



P3® 500 Series Cables

Trunk and Distribution Cable

CommScope's P3® product line is the industry standard by which all coaxial trunk and distribution cables are measured.

P3 has been proven robust and reliable by years of successful installations.

P3 500 is optimized for use in broadband feeder plants. It's small size, low attenuation and inherent strength has made it an industry standard.

A high precision aluminum outer conductor surrounds a high compression, micro-cellular dielectric core. The core contains a fully bonded copper clad center conductor.

Like all CommScope distribution products, P3 500, 565, 625, 700, 750 and 875 are available in ConQuest Conduit.

Product Specifications

COMMSCOPE®



Broadband Solutions
5301803 | P3® 500 JCA
75 Ohm P3® Trunk and Distribution Cable, black PE jacket

Construction Materials

Jacket Material	PE
Center Conductor Material	Copper-clad aluminum
Construction Type	Swaged
Dielectric Material	PE
Outer Conductor Material	Aluminum

Dimensions

Diameter Over Center Conductor, nominal	2.769 mm 0.109 in
Diameter Over Dielectric, nominal	11.481 mm 0.452 in
Diameter Over Outer Conductor, nominal	12.700 mm 0.500 in
Diameter Over Jacket, nominal	14.224 mm 0.560 in
Jacket Thickness, nominal	0.7620 mm 0.0300 in
Outer Conductor Thickness, nominal	0.6096 mm 0.0240 in
Cable Length	732 m 2400 ft
Shipping Weight	120.00 lb/kft

Electrical Specifications

dc Resistance, Inner Conductor, nominal	1.35 ohms/kft
dc Resistance, Outer Conductor, nominal	0.37 ohms/kft
dc Resistance, Loop, nominal	1.72 ohms/kft
dc Resistance Note	Nominal values based on a standard condition of 20 °C (68 °F)
Capacitance	50.2 pF/m 15.3 pF/ft
Capacitance Tolerance	±1.0 pF/ft
Characteristic Impedance	75 ohm
Characteristic Impedance Tolerance	±2 ohm
Jacket Spark Test Voltage	5000 Vac
Nominal Velocity of Propagation (NVP)	87 %
Operating Frequency Band	5–1000 MHz
Structural Return Loss	30 dB @ 5–1000 MHz

Environmental Specifications

Environmental Space	Aerial
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General Specifications

Brand	P3®
Cable Type	500 series
Jacket Color	Black
Packaging Type	Reel
Short Description	P3 500 JCA SM PR2171

Product Specifications



5301803 | P3® 500 JCA

Warranty One year

Mechanical Specifications

Minimum Bend Radius, bonded	88.90 mm 3.50 in
Minimum Bend Radius, standard	152.40 mm 6.00 in
Pulling Tension, maximum	136 kg 300 lb

Electrical Performance

Frequency	Attenuation (dB/100 m)	Attenuation (dB/100 ft)
5 MHz	0.52	0.16
55 MHz	1.77	0.54
83 MHz	2.17	0.66
211 MHz	3.58	1.09
250 MHz	3.94	1.20
300 MHz	4.30	1.31
350 MHz	4.69	1.43
400 MHz	5.02	1.53
450 MHz	5.35	1.63
500 MHz	5.67	1.73
550 MHz	5.97	1.82
600 MHz	6.27	1.91
750 MHz	7.09	2.16
865 MHz	7.68	2.34
1000 MHz	8.27	2.52

* Attenuation listed represents maximum values at standard condition of 20 °C (68 °F)

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system