# OZ-BL-CY

**for intrinsically safe systems in explosion-endangered areas, EMC-preferred type**




## TECHNICAL DATA

**PVC control cable in alignment with DIN VDE 0285-525-2-51 / DIN EN 50525-2-51**

| | |
|---|---|
| **Temperature range** | flexible -10°C to +80°C<br>fixed -40°C to +80°C |
| **Nominal voltage** | AC $U_0$/U 300/500 V |
| **Test voltage core/core** | 3000 V |
| **Breakdown voltage** | 6000 V |
| **Mutual capacitance core/core** | at 800 Hz, approx. 140 pF/m |
| **Mutual capacitance core/screen** | at 800 Hz, approx. 187 pF/m |
| **Inductance** | approx. 0.68 mH/km |
| **Coupling resistance** | at 30 MHz, approx. 250 Ohm/km |
| **Minimum bending radius** | flexible 10x Outer-Ø<br>fixed 5x Outer-Ø |

## CABLE STRUCTURE

- Copper wire bare, finely stranded acc. to DIN VDE 0295 Class 5 / IEC 60228 Class 5
- Core insulation: PVC, compound type Z 7225
- Core identification acc. to DIN VDE 0293-334, black cores with consecutive labeling in white digits
- x = without protective conductor (OZ)
- Cores stranded in layers with optimal lay lengths
- Foil wrapping
- Screen: braided screen of tinned copper wires, approx. coverage 85%
- Outer sheath: PVC acc. to DIN VDE 0207-363-4-1 / DIN EN 50363-4-1 (compound type TM2)
- Sheath colour: blue (RAL 5015)
- Length marking: in metres

## PROPERTIES

- resistant to: UV radiation, weathering effects
- largely resistant to: oil, for details, see "Technical Information"
- for outdoor use
- the materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers

## TESTS

- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2
- UV-resistant acc. to DIN EN ISO 4892-2
- weather-resistant acc. to DIN EN ISO 4892-2
- certifications and approvals:
  EAC
  VDE-Reg.-No. 7034, valid for temperature range up to +70°C

## APPLICATION

Used for flexible applications involving medium mechanical stress with free movement, without tensile stress and without forced motion control. For explosion-endangered areas marked as intrinsically safe (blue) (ignition protection type -i-) flexible control or measurement cable for intrinsically safe systems in measurement and control technology. These systems are not earthed and have a separate power circuit. These cables are not suitable for burial in the ground. The screening guarantees an exact data transmission. EMC= Electromagnetic Compatibility; in order to optimise EMC properties, we recommend a double-sided and all-round large contact area of the copper braiding.

## NOTES

- the conductor is metrically (mm²) constructed, AWG numbers are approximated, and are for reference only
- with blue sheathing for the installation of intrinsically safe systems (ignition protection type -i-) in explosion-endangered areas according to DIN VDE 0165-1 / DIN EN 60079-14 / IEC 60079-14, Section 16.2.2

| Part no. | No. cores x cross-sec. mm² | AWG, approx. | Outer Ø mm, approx. | Cu factor per km | Weight kg/km, approx. |
|---|---|---|---|---|---|
| 14028 | 2 x 0.75 | 19 | 6.2 | 40.0 | 59.0 |
| 14029 | 3 x 0.75 | 19 | 6.6 | 52.0 | 66.0 |
| 14030 | 4 x 0.75 | 19 | 7.1 | 60.0 | 77.0 |
| 14031 | 5 x 0.75 | 19 | 7.8 | 71.0 | 93.0 |
| 14088 | 7 x 0.75 | 19 | 8.4 | 91.0 | 130.0 |
| 14032 | 8 x 0.75 | 19 | 9.2 | 110.0 | 145.0 |
| 14033 | 10 x 0.75 | 19 | 10.7 | 137.0 | 180.0 |
| 14034 | 12 x 0.75 | 19 | 11.1 | 142.0 | 202.0 |
| 14035 | 18 x 0.75 | 19 | 12.9 | 212.0 | 292.0 |
| 14036 | 20 x 0.75 | 19 | 13.9 | 238.0 | 362.0 |
| 14037 | 25 x 0.75 | 19 | 15.4 | 281.0 | 415.0 |
| 14038 | 30 x 0.75 | 19 | 16.4 | 320.0 | 486.0 |
| 14039 | 34 x 0.75 | 19 | 17.8 | 345.0 | 523.0 |
| 14040 | 41 x 0.75 | 19 | 19.3 | 400.0 | 680.0 |
| 14041 | 2 x 1 | 18 | 6.5 | 50.0 | 65.0 |
| 14042 | 3 x 1 | 18 | 6.9 | 60.0 | 81.0 |
| 14043 | 4 x 1 | 18 | 7.6 | 71.0 | 98.0 |
| 14044 | 5 x 1 | 18 | 8.2 | 88.0 | 127.0 |
| 14045 | 7 x 1 | 18 | 9.0 | 111.0 | 158.0 |
| 14046 | 12 x 1 | 18 | 11.9 | 184.0 | 260.0 |
| 14047 | 18 x 1 | 18 | 14.0 | 260.0 | 380.0 |
| 14048 | 25 x 1 | 18 | 16.5 | 349.0 | 534.0 |
| 14049 | 34 x 1 | 18 | 19.0 | 486.0 | 741.0 |
| 14050 | 2 x 1.5 | 16 | 7.1 | 63.0 | 88.0 |
| 14051 | 3 x 1.5 | 16 | 7.7 | 80.0 | 100.0 |
| 14052 | 4 x 1.5 | 16 | 8.3 | 97.0 | 126.0 |
| 14053 | 5 x 1.5 | 16 | 9.2 | 119.0 | 160.0 |
| 14054 | 7 x 1.5 | 16 | 9.9 | 147.0 | 208.0 |
| 14055 | 12 x 1.5 | 16 | 13.5 | 267.0 | 338.0 |
| 14056 | 18 x 1.5 | 16 | 15.7 | 374.0 | 479.0 |

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## for intrinsically safe systems in explosion-endangered areas, EMC-preferred type

| Part no. | No. cores x cross-sec. mm² | AWG, approx. | Outer Ø mm, approx. | Cu factor per km | Weight kg/km, approx. |
|---|---|---|---|---|---|
| 14057 | 25 x 1.5 | 16 | 18.5 | 526.0 | 705.0 |
| 14058 | 30 x 1.5 | 16 | 19.7 | 555.0 | 830.0 |
| 14059 | 34 x 1.5 | 16 | 21.3 | 629.0 | 900.0 |
| 14060 | 3 x 2.5 | 14 | 9.2 | 144.0 | 167.0 |
| 14061 | 4 x 2.5 | 14 | 10.0 | 148.0 | 195.0 |

| Part no. | No. cores x cross-sec. mm² | AWG, approx. | Outer Ø mm, approx. | Cu factor per km | Weight kg/km, approx. |
|---|---|---|---|---|---|
| 14062 | 5 x 2.5 | 14 | 11.0 | 181.0 | 223.0 |
| 14063 | 7 x 2.5 | 14 | 12.1 | 255.0 | 344.0 |
| 14064 | 12 x 2.5 | 14 | 16.4 | 441.0 | 570.0 |
| 14065 | 18 x 2.5 | 14 | 19.3 | 570.0 | 681.0 |

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