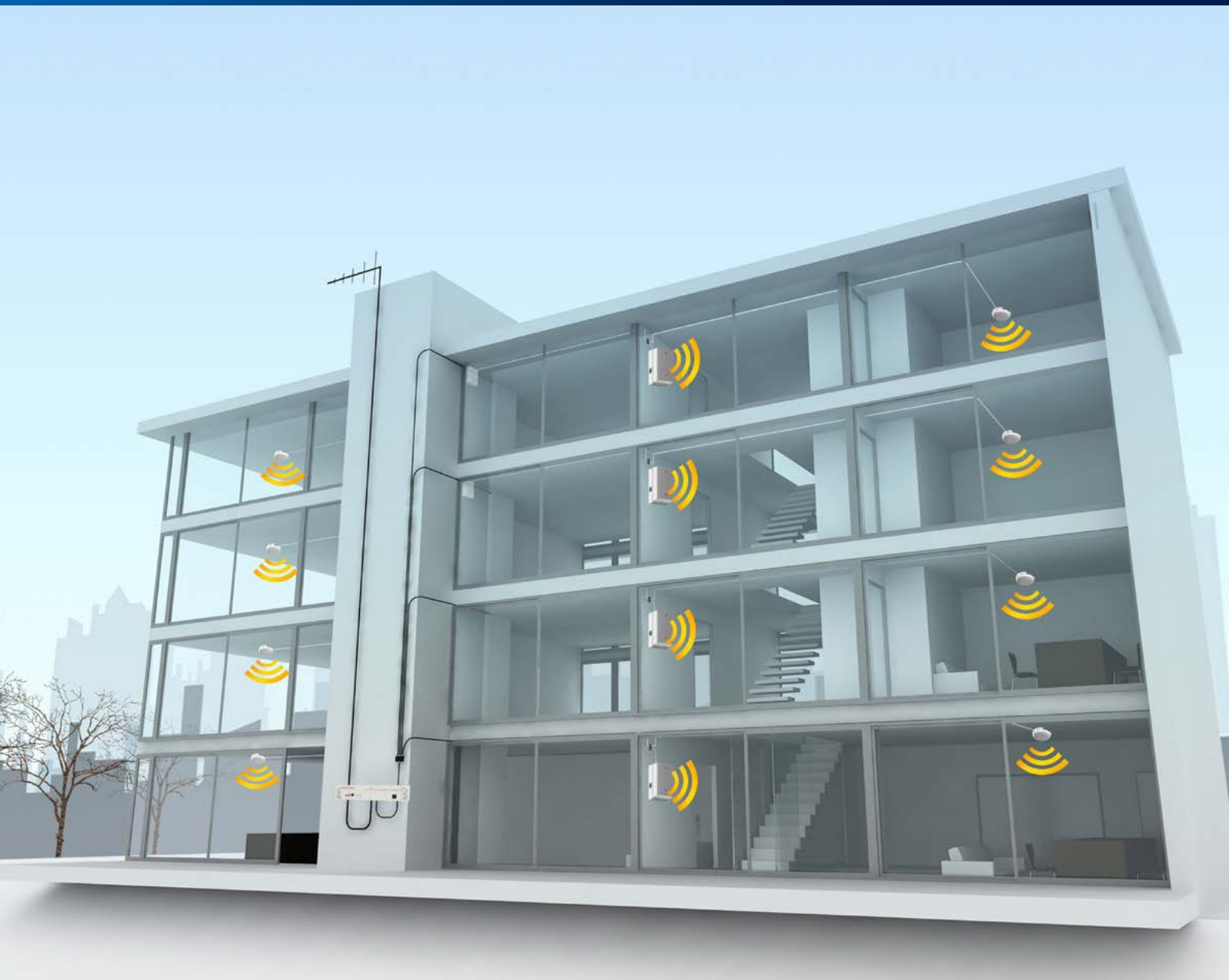


Much More Than Technology

Passive DAS Solutions

SITE SOLUTIONS





Rosenberger Site Solutions – Much More Than Technology

The Rosenberger Site Solutions Group designs, manufactures and provides solutions for the wireless infrastructure market. Our products and systems offer innovative and leading-edge designs with a focus on high performance and quality. Having an efficient network implementation in mind, we focus on total site kitting, logistics and delivery time leading to reduced cost of ownership. Globally present, the Rosenberger Site Solutions Group offers extensive local support making Rosenberger Site Solutions a partner instead of just a supplier.

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Rosenberger

The Rosenberger Online Catalog contains the current standard product range with specific details, including data sheets, assembly instructions, and panel piercings.

www.rosenberger.com/ok



Home of Innovation

A global network of Rosenberger R&D, manufacturing facilities and sales offices provides innovation, optimized cost structure and outstanding local customer service.



The Rosenberger headquarters located in Fridolfing in the southeast part of Bavaria, Germany



Company Profile

Rosenberger is one of the world's leading manufacturers of impedance-controlled and optical-connectivity solutions. We provide these solutions in high-frequency, high-voltage, and fiber-optic technology for mobile communication networks, data centers, test & measurement applications, automotive electronics, as well as high-voltage contact systems, medical electronics and aerospace engineering.

A global network of R&D, manufacturing and assembly locations provides innovation, optimized cost structure and excellent customer services. A total of around 8,500 employees are involved in the development, production, and distribution of our products.

Rosenberger Group

Europe

- Germany: Fridolfing, Augsburg, Laufen, Radeberg
- Austria: Timelkam
- Hungary: Jászárokszállás, Jászberény, Taksony
- Denmark: Birkerød
- Sweden: Kista, Solna, Ytterhogdal
- Spain: Madrid

North America

- USA: RNA Plano, RNA Akron, RNA Pennsauken, RSS Lake Charles

South America

- Brazil: Caçapava – São Paulo
- Chile: Santiago

Asia

- China: Beijing, Kunshan, Dongguan
- India: Manesar, Goa

Ensuring the optimum quality of products and services and taking responsibility for our environment are fundamental elements of Rosenberger's corporate philosophy. Our approach to ensuring quality covers more than just the optimization of parts and products – it also includes the continuous improvement of all company processes: from product development, planning, procurement, production, sales, and logistics right through to environmental policy. To summarize, we want to offer maximum benefits for our customers all over the world.

We aim to act in an environmentally conscious manner, use materials economically, protect natural resources, recycle, and ensure energy efficiency.

As we have continuously improved our processes and consistently applied our quality management systems, we have been awarded many certificates.

Certifications

- ISO / TS 16949
- DIN EN 9100
- ISO 9001
- ISO 14001
- DaKKs accreditation according to DIN EN ISO 17025

Rosenberger has won a number of prestigious quality awards and prizes from several renowned customers and organizations for achieving its quality and environmental objectives.





Our Promise to You. And to Quality and the Environment.

The quality of our products, solutions, and services is an essential part of our corporate strategy.

High Added Value

Rosenberger's mission is to be a leader when it comes to innovation and technology within its business segments.

The ongoing focus on cost management and process optimization complements our commitment to the increasingly stringent requirements for delivering products of the highest quality. Effective research & development, the very latest manufacturing technologies, the highest possible levels of efficiency in production processes, and continuous improvement of process automation make up Rosenberger's core competencies.





Research & Development

Science-based expertise in high-frequency applications combined with in-house RF, and EMC laboratories enable us to continuously improve existing products and to design innovative new products and systems. Numerous patents show Rosenberger's leadership as a reliable and creative development partner.

Production

By manufacturing everything in-house and using state of-the-art manufacturing technologies, Rosenberger can continue to develop and optimize key manufacturing technologies – turned-parts production, stamped & formed technology, injection molding technology. Manufacturing everything in-house ensures a high degree of flexibility, and continuous quality controls, and means that newly designed products can be produced in the required quantities.

Plating Technology

Our components can be electroplated quickly and flexibly in our own in-house electroplating facilities, regardless of whether this is to provide corrosion protection, optimized conductivity, or other technical and physical characteristics. Environmental protection is another key factor which must be taken into account when coating surfaces.

Assembly

Rosenberger operates manufacturing and assembly locations around the world – fully automated assembly centers and customer-oriented cable assembly locations offer global support and local sourcing.

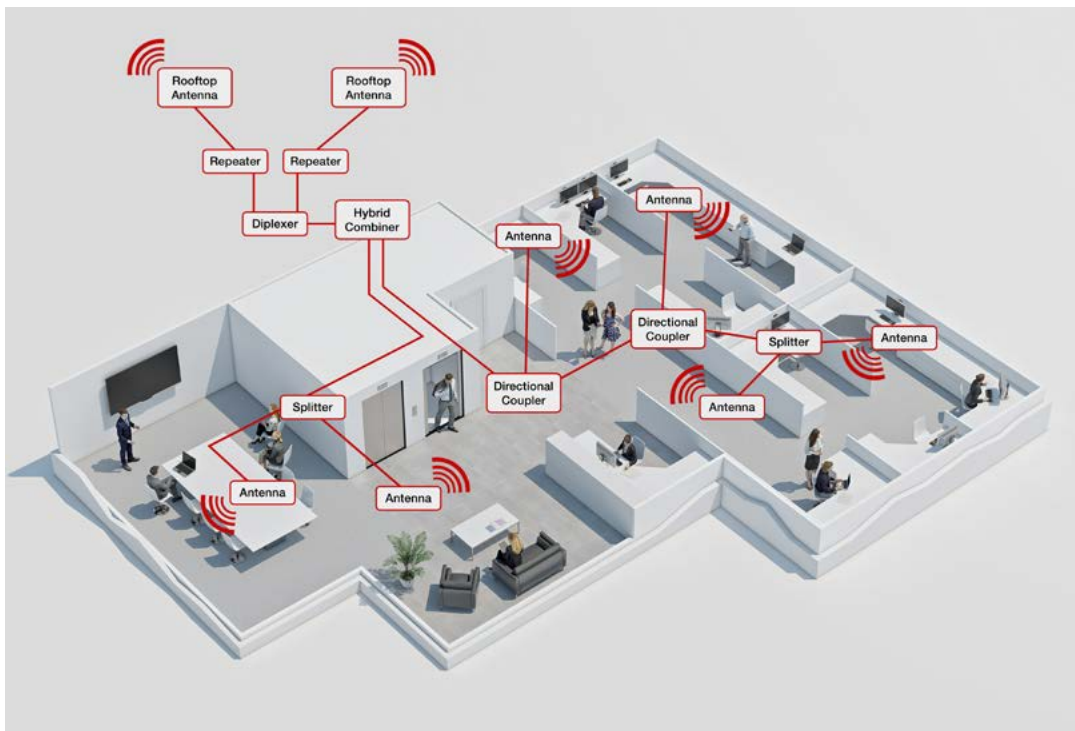
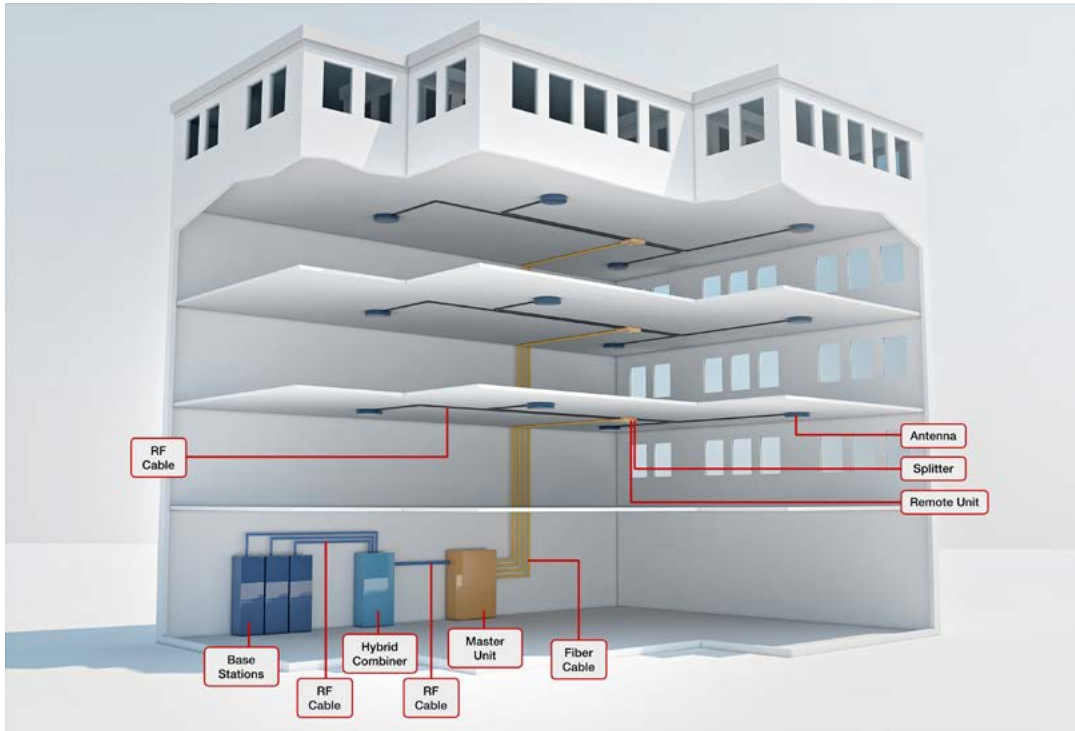
Injection Molding

We use the very latest machinery and methods, as well as special materials and components to ensure the precision and durability of our tools and products. Rosenberger is able to process all available high-performance plastics.

Passive Components for DAS Systems

With the development of modern wireless communication technologies, mobile communications networks are deployed requiring wideband universal passive components. Rosenberger supplies a complete range of passive components for wireless Distributed Antenna Systems (DAS) for in-building coverage such as splitters, combiners, termination loads, attenuators, and antennas.

Easy to install, Rosenberger DAS components ensure reliable, high quality and low PIM operation.



Directional Couplers

Directional couplers are used to divide an input signal into two proportional power levels. Designed with minimal internal connections, these couplers provide low PIM and high isolation and cover a frequency range from 698 to 2700 MHz.

Product Features

- Guaranteed PIM performance
- High isolation, low VSWR and loss
- High power performance

Rosenberger No.	Coupling Ratio	Frequency Band	PIM	Power Handling	Environmental	Interface
DC-6-8F-64F-T	6 dB	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
DC-8-8F-64F-T	8 dB	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
DC-10-8F-64F-T	10 dB	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
DC-12-8F-64F-T	12 dB	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
DC-15-8F-64F-T	15 dB	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
DC-20-8F-64F-T	20 dB	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
DC-30-8F-64F-T	30 dB	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
DC-5-8F-DF-01	5 dB	698 - 2700 MHz	-150 dBc	300 W	IP 65	7-16 (DIN) female
DC-6-7F-DF-01	6 dB	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
DC-8-7F-DF-01	8 dB	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
DC-10-7F-DF-01	10 dB	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
DC-13-7F-DF-01	13 dB	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
DC-15-7F-DF-01	15 dB	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
DC-20-7F-DF-01	20 dB	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
DC-30-7F-DF-01	30 dB	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
DC-5-7F-NF-01	5 dB	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female
DC-6-7F-NF-01	6 dB	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female
DC-8-7F-NF-01	8 dB	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female
DC-10-7F-NF-01	10 dB	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female
DC-13-7F-NF-01	13 dB	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female
DC-15-7F-NF-01	15 dB	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female
DC-20-7F-NF-01	20 dB	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female
DC-30-7F-NF-01	30 dB	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female



DC-10-8F-64F-T



Passive Splitters

Available in 2 through 4-way with customized 5 and 6-way versions available on request, Rosenberger's passive splitters are designed for best in class performance and value. Covering the entire frequency range from 698 - 2700 MHz with PIM performance up to -161 dBc, these splitters support low-PIM DAS applications.

Product Features

- Guaranteed PIM performance
- Low VSWR and loss
- High power performance

Rosenberger No.	Number of Splits	Frequency Band	PIM	Power Handling	Environmental	Interface
S-2-8F-64F-T	2	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
S-3-8F-64F-T	3	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
S-4-8F-64F-T	4	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
S-2-7F-DF-01	2	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
S-3-7F-DF-01	3	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
S-4-7F-DF-01	4	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
S-2-7F-NF-01	2	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female
S-3-7F-NF-01	3	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female
S-4-7F-NF-01	4	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female



S-2-8F-64F-T

Hybrid Combiners

Available in broadband and band-specific versions, these hybrid combination allow for the combining of multiple technologies within the same band. The excellent PIM performance of up to -161 dBc, low insertion loss, and low VSWR make these combiners an excellent choice for DAS applications.

Product Features

- Low PIM and high isolation, low VSWR and insertion loss
- High reliability
- Simple installation

Rosenberger No.	Number of Splits in/out	Frequency Band	PIM	Power Handling	Environmental	Interface
HM-3-8F-64F-T	2/2	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
HM-6-8F-64F-T	4/4	698 - 2700 MHz	-161 dBc	300 W	IP 65	4.3-10 female
HM-3-7F-DF-02	2/2	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
HM-6-8F-DF-01	4/4	698 - 2700 MHz	-150 dBc	500 W	IP 65	7-16 (DIN) female
HM-3-7F-NF-01	2/2	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female
HM-6-8F-NF-01	4/4	698 - 2700 MHz	-150 dBc	300 W	IP 65	N female



HM-3-8F-64F-T



Combiners

Rosenberger frequency combiners are deployed in site-sharing or co-siting applications. Suitable for both indoor and outdoor installations, these low-loss combiners are available as single units or for cross-pole antennas as double units. DC blocks can be added as an option.

Product Features

- Low PIM performance
- Wall or pole mount
- High isolation, low VSWR and insertion loss

Rosenberger No.	Frequency Band (MHz)*	Loss (dB)	Return Loss (dB)	PIM	Power Handling	Interface
CB-4-GDWE-64F-01	G, D, W, E	≤ 0.3	≥ 20	-161 dBc	300 W	4.3-10 female
CB-4-LCAP-64F-02	L, C, A, P	≤ 0.5	≥ 20	-161 dBc	300 W	4.3-10 female
CB-4-GDWE-DF-08G	G, D, W, E	≤ 0.3	≥ 20	-155 dBc	250 W	7-16 (DIN) female
CB-3-GDU-DF-04	L, D, W	≤ 0.2	≥ 20	-153 dBc	250 W	7-16 (DIN) female
CB-3-DWE-DF-01	D, W, E	≤ 0.5	≥ 20	-150 dBc	300 W	7-16 (DIN) female
CB-2-DW-DF-02H-T3	D, W	≤ 0.2	≥ 20	-160 dBc	250 W	7-16 (DIN) female
CB-2-LH-DF-01	L, HL	≤ 0.2	≥ 19	-150 dBc	500 W	7-16 (DIN) female
CB-2-FM-DF-01	F, M	≤ 0.5	≥ 19	-150 dBc	300 W	7-16 (DIN) female
CB-2-LH-NF-01	L / H	≤ 0.5	≥ 20	-150 dBc	300 W	N female

* Letter	* Frequency Band
HL	380 - 960 MHz
LT	698 - 787 MHz
LL	698 - 806 MHz
L	790 - 960 MHz
F	806 - 2170 MHz
C	824 - 894 MHz
G	698 - 960 MHz
D	1710 - 1880 MHz
A	1710 - 1755 MHz 2110 - 2155 MHz
P	1850 - 1990 MHz
W	1920 - 2170 MHz
M	2400 - 2700 MHz
E	2500 - 2700 MHz
H	1710 - 2700 MHz



CB-4-GDWE-64f-01

Termination Loads

Rosenberger's low-PIM loads are used to terminate open transmission lines such as a non-used port of a hybrid coupler or combiner.

Product Features

- Outstanding PIM performance
- Operating power 10 - 100 W

Rosenberger No.	Frequency Band	PIM	Power Handling	Interface
L-2-64M-01	698 - 2700 MHz		2 W	4.3-10 female
L-10-64F-T3	698 - 2700 MHz	-161 dBc	10 W	4.3-10 female
L-50-64F-T3	698 - 2700 MHz	-161 dBc	50 W	4.3-10 female
L-100-64F-T3	698 - 2700 MHz	-161 dBc	100 W	4.3-10 female
L-2-DM	698 - 2700 MHz		2 W	4.3-10 female
L-10-DM-T1	698 - 2700 MHz	-150 dBc	10 W	4.3-10 female
L-50-DM-T1	698 - 2700 MHz	-150 dBc	50 W	4.3-10 female
L-100-DM-T1	698 - 2700 MHz	-150 dBc	100 W	4.3-10 female
L-2-NM	698 - 2700 MHz		2 W	4.3-10 female
L-10-NM-T1	698 - 2700 MHz	-150 dBc	10 W	4.3-10 female
L-50-NM-T1	698 - 2700 MHz	-150 dBc	50 W	4.3-10 female
L-100-NM-T1	698 - 2700 MHz	-150 dBc	100 W	4.3-10 female



L-100-64F-T3



Attenuators

Rosenberger offers a wide range of attenuators.

Product Features

- Guaranteed PIM performance
- High isolation, low VSWR and loss
- Rugged aluminum housing for long lasting, reliable performance

Rosenberger No.	Frequency Band	VSWR	PIM	Power Handling	Interface
A-xx-50-64-T3	698 - 2700 MHz	1.20	-161 dBc	50 W	4.3-10 male to 4.3-10 female
A-xx-100-64-T3	698 - 2700 MHz	1.20	-161 dBc	100 W	4.3-10 male to 4.3-10 female
A-xx-50-D-T1	698 - 2700 MHz	1.20	-150 dBc	50 W	7-16 (DIN) male to 7-16 (DIN) female
A-xx-100-D-T1	698 - 2700 MHz	1.35	-150 dBc	100 W	7-16 (DIN) male to 7-16 (DIN) female
A-xx-50-N-T1	698 - 2700 MHz	1.20	-150 dBc	50 W	N male to N female
A-xx-100-N-T1	698 - 2700 MHz	1.35	-150 dBc	100 W	N male to N female



POI – Point of Interface

Rosenberger's modular POI is a passive system that is used for multiple inputs and outputs. It can combine different operators and systems into the same DAS with high isolation and low PIM interference.

The modular cabinets are easy to modify and update. If the operators upgrade their systems, there is no need to change the whole POI, but just upgrading the relevant modules can solve any problems that might occur. The field installation is very easy because of the "Plug and Play" design between the modular and the POI system.

Product Features

- Easy upgrade
- 4.3-10 interface
- Excellent PIM performance
- PNP (Plug-and-Play) modular inside
- Customized frequency band
- Better same band isolation
- Higher power handling

Rosenberger No.	Frequency Bands (MHz)	Loss (dB)	Isolation	Return Loss (dB)	PIM	Power Handling	Interface
CB-13-POI-64F-01	iDEN: 806~825 / 851~870 MHz GSM-1: 900~915 / 945~960 MHz GSM-2: 890~900 / 935~945 MHz GSM-3: 880~890 / 925~935 MHz DCS-1: 1710~1715 / 1805~1810 MHz 1735~1740 / 1830~1835 MHz DCS-2: 1760~1785 / 1855~1880 MHz DCS-3: 1715~1720 / 1810~1815 MHz 1740~1760 / 1835~1855 MHz 3G-1: 1935.1~1950.1 / 2125.1~2140.1 MHz 1969.9~1974.9 / 2159.9~2164.9 MHz 3G-2: 1950.1~1969.9 / 2140.1~2159.9 MHz 3G-3: 1920.0~1935.1 / 2110.3~2125.1 MHz 1974.9~1979.7 / 2164.9~2169.7 MHz LTE2600-1: 2500-2520 / 2620-2640 MHz LTE2600-2: 2520-2540 / 2640-2660 MHz LTE2600-3: 2540-2560 / 2660-2680 MHz	≤ 5.5	Same bands: ≥ 33dB Differ. bands: ≥ 65dB	≥ 18	-155 dBc	100 W	4.3-10 female

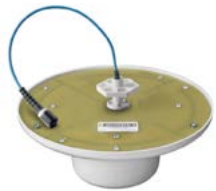


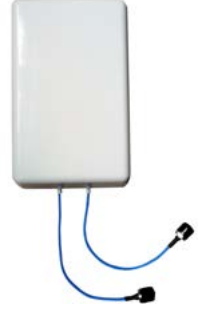
DAS In-Building Antennas

The Rosenberger broadband in-building antennas are suitable for all indoor distribution systems mainly installed in shopping malls, restaurants, office buildings, or sports facilities.

Product Features

- Ultra-wideband Indoor Ceiling Mounting Antenna
- Smooth design
- Vertical Polarization
- 2G/3G/LTE
- Small and compact

Rosenberger No.	Frequency Band	Antenna Type	PIM	Connector	Product
SL S4935i	698 - 6000 MHz	Ceiling mount	-153 dBc	4.3-10 female	
SL S5606i	698 - 2700 MHz	Ceiling mount, ultra flat	-153 dBc	4.3-10 female	
SL S5379i	698 - 6000 MHz	Ceiling mount, small form factor	-153 dBc	4.3-10 female	
SL M5542i	698 - 2700 MHz	Ceiling mount MIMO, small form factor	-153 dBc	4.3-10 female	
SL S5490i	698 - 2700 MHz	Panel antenna	-153 dBc	4.3-10 female	

Rosenberger No.	Frequency Band	Antenna Type	PIM	Connector	Product
8FW-OD-3-64K-B6	698 - 960 & 1710 - 2700 MHz	Ultra wideband ceiling mounting	-150 dBc	4.3-10 female	
8FW-90-8-64K-B6	698 - 960 & 1710 - 2700 MHz	Panel	-150 dBc	4.3-10 female	
8FW/8FW-65-8D-64K-B6	698 - 960 & 1710 - 2700 MHz	MIMO panel	-150 dBc	4.3-10 female	
8FW/8FW-OD-6-64K-B6	698-960 & 1710-2700 MHz	Ultra wideband ceiling mounting, omni slim MIMO	-150 dBc	4.3-10 female	

4.3-10 Connectors

As a global leader in RF technology, Rosenberger has been an active partner in the development of the 4.3-10 connector series for mobile communications applications.

The 4.3-10 connector series has been designed to meet rising electrical and mechanical performance requirements – as well as provide for a low footprint due to ongoing space reductions of infrastructure equipment.

Very Low PIM – Independent of Torque

The 4.3-10 connector series is characterized by optimal electrical performance and very low passive inter-modulation – independent of torque. Due to its dimensions, 4.3-10 connectors are the natural evolution of connector systems used today used in the mobile communications industry.

Electrical and mechanical planes have been separated, leading to significantly lower coupling torque. 4.3-10 connectors are available in three versions: Screw-on (HEX), hand-screw, and push-pull coupling mechanisms.

One Jack for All Plug Types

Due to its mechanical design, the universal 4.3-10 jack type can be mated to all plug types:



Screw Type (HEX)

- Screw type with recommended tightening torque of 5 Nm
- Recommended for harsh environments

Hand Screw Type

- Hand screw (no torque)
- Special release to prevent the nut from unintentionally becoming loose

Push-Pull Type

- Quick connection type
- No tools needed
- Self-locking

Universal Jack

- One jack for all 4.3-10 plug types

Features and Benefits

- Low, reliable, and constant PIM independent of torque
- Outstanding insertion/return loss
- Small foot print – 40% smaller than 7-16 connectors
- Low weight – 60% reduction compared to other RF interfaces
- High flexibility – 3 different plug types to mate with a universal jack

Connectors in Comparison – Technical Data

Connector Type	4.3-10	7-16 (DIN)	N Series
Minimum flange size	25.4 mm	32 mm	32 mm
Return loss	≥ 36 dB @ DC to 4 GHz ≥ 32 dB @ 4 GHz to 6 GHz	≥ 36 dB @ DC to 4 GHz ≥ 32 dB @ 4 GHz to 6 GHz	≥ 35 dB @ DC to 1 GHz ≥ 30 dB @ 1 GHz to 2.7 GHz
RF leakage	≥ 120 dB @ DC to 3 GHz (screw, HEX) ≥ 90 dB @ DC to 3 GHz (hand-screw) ≥ 70 dB @ 3 to 6 GHz (push-pull)	≥ 110 dB @ DC to 1 GHz (tool types)	≥ 110 dB @ DC to 1 GHz (tool types)
Passive intermodulation	≥ 166 dBc @ 2 x 43 dBm	≥ 160 dBc @ 2 x 43 dBm	≥ 160 dBc @ 2 x 43 dBm
Degree of protection (water tightness)	IP 68 (@ 25 m, 1 hour)	IP 68 (@ 25 m, 1 hour)	IP 68 (@ 25 m, 1 hour)
Mating cycles	≥ 100	≥ 500	≥ 500
Coupling mechanisms	Screw (HEX), hand-screw, push-pull	Screw (HEX)	Screw (HEX)
Coupling torque (screw-on type)	> 5 Nm	> 25 Nm	0.7 – 1.1 Nm



4.3-10 Series



7-16 Series



N Series

Torque Wrench and Spanners

Rosenberger No.	Description	Torque Setting	Opening
64W022-001	Torque wrench for 4.3-10	5 ± 0.3 Nm	22 mm
53W010-000	Torque wrench for N	1.1 Nm	18 mm
60W000-002	Torque wrench for 7-16	25 Nm	32 mm
99W057-000	Spanner, adjustable		0 - 35 mm
99W057-001	Spanner, adjustable		0 - 46 mm



64W022-001



99W057-000

4.3-10, 7-16, and N Connectors

4.3-10 Connectors

Rosenberger No.			
Male Straight	Male Right Angle	Female Straight	Feeder Cable Type
64S1C7-C01N1	64S2C7-C01N1	64K1C7-C01B1	1/4" Standard
64S1C7-C09N1	64S2C7-C09N1	64K1C7-C09B1	1/4" Super Flex
64S1C7-C02N1	64S2C7-C02N1	64K1C7-C02B1	3/8" Super Flex
64S1C7-C03N1	64S2C7-C03N1	64K1C7-C03B1	1/2" Standard
64S1C7-C08N1	64S2C7-C08N1	64K1C7-C08B1	1/2" Super Flex
64S1C7-CX5N1		64K1C7-CX5B1	7/8" Standard
64S1D7-C06N1		64K1D7-C06B1	1 1/4" Standard
64S1D7-C07N1		64K1D7-C07B1	1 5/8" Standard

7-16 Connectors

Rosenberger No.			
Male Straight	Male Right Angle	Female Straight	Feeder Cable Type
60S115-C01N1	60S215-C01N1	60K115-C01N1	1/4" Standard
60S115-C09N1	60S215-C09N1	60K115-C09N1	1/4" Super Flex
60S115-C02N1	60S215-C02N1	60K115-C02N1	3/8" Super Flex
60S1C7-C03N1	60S2C7-C03N1	60K1C7-C03N1	1/2" Standard
60S1C7-C08N1	60S2C7-C08N1	60K1C7-C08N1	1/2" Super Flex
60S1C7-CX5N1		60K1C7-CX5N1	7/8" Standard
60S1D7-C06N1		60K1D7-C06N1	1 1/4" Standard
60S1D7-C07N1		60K1D7-C07N1	1 5/8" Standard

N Connectors

Rosenberger No.			
Male Straight	Male Right Angle	Female Straight	Feeder Cable Type
53S115-C01N1	53S215-C01N1	53K115-C01N1	1/4" Standard
53S115-C09N1	53S215-C09N1	53K115-C09N1	1/4" Super Flex
53S1C7-C03N1	53S2C7-C03N1	53K1C7-C03N1	1/2" Standard
53S1C7-C08N1	53S2C7-C08N1	53K1C7-C08N1	1/2" Super Flex
53S1C7-CX5N1		53K1C7-CX5N1	7/8" Standard
53S1D7-C06N1		53K1D7-C06N1	1 1/4" Standard
53S1D7-C07N1		53K1D7-C07N1	1 5/8" Standard

Universal Preparation Tool

With exchangeable inserts for 1/2", 7/8", and 1 1/4", the tool is ideal for fast, easy, and reliable cable preparation. The high-precision cutting blades ensure smooth cuts resulting in low-PIM connector installations.



SLT001-C05



SLT001-C06



SLT001-C03



SLT001-C06

Universal Preparation Tool

Rosenberger No.	Description
SLT001-000	Rosenberger UniPrep Tool Basic without Inserts
SLT001-C09	Rosenberger UniPrep Tool for 1/4"S – superflex (Stripping, Cutting, Flaring)
SLT001-C01	Rosenberger UniPrep Tool for 1/4"R – flex (Stripping, Cutting, Flaring)
SLT001-C02	Rosenberger UniPrep Tool for 3/8"S – superflex (Stripping, Cutting, Flaring)
SLT001-C08	Rosenberger UniPrep Tool for 1/2"S – superflex (Stripping, Cutting, Flaring)
SLT001-C03	Rosenberger UniPrep Tool for 1/2"R (Stripping, Cutting, Flaring)
SLT001-C05	Rosenberger UniPrep Tool for 7/8"R (Stripping, Cutting, Flaring)
SLT001-C06	Rosenberger UniPrep Tool for 1 1/4"R (Stripping, Cutting, Flaring)
SLT001-C09-I	Rosenberger UniPrep Inserts for 1/4"S (Stripping, Cutting)
SLT001-C01-I	Rosenberger UniPrep Inserts for 1/4"R (Stripping, Cutting)
SLT001-C02-I	Rosenberger UniPrep Inserts for 3/8"S (Stripping, Cutting)
SLT001-C08-I	Rosenberger UniPrep Inserts for 1/2"S (Stripping, Cutting)
SLT001-C03-I	Rosenberger UniPrep Inserts for 1/2"R (Stripping, Cutting)
SLT001-C05-I	Rosenberger UniPrep Inserts for 7/8"R (Stripping, Cutting)
SLT001-C06-I	Rosenberger UniPrep Inserts for 1 1/4"R (Stripping, Cutting)
SLT001-C03-F	Rosenberger UniPrep Flaring for 1/2"R and 1/4"R
SLT001-C05-F	Rosenberger UniPrep Flaring for 7/8"R
SLT001-C06-F	Rosenberger UniPrep Flaring for 1 1/4"R
SLT001-000-CB	Rosenberger UniPrep 10 x Replacement Cutting Blade

Low-PIM, On-Site Connector Installation

To achieve the best PIM test results we recommend following the procedures below in addition to the recommendations outlined in the assembly instructions included with each individual connector.

It is very important to keep the prepped cable and connectors absolutely clean of dirt, metal particles, and scratches.



Prepare the cable according to assembly instructions (e.g. with tool SLT001-Cxx).



Use a plastic tool for removing the cut-off bond on the dielectric (e.g. SLT004-000).



On cables with tube inner conductor, remove burrs and sharp edges on the inside of the conductor (e.g. flaring tool integrated in tool SLT001-Cxx).



Before finally attaching the connector to the cable, clean the contact areas of the cables with alcohol by using non-metallic cleaning brushes/tools (e.g., SLZ0009-000).



SLZ0009-000

RF Jumper Cables

Superior Performance up to 6 GHz

Rosenberger coaxial jumpers have been designed using the many years of experience gained by Rosenberger engineers in this field. Rosenberger's unique knowledge of designing and manufacturing world-leading PIM testing equipment is directly reflected in the jumpers.

Rosenberger jumpers have the industry-best guaranteed PIM levels:

-117 dBm / -160 dBc @ 2 x 20 W (typ. -120 dBm / -163 dBc @ 2 x 20 W).

These excellent levels are guaranteed for every assembly that leaves the Rosenberger production facility.

- Specially developed connectors and soldering technique guarantee superior electrical performance
- Injection-molded sealing between the cable jacket and connector ensures mechanical stability and weather-proof protection to IP 68
- Excellent return loss due to silver-plated connectors and attenuation-optimized cable
- Low intermodulation, IM3, guaranteed at -160 dBc @ 2 x 20 W (typ. -163 dBc)
- 100% factory-tested for PIM and RL
- Available with flame-retardant, halogen-free cable jackets (FRNC)
- Available with a large variety of connector combinations



Traceability – Online Measurement Reports

Every single Coax Jumper is tested for its return loss and PIM values after its assembly. By entering the serial number on our web portal our customers are able to download the measurement reports of their cables.



Online Measurement Reports

Download VSWR and PIM measurements at jumper.rosenberger.com

For a more convenient verification of the performance, the measurement report can easily be downloaded to mobile devices by scanning the Data Matrix code on the packaging.

Return Loss	
DC - 1 GHz	≥ 32 dB
1 - 2.2 GHz	≥ 30 dB
2.2 - 2.7 GHz	≥ 28 dB
2.7 - 6 GHz	≥ 23 dB
Insertion Loss typ. (½"R – flexible)	
DC - 1 GHz	≤ 0.07 dB/m + 0.01 dB
1 - 2.2 GHz	≤ 0.11 dB/m + 0.015 dB
2.2 - 2.7 GHz	≤ 0.125 dB/m + 0.016 dB
2.7 - 6 GHz	≤ 0.22 dB/m + 0.01 dB
Insertion Loss typ. (½"S – super flexible)	
DC - 1 GHz	≤ 0.10 dB/m + 0.01 dB
1 - 2.2 GHz	≤ 0.168 dB/m + 0.015 dB
2.2 - 2.7 GHz	≤ 0.19 dB/m + 0.016 dB
2.7 - 6 GHz	≤ 0.31 dB/m + 0.01 dB



Jumper Cable Configurator

Configure your individual jumper cable online: rosenberger.com/siso/#jumperconf

4.3-10 Coaxial Cable Connectors

Field Installable 4.3-10 Connector – Corrugated Cables

Rosenberger connectors have excellent mechanical and environmental properties that ensure long-term durability and performance in both indoor and outdoor installations.

All Rosenberger connectors are coated with white bronze plating. This coating has been selected specifically to provide protection against oxidation while delivering exceptional intermodulation performance and electrical conductivity.



4.3-10 Cable Connectors – Super Flexible Corrugated Cables

Connector Type	Rosenberger No.		
	1/4" super flexible corrugated	3/8" super flexible corrugated	1/2" super flexible corrugated
4.3-10 male straight; screw type	64S1C7-C09N1	64S1C7-C02N1	64S1C7-C08N1
4.3-10 male right angle; screw type	64S2C7-C09N1	64S2C7-C02N1	64S2C7-C08N1
4.3-10 female straight	64K1C7-C09B1	64K1C7-C02B1	64K1C7-C08B1

4.3-10 Cable Connectors – Flexible Corrugated Cables

Connector Type	Rosenberger No.			
	1/2" flexible corrugated	7/8" flexible corrugated	1 1/4" flexible corrugated	1 5/8" flexible corrugated
4.3-10 male straight; screw type	64S1C7-C03N1	64S1C7-CX5N1	64S1D7-C06N1	64S1D7-C07N1
4.3-10 male right angle; screw type	64S2C7-C03N1			
4.3-10 female straight	64K1C7-C03B1	64K1C7-CX5B1	64K1D7-C06B1	64K1D7-C07B1



64S1C7-C08N1

Rosenberger 50 Ω Coaxial Cables

Rosenberger offers a complete range of 50 Ω coaxial cables, from 1/4" to 1 5/8".

The cable range provides best in-class electrical and mechanical performance:

- Low attenuation
- Low VSWR/RL
- Complete EMI shielding to minimize system interference
- Outstanding PIM performance
- High power rating

The cable construction is similar for all cable sizes: Inner conductor, foam dielectric, outer conductor, and outer jacket.

The foam insulator consists of a mixture of low dielectric polyethylene – melted and extruded utilizing an insert gas injection process. Low density, close and homogenous cell dielectric contributes to further excellent low-loss performance and minimized risk of water penetration.

The outer conductor is made of copper and has a longitudinal weld that provides high-quality screening and a tight bending radius.

The cables are available as standard with either a PE jacket for outdoor installations or in a flame-retardant and halogen-free version to comply with indoor requirements for health and safety (IEC 60332).

Coaxial Cable Overview

	Flexible (R)	Super flexible (S)	Low Loss (L)
1/4"	SL 014 R PE	SL 014 S PE	
	SL 014 R FRNC	SL 014 S FRNC	
3/8"		SL 038 S PE	
		SL 038 S FRNC	
1/2"	SL 012 R PE	SL 012 S PE	
	SL 012 R FRNC	SL 012 S FRNC	
7/8"			SL 078 R L PE
			SL 078 R L FRNC
1 1/4"			SL 114 R L PE
			SL 114 R L FRNC
1 5/8"			SL 158 R L P
			SL 158 R L FRNC

– R = Ring corrugation

– S = Spiral corrugation

– PE = Polyethylene

– FRNC = Flame-retardant & halogen-free (IEC 60332)

Flexible Coaxial Cables

Flexible Coaxial Cables 1/4" R

Rosenberger No.	Description	
SL 014 R PE	Standard polyethylene jacket	
SL 014 R FRNC	Flame-retardant, halogen-free jacket	

Mechanical Characteristics	
Inner conductor	Copper-clad aluminum wire, 2.6 mm
Dielectric	Foamed PE, 6.4 mm
Diameter over outer conductor	Corrugated copper, 7.6 mm
Diameter over outer jacket	PE / FRNC, 9.5 mm
Cable with standard UV-resistant and halogen-free PE / FRNC	
Cable weight PE (FRNC)	approx. 94 kg/km
Tensile strength	560 N
Min. bending radius, single	50 mm
Min. bending radius, repeated	120 mm
Number of bends, minimum (typical)	15 (50)
Recommended hanger spacing	0.6 m
Installation temperature	– 25 °C to + 60 °C
Operational temperature	– 40 °C to + 85 °C

Electrical Characteristics	
Impedance	50 ± 1 Ω
Relative velocity of propagation	85%
Capacitance	78.5 pF/m
Inductance	0.195 µH/m
Maximum operating frequency	7.5 GHz
Cut-off frequency	19.0 GHz
Peak power rating	7.5 kW
DC breakdown voltage	2200 V
Jacket spark, volts RMS	5000 V
Inner conductor DC-resistance	≤ 6.05 Ω/km
Outer conductor DC-resistance	≤ 4.45 Ω/km
Insulation resistance	≥ 10 GΩ x km
Return loss 800 – 1000 MHz	26 dB
Return loss 1700 – 2500 MHz	24 dB

Attenuation value and power rating

Frequency (MHz)	100	200	300	400	450	800	900	1000	1800	2000	2200	2500	2700	3000
Attenuation (dB/100 m)	5.14	7.50	8.50	9.00	9.14	12.7	13.3	14.1	19.5	20.6	21.8	23.4	28.0	28.3
Average power (kW)	1.92	1.40	1.20	1.09	1.08	0.78	0.74	0.70	0.51	0.49	0.45	0.42	0.36	0.35

- Attenuation, ambient temperature: 20 °C
- Average power, ambient temperature: 40 °C
- Average power, inner conductor temperature: 100 °C
- Maximum attenuation value will be 105% of the nominal attenuation value
- Other frequencies on request

Flexible Corrugated Cables 1/2" R

Rosenberger No.	Description	
SL 012 R PE	Standard polyethylene jacket	
SL 012 R FRNC	Flame-retardant, halogen-free jacket	

Mechanical Characteristics	
Inner conductor	Copper-clad aluminum wire, 4.8 mm
Dielectric	Foamed PE, 12.1 mm
Diameter over outer conductor	Corrugated copper tube, 13.8 mm
Diameter over outer jacket	PE / FRNC, 15.9 mm
Cable with standard UV-resistant and halogen-free PE / FRNC	
Cable weight PE (FRNC)	210 kg/km (245 kg/km)
Tensile strength	1150 N
Min. bending radius, single	50 mm
Min. bending radius, repeated	125 mm
Number of bends, minimum (typical)	15 (50)
Recommended hanger spacing	0.8 m
Installation temperature	– 25 °C to + 60 °C
Operational temperature	– 40 °C to + 85 °C

Electrical Characteristics	
Impedance	50 ± 1 Ω
Relative velocity of propagation	88%
Capacitance	76 pF/m
Inductance	0.190 µH/m
Maximum operating frequency	8.8 GHz
Cut-off frequency	10.0 GHz
Peak power rating	40 kW
DC breakdown voltage	6000 V
Jacket spark, volts RMS	8000 V
Inner conductor DC-resistance	1.5 Ω/km
Outer conductor DC-resistance	2.3 Ω/km
Insulation resistance	≥ 10 GΩ x km
Return loss 800 – 1000 MHz	26 dB
Return loss 1700 – 2500 MHz	24 dB

Attenuation value and power rating

Frequency (MHz)	100	200	300	400	450	800	900	1000	1800	2000	2200	2500	2700	3000
Attenuation (dB/100 m)	2.15	3.08	3.81	4.46	4.70	6.35	6.75	7.20	9.90	10.50	11.10	11.95	12.47	13.20
Average power (kW)	3.94	2.75	1.99	1.80	1.80	1.33	1.25	1.18	0.86	0.81	0.77	0.73	0.69	0.65

- Attenuation, ambient temperature: 20 °C
- Average power, ambient temperature: 40 °C
- Average power, inner conductor temperature: 100 °C
- Maximum attenuation value will be 105% of the nominal attenuation value
- Other frequencies on request

Rosenberger Super Flexible Coaxial Cables

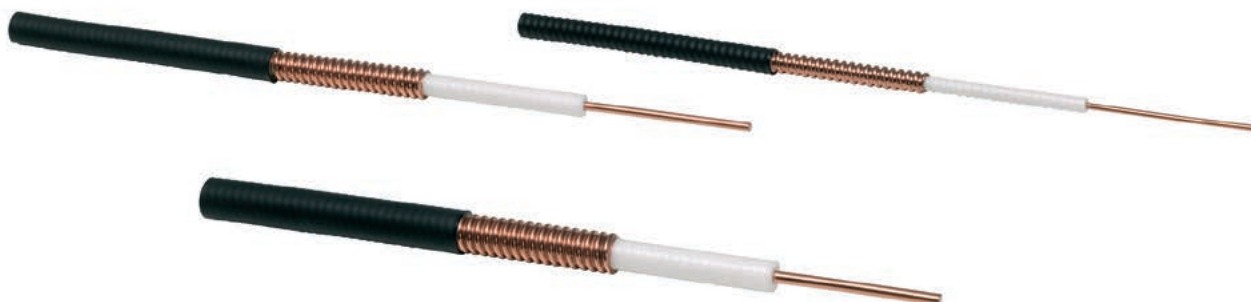
Rosenberger Super Flexible coaxial cables are designed for use in tight routing spaces. Typical applications include connections inside mobile base stations and jumpers for connecting the base stations, transmission lines, and antennas.

Super Flexible cables have superior electrical and mechanical performance, and are ideal for applications requiring the tightest bending radii, high flexibility, low attenuation, and high shielding.

Rosenberger Super Flexible coaxial cable assemblies achieve the highest standards in the industry including excellent intermodulation (IM3) and return loss performance.

The inner conductor consists of a copper-clad aluminum wire. The outer conductor is made of a welded copper tube with spiral corrugations and marked accordingly with the letter 'S'.

The Rosenberger Super Flexible coaxial cables are available with outer jackets made of either polyethylene or flame-retardant, halogen-free materials.



Super Flexible Coaxial Cables 1/4" S

Rosenberger No.	Description	
SL 014 S PE	Standard polyethylene jacket	
SL 014 S FRNC	Flame-retardant, halogen-free jacket	

Mechanical Characteristics	
Inner conductor	Copper-clad aluminum wire, 1.9 mm
Dielectric	Foamed PE, 4.4 m
Diameter over outer conductor	Corrugated copper tube, 6.4 mm
Diameter over outer jacket	Jacket PE / FRNC, 7.7 mm
Cable with standard UV-resistant and halogen-free PE / FRNC	
Cable weight PE (FRNC)	71 kg/km (78 kg/km)
Tensile strength	600 N
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
Installation temperature	– 25 °C to + 60 °C
Operational temperature	– 40 °C to + 85 °C

Electrical Characteristics	
Impedance	50 ± 1 Ω
Relative velocity of propagation	83%
Capacitance	80 pF/m
Inductance	0.195 µH/m
Maximum operating frequency	20.4 GHz
Cut-off frequency	25.0 GHz
Peak power rating	6.4 kW
DC breakdown voltage	2000 V
Jacket spark, volts RMS	5000 V
Inner conductor DC-resistance	9.8 Ω/km
Outer conductor DC-resistance	6.9 Ω/km
Insulation resistance	≥ 10 GΩ x km
Return loss 800 – 1000 MHz	26 dB
Return loss 1700 – 2500 MHz	24 dB

Attenuation value and power rating

Frequency (MHz)	100	200	300	400	450	800	900	1000	1800	2000	2200	2500	2700	3000
Attenuation (dB/100 m)	5.95	8.36	10.3	12.4	13.1	17.5	18.5	19.6	26.9	28.50	30.20	32.3	33.7	35.7
Average power (kW)	1.15	0.83	0.70	0.55	0.53	0.40	0.37	0.35	0.26	0.24	0.23	0.23	0.23	0.23

- Attenuation, ambient temperature: 20 °C
- Average power, ambient temperature: 40 °C
- Average power, inner conductor temperature: 100 °C
- Maximum attenuation value will be 105% of the nominal attenuation value
- Other frequencies on request

Super Flexible Coaxial Cables 3/8" S

Rosenberger No.	Description	
SL 038 S PE	Standard polyethylene jacket	
SL 038 S FRNC	Flame-retardant, halogen-free jacket	

Mechanical Characteristics	
Inner conductor	Copper-clad aluminum wire, 2.6 mm
Dielectric	Foamed PE, 6.7 mm
Diameter over outer conductor	Corrugated copper tube, 9.1 mm
Diameter over outer jacket	PE, 10.2 mm
Cable with standard UV-resistant and halogen-free PE / FRNC	
Cable weight PE (FRNC)	115 kg/km (130 kg/km)
Tensile strength	600 N
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
Installation temperature	– 25 °C to + 60 °C
Operational temperature	– 40 °C to + 85 °C

Electrical Characteristics	
Impedance	50 ± 1 Ω
Relative velocity of propagation	83%
Capacitance	81 pF/m
Inductance	0.195 µH/m
Maximum operating frequency	13.4 GHz
Cut-off frequency	16.1 GHz
Peak power rating	11.9 kW
DC breakdown voltage	2500 V
Jacket spark, volts RMS	5000 V
Inner conductor DC-resistance	< 4.76 Ω/km
Outer conductor DC-resistance	< 4.95 Ω/km
Insulation resistance	≥ 10 GΩ x km
Return loss 800 – 1000 MHz	26 dB
Return loss 1700 – 2500 MHz	24 dB

Attenuation value and power rating

Frequency (MHz)	100	200	300	400	450	800	900	1000	1800	2000	2200	2500	2700	3000
Attenuation (dB/100 m)	4.16	5.96	7.39	8.61	8.73	12.1	12.7	13.4	18.4	19.5	20.5	22.1	24.3	24.4
Average power (kW)	2.00	1.34	1.15	1.14	1.13	0.82	0.78	0.74	0.54	0.51	0.48	0.45	0.41	0.40

- Attenuation, ambient temperature: 20 °C
- Average power, ambient temperature: 40 °C
- Average power, inner conductor temperature: 100 °C
- Maximum attenuation value will be 105% of the nominal attenuation value
- Other frequencies on request

Super Flexible Coaxial Cables 1/2" S

Rosenberger No.	Description	
SL 012 S PE	Standard polyethylene jacket	
SL 012 S FRNC	Flame-retardant, halogen-free jacket	

Mechanical Characteristics	
Inner conductor	Copper-clad aluminum wire, 3.6 mm
Dielectric	Foamed PE, 9.0 mm
Diameter over outer conductor	Corrugated copper tube, 12.2 mm
Diameter over outer jacket	PE / FRNC, 13.4 mm
Cable with standard UV-resistant and halogen-free PE / FRNC	
Cable weight PE (FRNC)	171 (184) kg/km
Tensile strength	750 N
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
Installation temperature	– 25 °C to + 60 °C
Operational temperature	– 40 °C to + 85 °C

Electrical Characteristics	
Impedance	50 ± 1 Ω
Relative velocity of propagation	83%
Capacitance	80 pF/m
Inductance	0.195 µH/m
Maximum operating frequency	10.2 GHz
Cut-off frequency	13.0 GHz
Peak power rating	16 kW
DC breakdown voltage	2500 V
Jacket spark, volts RMS	5000 V
Inner conductor DC-resistance	2.73 Ω/km
Outer conductor DC-resistance	3.68 Ω/km
Insulation resistance	≥ 10 GΩ x km
Return loss 800 – 1000 MHz	26 dB
Return loss 1700 – 2500 MHz	24 dB

Attenuation value and power rating

Frequency (MHz)	100	200	300	400	450	800	900	1000	1800	2000	2200	2500	2700	3000
Attenuation (dB/100 m)	3.31	4.84	6.07	7.11	7.59	10.40	11.20	11.80	16.00	17.20	18.20	19.50	20.50	21.90
Average power (kW)	3.16	2.17	1.71	1.47	1.38	1.01	0.95	0.89	0.63	0.60	0.56	0.52	0.50	0.48

- Attenuation, ambient temperature: 20 °C
- Average power, ambient temperature: 40 °C
- Average power, inner conductor temperature: 100 °C
- Maximum attenuation value will be 105% of the nominal attenuation value
- Other frequencies on request

Rosenberger Low Loss Coaxial Cables

Rosenberger 7/8" RL, 1 1/4" RL and 1 5/8" RL Low Loss coaxial cables deliver excellent performance for connections between the various elements in a network.

The transmission characteristics of the Rosenberger Low Loss coaxial cables have been improved significantly while still maintaining the outer dimensions to suit all connectors and installation material.

The inner conductor consists of a smooth copper tube for the 7/8" RL and the 1 1/4" RL and a corrugated copper tube for the 1 5/8" RL. The outer conductor of each cable is made of a welded copper tube with annular corrugations and marked accordingly with the letter "R" and "L" for Low Loss.

The Low Loss coaxial cables are offered with outer jackets made of either polyethylene or flame-retardant, halogen-free materials.



Low Loss Coaxial Cables 7/8" RL

Rosenberger No.	Description	
SL 078 R L PE	Standard polyethylene jacket	
SL 078 R L FRNC	Flame-retardant, halogen-free jacket	

Mechanical Characteristics	
Inner conductor	Copper tube, 9.45 mm
Dielectric	Highly foamed polyethylene, 22.4 mm
Diameter over outer conductor	Regular corrugated copper tube, 25.4 mm
Diameter over outer jacket	PE / FRNC, 27.6 mm
Cable with standard UV-resistant and halogen-free PE / FRNC	
Cable weight PE (FRNC)	410 kg/km (480 kg/km)
Tensile strength	1450 N
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
Installation temperature	– 25 °C to + 60 °C
Operational temperature	– 40 °C to + 85 °C

Electrical Characteristics	
Impedance	50 ± 1 Ω
Relative velocity of propagation	89%
Capacitance	74 pF/m
Inductance	0.195 µH/m
Maximum operating frequency	5.0 GHz
Cut-off frequency	5.2 GHz
Peak power rating	95 kW
DC breakdown voltage	10000 V
Jacket spark, volts RMS	8000 V
Inner conductor DC-resistance	1.39 Ω/km
Outer conductor DC-resistance	1.22 Ω/km
Insulation resistance	≥ 10 GΩ x km
Return loss 800 – 1000 MHz	≤ – 26 dB
Return loss 1700 – 2500 MHz	≤ – 24 dB

Attenuation value and power rating

Frequency (MHz)	100	200	300	400	450	800	900	1000	1800	2000	2200	2500	2700	3000
Attenuation (dB/100 m)	1.11	1.60	1.99	2.31	2.49	3.42	3.61	3.84	5.35	5.62	6.01	6.48	6.75	7.20
Average power (kW)	9.30	6.40	4.82	4.16	3.81	2.75	2.62	2.56	1.79	1.70	1.60	1.48	1.23	1.17

- Attenuation, ambient temperature: 20 °C
- Average power, ambient temperature: 40 °C
- Average power, inner conductor temperature: 100 °C
- Maximum attenuation value will be 105% of the nominal attenuation value
- Other frequencies on request

Low Loss Coaxial Cables 1 1/4" RL

Rosenberger No.	Description	
SL114 R L PE	Standard polyethylene jacket	
SL114 R L FRNC	Flame-retardant, halogen-free jacket	

Mechanical Characteristics	
Inner conductor	Helically corrugated copper tube, 13.1 mm
Dielectric	Foamed polyethylene, 32.5 mm
Diameter over outer conductor	Annularly corrugated copper tube, 35.8 mm
Diameter over outer jacket	PE / FRNC, 39.5 mm
Cable with standard UV-resistant and halogen-free PE / FRNC	
Cable weight PE (FRNC)	~ 800 kg/km
Tensile strength	2500 N
Min. bending radius, single	200 mm
Min. bending radius, repeated	380 mm
Number of bends, minimum (typical)	15 (50)
Recommended hanger spacing	1.2 m
Installation temperature	– 25 °C to + 60 °C
Operational temperature	– 40 °C to + 85 °C

Electrical Characteristics	
Impedance	50 ± 1 Ω
Relative velocity of propagation	89%
Capacitance	75 pF/m
Inductance	0.190 µH/m
Maximum operating frequency	3.5 GHz
Cut-off frequency	3.7 GHz
Peak power rating	200 kW
DC breakdown voltage	10000 V
Jacket spark, volts RMS	10000 V
Inner conductor DC-resistance	≤ 0.91 Ω/km
Outer conductor DC-resistance	≤ 0.90 Ω/km
Insulation resistance	≥ 10 GΩ x km
Return loss 800 – 1000 MHz	≤ – 24 dB
Return loss 1700 – 2500 MHz	≤ – 24 dB

Attenuation value and power rating

Frequency (MHz)	100	200	300	400	450	800	900	1000	1800	2000	2200	2500	2700	3000
Attenuation (dB/100 m)	0.80	1.15	1.55	1.72	1.83	2.47	2.64	2.80	3.96	4.23	4.48	4.84	5.19	5.42
Average power (kW)	13.4	9.31	7.71	6.03	5.50	3.90	3.70	3.50	2.40	2.30	2.20	2.03	1.86	1.73

- Attenuation, ambient temperature: 20 °C
- Average power, ambient temperature: 40 °C
- Average power, inner conductor temperature: 100 °C
- Maximum attenuation value will be 105% of the nominal attenuation value
- Other frequencies on request

Low Loss Coaxial Cables 1 5/8" RL

Rosenberger No.	Description	
SL 158 R L PE	Standard polyethylene jacket	
SL 158 R L FRNC	Flame-retardant, halogen-free jacket	

Mechanical Characteristics	
Inner conductor	Spiral corrugated copper tube, 17.6 mm
Dielectric	Highly foamed polyethylene, 41.0 mm
Diameter over outer conductor	Regular corrugated copper, 46.5 mm
Diameter over outer jacket	PE / FRNC, 49.8 mm
Cable with standard UV-resistant and halogen-free PE / FRNC	
Cable weight PE (FRNC)	1055 kg/km
Tensile strength	3500 N
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
Installation temperature	– 25 °C to + 60 °C
Operational temperature	– 40 °C to + 85 °C

Electrical Characteristics	
Impedance	50 ± 1 Ω
Relative velocity of propagation	90%
Capacitance	74 pF/m
Inductance	0.190 µH/m
Maximum operating frequency	2.7 GHz
Cut-off frequency	2.9 GHz
Peak power rating	310 kW
DC breakdown voltage	15000 V
Jacket spark, volts RMS	10000 V
Inner conductor DC-resistance	1.25 Ω/km
Outer conductor DC-resistance	0.65 Ω/km
Insulation resistance	≥ 10 GΩ x km
Return loss 800 – 1000 MHz	≤ – 24 dB
Return loss 1700 – 2500 MHz	≤ – 24 dB

Attenuation value and power rating

Frequency (MHz)	100	200	300	400	450	800	900	1000	1800	2000	2200	2500	2700	3000
Attenuation (dB/100 m)	0.66	0.96	1.21	1.41	1.51	2.09	2.24	2.35	3.38	3.57	3.82	4.11	4.38	24.4
Average power (kW)	14.5	10.1	7.90	6.88	6.29	4.54	4.24	4.05	2.82	2.68	2.52	2.34	2.07	0.40

- Attenuation, ambient temperature: 20 °C
- Average power, ambient temperature: 40 °C
- Average power, inner conductor temperature: 100 °C
- Maximum attenuation value will be 105% of the nominal attenuation value
- Other frequencies on request

4.3-10 Coax Jumper Assemblies

Rosenberger coaxial jumpers have been designed using the many years of experience gained by Rosenberger engineers in this field. Rosenberger's unique knowledge of designing and manufacturing world-leading PIM testing equipment is directly reflected in the jumpers.



RF Jumper Cables – Superior performance up to 6 GHz

Rosenberger Coax Jumpers have the industry-best PIM levels

-117 dBm / 160 dBc @ 2 x 20 W (typ. -120 dBm / -163 dBc @ 2 x 20 W)

Technical Data

Range	Return Loss	Insertion Loss typ. (1/2"R – flexible)	Insertion Loss typ. (1/2"S – super flexible)
DC - 1 GHz	≥ 32 dB	≤ 0.07 dB/m + 0.01 dB	≤ 0.10 dB/m + 0.01 dB
1 - 2.2 GHz	≥ 30 dB	≤ 0.11 dB/m + 0.015 dB	≤ 0.168 dB/m + 0.015 dB
2.2 - 2.7 GHz	≥ 28 dB	≤ 0.125 dB/m + 0.016 dB	≤ 0.19 dB/m + 0.016 dB
2.7 - 6 GHz	≥ 23 dB	≤ 0.22 dB/m + 0.01 dB	≤ 0.31 dB/m + 0.01 dB

Traceability – Online Measurement Reports

Every single Coax Jumper is tested for its return loss and PIM values after its assembly. By entering the serial number on our web portal our customers are able to download the measurement reports of their cables.



Online Measurement Reports

Download VSWR and PIM measurements at jumper.rosenberger.com

For a more convenient verification of the performance, the measurement report can easily be downloaded to mobile devices by scanning the Data Matrix code on the packaging.

Test and Measurement Equipment

Test Cables

Cable assemblies from Rosenberger are characterized by excellent electrical and mechanical performances up to 18 GHz.

- High phase stability
- Crush resistance (80 N/mm) with armor (cable only)



Test Cable

Test Cables DC-18 GHz not armored

Rosenberger No.	Connector 1	Connector 2
LU7-036-500	RPC-N 50 Ω male	
LU7-036-1000	RPC-N 50 Ω male	RPC-N 50 Ω male
LU7-036-1500	RPC-N 50 Ω male	RPC-N 50 Ω male
LU7-036-2000	RPC-N 50 Ω male	RPC-N 50 Ω male
LU7-238-500	RPC-N 50 Ω male	RPC-N 50 Ω female
LU7-238-1000	RPC-N 50 Ω male	RPC-N 50 Ω female
LU7-238-1500	RPC-N 50 Ω male	RPC-N 50 Ω female
LU7-238-2000	RPC-N 50 Ω male	RPC-N 50 Ω female
LU7-307-500	RPC-N 50 Ω male	RPC-N 50 Ω male right angle
LU7-307-1000	RPC-N 50 Ω male	RPC-N 50 Ω male right angle
LU7-307-1500	RPC-N 50 Ω male	RPC-N 50 Ω male right angle
LU7-307-2000	RPC-N 50 Ω male	RPC-N 50 Ω male right angle

Test Cables DC-18 GHz armored

Rosenberger No.	Connector 1	Connector 2
LU7-096-500	RPC-N 50 Ω male	RPC-N 50 Ω male
LU7-096-1000	RPC-N 50 Ω male	RPC-N 50 Ω male
LU7-096-1500	RPC-N 50 Ω male	RPC-N 50 Ω male
LU7-096-2000	RPC-N 50 Ω male	RPC-N 50 Ω male
LU7-266-500	RPC-N 50 Ω male	RPC-N 50 Ω female
LU7-266-1000	RPC-N 50 Ω male	RPC-N 50 Ω female
LU7-266-1500	RPC-N 50 Ω male	RPC-N 50 Ω female
LU7-266-2000	RPC-N 50 Ω male	RPC-N 50 Ω female
LU7-275-500	RPC-N 50 Ω male	RPC-N 50 Ω male right angle
LU7-275-1000	RPC-N 50 Ω male	RPC-N 50 Ω male right angle
LU7-275-1500	RPC-N 50 Ω male	RPC-N 50 Ω male right angle
LU7-275-2000	RPC-N 50 Ω male	RPC-N 50 Ω male right angle

T-Adaptor (Open-Short-Load)

Rosenberger's T-Adaptor Open-Short Load (OSL) unique 'T' configuration integrates three termination standards into a single unit to simplify precision calibration of 50 Ω analyzers.

The variety of available connector types facilitates calibration to the analyzer's test port or its adapted extension to mate directly with the input port of the device being tested.



53S34R-MS0N3



60S34R-MS0N3



64S36R-MS0N3

T-Adaptor (Open-Short-Load)

Rosenberger No.	Connector 1	Frequency
53S34R-MS0N3	N male	4 GHz
53K34R-MS0N3	N female	4 GHz
53S36R-MS0N3	N male	6 GHz
53K36R-MS0N3	N female	6 GHz
60S34R-MS0N3	7-16 male	4 GHz
60K34R-MS0N3	7-16 female	4 GHz
60S36R-MS0N3	7-16 male	6 GHz
60K36R-MS0N3	7-16 female	6 GHz
64S36R-MS0N3	4.3-10 male	6 GHz
64K36R-MS0N3	4.3-10 female	6 GHz

Loads

For testing and troubleshooting, these high-quality, precision loads are typically used to terminate system components at the characteristics impedance.



05S150-010S3



60S17R-001N1



64S17R-001S3

Loads

Rosenberger No.	Interface	Frequency
05S150-010S3	N male	18 GHz, 0.5 W
05K150-010S3	N female	18 GHz, 0.5 W
60S17R-001N1	7-16 male	8 GHz, 1 W
60K17R-001N1	7-16 female	8 GHz, 1 W
64S17R-001S3	4.3-10 male	6 GHz, 1 W
64K17R-001S3	4.3.10-female	6 GHz, 1 W

Adaptors

These precision adaptors can be used at the test port of the analyzer or its extension cable to provide an interface compatible with the specified system test point before starting the calibration process. The PIM optimized adaptors ensure optimum accuracy and stability for testing.



65S153-KIMN1



60S101-SIMN1



53S101-S00N5



64S101-S00N1

Adaptors

Rosenberger No.	Interface
53S101-S00N5	N male – N male
53K102-K00N5	N female – N female
53S164-S00N1	N male – 4.3-10 male
53S164-K00N1	N male – 4.3-10 female
53K164-S00N1	N female – 4.3-10 male
53S201-K00N5	N male – N female
60S101-SIMN1	7-16 male – 7-16 male
60S101-KIMN1	7-16 male – 7-16 female
60K101-KIMN1	7-16 female – 7-16 female
60S153-KIMN1	7-16 male – N female
53S160-SIMN1	7-16 male – N male
53S160-KIMN1	7-16 female – N male
53K160-KIMN1	7-16 female – N female
60S164-S00N1	7-16 male – 4.3-10 male
60S164-K00N1	7-16 male – 4.3-10 female
60S231-K00N1	7-16 male – 7-16 female
64S101-S00N1	4.3-10 male – 4.3-10 male
64S101-K00B1	4.3-10 male – 4.3-10 female
64K101-K00B1	4.3-10 female – 4.3-10 female
64K501-K00B1	4.3-10 female – 4.3-10 female – bulkhead adaptor
64S201-K00B1	4.3-10 male – 4.3-10 female
65S153-KIMN1	4.1-9.5 male – N female

PIM Measurement

Excellent PIM performance is vital in today's mobile communications network. Rosenberger offers a complete range of PIM loads, measurement assemblies, and adaptors that meet our customers' expectations in terms of outstanding PIM performance.

PIM Load and Test Kit

For testing and troubleshooting, these high-quality precision loads are typically used to terminate system components at the characteristic impedance.

Rosenberger No.	Interface	Frequency	Product
60Z150-012	4.3-10 / 7-16	700 MHz to 3.6 GHz	
60Z150-020	7-16 male – 7-16 female	DC to 2.7 GHz	
IM-Load-Site 4.3-10	4.3-10 male – 4.3-10 female	DC to 2.7 GHz	

Measurement Assemblies

The PIM optimized measurement assemblies ensure optimum accuracy and stability for testing.

Rosenberger No.	Description	Product
IM-Cable-716m-4310m-xxx	7-16 male – 4.3-10 female	
IM-Cable-716m-716m-xxx	7-16 male – 7-16 male	
IM-Cable-4310m-4310m-xxx	4.3-10 male – 4.3-10 male	

xxx = cable length in mm

Adaptors

Rosenberger precision adaptors can be used at the test port of the analyzer or its extension cable to provide an interface compatible the specified system test point. The PIM optimized adaptors ensure optimum accuracy and stability for testing.

Rosenberger No.	Description	Product
60S164-K00N1	7-16 male – 4.3-10 male	
60S164-S00N1	7-16 male – 4.3-10 female	

PIM Test Kits

Carry out high-precision and quality test and measurements with the Rosenberger test kits including test cables, adaptors, load, and torque wrench.

Rosenberger No.	Description	Product
SLTK003-000	7-16 contains a high-power, low-PIM load, different adaptors, highly flexible test cable 7-16 male to 7-16 male, torque wrench	
SLTK003-001	4.3-10 contains a high-power, low-PIM load, different adaptors, highly flexible test cable 4.3-10 male to 4.3-10 male, torque wrench	

PIM Site Analyzer α

Stressed PIM Tests without any Calibration on Site

The Rosenberger portable and multifunctional broadband PIM Site Analyzer α provides the best alternative of performing the most precise and efficient PIM tests on site.

The PIM Site Analyzer α consists of a single Master Unit with band-specific, interchangeable filter units, since the form factor of the filter units is the same. Take out one filter unit, e.g., 900 MHz, and replace with another filter unit, e.g., 1800 MHz, without any calibration of the filter unit, potential adaptors, test cable, or operational mode(s). Future-proof Plug and Play concept covering 700 to 2700 MHz.

Benefits

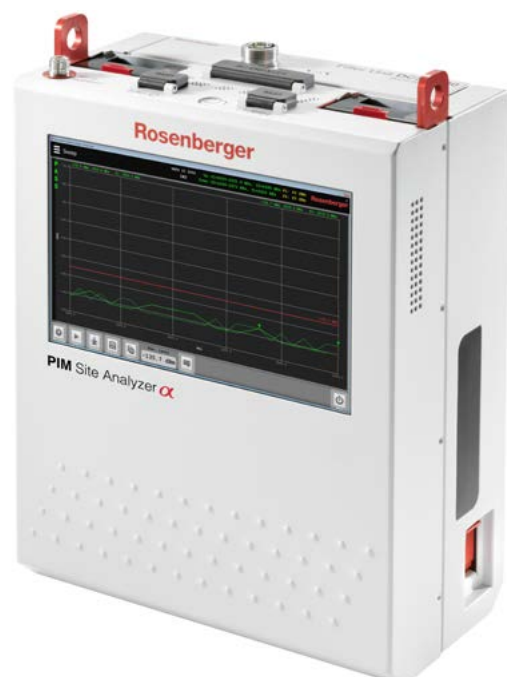
- Broadband Base Unit 700 - 2700 MHz with field interchangeable, band-specific filter units
- Stressed PIM tests – continuous wave (CW) signal simulates real operating conditions of the base station (in conformity with IEC 62037-1)
- Outstanding PIM performance < -125 dBm (< -130 dBm typ.)
- No on-site calibration
- Accuracy of < 0.3 m for PIM Distance to Fault (DTF) measurement
- Future-proof for upcoming bands
- Hardware ready for later CPRI SW upgrade

Additional Features

- In-built WiFi for remote control via optional 10" Android tablet
- Operation via batteries or external power supply
- VSWR/return loss measurements
- Antenna isolation measurement
- Integrated spectrum analyzer
- 12" touchscreen
- Intuitive software operation

Filter Units

- 700, 800, 900, 1800, 2100, 2600 MHz
(other frequency bands on request)



PIM Site Analyzer

Base unit includes:

- 1 filter unit
- 2 batteries
- External power unit
- Charging cable

PIM Site Analyzer Broadband Base Unit

Rosenberger No.	Frequency Range RX	Frequency Range TX	Power Output	RX Noise Floor
IM-B-BU-0727	698 - 2700 MHz	see filter units	26 / 49 dBm	< -135 dBm

Detailed specifications on request

PIM Site Analyzer Filter Units for 7-16

Rosenberger No.	Frequency Band	E-UTRA Band	Frequency Range RX	Frequency Range TX	Power Output	Residual IM @ 2x43 dBm Reflected IM
IM-B-FI-700/B12-14	LTE 700 LU	12, 13, 14, 17	698 - 716 MHz 776 - 798 MHz	728 - 760 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-800/B20	DigDiv	20	832 - 862 MHz	792 - 822 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-850/B5	AMPS 800	5	824 - 849 MHz	869 - 894 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-900/B8	EGSM 900	8	880 - 915 MHz	925 - 960 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-1800/B3	DCS 1800	3	1710 - 1785 MHz	1805 - 1880 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-1900/B2+4	PCS 1900 / AWS	2, 4	1710 - 1910 MHz	1930 - 2155 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-700/B28	APT 700	28	703 - 748 MHz	758 - 803 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-1400/B11+21	LTE 1400	11, 21	1427.9 - 1462.9 MHz	1475.9 - 1510.9 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-2100/B1	UMTS 2100	1	1920 - 2060 MHz	2110 - 2170 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-2600/B7	UMTS II / LTE 2600	7	2545 - 2580 MHz	2620 - 2695 MHz	+23 ... +46 dBm	< -168 dBc

Detailed specifications on request

PIM Site Analyzer Filter Units for 4.3-10

Rosenberger No.	Frequency Band	E-UTRA Band	Frequency Range RX	Frequency Range TX	Power Output	Residual IM @ 2x43 dBm Reflected IM
IM-B-FI-700/B12-14-G	LTE 700 LU	12, 13, 14, 17	698 - 716 MHz 776 - 798 MHz	728 - 760 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-800/B20-G	DigDiv	20	832 - 862 MHz	792 - 822 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-850/B5-G	AMPS 800	5	824 - 849 MHz	869 - 894 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-900/B8-G	EGSM 900	8	880 - 915 MHz	925 - 960 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-1800/B3-G	DCS 1800	3	1710 - 1785 MHz	1805 - 1880 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-1900/B2+4-G	PCS 1900 / AWS	2, 4	1710 - 1910 MHz	1930 - 2155 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-700/B28-G	APT 700	28	703 - 748 MHz	758 - 803 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-1400/B11+21-G	LTE 1400	11, 21	1427.9 - 1462.9 MHz	1475.9 - 1510.9 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-2100/B1-G	UMTS 2100	1	1920 - 2060 MHz	2110 - 2170 MHz	+23 ... +46 dBm	< -168 dBc
IM-B-FI-2600/B7-G	UMTS II / LTE 2600	7	2545 - 2580 MHz	2620 - 2695 MHz	+23 ... +46 dBm	< -168 dBc

Detailed specifications on request

PIM Site Analyzer α Battery Pack

Rosenberger No.	Capacity
IM-A-BU-BAT	99 Wh

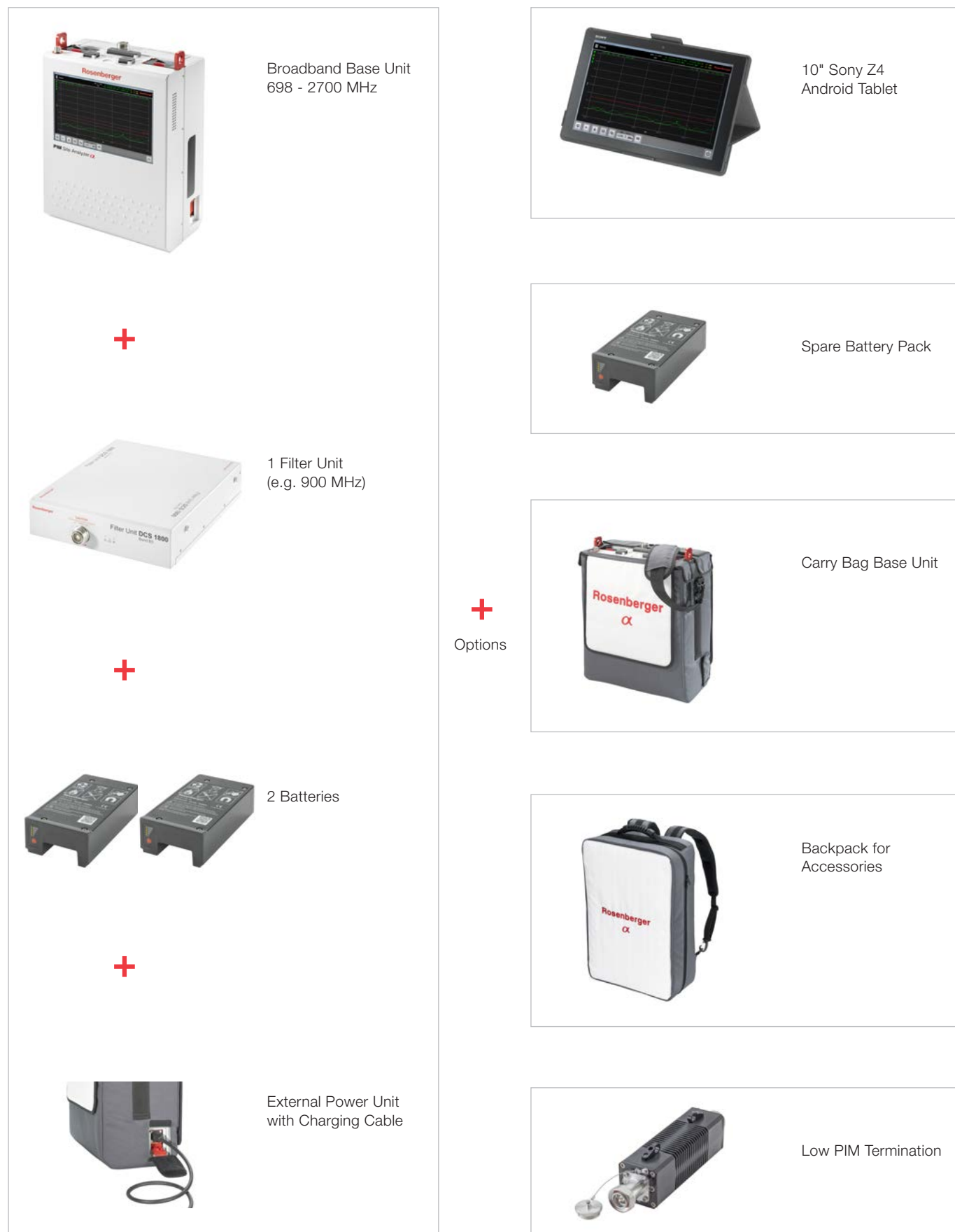
PIM Site Analyzer α Bag

Rosenberger No.	Description
IM-B-ACSR-BAG	Carry Bag for PIM Site Analyzer α
IM-A-ACSR-Backpack	Backpack for accessories



Band filter units that can be exchanged both easily and quickly

PIM Site Analyzer α Configuration



Rosenberger No.

05K150-010S3	42	60W000-002	21
05S150-010S3	42	60Z150-012	44
8FW/8FW-65-8D-64K-B6	19	60Z150-020	44
8FW/8FW-OD-6-64K-B6	19	64K1C7-C01B1	22
8FW-90-8-64K-B6	19	64K1C7-C02B1	22, 27
8FW-OD-3-64K-B6	19	64K1C7-C03B1	22, 27
53K1C7-C03N1	22	64K1C7-C08B1	22, 27
53K1C7-C08N1	22	64K1C7-C09B1	22, 27
53K1C7-CX5N1	22	64K1C7-CX5B1	22, 27
53K1D7-C06N1	22	64K1D7-C06B1	22, 27
53K1D7-C07N1	22	64K1D7-C07B1	22, 27
53K34R-MSON3	41	64K17R-001S3	42
53K36R-MSON3	41	64K36R-MSON3	41
53K102-K00N5	43	64K101-K00B1	43
53K115-C01N1	22	64K501-K00B1	43
53K115-C09N1	22	64S1C7-C01N1	22
53K160-KIMN1	43	64S1C7-C02N1	22, 27
53K164-S00N1	43	64S1C7-C03N1	22, 27
53S1C7-C03N1	22	64S1C7-C08N1	22, 27
53S1C7-C08N1	22	64S1C7-C09N1	22, 27
53S1C7-CX5N1	22	64S1C7-CX5N1	22, 27
53S1D7-C06N1	22	64S1D7-C06N1	22, 27
53S1D7-C07N1	22	64S1D7-C07N1	22, 27
53S2C7-C03N1	22	64S2C7-C01N1	22
53S2C7-C08N1	22	64S2C7-C02N1	22, 27
53S34R-MSON3	41	64S2C7-C03N1	22, 27
53S36R-MSON3	41	64S2C7-C08N1	22, 27
53S101-S00N5	43	64S2C7-C09N1	22, 27
53S115-C01N1	22	64S17R-001S3	42
53S115-C09N1	22	64S36R-MSON3	41
53S160-KIMN1	43	64S101-K00B1	43
53S160-SIMN1	43	64S101-S00N1	43
53S164-K00N1	43	64S201-K00B1	43
53S164-S00N1	43	64W022-001	21
53S201-K00N5	43	65S153-KIMN1	43
53S215-C01N1	22	99W057-000	21
53S215-C09N1	22	99W057-001	21
53W010-000	21	A-xx-50-64-T3	16
60K1C7-C03N1	22	A-xx-50-D-T1	16
60K1C7-C08N1	22	A-xx-50-N-T1	16
60K1C7-CX5N1	22	A-xx-100-64-T3	16
60K1D7-C06N1	22	A-xx-100-D-T1	16
60K1D7-C07N1	22	A-xx-100-N-T1	16
60K17R-001N1	42	CB-2-DW-DF-02H-T3	14
60K34R-MSON3	41	CB-2-FM-DF-01	14
60K36R-MSON3	41	CB-2-LH-DF-01	14
60K101-KIMN1	43	CB-2-LH-NF-01	14
60K115-C01N1	22	CB-3-DWE-DF-01	14
60K115-C02N1	22	CB-3-GDU-DF-04	14
60K115-C09N1	22	CB-4-GDWE-64F-01	14
60S1C7-C03N1	22	CB-4-GDWE-DF-08G	14
60S1C7-C08N1	22	CB-4-LCAP-64F-02	14
60S1C7-CX5N1	22	CB-13-POI-64F-01	17
60S1D7-C06N1	22	DC-5-7F-NF-01	11
60S1D7-C07N1	22	DC-5-8F-DF-01	11
60S2C7-C03N1	22	DC-6-7F-DF-01	11
60S2C7-C08N1	22	DC-6-7F-NF-01	11
60S17R-001N1	42	DC-6-8F-64F-T	11
60S34R-MSON3	41	DC-8-7F-DF-01	11
60S36R-MSON3	41	DC-8-7F-NF-01	11
60S101-KIMN1	43	DC-8-8F-64F-T	11
60S101-SIMN1	43	DC-10-7F-DF-01	11
60S115-C01N1	22	DC-10-7F-NF-01	11
60S115-C02N1	22	DC-10-8F-64F-T	11
60S115-C09N1	22	DC-12-8F-64F-T	11
60S153-KIMN1	43	DC-13-7F-DF-01	11
60S164-K00N1	43, 45	DC-13-7F-NF-01	11
60S164-S00N1	43, 45	DC-15-7F-DF-01	11
60S215-C01N1	22	DC-15-7F-NF-01	11
60S215-C02N1	22	DC-15-8F-64F-T	11
60S215-C09N1	22	DC-20-7F-DF-01	11
60S231-K00N1	43	DC-20-7F-NF-01	11

DC-20-8F-64F-T	11	LU7-307-1500	40
DC-30-7F-DF-01	11	LU7-307-2000	40
DC-30-7F-NF-01	11	S-2-7F-DF-01	12
DC-30-8F-64F-T	11	S-2-7F-NF-01	12
HM-3-7F-DF-02	13	S-2-8F-64F-T	12
HM-3-7F-NF-01	13	S-3-7F-DF-01	12
HM-3-8F-64F-T	13	S-3-7F-NF-01	12
HM-6-8F-64F-T	13	S-3-8F-64F-T	12
HM-6-8F-DF-01	13	S-4-7F-DF-01	12
HM-6-8F-NF-01	13	S-4-7F-NF-01	12
IM-A-ACSRy-Backpack	48	S-4-8F-64F-T	12
IM-A-BU-BAT	48	SL 012 R FRNC	28, 30
IM-B-ACSRy-BAG	48	SL 012 R PE	28, 30
IM-B-BU-0727	47	SL 012 S FRNC	28, 34
IM-B-FI-700/B12-14	47	SL 012 S PE	28, 34
IM-B-FI-700/B12-14-G	47	SL 014 R FRNC	28, 29
IM-B-FI-700/B28	47	SL 014 R PE	28, 29
IM-B-FI-700/B28-G	47	SL 014 S FRNC	28, 32
IM-B-FI-800/B20	47	SL 014 S PE	28, 32
IM-B-FI-800/B20-G	47	SL 038 S FRNC	28, 33
IM-B-FI-850/B5	47	SL 038 S PE	28, 33
IM-B-FI-850/B5-G	47	SL 078 R L FRNC	28, 36
IM-B-FI-900/B8	47	SL 078 R L PE	28, 36
IM-B-FI-900/B8-G	47	SL 114 R L FRNC	28
IM-B-FI-1400/B11+21	47	SL 114 R L PE	37
IM-B-FI-1400/B11+21-G	47	SL 114 R L PE	28
IM-B-FI-1800/B3	47	SL 114 R L PE	37
IM-B-FI-1800/B3-G	47	SL 158 R L FRNC	28, 38
IM-B-FI-1900/B2+4	47	SL 158 R L P	28
IM-B-FI-1900/B2+4-G	47	SL 158 R L PE	38
IM-B-FI-2100/B1	47	SL M5542i	18
IM-B-FI-2100/B1-G	47	SL S4935i	18
IM-B-FI-2600/B7	47	SL S5379i	18
IM-B-FI-2600/B7-G	47	SL S5490i	18
IM-Cable-716m-716m-xxx	44	SL S5606i	18
IM-Cable-716m-4310m-xxx	44	SLT001-000	23
IM-Cable-4310m-4310m-xxx	44	SLT001-000-CB	23
IM-Load-Site 4.3-10	44	SLT001-C01	23
L-2-64M-01	15	SLT001-C01-I	23
L-2-DM	15	SLT001-C02	23
L-2-NM	15	SLT001-C02-I	23
L-10-64F-T3	15	SLT001-C03	23
L-10-DM-T1	15	SLT001-C03-F	23
L-10-NM-T1	15	SLT001-C03-I	23
L-50-64F-T3	15	SLT001-C05	23
L-50-DM-T1	15	SLT001-C05-F	23
L-50-NM-T1	15	SLT001-C05-I	23
L-100-64F-T3	15	SLT001-C06	23
L-100-DM-T1	15	SLT001-C06-F	23
L-100-NM-T1	15	SLT001-C06-I	23
LU7-036-500	40	SLT001-C08	23
LU7-036-1000	40	SLT001-C08-I	23
LU7-036-1500	40	SLT001-C09	23
LU7-036-2000	40	SLT001-C09-I	23
LU7-096-500	40	SLTK003-000	45
LU7-096-1000	40	SLTK003-001	45
LU7-096-1500	40		
LU7-096-2000	40		
LU7-238-500	40		
LU7-238-1000	40		
LU7-238-1500	40		
LU7-238-2000	40		
LU7-266-500	40		
LU7-266-1000	40		
LU7-266-1500	40		
LU7-266-2000	40		
LU7-275-500	40		
LU7-275-1000	40		
LU7-275-1500	40		
LU7-275-2000	40		
LU7-307-500	40		
LU7-307-1000	40		



Website

For more information refer to our website:
www.rosenberger.com/siso

Rosenberger

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