



## Control &amp; signal cables

# JZ-500-PUR / OZ-500-PUR

## 300/500 V Unscreened PVC/PUR Control

300/500 V unscreened PVC-insulated TMPU polyurethane-sheathed flexible control cable



300/500 V · 4 kV Test

TMPU Polyurethane Sheath (11Y)

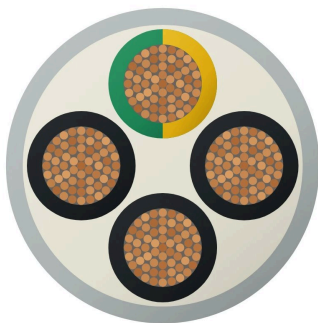
Oil, Swarf &amp; Microbe Res.

### Application

Abrasion-, cut- and coolant-resistant 300/500 V flexible control cable ('JZ-500-PUR / OZ-500-PUR') combining Class 5 bare copper conductors (0.5–16 mm<sup>2</sup>) and numbered TI2 PVC cores with a rugged EN 50363-10-2 TMPU polyurethane ('11Y') outer sheath.

**Typical uses:** Machine tool & metalcutting wet zones, Food, beverage & washdown packaging lines, Automotive assembly & portable shop-floor tools, Agricultural, municipal & construction plant, Woodworking, stone-cutting & recycling machines

### Construction



Cross-section, not to scale

|   |                                      |                                   |
|---|--------------------------------------|-----------------------------------|
| 1 | Class 5 flexible copper conductor    | IEC 60228 Class 5                 |
| 2 | TI2 PVC core insulation              | EN 50363-3 TI2 · EN 50334         |
| 3 | Short-lay core stranding + fleece    | DIN VDE 0285                      |
| 4 | TMPU polyurethane outer sheath (11Y) | EN 50363-10-2 TMPU · EN 60811-404 |

## Technical data

Typical values

|                                 |                                                                               |                              |                                                                           |
|---------------------------------|-------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------|
| Rated voltage U <sub>0</sub> /U | 300/500 V AC                                                                  | AC test voltage (50 Hz)      | 4000 V AC                                                                 |
| Insulation resistance (20 °C)   | ≥ 20 MΩ·km                                                                    | Temperature, flexing         | -15 °C to +80 °C                                                          |
| Temperature, fixed              | -40 °C to +80 °C                                                              | Max. conductor temperature   | +80 °C continuous · +150 °C short-circuit                                 |
| Min. bending radius, fixed      | 4 × overall diameter                                                          | Min. bending radius, flexing | 7.5–12.5 × overall diameter                                               |
| Abrasion & notch resistance     | TMPU (11Y) polyurethane sheath offers ~5× higher abrasion resistance than PVC | Oil & coolant resistance     | EN 60811-404 mineral oil, hydraulic fluids, cutting emulsions and greases |
| Hydrolysis & microbes           | Polyether-based PUR resists water immersion, mud and microbial attack         | UV & ozone resistance        | Weather-, UV- and ozone-resistant for indoor and outdoor service          |
| Standards                       | DIN VDE 0285-525-2-51 & DIN VDE 0207-20 (11YM1)                               | Standard packing             | Heat-treated ISPM-15 timber drums with sealed cable ends                  |

## Sizes

36 standard constructions

Tick the sizes you need and send this page to [info@tebaoflex.com](mailto:info@tebaoflex.com) or WhatsApp +86 185 9591 3361.

| Order designation                                                        | Cores × mm <sup>2</sup> | AWG ≈ | Outer Ø min<br>mm | Outer Ø max<br>mm | Copper<br>kg/km | Weight ≈<br>kg/km | Min. bend R<br>mm |
|--------------------------------------------------------------------------|-------------------------|-------|-------------------|-------------------|-----------------|-------------------|-------------------|
| 0.50 mm <sup>2</sup> JZ-500-PUR / OZ-500-PUR Control (300/500 V) 6 sizes |                         |       |                   |                   |                 |                   |                   |
| <input type="checkbox"/> OZ-500-PUR 2×0.5                                | 2×0.5                   | 20    | 4.5               | 4.9               | 9               | 31                | 20                |
| <input type="checkbox"/> JZ-500-PUR 3G0.5                                | 3×0.5                   | 20    | 4.8               | 5.2               | 14              | 38                | 21                |
| <input type="checkbox"/> JZ-500-PUR 4G0.5                                | 4×0.5                   | 20    | 5.2               | 5.7               | 19              | 46                | 23                |
| <input type="checkbox"/> JZ-500-PUR 7G0.5                                | 7×0.5                   | 20    | 6.3               | 6.9               | 33              | 74                | 28                |
| <input type="checkbox"/> JZ-500-PUR 12G0.5                               | 12×0.5                  | 20    | 8.2               | 8.9               | 57              | 122               | 36                |
| <input type="checkbox"/> JZ-500-PUR 18G0.5                               | 18×0.5                  | 20    | 9.7               | 10.5              | 86              | 178               | 42                |
| 0.75 mm <sup>2</sup> JZ-500-PUR / OZ-500-PUR Control (300/500 V) 7 sizes |                         |       |                   |                   |                 |                   |                   |
| <input type="checkbox"/> JZ-500-PUR 3G0.75                               | 3×0.75                  | 18    | 5.2               | 5.7               | 21              | 48                | 23                |
| <input type="checkbox"/> JZ-500-PUR 4G0.75                               | 4×0.75                  | 18    | 5.7               | 6.2               | 28              | 60                | 25                |
| <input type="checkbox"/> JZ-500-PUR 5G0.75                               | 5×0.75                  | 18    | 6.3               | 6.9               | 36              | 74                | 28                |
| <input type="checkbox"/> JZ-500-PUR 7G0.75                               | 7×0.75                  | 18    | 7.1               | 7.7               | 50              | 98                | 31                |
| <input type="checkbox"/> JZ-500-PUR 12G0.75                              | 12×0.75                 | 18    | 9.1               | 9.9               | 86              | 162               | 40                |
| <input type="checkbox"/> JZ-500-PUR 18G0.75                              | 18×0.75                 | 18    | 10.8              | 11.7              | 129             | 236               | 47                |
| <input type="checkbox"/> JZ-500-PUR 25G0.75                              | 25×0.75                 | 18    | 12.7              | 13.8              | 180             | 326               | 55                |
| 1.00 mm <sup>2</sup> JZ-500-PUR / OZ-500-PUR Control (300/500 V) 7 sizes |                         |       |                   |                   |                 |                   |                   |
| <input type="checkbox"/> JZ-500-PUR 3G1.0                                | 3×1.0                   | 17    | 5.5               | 6.0               | 28              | 58                | 24                |
| <input type="checkbox"/> JZ-500-PUR 4G1.0                                | 4×1.0                   | 17    | 6.1               | 6.6               | 38              | 73                | 26                |
| <input type="checkbox"/> JZ-500-PUR 5G1.0                                | 5×1.0                   | 17    | 6.7               | 7.3               | 48              | 90                | 29                |
| <input type="checkbox"/> JZ-500-PUR 7G1.0                                | 7×1.0                   | 17    | 7.5               | 8.2               | 67              | 121               | 33                |
| <input type="checkbox"/> JZ-500-PUR 12G1.0                               | 12×1.0                  | 17    | 9.8               | 10.6              | 115             | 202               | 42                |
| <input type="checkbox"/> JZ-500-PUR 18G1.0                               | 18×1.0                  | 17    | 11.6              | 12.6              | 172             | 294               | 50                |
| <input type="checkbox"/> JZ-500-PUR 25G1.0                               | 25×1.0                  | 17    | 13.7              | 14.9              | 240             | 405               | 60                |
| 1.50 mm <sup>2</sup> JZ-500-PUR / OZ-500-PUR Control (300/500 V) 7 sizes |                         |       |                   |                   |                 |                   |                   |
| <input type="checkbox"/> JZ-500-PUR 3G1.5                                | 3×1.5                   | 16    | 6.3               | 6.8               | 43              | 78                | 27                |
| <input type="checkbox"/> JZ-500-PUR 4G1.5                                | 4×1.5                   | 16    | 6.9               | 7.5               | 57              | 99                | 30                |
| <input type="checkbox"/> JZ-500-PUR 5G1.5                                | 5×1.5                   | 16    | 7.6               | 8.3               | 72              | 122               | 33                |
| <input type="checkbox"/> JZ-500-PUR 7G1.5                                | 7×1.5                   | 16    | 8.6               | 9.4               | 100             | 166               | 38                |
| <input type="checkbox"/> JZ-500-PUR 12G1.5                               | 12×1.5                  | 16    | 11.2              | 12.2              | 172             | 276               | 49                |

| Order designation                                                      | Cores × mm <sup>2</sup> | AWG ≈ | Outer Ø min<br>mm | Outer Ø max<br>mm | Copper<br>kg/km | Weight ≈<br>kg/km | Min. bend R<br>mm |
|------------------------------------------------------------------------|-------------------------|-------|-------------------|-------------------|-----------------|-------------------|-------------------|
| <input type="checkbox"/> JZ-500-PUR 18G1.5                             | 18×1.5                  | 16    | 13.2              | 14.4              | 259             | 402               | 58                |
| <input type="checkbox"/> JZ-500-PUR 25G1.5                             | 25×1.5                  | 16    | 15.8              | 17.2              | 360             | 558               | 69                |
| 2.5–16 mm <sup>2</sup> JZ-500-PUR / OZ-500-PUR Control & Power 9 sizes |                         |       |                   |                   |                 |                   |                   |
| <input type="checkbox"/> JZ-500-PUR 3G2.5                              | 3×2.5                   | 14    | 7.5               | 8.2               | 72              | 121               | 33                |
| <input type="checkbox"/> JZ-500-PUR 4G2.5                              | 4×2.5                   | 14    | 8.4               | 9.1               | 96              | 155               | 36                |
| <input type="checkbox"/> JZ-500-PUR 5G2.5                              | 5×2.5                   | 14    | 9.3               | 10.1              | 120             | 192               | 40                |
| <input type="checkbox"/> JZ-500-PUR 7G2.5                              | 7×2.5                   | 14    | 10.5              | 11.4              | 168             | 262               | 46                |
| <input type="checkbox"/> JZ-500-PUR 12G2.5                             | 12×2.5                  | 14    | 13.6              | 14.8              | 288             | 435               | 59                |
| <input type="checkbox"/> JZ-500-PUR 4G4                                | 4×4                     | 12    | 9.9               | 10.8              | 153             | 236               | 43                |
| <input type="checkbox"/> JZ-500-PUR 4G6                                | 4×6                     | 10    | 11.6              | 12.6              | 230             | 342               | 50                |
| <input type="checkbox"/> JZ-500-PUR 4G10                               | 4×10                    | 8     | 14.7              | 16.0              | 384             | 558               | 64                |
| <input type="checkbox"/> JZ-500-PUR 4G16                               | 4×16                    | 6     | 17.8              | 19.4              | 614             | 865               | 78                |

– Dimensions and weights are typical values per DIN VDE 0285 / EN 50363-10-2 (TMPU). Minimum fixed bending radius shown is 4 × OD.

## Electrical & current ratings

9 sizes

| Cross-section<br>mm <sup>2</sup> | AWG ≈ | Max. DC resistance<br>20 °C, Ω/km | Single pair/core<br>30 °C, A | Multi-core bundle<br>30 °C, A |
|----------------------------------|-------|-----------------------------------|------------------------------|-------------------------------|
| 0.5                              | 20    | 39                                | 9.0                          | 6.0                           |
| 0.75                             | 18    | 26                                | 12.0                         | 10.0                          |
| 1                                | 17    | 19.5                              | 15.0                         | 13.0                          |
| 1.5                              | 16    | 13.3                              | 23.0                         | 18.0                          |
| 2.5                              | 14    | 7.98                              | 30.0                         | 25.0                          |
| 4                                | 12    | 4.95                              | 41.0                         | 34.0                          |
| 6                                | 10    | 3.3                               | 53.0                         | 44.0                          |
| 10                               | 8     | 1.91                              | 74.0                         | 61.0                          |
| 16                               | 6     | 1.21                              | 99.0                         | 82.0                          |

– Current ratings at 30 °C ambient in free air per DIN VDE 0298-4 / DIN VDE 0891-1. Apply grouping derating factors for multi-core control and signal bundles.

## Standards and approvals

✓ DIN VDE 0285 / EN 50363-10-2 (TMPU)

✓ CE · RoHS 2 (2011/65/EU) · REACH

## Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

### Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/300-500-v-unscreened-pvc-pur-control-cable



Typical values for this cable type, based on DIN VDE 0285 / EN 50363-10-2 (TMPU). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.