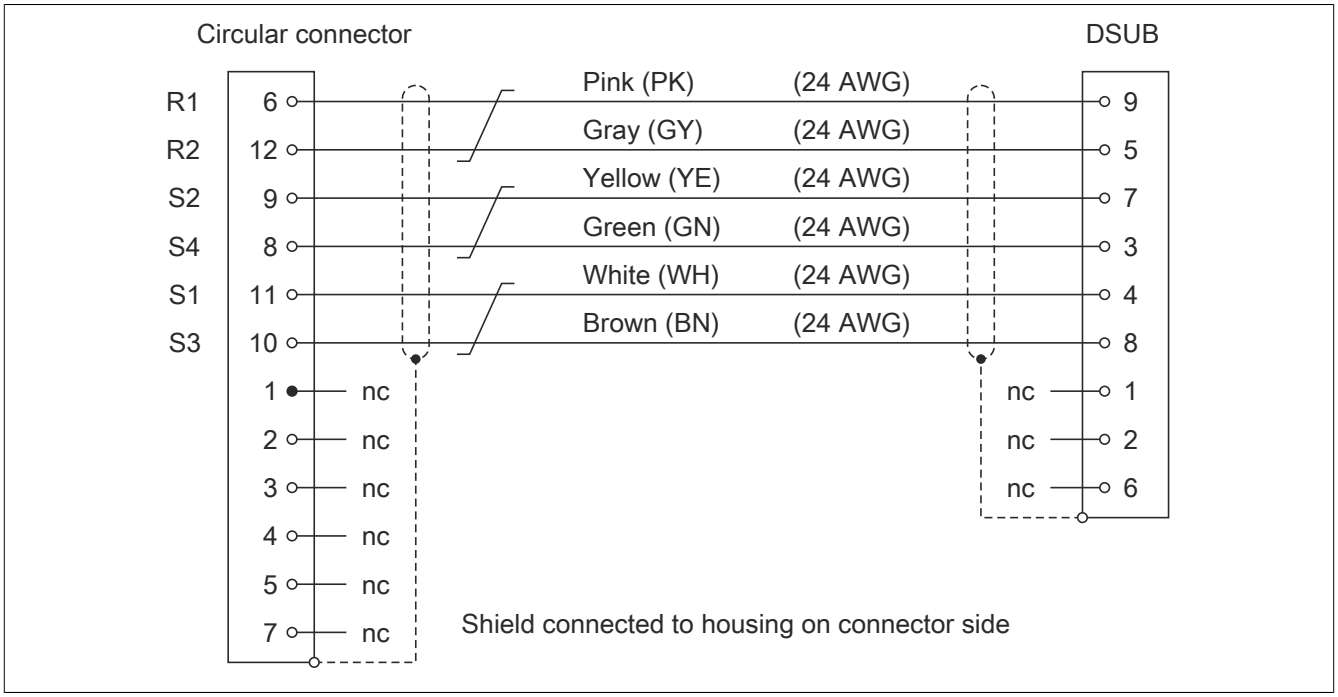



Figure 1: Resolver cables - Cable diagram