



Cable type	underground:	7168
Size: 5/8" - LD	aerial:	A 7168
	Units	Nominal

### Construction

<b>INNER CONDUCTOR</b>			
Material and construction	-	copper wire	
Diameter	mm	3.9	
<b>DIELECTRIC</b>			
Material	-	gas-injected cellular PE	
Diameter	mm	16.0	
<b>OUTER CONDUCTOR</b>			
Material and construction	-	corrugated copper tube	
Diameter over outer conductor	mm	17.2	
<b>OUTER SHEATH</b>			
Material	-	black polyethylene	
Thickness	mm	1.3	
Overall diameter	mm	19.8	< 20.1

### Cable with messenger

<b>MESSENGER</b>			
Material	-	AMS	
Construction	.. X mm	7 x 2	
Diameter over messenger	mm	8.5	
<b>OVERALL DIMENSIONS</b>	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	N/mm <sup>2</sup>	62000
Thermal coefficient of linear expansion	1/°C	23 x 10 <sup>-6</sup>
Weight	kg/km	455

### 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	$\alpha(f_{[MHz]}) = a \cdot \sqrt{f_{[MHz]}} + b \cdot f_{[MHz]}$		
	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

