



Description:

1 pr.(Signal)-16 AWG stranded (26x30) TC cond., XLPE insul., Beldfoil® shield (100% c), drain; 3 cond.(VFD) plus 1 ground wire-12 AWG stranded (65x30) TC cond., XLPE insul., Duofoil® and TC braid Shield (100% a85% c), drain, PVC jacket.

Usage (Overall)

Suitable Applications: AC Motor Drive, VFD, Variable Frequency Drive

Twisted Pair

Physical Characteristics

Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 1 | 16 | 26x30 | TC - Tinned Copper |

Insulation

Insulation Material:

| Insulation Material | Wall Thickness (in.) |
|----------------------------------|----------------------|
| XLPE - Cross Linked Polyethylene | 0.030 |

Twisted Pair Color Code Chart:

| Number | Color |
|--------|-----------------|
| 1 | Black and White |

Inner Shield

Inner Shield Material:

| Inner Shield Trade Name | Type | Inner Shield Material | Coverage (%) |
|-------------------------|------|------------------------------|--------------|
| Beldfoil® | Tape | Aluminum Foil-Polyester Tape | 100 |

Inner Shield Drain Wire AWG:

| AWG | Stranding | Conductor Material |
|-----|-----------|--------------------|
| 18 | 19x30 | TC - Tinned Copper |

Electrical Characteristics

Nom. Capacitance Conductor to Conductor:

| Capacitance (pF/ft) |
|---------------------|
| 34.000 |

Nom. Conductor DC Resistance:

| DCR @ 20°C (Ohm/1000 ft) |
|--------------------------|
| 4.000 |

Nom. Inner Shield DC Resistance:

| DCR @ 20°C (Ohm/1000 ft) |
|--------------------------|
| 4.990 |

Multi Conductor

Physical Characteristics

Conductor

AWG:

| # Conductors | AWG | Stranding | Conductor Material |
|--------------|-----|-----------|--------------------|
|--------------|-----|-----------|--------------------|

29512 Composite - 1000V UL Flexible Motor Supply Cable

| | | | |
|---|----|-------|--------------------|
| 3 | 12 | 65x30 | TC - Tinned Copper |
|---|----|-------|--------------------|

Ground Wire

Ground Wire (Y/N): Yes

Ground Wire Material:

| AWG | Stranding | Conductor Material | Insulation Material |
|-----|-----------|--------------------|--------------------------|
| 12 | 65x30 | TC - Tinned Copper | PVC - Polyvinyl Chloride |

Insulation

Insulation Material:

| Insulation Material | Wall Thickness (in.) |
|----------------------------------|----------------------|
| XLPE - Cross Linked Polyethylene | 0.045 |

Insulation Color Code Chart:

| Number | Color |
|--------|--------------|
| 1 | Black #1 |
| 2 | Black #2 |
| 3 | Black #3 |
| 4 | Green/Yellow |

Outer Shield

Outer Shield Material:

| Layer # | Outer Shield Trade Name | Type | Outer Shield Material | Coverage (%) |
|---------|-------------------------|-------|--|--------------|
| 1 | Duofoil® | Tape | Aluminum Foil-Polyester Tape-Aluminum Foil | 100.000 |
| 2 | | Braid | TC - Tinned Copper | 85.000 |

Outer Shield Drain Wire AWG:

| AWG | Stranding | Drain Wire Conductor Material |
|-----|-----------|-------------------------------|
| 12 | 65x30 | TC - Tinned Copper |

Electrical Characteristics

Nom. Inductance:

| Inductance (µH/ft) |
|--------------------|
| 0.197 |

Nom. Capacitance Conductor to Shield:

| Capacitance (pF/ft) |
|---------------------|
| 47.000 |

Nom. Capacitance Conductor to Conductor:

| Capacitance (pF/ft) |
|---------------------|
| 26.000 |

Nom. Conductor DC Resistance:

| DCR @ 20°C (Ohm/1000 ft) |
|--------------------------|
| 1.600 |

Physical Characteristics (Overall)

Conductor

Outer Jacket

Outer Jacket Material:

| Outer Jacket Material | Nom. Wall Thickness (in.) |
|--------------------------|---------------------------|
| PVC - Polyvinyl Chloride | 0.080 |

Outer Jacket Ripcord: Yes

Overall Cabling

Overall Nominal Diameter: 0.895 in.

Mechanical Characteristics (Overall)

Max. Recommended Pulling Tension: 527 lbs.

Min. Bend Radius (Install)/Minor Axis: 9 in.

29512 Composite - 1000V UL Flexible Motor Supply Cable

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|---------------------------------------|--------------------------------------|
| NEC/(UL) Specification: | RHW-2 Singles,TC-ER,XHHW-2 |
| NEC Articles: | 336 - ER |
| CSA Specification: | 1000 V AWM I/II A/B |
| EU CE Mark: | Yes |
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2002/95/EC (RoHS): | Yes |
| EU RoHS Compliance Date (mm/dd/yyyy): | 09/21/2006 |
| EU Directive 2002/96/EC (WEEE): | Yes |
| EU Directive 2003/11/EC (BFR): | Yes |
| CA Prop 65 (CJ for Wire & Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |
| PMSHA Specification: | P-07-KA070003 |
| Other Specification: | 1000V UL Flexible Motor Supply Cable |

Flame Test

| | |
|------------------|---|
| UL Flame Test: | UL1685 UL Loading |
| CSA Flame Test: | FT4 |
| IEEE Flame Test: | 1202,IEEE 383 Vertical Tray Flame Test (70,000 BTU) |

Suitability

| | |
|------------------------|-----|
| Suitability - Indoor: | Yes |
| Suitability - Outdoor: | Yes |
| Suitability - Burial: | Yes |
| Sunlight Resistance: | Yes |

Plenum/Non-Plenum

| | |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

Electrical Characteristics (Overall)

Max. Operating Voltage - UL:

Voltage

1000 V RMS (Flexible Motor Supply Cable)

Max. Operating Voltage - Other:

Voltage

1000 V RMS (CSA AWM I/II A/B)

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---------------|----------|--------------|-------|-------|------------------------|
| 29512 010100 | 100 FT | 77.300 LB | BLACK | C | COMPOSITE CABLE SH PVC |
| 29512 0101000 | 1,000 FT | 438.000 LB | BLACK | C | COMPOSITE CABLE SH PVC |
| 29512 0104000 | 4,000 FT | 1,680.000 LB | BLACK | C | COMPOSITE CABLE SH PVC |
| 29512 010500 | 500 FT | 226.500 LB | BLACK | C | COMPOSITE CABLE SH PVC |

Notes:

C = CRATE REEL PUT-UP.

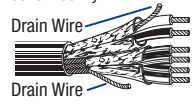


Variable Frequency Drive Cable – Classic Design with Signal Pair

16 to 10 AWG with Foil/Braid Shield Plus Signal Pair for Brake[▲]

| Description | Part No. | AWG | Cond. Stranding | Standard Lengths | | Standard Unit Wt. | | Nominal OD | | Maximum Pull Tension | | Minimum Bend Radius | |
|-------------|----------|-----|-----------------|------------------|---|-------------------|----|------------|----|----------------------|---|---------------------|----|
| | | | | Ft. | m | Lbs. | kg | Inch | mm | Lbs. | N | Inch | mm |

Three Stranded TC Circuit Conductors + (1) Full-sized PVC Ground* • Overall Beldfoil + 85% TC Braid Shield • Full Sized TC Drain Wire* + (1) 16 AWG Shielded Signal Pair for Brake with drain wire. (ICEA Method 4 Color Code: Black and Numbered, Green/Yellow Ground) + Black, White Signal Pair

| XLPE Insulated Circuit Conductors • Black Sunlight- and Oil-resistant PVC Jacket | | | | | | | | | | | | | |
|---|-------------|--------------|-------|--------------|--------|-------|--------------------|--------|--------|-------|------|-------|-------|
| 1000V UL Flexible Motor Supply Cable 600V UL 1277 Type TC-ER per 2005 NEC Article 336 1000V CSA AWM I/II A/B FT4 IEEE 1202/383 UL Direct Burial XHHW-2, RHW-2 rated circuit conductors** 90°C Wet/Dry  MSHA P-07-KA070003 | 29510 | Circuit Cond | 26x30 | 100 | 30.5 | 34.5 | 15.7 | .75 | 19.05 | 272 | 1210 | 7.5 | 190.5 |
| | | | | 500 | 152.4 | 136.0 | 61.7 | | | | | | |
| | Signal Pair | 26x30 | 1000 | 304.8 | 309.0 | 140.2 | 5000 ^{††} | 1524.0 | 1415.0 | 641.8 | | | |
| | | | 29511 | Circuit Cond | 41x30 | 100 | | 30.5 | 67.5 | 30.6 | .82 | 20.83 | 368 |
| | 500 | 152.4 | 177.5 | | | 80.6 | | | | | | | |
| | Signal Pair | 26x30 | 1000 | 304.8 | 340.0 | 154.2 | 5000 ^{††} | 1524.0 | 1565.0 | 709.9 | | | |
| | | | 29512 | Circuit Cond | 65x30 | 100 | | 30.5 | 77.3 | 35.1 | .90 | 22.86 | 527 |
| | 500 | 152.4 | 226.5 | | | 102.8 | | | | | | | |
| | Signal Pair | 26x30 | 1000 | 304.8 | 438.0 | 198.7 | 4000 ^{††} | 1219.5 | 1680.0 | 762.0 | | | |
| | | | 29513 | Circuit Cond | 105x30 | 100 | | 30.5 | 89.3 | 40.5 | .99 | 25.15 | 718 |
| | 500 | 152.4 | 286.5 | | | 130.1 | | | | | | | |
| | Signal Pair | 26x30 | 1000 | 304.8 | 490.0 | 222.3 | 3000 ^{††} | 914.6 | 1452.0 | 658.6 | | | |

See footnotes on page 4.

Variable Frequency Drive Cable – Symmetrical Design

16 to 4/0 AWG with Dual Copper Tape Shield

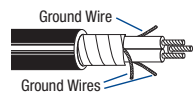
Belden's symmetrical ground design combines the benefits of our classic line of VFD cables with additional features for use on larger, more powerful AC motor drives. Its highly effective shielding provides a low resistance path to

ground, which improves common mode current containment. The spirally applied dual copper tapes provide improved flexibility and highly effective radiated and conducted noise protection. Three symmetrical bare ground wires provide a

balanced ground system. This reduces AC motor shaft voltage, which in turn, reduces the likelihood of premature motor bearing or motor insulation failure.

| Description | Part No. | AWG | Cond. Stranding | Standard Lengths | | Standard Unit Wt. | | Nominal OD | | Maximum Pull Tension | | Minimum Bend Radius | |
|-------------|----------|-----|-----------------|------------------|---|-------------------|----|------------|----|----------------------|---|---------------------|----|
| | | | | Ft. | m | Lbs. | kg | Inch | mm | Lbs. | N | Inch | mm |

Three Stranded TC Circuit Conductors + 3 Symmetrical BC Grounds • 2 Spiral Copper Tape Shields (100% Coverage) (ICEA Method 4 Color Code: Black and Numbered)

| XLPE Insulation • Black Sunlight- and Oil-resistant PVC Jacket | | | | | | | | | | | | | |
|---|-------------|-------|--------------|--------------|-------|--------------------|--------------------|--------|--------|-------|-------|-------|-------|
| 1000V UL Flexible Motor Supply Cable 600V UL 1277 Type TC-ER per 2005 NEC Article 336 600V CSA AWM I/II A/B FT4 IEEE 1202/383 UL Direct Burial XHHW-2 rated circuit conductors** 90°C Wet/Dry  MSHA P-07-KA070003 | 29520 | 16 | 7x24 | 100 | 30.4 | 17.0 | 7.7 | 0.40 | 10.11 | 107 | 476 | 4.0 | 101.6 |
| | | | | 500 | 152.4 | 68.5 | 31.1 | | | | | | |
| | Signal Pair | 7x22 | 1000 | 304.8 | 139.0 | 63.1 | 5000 ^{††} | 1524.0 | 710.0 | 322.3 | | | |
| | | | 29521 | Circuit Cond | 7x22 | 100 | | 30.4 | 19.2 | 8.7 | 0.42 | 10.74 | 162 |
| | 500 | 152.4 | 81.0 | | | 36.8 | | | | | | | |
| | Signal Pair | 7x20 | 1000 | 304.8 | 161.0 | 73.1 | 5000 ^{††} | 1524.0 | 800.0 | 363.2 | | | |
| | | | 29522 | Circuit Cond | 7x20 | 100 | | 30.4 | 24.2 | 11.0 | 0.48 | 12.19 | 258 |
| | 500 | 152.4 | 108.5 | | | 49.3 | | | | | | | |
| | Signal Pair | 7x18 | 1000 | 304.8 | 213.0 | 96.7 | 5000 ^{††} | 1524.0 | 1080.0 | 490.3 | | | |
| | | | 29523 | Circuit Cond | 7x18 | 100 | | 30.4 | 25.2 | 11.4 | 0.56 | 14.22 | 444 |
| | 500 | 152.4 | 111.5 | | | 50.6 | | | | | | | |
| | Signal Pair | 7x16 | 1000 | 304.8 | 216.0 | 98.1 | 5000 ^{††} | 1524.0 | 1505.0 | 683.3 | | | |
| 29524 | | | Circuit Cond | 7x16 | 100 | 30.4 | | 37.8 | 17.2 | 0.66 | 16.76 | 576 | 2562 |
| 500 | 152.4 | 194.0 | | | 88.1 | | | | | | | | |
| Signal Pair | 7x14 | 1000 | 304.8 | 439.0 | 199.3 | 5000 ^{††} | 1524.0 | 2045.0 | 928.4 | | | | |
| | | 29525 | Circuit Cond | 7x14 | 100 | | 30.4 | 55.5 | 25.2 | 0.76 | 19.30 | 915 | 4070 |
| 500 | 152.4 | 339.5 | | | 154.1 | | | | | | | | |
| Signal Pair | 7x14 | 1000 | 304.8 | 645.0 | 292.8 | 5000 ^{††} | 1524.0 | 3000.0 | 1362.0 | | | | |