

RF-CABLES ⁷⁵Ω

Coaxial cables for CATV and
multimedia networks



KABELWERK EUPEN AG





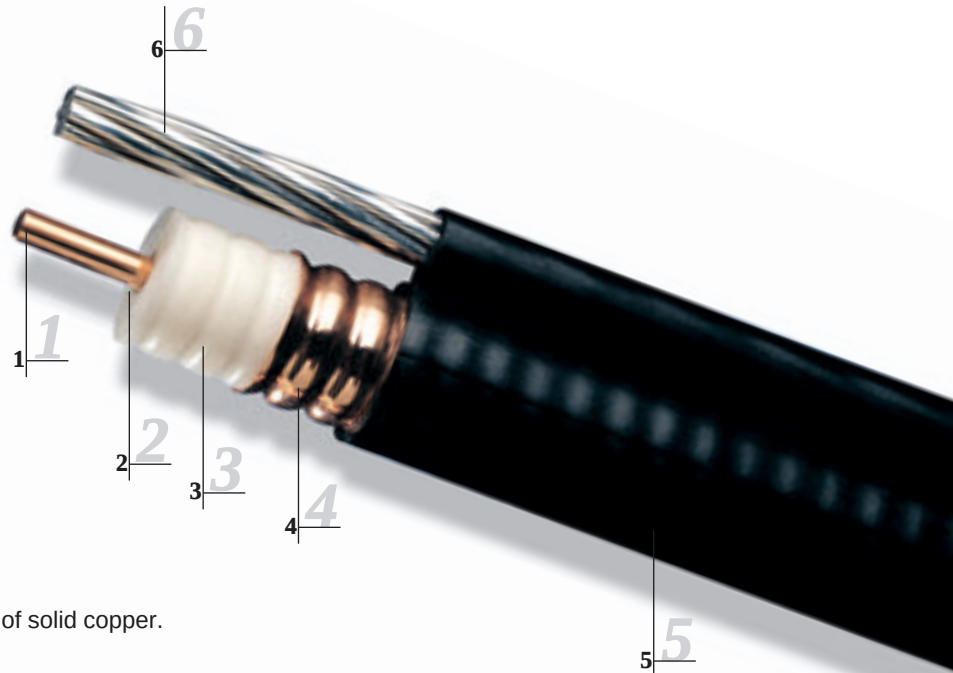
РАСПРЕДЕЛИТЕЛЬНЫЕ КАБЕЛИ

Trunk & Trunk & distribution cables *Distribution Cables*

Codes

		A	7	2	2	8	HLFR
		space		space			
Cable with / without messenger							
(None)	Cable without messenger						
A	AMS messenger						
Characteristic impedance							
7	75 Ω						
Cable size							
01 ... 99	Appr. diameter of dielectric (mm)						
Material of dielectric / outer conductor							
2	high density cellular PE / Copper						
8	low density cellular PE / Copper						
Outer sheath material							
(None)	PE						
HLFR	Halogen-free and flame-retardant sheath						

Description



- 1| The cables **inner conductor** is made of solid copper.
- 2| The foam dielectric is bonded to the inner conductor by a **precoating layer**. This layer ensures good adhesion of the inner conductor to the dielectric. It also allows easy and clean removal of the dielectric during connector installation.
- 3| The **dielectric** is made of cellular polyethylene foam manufactured by a unique insulating process using ozone friendly expansion gas. High foaming ratio guarantees low attenuation transmission.
- 4| The ring-corrugation of the copper **outer conductor** improves bending performances and ensures the good adhesion of the outer conductor to the dielectric.
Highest possible screening attenuation is obtained with the metallically closed tube outer conductor. The **copper** outer conductor material increases service life and reduces systems maintenance costs due to long term reliable connector contacts and high corrosion resistance compared to cables where aluminium is used.
With this unique construction no relative movement between inner and outer conductor occurs due to bending, pulling and temperature variations.
- 5| The standard cable construction uses all weather-resistant black polyethylene as **outer sheath**. For additional requirements regarding flame-retardancy the coaxial cables are available with a flame-retardant and halogen-free outer sheath. In this construction they meet the international standards on flame propagation acc. to IEC 60332-3, smoke density acc. to IEC 61034 and evolved gases acc. to IEC 60754.
- 6| As an option, most of our trunk and distribution cables are available with one Aluminium-Magnesium-Silicium alloy (AMS) **messenger**.



Trunk & distribution cables

Cable type	underground	7062
Size: 1/4"		
		<i>Nominal</i>
		Tolerances
Construction		
Inner Conductor		
Material and construction	-	copper wire
Diameter	mm	1.4
Dielectric		
Material	-	gas-injected cellular PE
Diameter	mm	6.5
Outer conductor		
Material and construction	-	corrugated copper tube
Diameter over outer conductor	mm	7.5
Outer sheath		
Material	-	black polyethylene
Thickness	mm	1.1
Overall diameter	mm	9.7
		< 10.1
Mechanical characteristics		
Minimum bending radius		
1 x	cm	3
10 x	cm	5
Maximum pulling strength		
without messenger	daN	35
Weight	kg/km	111

Trunk & distribution cables

Cable type	underground	7062	
Size: 1/4"			
		Nominal	Tolerances
Electrical characteristics			
Characteristic impedance	Ω	75	± 2
Capacity	pF/m	54	
Relative propagation velocity (velocity ratio)	%	82	
DC-resistance of inner conductor at 20°C	Ω/km	11.2	
DC-resistance of outer conductor at 20°C	Ω/km	3.5	
Current rating (50-60) Hz	A	7	
Dielectric voltage strength	kV	1	
Longitudinal attenuation at 20°C		$\alpha[\text{dB}/100\text{m}] = a \cdot \sqrt{f[\text{MHz}]} + b \cdot f[\text{MHz}]$	
a =	-	0.418	
b =	-	0.0011	
5 MHz	dB/100m	0.94	< 0.99
10 MHz	dB/100m	1.33	< 1.40
30 MHz	dB/100m	2.32	< 2.44
50 MHz	dB/100m	3.01	< 3.16
100 MHz	dB/100m	4.29	< 4.50
200 MHz	dB/100m	6.13	< 6.44
300 MHz	dB/100m	7.57	< 7.95
400 MHz	dB/100m	8.80	< 9.24
470 MHz	dB/100m	9.58	< 10.06
600 MHz	dB/100m	10.90	< 11.44
800 MHz	dB/100m	12.70	< 13.34
860 MHz	dB/100m	13.20	< 13.86
1000 MHz	dB/100m	14.32	< 15.03
Return loss (3 peak values up to 4 dB lower are permissible)			
5 - 470 MHz	dB	> 23	
470 - 862 MHz	dB	> 20	
Screening attenuation (30 - 1000 MHz)	dB	>> 120	



Trunk & distribution cables

Cable type	underground	7088
Size: 2.0/8.3	aerial	A 7088
		<i>Nominal</i>
		<i>Tolerances</i>
Construction		
Inner Conductor		
Material and construction	-	copper wire
Diameter	mm	2.02
Dielectric		
Material	-	gas-injected cellular PE
Diameter	mm	8.3
Outer conductor		
Material and construction	-	corrugated copper tube
Diameter over outer conductor	mm	9.3
Outer sheath		
Material	-	black polyethylene
Thickness	mm	1.0
Overall diameter	mm	11.3
		< 11.7
Cable with messenger		
Messenger		
Material	-	AMS
Construction	... x mm	7 x 1.52
Diameter over messenger	mm	7.0
Overall dimensions	mm	20.8/11.3
Mechanical characteristics		
Minimum bending radius		
1 x	cm	8
10 x	cm	15
Maximum pulling strength (without messenger)	daN	50
Weight	kg/km	145
Cable with messenger		
Minimum breaking strength of messenger	daN	400
Modulus of elasticity	daN/mm ²	62000
Thermal coefficient of linear expansion	1/°C	23 x 10⁻⁶
Weight	kg/km	205



7088, A 7088

Trunk & distribution cables

Cable type		7088	
Size: 2.0/8.3		A 7088	
		Nominal	Tolerances
Electrical characteristics			
Characteristic impedance	Ω	75	± 2
Capacity	pF/m	50	
Relative propagation velocity (velocity ratio)	%	88	
DC-resistance of inner conductor at 20°C	Ω/km	5.3	
DC-resistance of outer conductor at 20°C	Ω/km	2.6	
Current rating (50 - 60) Hz	A	11	
Dielectric voltage strength	kV	2	
Longitudinal attenuation at 20°C		$\alpha[\text{dB}/100\text{m}] = a \cdot \sqrt{f[\text{MHz}]} + b \cdot f[\text{MHz}]$	
a =	-	0.296	
b =	-	0.00085	
5 MHz	dB/100m	0.67	< 0.70
10 MHz	dB/100m	0.94	< 0.99
30 MHz	dB/100m	1.65	< 1.73
50 MHz	dB/100m	2.14	< 2.24
100 MHz	dB/100m	3.05	< 3.20
200 MHz	dB/100m	4.36	< 4.57
300 MHz	dB/100m	5.38	< 5.65
400 MHz	dB/100m	6.26	< 6.57
470 MHz	dB/100m	6.82	< 7.16
600 MHz	dB/100m	7.76	< 8.15
800 MHz	dB/100m	9.05	< 9.50
860 MHz	dB/100m	9.41	< 9.88
1000 MHz	dB/100m	10.21	< 10.72
Return loss (3 peak values up to 4 dB lower are permissible)			
5 - 470 MHz	dB	> 23	
470 - 862 MHz	dB	> 20	
Screening attenuation (30 - 1000 MHz)	dB	>> 120	



Trunk & distribution cables

Cable type	underground	7098	
Size: 2.1/8.7	aerial	A 7098	
		<i>Nominal</i>	<i>Tolerances</i>
Construction			
Inner Conductor			
Material and construction	-	copper wire	
Diameter	mm	2.1	
Dielectric			
Material	-	gas-injected cellular PE	
Diameter	mm	8.75	
Outer conductor			
Material and construction	-	smooth copper tube	
Diameter over outer conductor	mm	9.3	
Outer sheath			
Material	-	black polyethylene	
Thickness	mm	1.0	
Overall diameter	mm	11.3	< 11.7
Cable with messenger			
Messenger			
Material	-	AMS	
Construction	... x mm	7 x 1.52	
Diameter over messenger	mm	6.5	
Overall dimensions	mm	20.3/11.3	
Mechanical characteristics			
Minimum bending radius			
1 x	cm	15	
10 x	cm	20	
Maximum pulling strength (without messenger)	daN	50	
Weight	kg/km	150	
Cable with messenger			
Minimum breaking strength of messenger	daN	400	
Modulus of elasticity	daN/mm ²	62000	
Thermal coefficient of linear expansion	1/°C	23 x 10 ⁻⁶	
Weight	kg/km	215	



7098, A 7098

Trunk & distribution cables

Cable type		7098	
Size: 2.1/8.7		A 7098	
		Nominal	Tolerances
Electrical characteristics			
Characteristic impedance	Ω	75	± 2
Capacity	pF/m	50	
Relative propagation velocity (velocity ratio)	%	88	
DC-resistance of inner conductor at 20°C	Ω/km	4.9	
DC-resistance of outer conductor at 20°C	Ω/km	2.4	
Current rating (50 - 60) Hz	A	12	
Dielectric voltage strength	kV	2	
Longitudinal attenuation at 20°C			
$\alpha[\text{dB}/100\text{m}] = a \cdot \sqrt{f[\text{MHz}]} + b \cdot f[\text{MHz}]$			
a =	-	0.28	
b =	-	0.0008	
5 MHz	dB/100m	0.63	< 0.66
10 MHz	dB/100m	0.89	< 0.94
30 MHz	dB/100m	1.56	< 1.64
50 MHz	dB/100m	2.02	< 2.12
100 MHz	dB/100m	2.88	< 3.02
200 MHz	dB/100m	4.12	< 4.33
300 MHz	dB/100m	5.09	< 5.34
400 MHz	dB/100m	5.92	< 6.22
470 MHz	dB/100m	6.45	< 6.77
600 MHz	dB/100m	7.34	< 7.71
800 MHz	dB/100m	8.56	< 8.99
860 MHz	dB/100m	8.90	< 9.34
1000 MHz	dB/100m	9.65	< 10.14
Return loss (3 peak values up to 4 dB lower are permissible)			
5 - 470 MHz	dB	> 23	
470 - 862 MHz	dB	> 20	
Screening attenuation (30 - 1000 MHz)	dB	>> 120	



Trunk & distribution cables

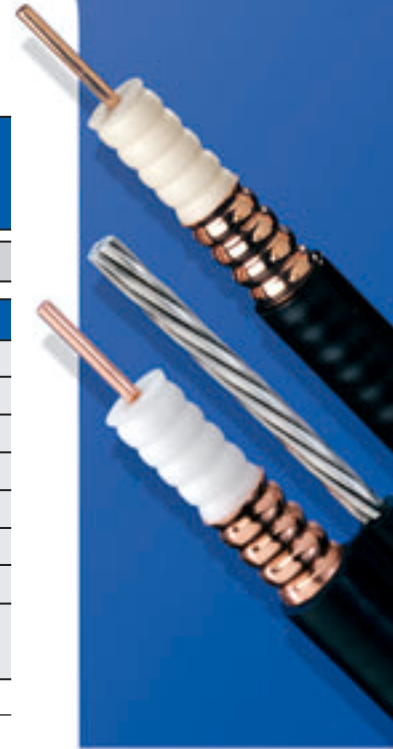
Cable type	underground	7118
Size: 2.65/11.0	aerial	A 7118
		<i>Nominal</i> <i>Tolerances</i>
Construction		
Inner Conductor		
Material and construction	-	copper wire
Diameter	mm	2.65
Dielectric		
Material	-	gas-injected cellular PE
Diameter	mm	11.2
Outer conductor		
Material and construction	-	corrugated copper tube
Diameter over outer conductor	mm	12.0
Outer sheath		
Material	-	black polyethylene
Thickness	mm	1.1
Overall diameter	mm	14.3 < 14.6
Cable with messenger		
Messenger		
Material	-	AMS
Construction	... x mm	7 x 1.7
Diameter over messenger	mm	7.5
Overall dimensions	mm	24.3/14.3
Mechanical characteristics		
Minimum bending radius		
1 x	cm	10
10 x	cm	18
Maximum pulling strength (without messenger)	daN	75
Weight	kg/km	210
Cable with messenger		
Minimum breaking strength of messenger	daN	500
Modulus of elasticity	daN/mm ²	62000
Thermal coefficient of linear expansion	1/°C	23 x 10⁻⁶
Weight	kg/km	280



7118, A 7118

Trunk & distribution cables

Cable type		7118	
Size: 2.65/11.0		A 7118	
		Nominal	Tolerances
Electrical characteristics			
Characteristic impedance	Ω	75	± 2
Capacity	pF/m	50	
Relative propagation velocity (velocity ratio)	%	88	
DC-resistance of inner conductor at 20°C	Ω/km	3.05	
DC-resistance of outer conductor at 20°C	Ω/km	2.05	
Current rating (50 - 60) Hz	A	16	
Dielectric voltage strength	kV	3	
Longitudinal attenuation at 20°C		$\alpha[\text{dB}/100\text{m}] = a \cdot \sqrt{f[\text{MHz}]} + b \cdot f[\text{MHz}]$	
a = -		0.228	
b = -		0.0007	
5 MHz	dB/100m	0.51	< 0.54
10 MHz	dB/100m	0.73	< 0.76
30 MHz	dB/100m	1.27	< 1.33
50 MHz	dB/100m	1.65	< 1.73
100 MHz	dB/100m	2.35	< 2.47
200 MHz	dB/100m	3.36	< 3.53
300 MHz	dB/100m	4.16	< 4.37
400 MHz	dB/100m	4.84	< 5.08
470 MHz	dB/100m	5.27	< 5.54
600 MHz	dB/100m	6.00	< 6.31
800 MHz	dB/100m	7.01	< 7.36
860 MHz	dB/100m	7.29	< 7.65
1000 MHz	dB/100m	7.91	< 8.31
Return loss (3 peak values up to 4 dB lower are permissible)			
5 - 470 MHz	dB	> 23	
470 - 862 MHz	dB	> 20	
Screening attenuation (30 - 1000 MHz)	dB	>> 120	





Trunk & distribution cables

Cable type	underground	7128
Size: 1/2"	aerial	A 7128
		<i>Nominal</i> Tolerances
Construction		
Inner Conductor		
Material and construction	-	copper wire
Diameter	mm	3.1
Dielectric		
Material	-	gas-injected cellular PE
Diameter	mm	12.4
Outer conductor		
Material and construction	-	corrugated copper tube
Diameter over outer conductor	mm	13.7
Outer sheath		
Material	-	black polyethylene
Thickness	mm	1.1
Overall diameter	mm	16.0 < 16.3
Cable with messenger		
Messenger		
Material	-	AMS
Construction	... x mm	7 x 1.7
Diameter over messenger	mm	7.5
Overall dimensions	mm	26/16
Mechanical characteristics		
Minimum bending radius		
1 x	cm	12
10 x	cm	20
Maximum pulling strength (without messenger)	daN	85
Weight	kg/km	245
Cable with messenger		
Minimum breaking strength of messenger	daN	500
Modulus of elasticity	daN/mm ²	62000
Thermal coefficient of linear expansion	1/°C	23 x 10⁻⁶
Weight	kg/km	305



7128, A 7128

Trunk & distribution cables

Cable type	underground	7128
Size: 1/2"	aerial	A 7128
		Nominal Tolerances
Electrical characteristics		
Characteristic impedance	Ω	75 ± 2
Capacity	pF/m	50
Relative propagation velocity (velocity ratio)	%	88
DC-resistance of inner conductor at 20°C	Ω/km	2.3
DC-resistance of outer conductor at 20°C	Ω/km	1.95
Current rating (50 - 60) Hz	A	20
Dielectric voltage strength	kV	3
Longitudinal attenuation at 20°C		
$\alpha[\text{dB}/100\text{m}] = a \cdot \sqrt{f[\text{MHz}]} + b \cdot f[\text{MHz}]$		
a =	-	0.197
b =	-	0.0007
5 MHz	dB/100m	0.44 < 0.47
10 MHz	dB/100m	0.63 < 0.66
30 MHz	dB/100m	1.10 < 1.16
50 MHz	dB/100m	1.43 < 1.50
100 MHz	dB/100m	2.04 < 2.14
200 MHz	dB/100m	2.93 < 3.07
300 MHz	dB/100m	3.62 < 3.80
400 MHz	dB/100m	4.22 < 4.43
470 MHz	dB/100m	4.60 < 4.83
600 MHz	dB/100m	5.25 < 5.51
800 MHz	dB/100m	6.13 < 6.44
860 MHz	dB/100m	6.38 < 6.70
1000 MHz	dB/100m	6.93 < 7.28
Return loss (3 peak values up to 4 dB lower are permissible)		
5 - 470 MHz	dB	> 26
470 - 862 MHz	dB	> 22
Screening attenuation (30 - 1000 MHz)	dB	>> 120





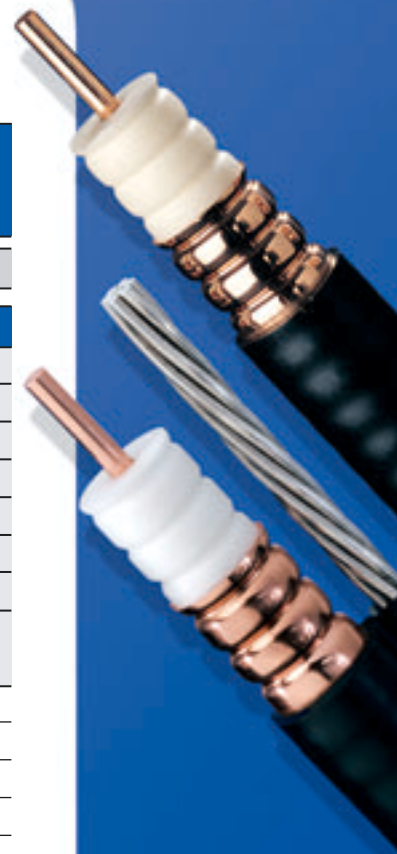
Trunk & distribution cables

Cable type	underground	7168
Size: 5/8"	aerial	A 7168
		<i>Nominal</i> Tolerances
Construction		
Inner Conductor		
Material and construction	-	copper wire
Diameter	mm	3.9
Dielectric		
Material	-	gas-injected cellular PE
Diameter	mm	16.0
Outer conductor		
Material and construction	-	corrugated copper tube
Diameter over outer conductor	mm	17.2
Outer sheath		
Material	-	black polyethylene
Thickness	mm	1.3
Overall diameter	mm	19.8 < 20.1
Cable with messenger		
Messenger		
Material	-	AMS
Construction	... x mm	7 x 2.0
Diameter over messenger	mm	8.5
Overall dimensions	mm	30.8/19.8
Mechanical characteristics		
Minimum bending radius		
1 x	cm	15
10 x	cm	25
Maximum pulling strength (without messenger)	daN	130
Weight	kg/km	360
Cable with messenger		
Minimum breaking strength of messenger	daN	700
Modulus of elasticity	daN/mm ²	62000
Thermal coefficient of linear expansion	1/°C	23 x 10⁻⁶
Weight	kg/km	455

7168, A 7168

Trunk & distribution cables

Cable type		7168	
Size: 5/8"		A 7168	
		Nominal	Tolerances
Electrical characteristics			
Characteristic impedance	Ω	75	± 2
Capacity	pF/m	50	
Relative propagation velocity (velocity ratio)	%	88	
DC-resistance of inner conductor at 20°C	Ω/km	1.42	
DC-resistance of outer conductor at 20°C	Ω/km	1.4	
Current rating (50 - 60) Hz	A	26	
Dielectric voltage strength	kV	4	
Longitudinal attenuation at 20°C		$\alpha[\text{dB}/100\text{m}] = a \cdot \sqrt{f[\text{MHz}]} + b \cdot f[\text{MHz}]$	
a = -		0.153	
b = -		0.00065	
5 MHz	dB/100m	0.35	< 0.36
10 MHz	dB/100m	0.49	< 0.51
30 MHz	dB/100m	0.86	< 0.90
50 MHz	dB/100m	1.11	< 1.17
100 MHz	dB/100m	1.60	< 1.67
200 MHz	dB/100m	2.29	< 2.41
300 MHz	dB/100m	2.85	< 2.99
400 MHz	dB/100m	3.32	< 3.49
470 MHz	dB/100m	3.62	< 3.80
600 MHz	dB/100m	4.14	< 4.34
800 MHz	dB/100m	4.85	< 5.09
860 MHz	dB/100m	5.05	< 5.30
1000 MHz	dB/100m	5.49	< 5.76
Return loss (3 peak values up to 4 dB lower are permissible)			
5 - 470 MHz	dB	> 26	
470 - 862 MHz	dB	> 22	
Screening attenuation (30 - 1000 MHz)	dB	>> 120	





Trunk & distribution cables

Cable type	underground	7228
Size: 7/8"	aerial	A 7228
		<i>Nominal</i> Tolerances
Construction		
Inner Conductor		
Material and construction	-	copper wire
Diameter	mm	5.7
Dielectric		
Material	-	gas-injected cellular PE
Diameter	mm	23.5
Outer conductor		
Material and construction	-	corrugated copper tube
Diameter over outer conductor	mm	25.0
Outer sheath		
Material	-	black polyethylene
Thickness	mm	1.5
Overall diameter	mm	28.0 < 28.3
Cable with messenger		
Messenger		
Material	-	AMS
Construction	... x mm	7 x 3.15
Diameter over messenger	mm	12.5
Overall dimensions	mm	43/28
Mechanical characteristics		
Minimum bending radius		
1 x	cm	20
10 x	cm	30
Maximum pulling strength (without messenger)	daN	225
Weight	kg/km	640
Cable with messenger		
Minimum breaking strength of messenger	daN	1750
Modulus of elasticity	daN/mm ²	62000
Thermal coefficient of linear expansion	1/°C	23 x 10⁻⁶
Weight	kg/km	845



7228, A 7228

Trunk & distribution cables

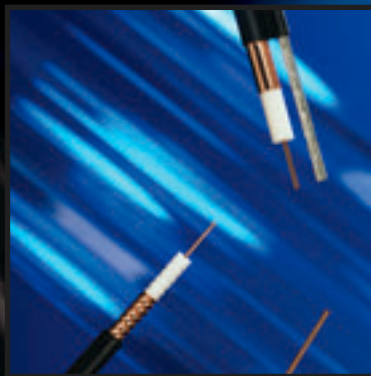
Cable type		7228	
Size: 7/8"		A 7228	
		Nominal	Tolerances
Electrical characteristics			
Characteristic impedance	Ω	75	± 2
Capacity	pF/m	50	
Relative propagation velocity (velocity ratio)	%	88	
DC-resistance of inner conductor at 20°C	Ω/km	0.68	
DC-resistance of outer conductor at 20°C	Ω/km	0.98	
Current rating (50 - 60) Hz	A	43	
Dielectric voltage strength	kV	6	
Longitudinal attenuation at 20°C		$\alpha[\text{dB}/100\text{m}] = a \cdot \sqrt{f[\text{MHz}]} + b \cdot f[\text{MHz}]$	
a = -		0.104	
b = -		0.00065	
5 MHz	dB/100m	0.24	< 0.25
10 MHz	dB/100m	0.34	< 0.35
30 MHz	dB/100m	0.59	< 0.62
50 MHz	dB/100m	0.77	< 0.81
100 MHz	dB/100m	1.11	< 1.16
200 MHz	dB/100m	1.60	< 1.68
300 MHz	dB/100m	2.00	< 2.10
400 MHz	dB/100m	2.34	< 2.46
470 MHz	dB/100m	2.56	< 2.69
600 MHz	dB/100m	2.94	< 3.08
800 MHz	dB/100m	3.46	< 3.63
860 MHz	dB/100m	3.61	< 3.79
1000 MHz	dB/100m	3.94	< 4.14
Return loss (3 peak values up to 4 dB lower are permissible)			
5 - 470 MHz	dB	> 26	
470 - 862 MHz	dB	> 22	
Screening attenuation (30 - 1000 MHz)	dB	>> 120	





АБОНЕНТСКИЕ КАБЕЛИ

Subscriber Subscriber cables *Cables*





Subscriber cables

Codes

A 7CW07CRT5V HS

Cable with / without messenger

(None) Cable without messenger
A AMS messenger

Characteristic impedance

7 75 Ω

Inner conductor

(None) Copper wire
CW Copper clad steel wire

Cable size

01 ... 99 Appr. diameter of dielectric (mm)

Construction of outer conductor

CR Tape, bonded to the dielectric
R Tape or foil (not bonded)
T Braid

Material of dielectric / outer conductor tape

2 High density cellular PE / Copper
3 Solid PE / Copper
5 High density cellular PE / Aluminium
8 Low density cellular PE / Copper

Outer sheath material

(None) PE
V PVC
HLFR Halogen-free and flame-retardant sheath

Special construction

PE PE protection tube
HS High Screened

Description



- 1 The cable **inner conductor** is made of solid copper or copper clad steel wire.
- 2 The foam dielectric is bonded to the inner conductor by a **precoating layer**. This layer ensures good adhesion of the inner conductor to the dielectric. It also permits easy and clean removal of the dielectric during connector installation.
- 3 The **dielectric** is made of cellular polyethylene foam manufactured by a unique insulating process. High foaming ratio guarantees low attenuation transmission.
- 4 The braid consists of bare or tinned copper wires. All braids have been optimized to provide optimal screening. An additional copper or aluminium tape contributes in improving screening efficiency.
- 5 The standard cable construction uses PVC, PE or all weather-resistant halogen-free polyethylene as **outer sheath**. For the PVC outer sheath, different colors are available (grey, white, ...)
- 6 As an option, most of the subscriber cables are available with one Aluminium-Magnesium-Silicium alloy (AMS) **messenger**.



Subscriber cables

Cable type		704TT3V	7CW04CRT2(V)	7CW04CRT5(V)-HS
Size		0.6/3.7	0.81/3.6	0.81/3.6
		<i>Nominal</i> Tolerances	<i>Nominal</i> Tolerances	<i>Nominal</i> Tolerances
Construction				
Inner Conductor				
Material and construction		copper wire	copper clad steel wire	
Diameter	mm	0.60	0.81	0.81
Dielectric				
Material		polyethylene	gas- injected cellular PE	
Diameter over dielectric	mm	3.7	3.6	3.6
Outer conductor				
Material and construction		copper, 2 braids	copper tape & braid	alu. tape & braid
Diameter over tape	mm	-	3.8	3.8
Outer sheath				
Material		PVC	PE (PVC)	PE (PVC)
Thickness	mm	0.9	0.8	0.8
Overall diameter	mm	6.5 < 6.7	6.0 < 6.4	6.0 < 6.4
Mechanical characteristics				
Minimum bending radius				
1 x	cm	3	3	3
10 x	cm	6	6	6
Maximum pulling strength				
without messenger	daN	5	15	15
Weight	kg/km	74	42	41



704... RG 59 family

Subscriber cables

Cable type Size	704TT3V 0.6/3.7		7CW04CRT2(V) 0.81/3.6		7CW04CRT5(V)-HS 0.81/3.6	
	Nominal	Tolerances	Nominal	Tolerances	Nominal	Tolerances
Electrical characteristics						
Characteristic impedance Ω	73	± 3	75	± 3	75	± 3
Capacity pF/m	69		54		54	
Relative propagation velocity (velocity ratio) %	66		82		82	
DC-resistance of inner conductor at 20°C Ω/km	61.0		81.5		81.5	
DC-resistance of outer conductor at 20°C Ω/km	6.0		11.0		11.5	
Current rating (50 - 60) Hz A	2.5		0.4		0.4	
Dielectric voltage strength kV	1		1		1	
Longitudinal attenuation at 20°C $\alpha[\text{dB}/100\text{m}] = a \cdot \sqrt{f[\text{MHz}]} + b \cdot f[\text{MHz}]$						
a = -	1.068		0.773		0.78	
b = -	0.0042		0.0015		0.0015	
5 MHz dB/100m	2.41	< 2.65	1.74	< 1.91	1.75	< 1.93
10 MHz dB/100m	3.42	< 3.76	2.46	< 2.71	2.48	< 2.73
30 MHz dB/100m	5.98	< 6.57	4.28	< 4.71	4.32	< 4.75
50 MHz dB/100m	7.76	< 8.54	5.54	< 6.10	5.59	< 6.15
100 MHz dB/100m	11.10	< 12.21	7.88	< 8.67	7.95	< 8.75
200 MHz dB/100m	15.94	< 17.54	11.23	< 12.36	11.33	< 12.46
300 MHz dB/100m	19.76	< 21.73	13.84	< 15.22	13.96	< 15.36
400 MHz dB/100m	23.04	< 25.34	16.06	< 17.67	16.20	< 17.82
470 MHz dB/100m	25.13	< 27.64	17.46	< 19.21	17.61	< 19.38
600 MHz dB/100m	28.68	< 31.55	19.83	< 21.82	20.01	< 22.01
800 MHz dB/100m	33.57	< 36.92	23.06	< 25.37	23.26	< 25.59
860 MHz dB/100m	34.93	< 38.43	23.96	< 26.35	24.16	< 26.58
1000 MHz dB/100m	37.97	< 41.77	25.94	< 28.54	26.17	< 28.78
Return loss (3 peak values up to 4 dB lower are permissible)						
5 - 470 MHz dB	> 20		> 20		> 20	
470 - 862 MHz dB	> 18		> 18		> 18	
Screening attenuation (30 - 1000 MHz) dB	> 65		> 85		> 90	
Transfer impedance (5 - 30 MHz) m Ω /m	< 30		< 5		< 5	
EN 50117 screening class	-		Class A		Class A	



Subscriber cables

Cable type	standard	7(CW)05CRT2(V)	7(CW)05CRT5(V)-HS	705CRT5(V)
	aerial	A 7(CW)05CRT2(V)		A 705CRT5(V)
Size		1.02/4.55	1.02/4.55	1.02/4.55
		<i>Nominal</i> Tolerances	<i>Nominal</i> Tolerances	<i>Nominal</i> Tolerances
Construction				
Inner Conductor				
Material and construction	-	copper (clad steel) wire		copper wire
Diameter	mm	1.02	1.02	1.02
Dielectric				
Material	-	gas- injected cellular PE		
Diameter	mm	4.55	4.55	4.55
Outer conductor				
Material and construction		copper tape & braid	aluminium tape & braid	
Diameter over tape	mm	4.8	4.8	4.8
Outer sheath				
Material	-	PE (PVC)	PE (PVC)	PE (PVC)
Thickness	mm	0.8	0.8	0.8
Overall diameter	mm	7.0 < 7.4	7.0 < 7.4	7.0 < 7.4
Cable with messenger				
Messenger				
Material	-	AMS	-	AMS
Construction	... x mm	1 x 2.0	-	1 x 2.0
Diameter over messenger	mm	3.5	-	3.5
Overall dimensions	mm	12/7	-	12/7
Mechanical characteristics				
Minimum bending radius				
1 x	cm	3.5	3.5	3.5
10 x	cm	7	7	7
Maximum pulling strength				
without messenger	daN	10 (CW: 20)	10 (CW: 20)	10
Weight	kg/km	47 (CW: 48)	52 (CW: 53)	36
Cable with messenger				
Minimum breaking strength of messenger	daN	100	-	100
Modulus of elasticity	daN/mm²	62000	-	62000
Thermal coefficient of linear expansion	1/°C	23 x 10 ⁻⁶	-	23 x 10 ⁻⁶
Weight	kg/km	65	-	52



705...^{RG6} family

Subscriber cables

Cable type	standard aerial	7(CW)05CRT2(V) A 7(CW)05CRT2(V) 1.02/4.55		7(CW)05CRT5(V)-HS 1.02/4.55		705CRT5(V) A 705CRT5(V) 1.02/4.55	
Size							
		Nominal	Tolerances	Nominal	Tolerances	Nominal	Tolerances
Electrical characteristics							
Characteristic impedance	Ω	75	± 3	75	± 3	75	± 3
Capacity	pF/m	54		54		54	
Relative propagation velocity (velocity ratio)	%	82		82		82	
DC-resistance of inner conductor at 20°C	Ω/km	20.6 (CW: 51.6)		20.6 (CW: 51.6)		20.6	
DC-resistance of outer conductor at 20°C	Ω/km	8.7		9.1		23.3	
Current rating (50 - 60) Hz	A	5.0 (CW: 0.5)		5.0 (CW: 0.5)		5.0	
Dielectric voltage strength	kV	1		1		1	
Longitudinal attenuation at 20°C		α[dB/100m] = a.√f[MHz] + b.f[MHz]					
a =	-	0.598		0.624		-	
b =	-	0.0015		0.0015		-	
5 MHz	dB/100m	1.34	< 1.41	1.40	< 1.54	1.79	< 1.97
10 MHz	dB/100m	1.91	< 2.00	1.99	< 2.19	2.35	< 2.58
30 MHz	dB/100m	3.32	< 3.49	3.46	< 3.81	3.75	< 4.13
50 MHz	dB/100m	4.30	< 4.52	4.49	< 4.94	4.73	< 5.21
100 MHz	dB/100m	6.13	< 6.44	6.39	< 7.03	6.55	< 7.21
200 MHz	dB/100m	8.76	< 9.19	9.12	< 10.04	9.16	< 10.08
300 MHz	dB/100m	10.81	< 11.35	11.26	< 12.38	11.21	< 12.33
400 MHz	dB/100m	12.56	< 13.19	13.08	< 14.39	12.95	< 14.25
470 MHz	dB/100m	13.67	< 14.35	14.23	< 15.66	14.05	< 15.46
600 MHz	dB/100m	15.55	< 16.33	16.18	< 17.80	15.92	< 17.52
800 MHz	dB/100m	18.11	< 19.02	18.85	< 20.73	18.48	< 20.33
860 MHz	dB/100m	18.83	< 19.77	19.59	< 21.55	19.19	< 21.11
1000 MHz	dB/100m	20.41	< 21.43	21.23	< 23.36	20.77	< 22.84
1750 MHz	dB/100m	27.64	< 29.02	28.73	< 31.60	-	-
2150 MHz	dB/100m	30.95	< 32.50	32.16	< 35.37	-	-
2400 MHz	dB/100m	32.90	< 34.54	34.17	< 37.59	-	-
Return loss (3 peak values up to 4 dB lower are permissible)							
5 - 470 MHz	dB	> 20		> 20		> 20	
470 - 862 MHz	dB	> 18		> 18		> 18	
Screening attenuation (30 - 1000 MHz)	dB	> 90		> 90		> 70	
Transfer impedance (5 - 30 MHz)	mΩ/m	< 5		< 5		< 20	
EN 50117 screening class		Class A		Class A		-	

SAT



Subscriber cables

Cable type	standard aerial	707CRT2(V) A 707CRT2(V) 1.63/7.2	707CRT5(V) A 707CRT5(V) 1.63/7.2	707RT8(V) 1.7/6.9
Size				
		<i>Nominal</i> Tolerances	<i>Nominal</i> Tolerances	<i>Nominal</i> Tolerances
Construction				
Inner Conductor				
Material and construction	-	copper wire		
Diameter	mm	1.63	1.63	1.70
Dielectric				
Material	-	gas- injected cellular PE		
Diameter	mm	7.2	7.2	6.9
Outer conductor				
Material and construction	-	copper tape & braid	aluminium tape & braid	copper tape & braid
Diameter over tape	mm	7.4	7.4	7.1
Outer sheath				
Material	-	PE (PVC)	PE (PVC)	PE (PVC)
Thickness	mm	1.0	1.0	1.5
Overall diameter	mm	10.0 < 10.4	10.0 < 10.4	10.4 < 10.7
Cable with messenger				
Messenger				
Material	-	AMS	AMS	-
Construction	... x mm	1 x 3.15	1 x 3.15	-
Diameter over messenger	mm	5.5	5.5	-
Overall dimensions	mm	17/10	17/10	-
Mechanical characteristics				
Minimum bending radius				
1 x	cm	5	5	10
10 x	cm	10	10	25
Maximum pulling strength				
without messenger	daN	15	10	40
Weight	kg/km	87	72	112
Cable with messenger				
Minimum breaking strength of messenger	daN	250	250	-
Modulus of elasticity	daN/mm ²	62000	62000	-
Thermal coefficient of linear expansion	1/°C	23 x 10⁻⁶	23 x 10⁻⁶	-
Weight	kg/km	125	109	-



707...^{RG.11} family

Subscriber cables

Cable type	standard aerial	707CRT2(V) A 707CRT2(V) 1.63/7.2	707CRT5(V) A 707CRT5(V) 1.63/7.2	707RT8(V) 1.7/6.9
Size				
		Nominal Tolerances	Nominal Tolerances	Nominal Tolerances
Electrical characteristics				
Characteristic impedance	Ω	75 ± 3	75 ± 3	75 ± 3
Capacity	pF/m	54	54	50
Relative propagation velocity (velocity ratio)	%	82	82	88
DC-resistance of inner conductor at 20°C	Ω/km	8.2	8.2	7.6
DC-resistance of outer conductor at 20°C	Ω/km	6.8	9.2	7.6
Current rating (50 - 60) Hz	A	9	9	9.5
Dielectric voltage strength	kV	2	2	2
Longitudinal attenuation at 20°C α [dB/100m] = a.√f[MHz] + b.f[MHz]				
a =	-	0.37	-	0.345
b =	-	0.0016	-	0.0007
5 MHz	dB/100m	0.84 < 0.88	1.17 < 1.29	0.77 < 0.85
10 MHz	dB/100m	1.19 < 1.25	1.51 < 1.66	1.10 < 1.21
30 MHz	dB/100m	2.07 < 2.18	2.36 < 2.60	1.91 < 2.10
50 MHz	dB/100m	2.70 < 2.83	2.96 < 3.25	2.47 < 2.72
100 MHz	dB/100m	3.86 < 4.05	4.09 < 4.50	3.52 < 3.87
200 MHz	dB/100m	5.55 < 5.83	5.75 < 6.32	5.02 < 5.52
300 MHz	dB/100m	6.89 < 7.23	7.07 < 7.77	6.19 < 6.80
400 MHz	dB/100m	8.04 < 8.44	8.21 < 9.03	7.18 < 7.90
470 MHz	dB/100m	8.77 < 9.21	8.95 < 9.84	7.81 < 8.59
600 MHz	dB/100m	10.02 < 10.52	10.20 < 11.22	8.87 < 9.76
800 MHz	dB/100m	11.75 < 12.33	11.94 < 13.14	10.32 < 11.35
860 MHz	dB/100m	12.23 < 12.84	12.43 < 13.68	10.72 < 11.79
1000 MHz	dB/100m	13.30 < 13.97	13.53 < 14.88	11.61 < 12.77
1750 MHz	dB/100m	18.28 < 19.19	-	-
2150 MHz	dB/100m	20.60 < 21.63	-	-
2400 MHz	dB/100m	21.97 < 23.06	-	-
Return loss (3 peak values up to 4 dB lower are permissible)				
5 - 470 MHz	dB	> 23	> 23	> 23 *
470 - 862 MHz	dB	> 20	> 20	> 19 *
Screening attenuation (30 - 1000 MHz)	dB	> 90	> 70	> 75
Transfer impedance (5 - 30 MHz)	m Ω/m	< 5	< 20	< 10
EN 50117 screening class		Class A	-	Class B

* 707RT8(V) also complies with NF C-132-2