

# ÖLFLEX® TRAY II/TRAY II CY

Extremely Oil-Resistant & Flexible Tray Cable with UL & CSA; Unshielded & Shielded



ÖLFLEX® TRAY II is an industrial grade tray cable with superior oil performance for long cable life. It has a pressure-extruded jacket and fine copper stranding for excellent flexibility, making it much easier to pull through tray. With UL TC-ER approval, no conduit is needed so you can reduce material costs along with saving on labor. ÖLFLEX® TRAY II CY is designed with foil tape and tinned copper braid shield for improved effectiveness.

## Recommended Applications

Industrial plant expansions; automotive plants; tray wiring; anywhere VNTC® cables are used

## Approvals



## Unshielded Construction

**Conductors:** Finely stranded bare copper

**Insulation:** Specially formulated PVC/nylon

**Jacket:** Specially formulated thermoplastic polymer; black

## Shielded Construction

**Conductors:** Finely stranded bare copper

**Insulation:** Specially formulated PVC/nylon

**Shielding:** Foil tape; tinned copper braid (70% coverage)

**Jacket:** Specially formulated thermoplastic polymer; black

## Application Advantage

- Oil-resistant pressure-extruded jacket improves flexibility
- Easier to pull than standard tray cables; lower labor costs
- UL TC-ER reduces material costs; no conduit is needed
- Black numbered conductors for easy identification
- Improved shielding effectiveness

| Cable Attributes |       | page 640    |
|------------------|-------|-------------|
| OIL              | OR-03 | FLAME FR-03 |
| MOTION           | WT-02 | MECH. MP-03 |

| Complete the Installation |                  |
|---------------------------|------------------|
| SKINTOP® Strain Relief    | EPIC® Connectors |
| page 488                  | page 280         |

## Technical Data

|                                                                                                                                                                                                        |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Minimum Bend Radius:</b><br>- for installation:<br>- < 1 AWG: 4 x cable diameter<br>- ≥ 1 AWG: 6 x cable diameter<br>- shielded: 6 x cable diameter                                                 | <b>Color Code:</b><br><br>Black with white numbers, plus green/yellow ground | <b>Approvals:</b><br>UL: TC-ER per UL 1277<br>MTW per UL 1063<br>WTTC per UL 2277<br>Submersible Pump (14 AWG & larger)<br>PLTC-ER per UL 13 (18 - 12 AWG)<br>ITC-ER per UL 2250 (18 - 12 AWG)<br>DP-1 per UL 1690<br>AWM 20886<br>Attributes: UL Oil Res I/II<br>75°C Wet; 90°C Dry<br>Sunlight Resistant<br>Direct Burial<br>NFPA 79<br>NEC: Class 1 Division 2 per NEC Article 501<br>Canada: c(UL) CIC/TC FT4 (18 - 4/0 AWG)<br>CSA AWM I/II A/B FT4<br>Additional: Torsion Rated for Wind Market<br>(± 90°/m) & (± 150°/m)<br>CE & RoHS<br>MSHA: P-07-KA050016-MSHA (shielded only) |
|                                                                                                                                                                                                        |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Temperature Range:</b><br>- UL/CSA TC: -25°C to +90°C<br>- for stationary use: -40°C to +105°C<br>- for flexible use: -25°C to +105°C                                                               |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Nominal Voltage:</b><br>- UL/CSA TC: 600V<br>- UL WTTC/CSA AWM: 1000V                                                                                                                               |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Test Voltage:</b> 2000V                                                                                                                                                                             |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Conductor Stranding:</b><br>- 18 - 6 AWG: Class 5 fine wire*<br>- 4 - 2 AWG: Class K fine wire<br>- 1 AWG - 500 KCMIL: Stranded wire<br>* 18 AWG meets only Class 5 cross section and DC resistance |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Part Number                         | Number of Conductors (incl. ground) | Nominal Outer Diameter (in) (mm) | Copper Weight (lbs/mft) | Approx. Weight (lbs/mft) | SKINTOP® Non-Metallic PG Thread | Part Number                             | Number of Conductors (incl. ground) | Nominal Outer Diameter (in) (mm) | Copper Weight (lbs/mft) | Approx. Weight (lbs/mft) | SKINTOP® Non-Metallic PG Thread |
|-------------------------------------|-------------------------------------|----------------------------------|-------------------------|--------------------------|---------------------------------|-----------------------------------------|-------------------------------------|----------------------------------|-------------------------|--------------------------|---------------------------------|
| <b>18 AWG (1.00 mm<sup>2</sup>)</b> |                                     |                                  |                         |                          |                                 | <b>10 AWG (6 mm<sup>2</sup>)</b>        |                                     |                                  |                         |                          |                                 |
| 221803                              | 3                                   | 0.297 7.5                        | 20                      | 57                       | S2111                           | 221003                                  | 3                                   | 0.498 12.6                       | 117                     | 218                      | S2116                           |
| 221804                              | 4                                   | 0.320 8.1                        | 26                      | 66                       | S2111                           | 221004                                  | 4                                   | 0.578 14.7                       | 155                     | 264                      | S2121                           |
| 221805                              | 5                                   | 0.346 8.8                        | 33                      | 77                       | S2111                           | 221005                                  | 5                                   | 0.631 16.0                       | 194                     | 317                      | S2121                           |
| 221807                              | 7                                   | 0.373 9.5                        | 46                      | 99                       | S2111                           | 221007                                  | 7                                   | 0.686 17.4                       | 271                     | 445                      | S2129                           |
| 221809                              | 9                                   | 0.429 10.9                       | 59                      | 112                      | S2113                           | <b>8 AWG (10 mm<sup>2</sup>)</b>        |                                     |                                  |                         |                          |                                 |
| 221812                              | 12                                  | 0.477 12.1                       | 79                      | 172                      | S2116                           | 220804                                  | 4                                   | 0.703 17.9                       | 258                     | 384                      | S2129                           |
| 221818                              | 18                                  | 0.587 14.9                       | 118                     | 245                      | S2121                           | 220805                                  | 5                                   | 0.772 19.6                       | 323                     | 518                      | S2129                           |
| 221825                              | 25                                  | 0.664 16.9                       | 164                     | 322                      | S2121                           | <b>6 AWG (16 mm<sup>2</sup>)</b>        |                                     |                                  |                         |                          |                                 |
| 221850                              | 50                                  | 0.939 23.9                       | 303                     | 646                      | S2129                           | 220603                                  | 3                                   | 0.776 19.7                       | 310                     | 454                      | S2129                           |
| <b>16 AWG (1.50 mm<sup>2</sup>)</b> |                                     |                                  |                         |                          |                                 | 220604                                  | 4                                   | 0.899 22.8                       | 413                     | 580                      | S2129                           |
| 221603                              | 3                                   | 0.325 8.3                        | 29                      | 68                       | S2111                           | 220605                                  | 5                                   | 0.982 24.9                       | 517                     | 725                      | S2136                           |
| 221604                              | 4                                   | 0.351 8.9                        | 39                      | 84                       | S2111                           | <b>4 AWG (21 mm<sup>2</sup>)</b>        |                                     |                                  |                         |                          |                                 |
| 221605                              | 5                                   | 0.381 9.7                        | 49                      | 99                       | S2113                           | 220403                                  | 3                                   | 0.999 25.3                       | 386                     | 919                      | S2136                           |
| 221607                              | 7                                   | 0.412 10.5                       | 68                      | 128                      | S2113                           | 220404                                  | 4                                   | 1.094 27.8                       | 544                     | 952                      | S2136                           |
| 221608                              | 8                                   | 0.444 11.3                       | 78                      | 137                      | S2113                           | <b>2 AWG (33.7 mm<sup>2</sup>)</b>      |                                     |                                  |                         |                          |                                 |
| 221609                              | 9                                   | 0.476 12.1                       | 88                      | 172                      | S2116                           | 220203                                  | 3                                   | 1.155 29.3                       | 658                     | 1085                     | S2136                           |
| 221612                              | 12                                  | 0.565 14.4                       | 117                     | 220                      | S2121                           | 220204                                  | 4                                   | 1.272 32.3                       | 859                     | 1320                     | S2248                           |
| 221616                              | 16                                  | 0.621 15.8                       | 155                     | 271                      | S2121                           | <b>1 AWG (42.3 mm<sup>2</sup>)</b>      |                                     |                                  |                         |                          |                                 |
| 221618                              | 18                                  | 0.652 16.6                       | 175                     | 289                      | S2121                           | 220104                                  | 4                                   | 1.400 35.6                       | 1065                    | 1563                     | S2142                           |
| 221625                              | 25                                  | 0.741 18.8                       | 242                     | 397                      | S2129                           | <b>1/0 AWG (52.9 mm<sup>2</sup>)</b>    |                                     |                                  |                         |                          |                                 |
| 221634                              | 34                                  | 0.904 23.0                       | 296                     | 540                      | S2129                           | 221104                                  | 4                                   | 1.466 37.2                       | 1302                    | 1920                     | S2142                           |
| 221641                              | 41                                  | 0.986 25.0                       | 357                     | 626                      | S2136                           | <b>2/0 AWG (67.3 mm<sup>2</sup>)</b>    |                                     |                                  |                         |                          |                                 |
| 221650                              | 50                                  | 1.048 26.6                       | 436                     | 760                      | S2136                           | 222204                                  | 4                                   | 1.674 42.5                       | 1720                    | 2369                     | S2148                           |
| 221661                              | 61                                  | 1.085 27.6                       | 533                     | 771                      | S2136                           | <b>3/0 AWG (84.8 mm<sup>2</sup>)</b>    |                                     |                                  |                         |                          |                                 |
| <b>14 AWG (2.50 mm<sup>2</sup>)</b> |                                     |                                  |                         |                          |                                 | 223304                                  | 4                                   | 1.695 43.1                       | 2185                    | 3020                     | S2148                           |
| 221403                              | 3                                   | 0.362 9.2                        | 49                      | 88                       | S2111                           | <b>4/0 AWG (106.7 mm<sup>2</sup>)</b>   |                                     |                                  |                         |                          |                                 |
| 221404                              | 4                                   | 0.392 10.0                       | 65                      | 106                      | S2113                           | 224404                                  | 4                                   | 2.059 52.3                       | 2695                    | 3597                     | 53112080*                       |
| 221405                              | 5                                   | 0.427 10.8                       | 81                      | 128                      | S2113                           | <b>250 KCMIL (128.4 mm<sup>2</sup>)</b> |                                     |                                  |                         |                          |                                 |
| 221407                              | 7                                   | 0.463 11.8                       | 113                     | 170                      | S2116                           | 222504                                  | 4                                   | 2.167 55.0                       | 3211                    | 4221                     | 531112511*                      |
| 221409                              | 9                                   | 0.571 14.5                       | 146                     | 225                      | S2121                           | <b>350 KCMIL (181.9 mm<sup>2</sup>)</b> |                                     |                                  |                         |                          |                                 |
| 221412                              | 12                                  | 0.636 16.2                       | 194                     | 309                      | S2121                           | 223504                                  | 4                                   | 2.501 63.5                       | 4542                    | 6004                     | 53112510*                       |
| 221418                              | 18                                  | 0.737 18.7                       | 290                     | 439                      | S2129                           | <b>500 KCMIL (257.6 mm<sup>2</sup>)</b> |                                     |                                  |                         |                          |                                 |
| 221425                              | 25                                  | 0.886 22.5                       | 404                     | 586                      | S2129                           | 225004                                  | 4                                   | 2.902 73.7                       | 6410                    | 8233                     | 53112512*                       |
| <b>12 AWG (4 mm<sup>2</sup>)</b>    |                                     |                                  |                         |                          |                                 |                                         |                                     |                                  |                         |                          |                                 |
| 221203                              | 3                                   | 0.423 10.7                       | 78                      | 126                      | S2113                           |                                         |                                     |                                  |                         |                          |                                 |
| 221204                              | 4                                   | 0.460 11.7                       | 104                     | 152                      | S2113                           |                                         |                                     |                                  |                         |                          |                                 |
| 221205                              | 5                                   | 0.503 12.8                       | 129                     | 187                      | S2116                           |                                         |                                     |                                  |                         |                          |                                 |
| 221207                              | 7                                   | 0.581 14.8                       | 181                     | 258                      | S2121                           |                                         |                                     |                                  |                         |                          |                                 |

\* SKINTOP® MS-M: nickel-plated brass with metric thread.

| Part Number                         | Number of Conductors (incl. ground) | Nominal Outer Diameter (in) (mm) | Copper Weight (lbs/mft) | Approx. Weight (lbs/mft) | SKINTOP® MS-SC PG Thread | Part Number                        | Number of Conductors (incl. ground) | Nominal Outer Diameter (in) (mm) | Copper Weight (lbs/mft) | Approx. Weight (lbs/mft) | SKINTOP® MS-SC PG Thread |
|-------------------------------------|-------------------------------------|----------------------------------|-------------------------|--------------------------|--------------------------|------------------------------------|-------------------------------------|----------------------------------|-------------------------|--------------------------|--------------------------|
| <b>18 AWG (1.00 mm<sup>2</sup>)</b> |                                     |                                  |                         |                          |                          | <b>12 AWG (4 mm<sup>2</sup>)</b>   |                                     |                                  |                         |                          |                          |
| 2218030                             | 3                                   | 0.322 8.2                        | 29                      | 79                       | 53112220                 | 2212040                            | 4                                   | 0.491 12.5                       | 126                     | 212                      | 53112240                 |
| 2218040                             | 4                                   | 0.346 8.8                        | 38                      | 93                       | 53112220                 | 2212050                            | 5                                   | 0.568 14.4                       | 157                     | 260                      | 53112250                 |
| 2218050                             | 5                                   | 0.371 9.4                        | 45                      | 99                       | 53112230                 | 2212070                            | 7                                   | 0.612 15.5                       | 209                     | 335                      | 53112250                 |
| 2218070                             | 7                                   | 0.398 10.1                       | 59                      | 130                      | 53112230                 | <b>10 AWG (6 mm<sup>2</sup>)</b>   |                                     |                                  |                         |                          |                          |
| 2218120                             | 12                                  | 0.508 12.9                       | 101                     | 223                      | 53112240                 | 2210040                            | 4                                   | 0.609 15.5                       | 183                     | 370                      | 53112250                 |
| 2218180                             | 18                                  | 0.618 15.7                       | 145                     | 295                      | 53112250                 | 2210050                            | 5                                   | 0.662 16.8                       | 224                     | 412                      | 53112250                 |
| 2218250                             | 25                                  | 0.695 17.7                       | 238                     | 386                      | 53112260                 | 2210070                            | 7                                   | 0.717 18.2                       | 308                     | 575                      | 53112260                 |
| <b>16 AWG (1.50 mm<sup>2</sup>)</b> |                                     |                                  |                         |                          |                          | <b>8 AWG (10 mm<sup>2</sup>)</b>   |                                     |                                  |                         |                          |                          |
| 2216030                             | 3                                   | 0.350 8.9                        | 41                      | 97                       | 53112220                 | 2208040                            | 4                                   | 0.737 18.7                       | 295                     | 575                      | 53112260                 |
| 2216040                             | 4                                   | 0.376 9.6                        | 51                      | 117                      | 53112230                 | <b>6 AWG (16 mm<sup>2</sup>)</b>   |                                     |                                  |                         |                          |                          |
| 2216050                             | 5                                   | 0.406 10.3                       | 63                      | 128                      | 53112230                 | 2206040                            | 4                                   | 0.918 23.3                       | 470                     | 811                      | 53112260                 |
| 2216070                             | 7                                   | 0.443 11.3                       | 88                      | 165                      | 53112240                 | <b>4 AWG (21 mm<sup>2</sup>)</b>   |                                     |                                  |                         |                          |                          |
| 2216120                             | 12                                  | 0.596 15.1                       | 144                     | 287                      | 53112250                 | 2204040                            | 4                                   | 1.127 28.6                       | 579                     | 1331                     | 53112270                 |
| 2216180                             | 18                                  | 0.683 17.3                       | 210                     | 346                      | 53112260                 | <b>2 AWG (33.7 mm<sup>2</sup>)</b> |                                     |                                  |                         |                          |                          |
| 2216250                             | 25                                  | 0.772 19.6                       | 280                     | 430                      | 53112260                 | 2202040                            | 4                                   | 1.309 33.2                       | 950                     | 1951                     | 53112670*                |
| <b>14 AWG (2.50 mm<sup>2</sup>)</b> |                                     |                                  |                         |                          |                          |                                    |                                     |                                  |                         |                          |                          |
| 2214030                             | 3                                   | 0.387 9.8                        | 62                      | 121                      | 53112230                 |                                    |                                     |                                  |                         |                          |                          |
| 2214040                             | 4                                   | 0.423 10.7                       | 85                      | 150                      | 53112230                 |                                    |                                     |                                  |                         |                          |                          |
| 2214050                             | 5                                   | 0.458 11.6                       | 101                     | 181                      | 53112240                 |                                    |                                     |                                  |                         |                          |                          |
| 2214070                             | 7                                   | 0.494 12.5                       | 136                     | 220                      | 53112240                 |                                    |                                     |                                  |                         |                          |                          |
| 2214120                             | 12                                  | 0.667 16.9                       | 225                     | 399                      | 53112250                 |                                    |                                     |                                  |                         |                          |                          |
| 2214180                             | 18                                  | 0.768 19.5                       | 328                     | 527                      | 53112260                 |                                    |                                     |                                  |                         |                          |                          |
| 2214250                             | 25                                  | 0.917 23.3                       | 461                     | 705                      | 53112260                 |                                    |                                     |                                  |                         |                          |                          |

\* SKINTOP® MS-SC with metric thread.

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.  
If not otherwise specified, all values relating to the product are nominal values. For current information go to our website.