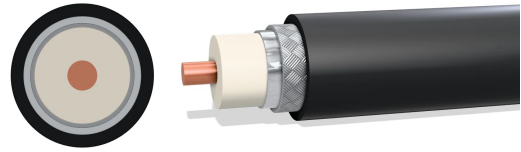


Application

RG59 is a 75 Ω coaxial cable, thinner than RG6, long established as the classic cable for CCTV and analog composite video, and - in its foam-PE precision grade - for serial-digital (SDI) video. The centre conductor is 20 AWG (nominal 0.81 mm) solid bare copper in the broadcast/SDI grade shown here; classic RG59 B/U for CCTV commonly uses a copper-clad-steel (CCS) centre of about 0.58 mm. The dielectric is polyethylene - foam-PE on the precision grade (higher velocity, lower loss, about 3.7 mm over the dielectric), solid PE on classic B/U. The screen is an aluminium/polyester (tri-laminate) foil at approximately 100 % coverage plus a tinned copper wire braid of about 95 %; classic RG59 B/U is frequently a single copper (or copper-clad-aluminium) braid without foil. The outer jacket is PVC. RG59 is used for camera-to-DVR video runs, baseband analog video, HD/3G-SDI patching and general 75 Ω interconnect where a compact, flexible coax is preferred over RG6.



CONSTRUCTION

Centre conductor	Solid bare copper, 20 AWG (nominal 0.81 mm). Classic RG59 B/U for CCTV commonly uses a copper-clad-steel (CCS) centre of approximately 0.58 mm.
Dielectric	Polyethylene (PE), nominal 3.7 mm over the dielectric - foam-PE on the SDI/precision grade, solid PE on classic RG59 B/U.
Screen (foil)	Bonded aluminium/polyester tri-laminate foil (aluminium-polyester-aluminium), approximately 100 % coverage. Classic RG59 B/U is often braid-only, without an overall foil.
Screen (braid)	Tinned copper wire braid over the foil, approximately 95 % coverage (classic B/U: about 93 % copper or copper-clad-aluminium braid).
Outer jacket	Polyvinyl chloride (PVC), flame-retardant to IEC/EN 60332-1-2; a low-smoke halogen-free (LSZH) jacket is available as a variant.
Colour	Jacket typically black or white (PVC); other colours to order.

ELECTRICAL & TRANSMISSION PROPERTIES

Characteristic impedance	75 Ω (nominal).
Centre conductor	20 AWG (nominal 0.81 mm), solid bare copper (classic B/U: CCS approximately 0.58 mm).
Dielectric	Polyethylene (PE), nominal 3.7 mm over the dielectric (foam-PE on SDI grade, solid PE on classic B/U).
Screen / coverage	Aluminium/polyester tri-laminate foil (approximately 100 %) plus tinned copper wire braid (approximately 95 %).
Nominal capacitance	approximately 53 pF/m (foam-PE / SDI grade); classic solid-PE RG59 B/U approximately 67-72 pF/m.
Velocity of propagation	approximately 82 % (foam-PE / SDI grade); classic solid-PE RG59 B/U approximately 66 %.
Attenuation (indicative)	approximately 7.6 dB/100 m @ 100 MHz; approximately 25 dB/100 m @ 1000 MHz (foam-PE reference; classic solid-PE B/U is higher; indicative).
Screening class	Foil + braid to EN 50117-1 on the precision grade; classic RG59 B/U braid-only screening is lower.
Reaction to fire (CPR)	Eca as standard (EN 50575); LSZH (Dca/B2ca) on request.
Temperature range	Operating -20 to +70 °C (individual references rated -30 to +75 or +85 °C).
Min. bending radius	approximately 10 $\times$ outer diameter (approximately 58 mm).

KEY FIGURES

Nominal outer diameter	approx. 6.0 mm (range 5.9-6.2 mm)
Nominal weight	approx. 50 kg/km
Centre conductor	20 AWG (0.81 mm) solid bare copper (classic B/U: CCS approx. 0.58 mm)

Green code CU/PE/CAM/TCWB/PVC: solid bare copper centre - PE dielectric (foam-PE on the SDI grade) - aluminium/polyester foil (CAM) - tinned copper wire braid (TCWB) - PVC jacket. Values follow the broadcast/SDI precision grade (foam-PE, solid copper, foil + braid). Classic RG59 B/U for CCTV commonly differs (CCS centre, solid PE, braid-only, ~67-72 pF/m, ~66% velocity) - noted on the sheet. All values are indicative and non-binding.