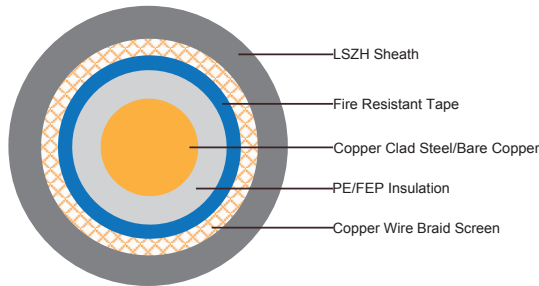




## Fire Resistant RG59 B/U Coaxial Cables

RG59 B/U FR



### APPLICATION

The cables are designed for CCTV, security, smoke detection and evacuation monitoring applications, where continued functionality is required during a fire situation. Due to the zero halogen low smoke construction, this cable is ideal for use in public, commercial and industrial environments.

### STANDARDS

Basic design to MIL-C-17

### FIRE PERFORMANCE

Circuit Integrity	IEC 60331-23; BS 6387 CWZ; DIN VDE 0472-814(FE180); CEI 20-36/2-1; SS299-1; NBN C 30-004 (cat. F3); NF C32-070-2.3(CR1)
System Circuit Integrity	DIN 4102-12, E30 depending on lay system
Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk \* denotes superseded standard.

## CABLE CONSTRUCTION

**Conductors:** Copper clad steel, solid according to IEC 60228 class 1.

**Insulation:** PE wrapped with fire resistant silicone rubber compound type EI2 as per BS 7655-1.1 or fluoropolymer(FEP) compound.

**Binder:** Glass tape

**Overall Screen:** Plain copper wire braid

**Outer Sheath:** Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1(Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

## PHYSICAL AND THERMAL PROPERTIES

**Temperature range during operation (fixed state):** -30°C - +70°C

**Temperature range during installation (mobile state):** -5°C - +60°C

**Minimum bending radius:** 8 x Overall Diameter

## ELECTRICAL PROPERTIES

Impedance	75±5Ω
Capacitance	67 nF/km
Velocity ratio(%)	66
Insulation resistance	>2000 Mohm.Km
Shield coverage	95%
DC resistance	
Inner conductor	158 Ω/km
Outer conductor	9.0 Ω/km

## ATTENUATION

Frequency(MHz)	Attenuation (dB/100 m)	Attenuation (dB/100ft)
50	7.4	2.26
100	10.7	3.26
200	15.7	4.79
400	22.7	6.92
500	25.7	7.84
600	28.7	8.75
860	34.8	10.61
1000	38.0	11.59



### RETURN LOSS

Frequency(MHz)	Return Loss (dB)
30-300 MHz	>31dB
300-600 MHz	>28dB
600-900 MHz	>24dB

### CONSTRUCTION PARAMETERS

Cable Code	Conductor Diameter	Nominal Insulation Diameter	Nominal Screen No.x Diameter	Nominal Overall Diameter	Approx. Weight
	mm	mm	No. x mm	mm	kg/km
RG59 B/U FR	0.58 ± 0.03	3.70 ± 0.10 m	120 x 0.15	6.20 ± 0.10	60.3



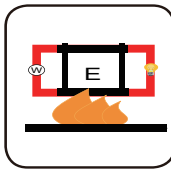
300/500V

Rated Voltage



MIL-C-17

Standard



IEC 60331/BS 6387  
NF C32-070-2.3(CR1)  
Circuit Integrity



Reduced Fire Propagation  
NF C32-070-2.2(C1)  
IEC60332-3-24/EN50266-2-4



NF C32-070-2.1(C2)  
IEC60332-1-2/EN50265-2-1  
Flame Retardancy



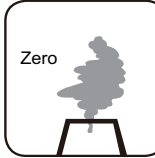
NES 02-713/NF C 20-454  
Low Toxicity



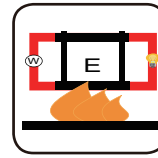
IEC60754-2  
EN50267-2-2/3  
NF C 32-074  
Low Corrosivity



IEC 61034-1&2  
EN 50268-1&2/NF C32-07  
Low Smoke Emission



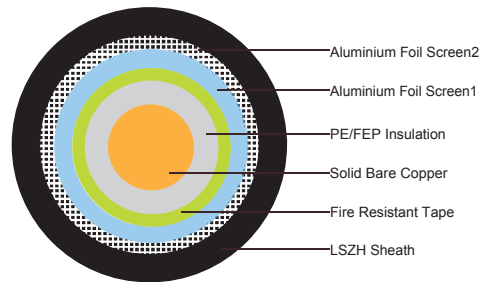
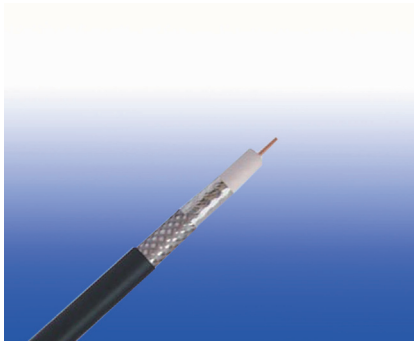
Zero  
Halogen Free  
IEC60754-1  
EN50267-2-1



DIN 4102-12  
Functional Integrity

## Fire Resistant RG6 A/U Coaxial Cables

RG6 A/U FR



### APPLICATION

The cables are designed for CCTV, security, smoke detection and evacuation monitoring applications, where continued functionality is required during a fire situation. Due to the zero halogen low smoke construction, this cable is ideal for use in public, commercial and industrial environments.

### STANDARDS

Basic design to MIL-C-17

### FIRE PERFORMANCE

Circuit Integrity	IEC 60331-23; BS 6387 CWZ; DIN VDE 0472-814(FE180); CEI 20-36/2-1; SS299-1; NBN C 30-004 (cat. F3); NF C32-070-2.3(CR1)
System Circuit Integrity	DIN 4102-12, E30 depending on lay system
Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk \* denotes superseded standard.



## CABLE CONSTRUCTION

**Conductors:** Bare copper wire, solid according to IEC 60228 class 1.

**Insulation:** Foamed PE wrapped with fire resistant silicone rubber compound type EI2 as per BS 7655-1.1 or fluoropolymer(FEP) compound.

**Binder:** Glass tape

**Overall Screen:** AL foil(100%)+AL braid (70%)

**Outer Sheath:** Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

## PHYSICAL AND THERMAL PROPERTIES

**Temperature range during operation (fixed state):** -30°C - +70°C

**Temperature range during installation (mobile state):** -5°C - +60°C

**Minimum bending radius:** 8 x Overall Diameter

## ELECTRICAL PROPERTIES

Impedance	75±5Ω
Capacitance	54 nF/km
Velocity ratio(%)	82
Insulation resistance	>5000 Mohm.Km
Shield coverage	AL foil(100%)+AL 70%
DC resistance	
Inner conductor	23.1 Ω/km
Outer conductor	31 Ω/km

## ATTENUATION

Frequency(MHz)	Attenuation (dB/100 m)	Attenuation (dB/100ft)
50	5.0	1.5
100	6.4	1.96
200	9.2	2.8
500	14.5	4.4
600	15.9	4.9
800	17.7	5.4
1000	21.9	6.7
1350	24.9	7.6
1750	29.0	8.8
2050	33.1	10.1
2400	36.4	11.1

## RETURN LOSS

Frequency(MHz)	Return Loss (dB)
30-300	>28dB
300-600	>24dB
600-900	>22dB

## CONSTRUCTION PARAMETERS

Cable Code	Conductor Diameter	Nominal Insulation Diameter	Nominal Screen No. x Diameter	Nominal Overall Diameter	Approx. Weight
	mm	mm	No. x mm	mm	kg/km
RG6 A/U FR	1.02	4.57 ± 0.20	96 x 0.12	7.00 ± 0.20	81.6



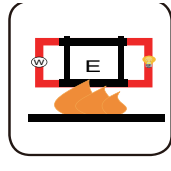
300/500V

Rated Voltage



MIL-C-17

Standard



IEC 60331/BS 6387  
NF C32-070-2.3(CR1)  
Circuit Integrity



Reduced Fire Propagation  
NF C32-070-2.2(C1)  
IEC60332-3-24/EN50266-2-4



NF C32-070-2.1(C2)  
IEC60332-1-2/EN50265-2-1  
Flame Retardancy



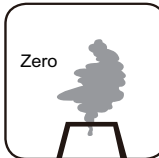
NES 02-713/NF C 20-454  
Low Toxicity



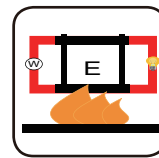
IEC60754-2  
EN50267-2-2/3  
NF C 32-074  
Low Corrosivity



IEC 61034-1&2  
EN 50268-1&2/NF C32-07  
Low Smoke Emission



Zero  
Halogen Free  
IEC60754-1  
EN50267-2-1

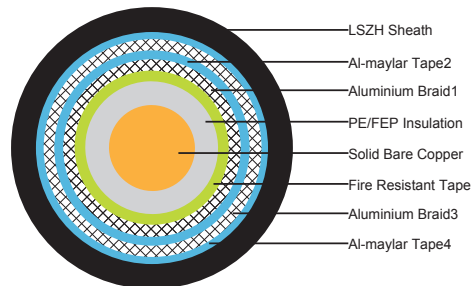
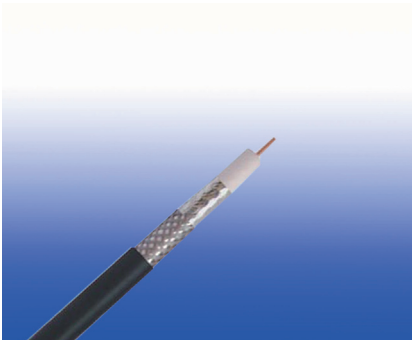


DIN 4102-12  
Functional Integrity



## Fire Resistant RG6 QUAD Coaxial Cables

RG6 QUAD FR



### APPLICATION

The cables are designed for CCTV, security, smoke detection and evacuation monitoring applications, where continued functionality is required during a fire situation. Due to the zero halogen low smoke construction, this cable is ideal for use in public, commercial and industrial environments.

### STANDARDS

Basic design to MIL-C-17

### FIRE PERFORMANCE

Circuit Integrity	IEC 60331-23; BS 6387 CWZ; DIN VDE 0472-814(FE180); CEI 20-36/2-1; SS299-1; NBN C 30-004 (cat. F3); NF C32-070-2.3(CR1)
System Circuit Integrity	DIN 4102-12, E30 depending on lay system
Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk \* denotes superseded standard.

## CABLE CONSTRUCTION

**Conductors:** Copper clad steel, solid according to IEC 60228 class 1.

**Insulation:** Foamed PE wrapped with fire resistant silicone rubber compound type EI2 as per BS 7655-1.1 or fluoropolymer(FEP) compound.

**Binder:** Glass tape

**Overall Screen:**

Screen1: Al-maylar Tape  $\geq 25\%$

Screen2: Aluminium Braid

Screen3: Al-maylar Tape  $\geq 25\%$

Screen4: Aluminium Braid

**Outer Sheath:** Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

## PHYSICAL AND THERMAL PROPERTIES

**Temperature range during operation (fixed state):**  $-30^{\circ}\text{C} - +70^{\circ}\text{C}$

**Temperature range during installation (mobile state):**  $-5^{\circ}\text{C} - +60^{\circ}\text{C}$

**Minimum bending radius:** 8 x Overall Diameter

## ELECTRICAL PROPERTIES

Impedance	$75 \pm 5 \Omega$
Capacitance	54 nF/km
Velocity ratio(%)	82
Insulation resistance	$> 5000 \text{ Mohm.Km}$
Shield coverage	$\geq 60\%$
Max.conductor resistance	24.1 $\Omega/\text{km}$

## ATTENUATION

Frequency(MHz)	Attenuation (dB/100 m)	Attenuation (dB/100ft)
50	4.8	1.5
100	6.7	2.0
200	9.3	2.8
500	15.0	4.6
600	16.9	5.1
800	19.4	5.9
1000	21.6	6.6
1350	24.2	7.4
1750	28.0	8.4





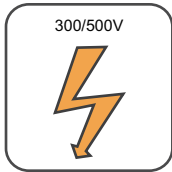
2150	31.5	9.6
2400	32.8	10.0
3000	37.9	11.5

### RETURN LOSS

Frequency(MHz)	Return Loss (dB)
30-300	>28dB
300-600	>24dB
600-900	>22dB

### CONSTRUCTION PARAMETERS

Cable Code	Conductor Diameter	Nominal Insulation Diameter	Nominal Screen2 No.x Diameter	Nominal Screen4 No.x Diameter	Nominal Overall Diameter	Approx. Weight
	mm	mm	No. x mm	No. x mm	mm	kg/km
RG6 QUAD FR	1.02	4.60 ± 0.20	80 x 0.12	64 x 0.12	7.55 ± 0.20	92.4



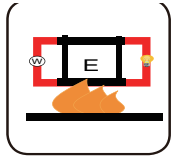
300/500V

Rated Voltage



MIL-C-17

Standard



IEC 60331/BS 6387  
NF C32-070-2.3(CR1)  
Circuit Integrity



Reduced Fire Propagation  
NF C32-070-2.2(C1)  
IEC60332-3-24/EN50266-2-4



NF C32-070-2.1(C2)  
IEC60332-1-2/EN50265-2-1  
Flame Retardancy



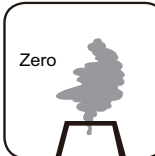
NES 02-713/NF C 20-454  
Low Toxicity



IEC60754-2  
EN50267-2-2/3  
NF C 32-074  
Low Corrosivity

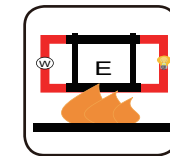


IEC 61034-1&2  
EN 50266-1&2/NF C32-07  
Low Smoke Emission



Zero

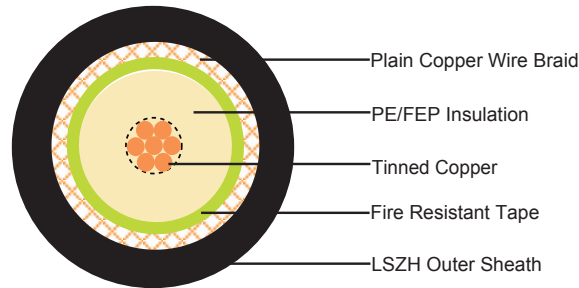
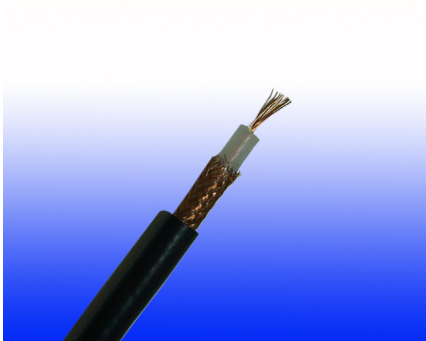
Halogen Free  
IEC60754-1  
EN50267-2-1



DIN 4102-12  
Functional Integrity

## Fire Resistant RG11 A/U Coaxial Cables

RG11 A/U FR



### APPLICATION

The cables are designed for CCTV, security, smoke detection and evacuation monitoring applications, where continued functionality is required during a fire situation. Due to the zero halogen low smoke construction, this cable is ideal for use in public, commercial and industrial environments.

### STANDARDS

Basic design to MIL-C-17

### FIRE PERFORMANCE

Circuit Integrity	IEC 60331-23; BS 6387 CWZ; DIN VDE 0472-814(FE180); CEI 20-36/2-1; SS299-1; NBN C 30-004 (cat. F3); NF C32-070-2.3(CR1)
System Circuit Integrity	DIN 4102-12, E30 depending on lay system
Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk \* denotes superseded standard.



## CABLE CONSTRUCTION

**Conductors:** Tinned copper copper wire, stranded according to IEC 60228 class 2.

**Insulation:** Low density PE wrapped with fire resistant silicone rubber compound type EI2 as per BS 7655-1.1 or fluoropolymer(FEP) compound.

**Binder:** Glass tape

**Overall Screen:** Plain copper wire braid

**Outer Sheath:** Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655:section 2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

## PHYSICAL AND THERMAL PROPERTIES

**Temperature range during operation (fixed state):** -30°C - +70°C

**Temperature range during installation (mobile state):** -5°C - +60°C

**Minimum bending radius:** 8 x Overall Diameter

## ELECTRICAL PROPERTIES

Impedance	75±5Ω
Capacitance	67 nF/km
Velocity ratio(%)	66
Insulation resistance	>2000 Mohm.Km
Shield coverage	97%
DC resistance	
Inner conductor	20.5 Ω/km
Outer conductor	4.5 Ω/km

## ATTENUATION

Frequency(MHz)	Attenuation (dB/100 m)	Attenuation (dB/100ft)
50	4.2	1.28
100	6.2	1.89
200	9.3	2.84
400	13.8	4.21
500	15.5	4.73
600	17.1	5.21
860	20.1	6.13
1000	23.4	7.13

## RETURN LOSS

Frequency(MHz)	Return Loss (dB)
30-300 MHz	>30dB
300-600 MHz	>27dB
600-900 MHz	>25dB

## CONSTRUCTION PARAMETERS

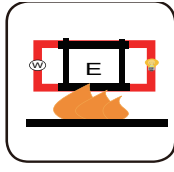
Cable Code	Conductor Diameter	Nominal Insulation Diameter	Nominal Screen No.x Diameter	Nominal Overall Diameter	Approx. Weight
	mm	mm	No. x mm	mm	kg/km
RG11 A/U FR	7 x 0.40	7.25 ± 0.18	192 x 0.18	10.3 ± 0.18	150



Rated Voltage



Standard



IEC 60331/BS 6387  
NF C32-070-2.3(CR1)  
Circuit Integrity



Reduced Fire Propagation  
NF C32-070-2.2(C1)  
IEC60332-3-24/EN50266-2-4



NF C32-070-2.1(C2)  
IEC60332-1-2/EN50265-2-1  
Flame Retardancy



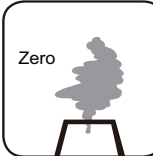
NES 02-713/NF C 20-454  
Low Toxicity



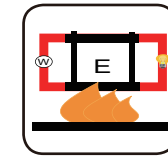
IEC60754-2  
EN50267-2-2/3  
NF C 32-074  
Low Corrosivity



IEC 61034-1&2  
EN 50268-1&2/NF C32-07  
Low Smoke Emission



Zero  
Halogen Free  
IEC60754-1  
EN50267-2-1



DIN 4102-12  
Functional Integrity