530093104 12.7MB-TW

530093104 | E20-2" SDR13.5-875JCASS-16MT-

E#O® Coaxial/Microduct Hybrid Buried Cable



- E#O is a solution that enables service providers the ability to bridge HFC networks to FTTx. The
 E#O composite coaxial/fiber product line combines fiber, microducts, and coaxial cable
 preinstalled in conduit
- Serves businesses in a new commercial serving area
- Mitigates future cost of fiber installation
- Pre-installed in high density PE conduit for added physical protection
- One-step installation saves on construction cost
- Ideal for commercial data customers that also require video
- All products tested to industry standards
- *Product complies with the Build America, Buy America Act (BABAA) requirements of the Infrastructure Investment and Jobs Act of 2021 (Pub. L. 117- 58, §§ 70901-70953), or is the subject of a waiver approved by the Secretary of Commerce or designee. Compliance requirements and waiver applicability vary based on government funding program. Check the laws and regulations for your specific program.

Product Classification

Regional Availability North America

Product Type Coaxial fiber cable-in-conduit

Product Brand E#O®

Government FundingBuild America Buy America (BABA) compliant*

General Specifications

Cable Series P3 875

Dimensions

 Height
 60.325 mm | 2.375 in

 Width
 60.325 mm | 2.375 in

 Outer Jacket Thickness, nominal
 4.724 mm | 0.186 in

Material Specifications

Outer Jacket Material High density polyethylene (HDPE)

Mechanical Specifications

Minimum Bend Radius 660.4 mm | 26 in

Pulling Tension, maximum 1,170.268 kg | 2580 lb



530093104 | E20-2" SDR13.5-875JCASS-16MT-12.7MB-TW

Environmental Specifications

Environmental Space Buried

Packaging and Weights

Weight, gross 1,285.774 kg/km | 864 lb/kft

Regulatory Compliance/Certifications

Agency Classification

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system

ISO 9001:2015

Included Products

359998100 - ConQuest® Empty Conduit, 16 mm, SDR 11, terracotta
359998400 - ConQuest® Empty Conduit, 16 mm, SDR 11, terracotta

360000000 - ConQuest® Empty Conduit, 12.7 mm, black 360000013 - ConQuest® Empty Conduit, 12.7 mm, black

5309103 - 75 Ohm P3® Trunk and Distribution Cable, black PE jacket, flooded for underground

P3® 875 JCASS

5309193 - 75 Ohm P3® Trunk and Distribution Cable, black PE jacket, flooded for underground

P3® 875 JCASS

8220001 - E#0® Coaxial/Microduct Hybrid Buried Cable PP Coated with Tone Wire

CX3799839 - ConQuest® Empty Conduit, 2 in, SDR 13.5, terracotta

200T135 EMPTY DUCT COEX





ConQuest® Empty Conduit, 16 mm, SDR 11, terracotta

 *Product complies with the Build America, Buy America Act (BABAA) requirements of the Infrastructure Investment and Jobs Act of 2021 (Pub. L. 117- 58, §§ 70901-70953), or is the subject of a waiver approved by the Secretary of Commerce or designee. Compliance requirements and waiver applicability vary based on government funding program. Check the laws and regulations for your specific program.

Product Classification

Regional AvailabilityNorth AmericaProduct TypeEmpty conduitProduct BrandConQuest®

Government FundingBuild America Buy America (BABA) compliant*

General Specifications

ColorTerracottaConduit TypeNon-toneableDensity Test MethodASTM D792A

 Density, maximum
 0.955 g/cm³ | 0.035 lb/in³

 Density, minimum
 0.941 g/cm³ | 0.034 lb/in³

Design Standard ASTM D3350-05

Wall Type Smooth

Dimensions

 Length
 1,828.8 m | 6000 ft

 Inner Diameter, nominal
 12.725 mm | 0.501 in

 Outer Diameter, nominal
 15.875 mm | 0.625 in

Wall Thickness Designation SDR 11

Wall Thickness, minimum 1.397 mm | 0.055 in

Nominal Size 16 mm

Material Specifications

Flexural Modulus, minimum 551.581 N/mm² | 80000 psi

Flexural Property Test Method ASTM D790

Hydrostatic Design BasisNot pressure rated

Hydrostatic Design Test MethodASTM D2837

Material Type High density polyethylene (HDPE)

Melt Flow Rate Test MethodASTM D1238Melt Flow Rate, maximum0.39 g/10 min

Mechanical Specifications

Minimum Bend Radius, unsupported 203.2 mm | 8 in

Tensile Property Test Method ASTM D638

Tensile Strength at yield, minimum 20.684 N/mm² | 3000 psi

Pulling Tension, maximum 95.254 kg | 210 lb

Environmental Specifications

Environmental Stress Crack Resistance Failure rate of 10% within 96 hours
Environmental Stress Test Method ASTM D1693, ESCR Condition B

Packaging and Weights

Weight, net 68.456 kg/km | 46 lb/kft

Regulatory Compliance/Certifications

Agency Classification

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system



* Footnotes





ConQuest® Empty Conduit, 16 mm, SDR 11, terracotta

Product Classification

Product TypeEmpty conduitProduct BrandConQuest®

General Specifications

ColorTerracottaConduit TypeNon-toneableDensity Test MethodASTM D792A

 Density, maximum
 0.955 g/cm³ | 0.035 lb/in³

 Density, minimum
 0.941 g/cm³ | 0.034 lb/in³

Design Standard ASTM D3350-05

Wall Type Smooth

Dimensions

 Inner Diameter, nominal
 12.725 mm | 0.501 in

 Outer Diameter, nominal
 15.875 mm | 0.625 in

Wall Thickness Designation SDR 11

Wall Thickness, minimum 1.397 mm | 0.055 in

Nominal Size 16 mm

Material Specifications

Flexural Modulus, minimum 551.581 N/mm² | 80000 psi

Flexural Property Test Method ASTM D790

Hydrostatic Design BasisNot pressure rated

Hydrostatic Design Test MethodASTM D2837

Material TypeHigh density polyethylene (HDPE)

Melt Flow Rate Test MethodASTM D1238Melt Flow Rate, maximum0.39 g/10 min

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Mechanical Specifications

Minimum Bend Radius, unsupported 203.2 mm | 8 in

Tensile Property Test Method ASTM D638

Tensile Strength at yield, minimum 20.684 N/mm² | 3000 psi

Pulling Tension, maximum 95.254 kg | 210 lb

Environmental Specifications

Environmental Stress Crack Resistance Failure rate of 10% within 96 hours
Environmental Stress Test Method ASTM D1693, ESCR Condition B

Packaging and Weights

Weight, net 68.456 kg/km | 46 lb/kft

Regulatory Compliance/Certifications

Agency Classification

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system



* Footnotes





ConQuest® Empty Conduit, 12.7 mm, black

Product Classification

Product TypeEmpty conduitProduct BrandConQuest®

General Specifications

Color Black

Conduit TypeNon-toneableDensity Test MethodASTM D792A

 Density, maximum
 0.955 g/cm³ | 0.035 lb/in³

 Density, minimum
 0.941 g/cm³ | 0.034 lb/in³

Design Standard ASTM D3350-05

Wall Type Smooth

Dimensions

Inner Diameter, nominal10.008 mm | 0.394 inOuter Diameter, nominal12.7 mm | 0.5 inWall Thickness, minimum1.346 mm | 0.053 in

Nominal Size 12.7 mm

Material Specifications

Flexural Modulus, minimum 551.581 N/mm² | 80000 psi

Flexural Property Test Method ASTM D790

Hydrostatic Design BasisNot pressure rated

Hydrostatic Design Test MethodASTM D2837

Material Type High density polyethylene (HDPE)

Melt Flow Rate Test MethodASTM D1238Melt Flow Rate, maximum0.39 g/10 min

Mechanical Specifications

Minimum Bend Radius, unsupported 152.4 mm | 6 in

Tensile Property Test Method ASTM D638

Tensile Strength at yield, minimum 20.684 N/mm² | 3000 psi

Pulling Tension, maximum 86.183 kg | 190 lb

Environmental Specifications

Environmental Stress Crack Resistance Failure rate of 10% within 96 hours

Environmental Stress Test Method ASTM D1693, ESCR Condition B

Packaging and Weights

Weight, net 46.133 kg/km | 31 lb/kft

Regulatory Compliance/Certifications

Agency Classification

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system



* Footnotes





ConQuest® Empty Conduit, 12.7 mm, black

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Product Classification

Regional AvailabilityNorth AmericaProduct TypeEmpty conduitProduct BrandConQuest®

Government FundingBuild America Buy America (BABA) compliant*

General Specifications

Color Black

Conduit TypeNon-toneableDensity Test MethodASTM D792A

 Density, maximum
 0.955 g/cm³ | 0.035 lb/in³

 Density, minimum
 0.941 g/cm³ | 0.034 lb/in³

Design Standard ASTM D3350-05

Wall Type Smooth

Dimensions

Inner Diameter, nominal 10.008 mm | 0.394 in

Outer Diameter, nominal 12.7 mm | 0.5 in

Wall Thickness, minimum 1.346 mm | 0.053 in

Nominal Size 12.7 mm

Material Specifications

Flexural Modulus, minimum 551.581 N/mm² | 80000 psi

Flexural Property Test Method ASTM D790

Hydrostatic Design BasisNot pressure rated

Hydrostatic Design Test MethodASTM D2837

Material Type High density polyethylene (HDPE)

Melt Flow Rate Test MethodASTM D1238Melt Flow Rate, maximum0.39 g/10 min

Mechanical Specifications

Minimum Bend Radius, unsupported 152.4 mm | 6 in

Tensile Property Test Method ASTM D638

Tensile Strength at yield, minimum 20.684 N/mm² | 3000 psi

Pulling Tension, maximum 86.183 kg | 190 lb

Environmental Specifications

Environmental Stress Crack Resistance Failure rate of 10% within 96 hours

Environmental Stress Test Method ASTM D1693, ESCR Condition B

Packaging and Weights

Weight, net 46.133 kg/km | 31 lb/kft

Regulatory Compliance/Certifications

Agency Classification

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system



* Footnotes



75 Ohm P3® Trunk and Distribution Cable, black PE jacket, flooded for underground



 *Product complies with the Build America, Buy America Act (BABAA) requirements of the Infrastructure Investment and Jobs Act of 2021 (Pub. L. 117- 58, §§ 70901-70953), or is the subject of a waiver approved by the Secretary of Commerce or designee. Compliance requirements and waiver applicability vary based on government funding program. Check the laws and regulations for your specific program.

Product Classification

Regional Availability North America

Product Type Coaxial hardline cable

Product Brand P3®

Government FundingBuild America Buy America (BABA) compliant*

Warranty One year

General Specifications

Cable Type875 SeriesConstruction TypeSwagedJacket ColorBlack

Short Description P3 875 JCASS SM PR997

Dimensions

Cable Length 762 m | 2500 ft

Diameter Over Center Conductor, nominal4.928 mm | 0.194 inDiameter Over Dielectric, nominal20.244 mm | 0.797 inDiameter Over Jacket, nominal24.257 mm | 0.955 inDiameter Over Outer Conductor, nominal22.225 mm | 0.875 inJacket Thickness, nominal0.889 mm | 0.035 inOuter Conductor Thickness, nominal0.991 mm | 0.039 in

Electrical Specifications

Capacitance 50.197 pF/m | 15.3 pF/ft

Capacitance Tolerance ±1.0 pF/ft

Characteristic Impedance75 ohmCharacteristic Impedance Tolerance±2 ohm

dc Resistance Note

Nominal values based on a standard condition of 20 °C (68 °F)

dc Resistance, Inner Conductor, nominal1.378 ohms/km0.42 ohms/kftdc Resistance, Loop, nominal1.804 ohms/km0.55 ohms/kftdc Resistance, Outer Conductor, nominal0.427 ohms/km0.13 ohms/kft

Jacket Spark Test Voltage5000 VacNominal Velocity of Propagation (NVP)87 %

Operating Frequency Band 5-3000 MHz

Structural Return Loss 24 dB @ 1003-1218 MHz | 24 dB @ 1219-1794 MHz | 30 dB @ 5-1002

MHz

Structural Return Loss, Grade N ≥24 dB @ 1003−1218 MHz | ≥24 dB @ 1219−1794 MHz | ≥30 dB @ 5−1002

MHz

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)
5.0	0.3	0.09
55.0	1.08	0.33
85.0	1.31	0.4
204.0	2.07	0.63
211.0	2.17	0.66
250.0	2.36	0.72
300.0	2.56	0.78
350.0	2.76	0.84
400.0	2.99	0.91
450.0	3.18	0.97
500.0	3.38	1.03
550.0	3.54	1.08
600.0	3.74	1.14
750.0	4.23	1.29
865.0	4.63	1.41
1002.0	5.02	1.53
1218.0	5.57	1.7
1500.0	6.39	1.95
1794.0	7.13	2.17

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1800.0	7.14	2.18
2000.0	7.62	2.32
2200.0	8.09	2.46
2500.0	8.76	2.67
2700.0	9.19	2.8
3000.0	9.83	3

Material Specifications

Center Conductor Material Copper-clad aluminum

Dielectric Material Foam PE

Jacket Material PE

Outer Conductor Material Aluminum

Mechanical Specifications

Minimum Bend Radius, bonded177.8 mm7 inPulling Tension, maximum396.893 kg875 lb

Environmental Specifications

Corrosion Protection Migraheal®

Environmental Space Buried

Packaging and Weights

Packaging Type Reel

Weight, gross 505.976 kg/km | 340 lb/kft

Regulatory Compliance/Certifications

Agency Classification

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system





75 Ohm P3® Trunk and Distribution Cable, black PE jacket, flooded for underground



Product Classification

Product Type Coaxial hardline cable

Product Brand P3®

Warranty One year

General Specifications

Cable Type875 SeriesConstruction TypeSwagedJacket ColorBlack

Short Description P3 875 JCASS SM PR997

Dimensions

 Cable Length
 762 m | 2500 ft

Diameter Over Center Conductor, nominal4.928 mm | 0.194 inDiameter Over Dielectric, nominal20.244 mm | 0.797 inDiameter Over Jacket, nominal24.257 mm | 0.955 inDiameter Over Outer Conductor, nominal22.225 mm | 0.875 inJacket Thickness, nominal0.889 mm | 0.035 inOuter Conductor Thickness, nominal0.991 mm | 0.039 in

Electrical Specifications

Capacitance 50.197 pF/m | 15.3 pF/ft

Capacitance Tolerance±1.0 pF/ftCharacteristic Impedance75 ohmCharacteristic Impedance Tolerance±2 ohm

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dc Resistance Note Nominal values based on a standard condition of 20 °C (68 °F)

dc Resistance, Inner Conductor, nominal1.378 ohms/km0.42 ohms/kftdc Resistance, Loop, nominal1.804 ohms/km0.55 ohms/kft

dc Resistance, Outer Conductor, nominal 0.427 ohms/km | 0.13 ohms/kft

Jacket Spark Test Voltage 5000 Vac

Nominal Velocity of Propagation (NVP) 87 %

Operating Frequency Band 5-3000 MHz

Structural Return Loss 24 dB @ 1003-1218 MHz | 24 dB @ 1219-1794 MHz | 30 dB @ 5-1002

MHz

Structural Return Loss, Grade N ≥24 dB @ 1003−1218 MHz | ≥24 dB @ 1219−1794 MHz | ≥30 dB @ 5−1002

MHz

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)
5.0	0.3	0.09
55.0	1.08	0.33
85.0	1.31	0.4
204.0	2.07	0.63
211.0	2.17	0.66
250.0	2.36	0.72
300.0	2.56	0.78
350.0	2.76	0.84
400.0	2.99	0.91
450.0	3.18	0.97
500.0	3.38	1.03
550.0	3.54	1.08
600.0	3.74	1.14
750.0	4.23	1.29
865.0	4.63	1.41
1002.0	5.02	1.53
1218.0	5.57	1.7
1500.0	6.39	1.95
1794.0	7.13	2.17
1800.0	7.14	2.18
2000.0	7.62	2.32





2200.0	8.09	2.46
2500.0	8.76	2.67
2700.0	9.19	2.8
3000.0	9.83	3

Material Specifications

Center Conductor Material Copper-clad aluminum

Dielectric Material Foam PE

Jacket Material PE

Outer Conductor Material Aluminum

Mechanical Specifications

Minimum Bend Radius, bonded177.8 mm7 inPulling Tension, maximum396.893 kg875 lb

Environmental Specifications

Corrosion Protection Migraheal®

Environmental Space Buried

Packaging and Weights

Packaging Type Reel

Weight, gross 505.976 kg/km | 340 lb/kft

Regulatory Compliance/Certifications

Agency Classification

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system





E#O® Coaxial/Microduct Hybrid Buried Cable PP Coated with Tone Wire



- E#O is a solution that enables service providers the ability to bridge HFC networks to FTTx. The
 E#O composite coaxial/fiber product line combines fiber, microducts, and coaxial cable
 preinstalled in conduit
- Serves businesses in a new commercial serving area
- Mitigates future cost of fiber installation
- Pre-installed in high density PE conduit for added physical protection
- One-step installation saves on construction cost
- Ideal for commercial data customers that also require video
- All products tested to industry standards

Product Classification

Product Type Coaxial fiber cable-in-conduit

Product Brand E#O®

General Specifications

Conductor Elongation, maximum1 %Conductor TypeSolid

Insulation Elongation, minimum $200\ \%$

Dimensions

Conductor Diameter1.024 mm0.04 inInsulation Thickness, nominal0.008 mm0 in

Conductor Gauge 18 AWG

Electrical Specifications

Conductor Resistance 87.598 ohms/km | 26.7 ohms/kft

Material Specifications

Insulation Material Type Polypropylene coated copper-clad steel wire

Outer Jacket Material High density polyethylene (HDPE)

Mechanical Specifications

Conductor Tensile Strength, minimum827.371 N/mm² | 120000 psiInsulation Tensile Strength, minimum31.026 N/mm² | 4500 psi

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Environmental Specifications

Environmental Space

Buried

Regulatory Compliance/Certifications

Agency

Classification

ISO 9001:2015

Designed, manufactured and/or distributed under this quality management system



CX3799839 | 200T135 EMPTY DUCT COEX



ConQuest® Empty Conduit, 2 in, SDR 13.5, terracotta

 *Product complies with the Build America, Buy America Act (BABAA) requirements of the Infrastructure Investment and Jobs Act of 2021 (Pub. L. 117- 58, §§ 70901-70953), or is the subject of a waiver approved by the Secretary of Commerce or designee. Compliance requirements and waiver applicability vary based on government funding program. Check the laws and regulations for your specific program.

Product Classification

Regional AvailabilityNorth AmericaProduct TypeEmpty conduitProduct BrandConQuest®

Government FundingBuild America Buy America (BABA) compliant*

General Specifications

ColorTerracottaConduit TypeNon-toneableDensity Test MethodASTM D792A

 Density, maximum
 0.955 g/cm³ | 0.035 lb/in³

 Density, minimum
 0.941 g/cm³ | 0.034 lb/in³

Design Standard ASTM D3350-05

Wall Type Smooth

Dimensions

Length 762 m | 2500 ft

 Inner Diameter, nominal
 50.876 mm | 2.003 in

 Outer Diameter, nominal
 60.325 mm | 2.375 in

Wall Thickness Designation SDR 13.5

Wall Thickness, minimum 4.47 mm | 0.176 in

Nominal Size 2 in

Material Specifications

Flexural Modulus, minimum 551.581 N/mm² | 80000 psi

Flexural Property Test Method ASTM D790

CX3799839 | 200T135 EMPTY DUCT COEX

Hydrostatic Design BasisNot pressure rated

Hydrostatic Design Test Method ASTM D2837

Material Type High density polyethylene (HDPE)

Melt Flow Rate Test MethodASTM D1238Melt Flow Rate, maximum0.39 g/10 min

Mechanical Specifications

Minimum Bend Radius, unsupported 660.4 mm | 26 in

Tensile Property Test Method ASTM D638

Tensile Strength at yield, minimum $20.684 \text{ N/mm}^2 \mid 3000 \text{ psi}$ Pulling Tension, maximum $1,170.268 \text{ kg} \mid 2580 \text{ lb}$

Environmental Specifications

Environmental Stress Crack Resistance Failure rate of 10% within 96 hours
Environmental Stress Test Method ASTM D1693, ESCR Condition B

Packaging and Weights

Weight, net 791.703 kg/km | 532 lb/kft

Regulatory Compliance/Certifications

Agency Classification

ISO 9001:2015 Designed, manufactured and/or distributed under this quality management system



* Footnotes

