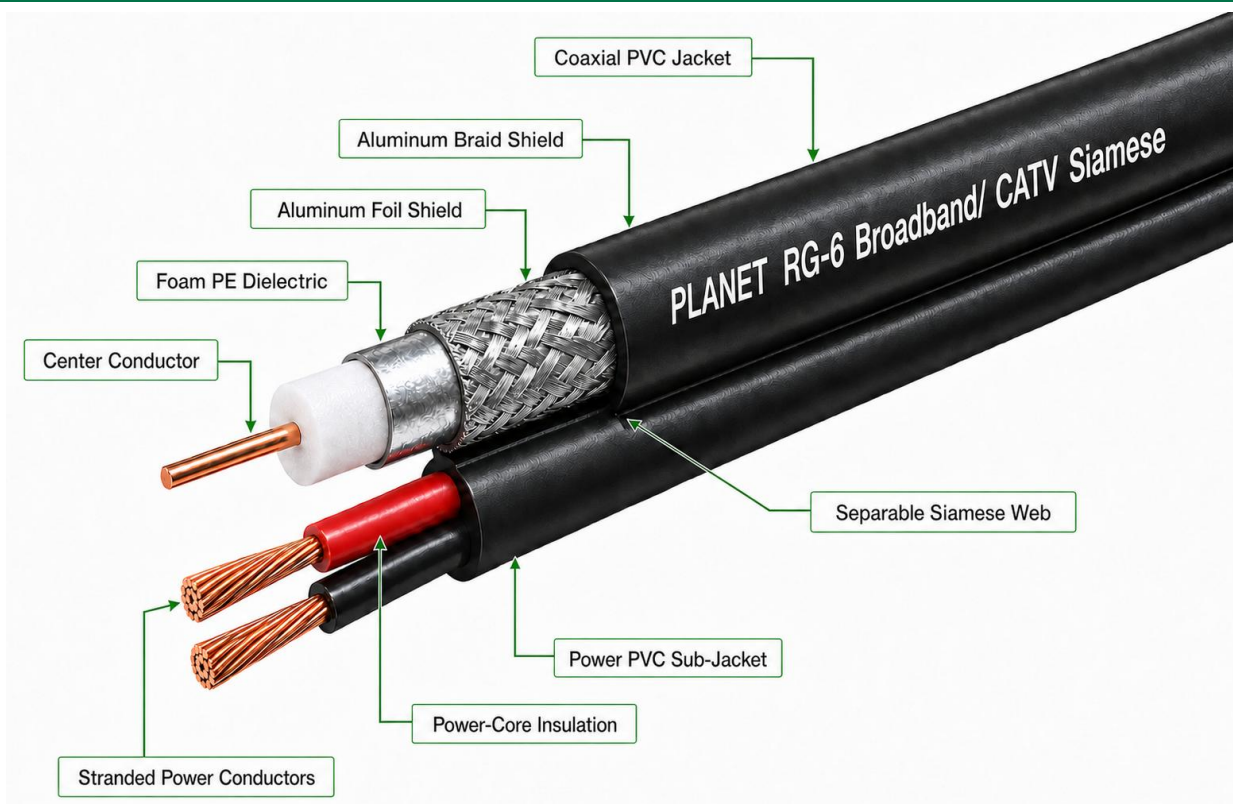


3D PRODUCT VIEW



1. GENERAL DESCRIPTION

Combined cable comprising an IEC 75-5S, 75-ohm Class C RG-6 coaxial section and a separable two-core low-voltage DC power section. The coaxial section supports CATV, MATV/SMATV, satellite IF, broadband video and surveillance signals from 5 MHz to 3000 MHz. IEC 61196-6-3 applies to the coaxial section only; power-conductor material and size are controlled separately by the complete order description and test records.

75 OHM CATV / satellite	18 AWG 1.02 mm solid	5-3000 MHz Published RF range	2-CORE POWER 0.50 / 0.75 mm ²
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2. INDEX BY PART NUMBER

Part Number	Coax Center Conductor	Power Conductors
PL-RG6WP3	Bare Copper (BC) - 75-5S-BC-ALT+A-PVC-C	Bare Copper (BC)
PL-RG6WP3BA	Bare Copper (BC) - 75-5S-BC-ALT+A-PVC-C	Copper-Clad Aluminum (CCA)
PL-RG6WP3SB	Copper-Clad Steel (CCS) - 75-5S-CCS-ALT+A-PVC-C	Bare Copper (BC)
PL-RG6WP3SA	Copper-Clad Steel (CCS) - 75-5S-CCS-ALT+A-PVC-C	Copper-Clad Aluminum (CCA)

PRODUCT HIGHLIGHTS

- IEC 75-5S coaxial section: 75 +/- 3 ohm, foamed-PE dielectric and ALT+A dual shield, Screening Class C.
- Two stranded, color-coded 0.50 mm² or 0.75 mm² power conductors; BC or controlled CCA variant by part number.
- IEC Annex B attenuation, return-loss and post-flex Class C screening limits through 3000 MHz.
- Exact jacket marking: PLANET RG-6 Broadband/ CATV Siamese.

3. CONSTRUCTION

Component	Material / Construction	Dimension / Requirement
Coax center conductor	Solid BC or CCS, controlled by complete part number	1.02 +/- 0.02 mm (18 AWG nominal)
Coax dielectric	Foamed polyethylene (Foam PE)	4.57 +/- 0.13 mm diameter
Foil shield	Bonded aluminum-polymeric laminated tape (ALT)	100% coverage; 18-35% overlap; inner shield OD 4.78 +/- 0.13 mm
Braid shield	Aluminum-alloy wire braid (A)	Braid construction controlled by measured coverage and Class C performance
Braid coverage	IEC 75-5S standard-shield construction	>= 59% IEC minimum; PLANET acceptance requirement >= 60%
Coax jacket	Black polyvinyl chloride (PVC), indoor base construction	0.60 mm minimum wall; 6.93 +/- 0.20 mm finished diameter
Power conductors	2 stranded cores; BC or CCA by part number	2 x 0.50 mm ² : 16 x 0.20 mm; 2 x 0.75 mm ² : 24 x 0.20 mm
Power-core insulation	Red and black polyvinyl chloride (PVC)	2.10 +/- 0.20 mm finished diameter per core
Power sub-jacket	Black polyvinyl chloride (PVC)	5.40 +/- 0.30 mm nominal finished diameter
Composite construction	Separable Siamese / figure-eight web	Approx. 7.0 x 13.0 mm; sections separable without jacket damage
Cable marking	Brand, type, complete part number, power size, lot and length	PLANET RG-6 Broadband/ CATV Siamese

4. MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Parameter	Value / Requirement
Installation temperature	0 deg C to +50 deg C; avoid impact or bending below the stated limit
Operating temperature	-20 deg C to +70 deg C for the base PVC construction
Storage temperature	-20 deg C to +70 deg C
Minimum bend radius / flex qualification	>= 10 x coax OD (69.3 mm nominal); 5 N tension, <= 1 m/s, 3 cycles; post-flex Class C limits shall be met
Cold bend	IEC method B; 20 x cable OD mandrel at -20 +/- 2 deg C for PVC; no physical damage
Standard commercial length	305 m (1,000 ft), subject to order confirmation
Base PVC construction	No UV, direct-burial, plenum, LSZH or flame-classification claim unless separately ordered and documented

5. ELECTRICAL CHARACTERISTICS

Parameter	Requirement / Nominal Value
Published RF range	5-3000 MHz
Characteristic impedance	75 +/- 3 ohm, measured at 200 MHz
Capacitance / NVP / delay	53 pF/m nominal at 1 kHz; 85% nominal NVP; approx. 3.92 ns/m delay
Coax-center DCR at 20 deg C	BC: <= 21.10 ohm/km; CCS: <= 102.00 ohm/km
Outer-conductor DCR at 20 deg C	<= 33.00 ohm/km for ALT+A standard shield
Coax insulation / dielectric withstand	IR >= 10,000 Mohm-km; 1.5 kV AC or 2.1 kV DC for 1 min conductor-to-shield
Coax sheath withstand / spark test	2.5 kV AC or 3.5 kV DC for 1 min; spark: 2.5 kV AC 50 Hz, 3.0 kV AC 15 kHz or 3.75 kV DC
BC power-conductor DCR at 20 deg C	0.50 mm2: <= 39.0 ohm/km; 0.75 mm2: <= 26.0 ohm/km
CCA power-conductor DCR at 20 deg C	PLANET acceptance: 0.50 mm2 <= 65.0 ohm/km; 0.75 mm2 <= 43.5 ohm/km; no IEC 60228 copper claim
Power insulation / withstand	Specified acceptance: IR >= 200 Mohm-km; 1.0 kV AC for 1 min core-to-core; sub-jacket spark 2.5 kV AC
Power-circuit limitation	12/24 V DC SELV/PELV only; not mains-rated; verify voltage drop, thermal loading and circuit protection

6. MAXIMUM PUBLISHED ATTENUATION AT 20 deg C

Frequency (MHz)	Maximum (dB/100 m)
5	2.0
50	5.1
100	6.7
200	9.5
400	13.9
700	18.5
900 / 1000	21.2 / 22.3
1450	26.9
1800 / 2100 / 2250	30.2 / 32.3 / 33.5
3000	39.4

7. SCREENING AND RETURN-LOSS TARGETS

Parameter	Frequency Range	Minimum / Maximum Requirement
Transfer impedance after flex	5-30 MHz	<= 50 mOhm/m (Class C maximum)
Screening attenuation after flex	30-1000 MHz	>= 75 dB (Class C minimum)
Screening attenuation after flex	1000-2000 MHz	>= 65 dB (Class C minimum)
Screening attenuation after flex	2000-3000 MHz	>= 55 dB (Class C minimum)
Return loss (uniformity)	5-1000 MHz	>= 20 dB
Return loss (uniformity)	1000-2000 MHz	>= 18 dB
Return loss (uniformity)	2000-3000 MHz	>= 16 dB

8. APPLICATIONS

- CATV, MATV and SMATV distribution within the published 5-3000 MHz frequency and attenuation limits.
- Satellite intermediate-frequency distribution through 2150 MHz using compatible 75-ohm connectors.
- Broadband video, analog/digital television and surveillance-video interconnections.
- Combined video/RF and 12/24 V DC SELV/PELV power routing after documented voltage-drop, thermal and installation verification.

COMPLIANCE, QUALITY AND DOCUMENTATION

RG-6 SIAMESE | PL-RG6WPxx

9. STANDARDS AND REGULATORY STATUS

Standard / Classification	Status
IEC 61196-6-3:2020; IEC 61196-6:2009	Primary detail and dated sectional references for the 75-5S Class C coaxial section only; IEC 61196-6:2021 may be used supplementally
IEC 61196-1:2005; IEC 61196-1-115 / 1-314; IEC 62153-4-3 / -4	Applicable coaxial electrical, bending, transfer-impedance and screening-attenuation test methods
IEC 60728 series	CATV/MATV system application reference; not a standalone product certificate
IEC 60228:2023	BC power-conductor resistance basis where applicable. CCA variants are not claimed as IEC 60228 copper conductors and require project/AHJ acceptance
RoHS / REACH	Material declarations available upon request for the exact ordered construction
CE / CPR	No claim without the applicable declaration and reaction-to-fire documentation for the exact ordered construction
UL / ETL / flame / UV / direct burial / LSZH	Optional only; no claim unless stated on the complete part number and supported by a valid report

10. QUALITY ASSURANCE AND TESTING

- Routine controls include dimensions, continuity/open-short, coax and power-conductor DCR, outer-conductor DCR, insulation resistance, jacket/sub-jacket spark testing and marking inspection.
- Qualification testing shall verify impedance, Annex B attenuation, return loss, regularity, capacitance/NVP, braid coverage, transfer impedance and screening attenuation after flex for the exact coax variant.
- Power-section validation shall verify conductor construction, DCR, insulation resistance and withstand/spark tests for the ordered material and cross-section; voltage-drop and thermal design remain project-specific.
- Mechanical/environmental validation shall include flex and cold-bend tests; ageing, UV and flame tests apply only when specifically claimed for the ordered construction.
- Reports shall identify the exact part number, conductor materials, power size, shield construction, jacket compound, batch and test method.

11. ORDERING AND ACCEPTANCE REQUIREMENTS

Requirement	Acceptance Basis
Part-number control	PL-RG6WP3 / 3BA use BC coax; 3SB / 3SA use CCS coax. BA / SA use CCA power conductors; substitutions require written approval.
Power-size control	2 x 0.50 mm ² or 2 x 0.75 mm ² shall be stated on the sales order, reel label and acceptance documents.
Cable and reel marking	PLANET RG-6 Broadband/ CATV Siamese, complete part number, power size, lot, sequential length and production identification.
Project-specific options	Color, packaging, UV/direct-burial, LSZH, flame class or third-party listing must be separately ordered and verified.
Consultant submittal	Datasheet plus requested coax type-test report, power-section routine certificate and material declaration for the exact variant.