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S 33 48"
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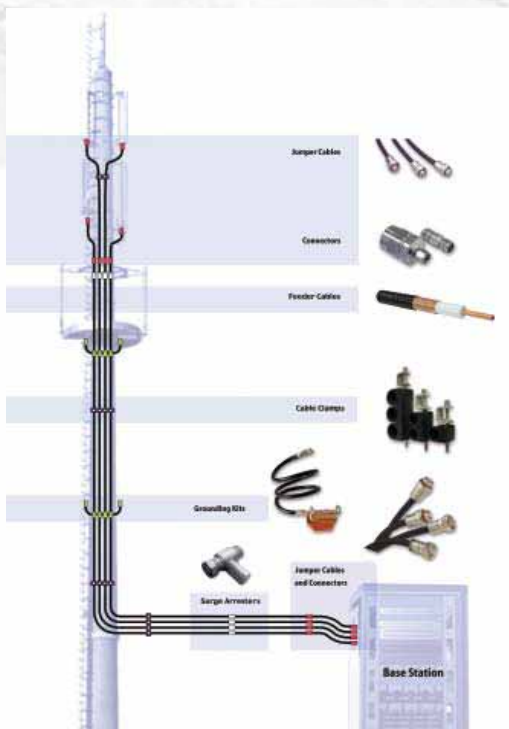
S-Link[®] RF Cable Solution

Netop supplies complete RF subsystem for site application with Rosenberger *S-Link*[®] site solution package which include feeder cables, jumpers, connectors, surge arresters, grounding kits, etc. Rosenberger has more than 50 years RF expertise and their solution is already being successfully used in GSM, CDMA and 3G network systems around the world.

For the feeder sub-system, the Rosenberg *S-Link*[®] feeder cable solution offers outstanding electrical and mechanical performance around the world. The system performs at a low VSWR, a low attenuation, excellent 3rd intermodulation, and has a high power rating which can be reliable and durable in any situation. The whole system's waterproof class complies with the harshest standard IP68 and can be installed easily.

Rosenberger offers a complete cable range from 1/4"R to 1-5/8"R. And the cables are constructed with inner conductor, foam dielectric, outer conductor and protective jacket.

With worldwide manufacturing experience, Rosenberger offers a complete cable range from 1/4"R to 1-5/8"R. Rosenberger also offers a whole series of low loss coaxial cables and can be at your site quickly via our global distribution network. Designed and engineered with both your link and cost budgets in mind, Rosenberger low loss RF coaxial cables continue to provide long-time outstanding quality and excellent performance that has been delivered for telecommunications industry applications for decades.



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S-Link[®] Super Flexible Cables

Outline

Rosenberger S-Link[®] super flexible cables are manufactured with deep spiral corrugation in the outer conductor and designed for applications which require smaller bending radius, high flexibility especially in shelters or plenum while outstanding mechanical and electrical performance are available.

These series super flexible cables covered by 1/4"S, 3/8"S and 1/2"S and constructed with inner conductor, foam dielectric, outer conductor and protective jacket. With unique spiral corrugated process, S-Link[®] super flexible cables feature more flexible characteristic compare with flexible series cables. Rosenberger offers outer jacket with polyethylene or flame-retardant, halogen-free material according to client requirement.

*SL is abbreviation of S-Link[®] cable series

*S is a mark of this super flexible cables series

SL 014S PE, SL 038S PE and SL 012S PE

FRNC= Flame Retardant Non Corrosive(Halogen free)



1/4" S Cable

Part Number

SL 014S PE **Standard polyethylene jacket**

SL 014S FRNC **Flame retardant, non-corrosive jacket**

Mechanical Characteristic		
Inner conductor	Copper-Clad Alu Wire	1.9mm
Dielectric	Foamed PE	4.4mm
Diameter over outer conductor	Corrugated copper tube	6.4mm
Diameter over outer jacket	Jacket PE/FRNC	7.7mm
Cable with standard UV resistant and halogen free PE/FRNC		
Cable weight PE(FRNC)	70(78) kg/km	
Tensile strength	600N	
Min. bending radius, single	13 mm	
Min. bending radius, repeated	25 mm	
Number of bends, minimum(typical)	20(50)	
Recommended hanger spacing	0.6 m	
Permissible temperature range, installation	-40°C to +60°C	
Permissible temperature range, operation	-55°C to +85°C	



Electrical Characteristic			
Impedance	50 +/-1 Ω	DC breakdown voltage	2000V
Relative velocity of propagation	83%	Jacket spark, volts RMS	5000V
Capacitance	80pF/m	Inner conductor DC-resistance	9.8 Ω/km
Inductance	0.195 μ H/m	Outer conductor DC-resistance	6.6 Ω/km
Maximum operating frequency	20.4GHz	Return loss 800-1000MHz	26dB
Cutoff frequency	25.0GHz	Return loss 1700-2500MHz	24dB
Peak power rating	6.4KW		

Attenuation value and power rating

Attenuation value typical at 20°C ambient temperature

Mean power rating at 40°C ambient temperature

Frequency	Attenuation	M.P.Rating
[MHz]	[dB/100m]	[KW]
50MHz	4.06	1.704
150MHz	7.20	0.961
200MHz	8.36	0.828
400MHz	12.40	0.558
450MHz	13.10	0.527
800MHz	17.50	0.395
900MHz	18.50	0.373
960MHz	19.20	0.359

Frequency	Attenuation	M.P.Rating
[MHz]	[dB/100m]	[KW]
1000MHz	19.60	0.351
1500MHz	24.50	0.281
1800MHz	26.90	0.256
1900MHz	27.70	0.249
2000MHz	28.50	0.242
2200MHz	30.20	0.228
2500MHz	32.50	0.212

3/8" S Cable

Part Number

SL 038S PE **Standard polyethylene jacket**

SL 038S FRNC **Flame retardant, non-corrosive jacket**

Mechanical Characteristic		
Inner conductor	Copper-Clad Alu Wire	2.6mm
Dielectric	Foamed PE	6.7mm
Diameter over outer conductor	Corrugated copper tube	9.1mm
Diameter over outer jacket	PE	10.2mm
Cable with standard UV resistant and halogen free PE/FRNC		
Cable weight PE(FRNC)	125(130) kg/km	
Tensile strength	600N	
Min. bending radius, single	13 mm	
Min. bending radius, repeated	25 mm	
Number of bends, minimum(typical)	20(50)	
Recommended hanger spacing	0.6 m	
Permissible temperature range, installation	-40°C to +60°C	
Permissible temperature range, operation	-55°C to +85°C	



Electrical Characteristic			
Impedance	50 +/-1 Ω	DC breakdown voltage	2500V
Relative velocity of propagation	82%	Jacket spark, volts RMS	5000V
Capacitance	83pF/m	Inner conductor DC-resistance	5.3 Ω/km
Inductance	0.195 μ H/m	Outer conductor DC-resistance	4.4 Ω/km
Maximum operating frequency	13.4GHz	Return loss 800-1000MHz	26dB
Cutoff frequency	16.1GHz	Return loss 1700-2500MHz	24dB
Peak power rating	11.9KW		

Attenuation value and power rating

Attenuation value typical at 20°C ambient temperature;

Mean power rating at 40°C ambient temperature

Frequency	Attenuation	M.P.Rating
[MHz]	[dB/100m]	[KW]
50MHz	2.94	2.738
100MHz	4.16	1.920
200MHz	6.05	1.327
400MHz	8.71	0.918
450MHz	9.18	0.871
800MHz	12.50	0.640
900MHz	13.30	0.601
960MHz	13.90	0.575

Frequency	Attenuation	M.P.Rating
[MHz]	[dB/100m]	[KW]
1000MHz	14.20	0.563
1500MHz	17.70	0.451
1800MHz	19.50	0.411
1900MHz	20.10	0.398
2000MHz	20.70	0.386
2200MHz	21.80	0.367
2500MHz	23.50	0.338

1/2" S Cable

Part Number

- SL 012S PE** Standard polyethylene jacket
SL 012S FRNC Flame retardant, non-corrosive jacket

Mechanical Characteristic		
Inner conductor	Copper-Clad Alu Wire	3.6mm
Dielectric	Foamed PE	9.0mm
Diameter over outer conductor	Corrugated copper tube	12.2mm
Diameter over outer jacket	PE/FRNC	13.6mm
Cable with standard UV resistant and halogen free PE/FRNC		
Cable weight PE(FRNC)	171(184) kg/km	
Tensile strength	750N	
Min. bending radius, single	25 mm	
Min. bending radius, repeated	35 mm	
Number of bends, minimum(typical)	20(50)	
Recommended hanger spacing	0.8 m	
Permissible temperature range, installation	-40°C to +60°C	
Permissible temperature range, operation	-55°C to +85°C	



Electrical Characteristic			
Impedance	50 +/-1 Ω	DC breakdown voltage	2500V
Relative velocity of propagation	83%	Jacket spark, volts RMS	5000V
Capacitance	81pF/m	Inner conductor DC-resistance	2.69 Ω/km
Inductance	0.195 μ H/m	Outer conductor DC-resistance	3.54 Ω/km
Maximum operating frequency	10.2GHz	Return loss 800-1000MHz	26dB
Cutoff frequency	13.0GHz	Return loss 1700-2500MHz	24dB
Peak power rating	16KW		

Attenuation value and power rating

Attenuation value typical at 20°C ambient temperature

Mean power rating at 40°C ambient temperature

Frequency	Attenuation	M.P.Rating
[MHz]	[dB/100m]	[KW]
50MHz	2.35	4.590
150MHz	4.23	2.550
200MHz	4.95	2.162
400MHz	7.48	1.404
450MHz	7.59	1.380
800MHz	10.40	1.010
900MHz	11.00	0.950
960MHz	11.30	0.930

Frequency	Attenuation	M.P.Rating
[MHz]	[dB/100m]	[KW]
1000MHz	11.50	0.889
1500MHz	14.35	0.707
1800MHz	16.00	0.634
1900MHz	16.50	0.615
2000MHz	17.20	0.597
2200MHz	18.20	0.564
2500MHz	19.61	0.523

S-Link[®] Low Loss Cables

Outline

SL 078 R L PE & SL 158R L PE From Rosenberger Asia Pacific Electronic Co., Ltd. are new-designed low attenuation RF coaxial cable in the industry application.

With Rosenberger SL 078R L PE & SL 158R L PE cable , system designers and operators can cut cable subsystem costs by up to 30% and gain cable height at the same time. Engineers can now meet system link using Rosenberger SL 078R L PE & SL 158R L PE RF coaxial cable in certain taller tower applications, instead of cable which would have been required before.

With worldwide manufactory experience , Rosenberger SL 078R L PE & SL 158R L PE RF coaxial cables can be at your site quickly via our global distribution network. Designed and engineered with both your link and cost budgets in advance, Rosenberger SL 078R L PE & SL 158R L PE RF coaxial cables continue provide the long-time outstanding quality and excellence performance that delivered to the communication industry application for decades.

*SL is abbreviation of *S-Link*[®] cable series

*L is a mark of this Low Loss cables series

SL 078R L PE & SL 158R L PE

FRNC = Flame Retardant Non Corrosive(Halogen free)



7/8" L Cable

Part Number

SL 078R L PE Standard polyethylene jacket

SL 078R L FRNC Flame retardant, non-corrosive jacket

Mechanical Characteristic		
Inner conductor	Copper tube	9.45mm
Dielectric	Highly foamed polyethylene	22.4mm
Diameter over outer conductor	Regular Corrugated copper tube	25.4mm
Diameter over outer jacket	PE/FRNC	27.5mm
Cable with standard UV resistant and halogen free compliant		
Cable weight	PE jacket	510kg/km
	FRNC jacket	567kg/km
Tensile strength	1450N	
Min. bending radius, single	120 mm	
Min. bending radius, repeated	250 mm	
Number of bends, minimum(typical)	15(50)	
Recommended hanger spacing	1.0 m	
Permissible temperature range, installation	-30°C to +60°C	
Permissible temperature range, operation	-45°C to +85°C	



Electrical Characteristic			
Impedance	50 +/-1 Ω	DC breakdown voltage	10000V
Relative velocity of propagation	89%	Jacket spark, volts RMS	8000V
Capacitance	74pF/m	Inner conductor DC-resistance	1.25 Ω/km
Inductance	0.195 μ H/m	Outer conductor DC-resistance	1.17 Ω/km
Maximum operating frequency	5.0GHz	Return loss 800-1000MHz	≤-26dB
Cutoff frequency	5.2GHz	Return loss 1700-2500MHz	≤-24dB
Peak power rating	95KW		

* Can provide special cable according to customer's requirement

Attenuation value and power rating

Attenuation value typical at 20°C ambient temperature

Mean power rating at 40°C ambient temperature

Frequency	Attenuation	M.P.Rating
[MHz]	[dB/100m]	[KW]
50MHz	0.74	12.56
150MHz	1.35	6.97
200MHz	1.59	6.40
400MHz	2.34	4.05
450MHz	2.49	3.81
800MHz	3.45	2.75
900MHz	3.61	2.62
960MHz	3.69	2.59

Frequency	Attenuation	M.P.Rating
[MHz]	[dB/100m]	[KW]
1000MHz	3.84	2.49
1500MHz	4.77	1.98
1800MHz	5.35	1.79
1900MHz	5.45	1.75
2000MHz	5.62	1.70
2200MHz	6.01	1.60
2500MHz	6.48	1.53

1-5/8" L Cable

Part Number

SL 158R L PE Standard polyethylene jacket

SL 158R L FRNC Flame retardant, non-corrosive jacket

Mechanical Characteristic		
Inner conductor	Spiral corrugated copper tube	17.6mm
Dielectric	Highly foamed polyethylene	41.0mm
Diameter over outer conductor	Regular corrugated copper tube	46.5mm
Diameter over outer jacket	PE/FRNC	49.8mm
Cable with standard UV resistant and halogen free compliant		
Cable weight	PE jacket	1185kg/km
	FRNC jacket	1349kg/km
Tensile strength	3500N	
Min. bending radius, single	300 mm	
Min. bending radius, repeated	510 mm	
Number of bends, minimum(typical)	15(50)	
Recommended hanger spacing	1.2 m	
Permissible temperature range, installation	-40°C to +60°C	
Permissible temperature range, operation	-55°C to +85°C	



Electrical Characteristic			
Impedance	50 +/-1 Ω	DC breakdown voltage	15000V
Relative velocity of propagation	90%	Jacket spark, volts RMS	10000V
Capacitance	74pF/m	Inner conductor DC-resistance	1.25 Ω/km
Inductance	0.190 μ H/m	Outer conductor DC-resistance	0.65 Ω/km
Maximum operating frequency	2.7GHz	Return loss 800-1000MHz	≤-23dB
Cutoff frequency	2.9GHz	Return loss 1700-2500MHz	≤-23dB
Peak power rating	310KW		

* Can provide special cable according to customer's requirement

Attenuation value and power rating

Attenuation value typical at 20°C ambient temperature

Mean power rating at 40°C ambient temperature

Frequency	Attenuation	M.P.Rating
[MHz]	[dB/100m]	[KW]
450MHz	1.51	6.29
800MHz	2.09	4.54
900MHz	2.24	4.24
1000MHz	2.35	4.05

Frequency	Attenuation	M.P.Rating
[MHz]	[dB/100m]	[KW]
1800MHz	3.38	2.82
2000MHz	3.57	2.68
2200MHz	3.82	2.52
2500MHz	4.11	2.34

* Maximum attenuation value shall be 105% of the nominal attenuation value