



Cable type	underground:	7082
Size: 1.75/8.20	aerial:	A 7082
	Units	Nominal

Construction

INNER CONDUCTOR			
Material and construction	-	copper wire	
Diameter	mm	1.75	
DIELECTRIC			
Material	-	gas-injected cellular PE	
Diameter	mm	8.2	
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	
OVERALL DIMENSIONS	mm	20.8/11.3	

Mechanical characteristics

Minimum bending radius			
	1 x	cm	4.5
	10 x	cm	7.5
Maximum pulling strength (without messenger)		daN	50
Weight		kg/km	145

Cable with messenger

Minimum breaking strength of messenger	daN	400
Modulus of elasticity	N/mm ²	62000
Thermal coefficient of linear expansion	1/°C	23 x 10 ⁻⁶
Weight	kg/km	200

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	7.1	
DC-resistance of outer conductor at 20°C	Ω/km	2.6	
Current rating (50 - 60) Hz	A	9	
Dielectric voltage strength	kV	2	
Longitudinal attenuation at 20°C	$\alpha(f_{[MHz]}) = a \cdot \sqrt{f_{[MHz]}} + b \cdot f_{[MHz]}$		
	a =	-	0.342
	b =	-	0.00095
	5 MHz	dB/100m	0.77 < 0.81
	10 MHz	dB/100m	1.09 < 1.15
	30 MHz	dB/100m	1.90 < 2.00
	50 MHz	dB/100m	2.47 < 2.59
	100 MHz	dB/100m	3.52 < 3.69
	200 MHz	dB/100m	5.03 < 5.28
	300 MHz	dB/100m	6.21 < 6.52
	400 MHz	dB/100m	7.22 < 7.58
	470 MHz	dB/100m	7.86 < 8.25
	600 MHz	dB/100m	8.95 < 9.39
	800 MHz	dB/100m	10.43 < 10.95
	860 MHz	dB/100m	10.85 < 11.39
	1000 MHz	dB/100m	11.76 < 12.35
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

