

## Connectors

The connector design offers a significant installation advantage due to a one-piece item. That means, no assembly or disassembly is required during installation. All connectors are available as N as well as 7-16 types, male or female.

### Same connectors for all smooth wall cable types

All RADIAFLEX® smooth wall cables, these are the series ALF/RLF, RLK, RLV and RAY, fit to the same type of connectors. This simplifies everything around the cable – from ordering to installation.

### Connectors for corrugated cable types

The RADIAFLEX® cables of the RCF, RSF, and RHCA series have a corrugated outer conductor requiring different connectors than the smooth wall radiating cables.

For all RADIAFLEX® cables with corrugated outer conductor the connectors of the CELLFLEX® series can be used. The RCF and RHCA leaky cable series are compatible to the connectors of type LCF and the RSF leaky cable series fits to connectors of type SCF.

## Sealing

Sealing and mechanical load reduction for the smooth wall cables is performed by installing a heat shrinking sleeve that is provided with each connector.

RADIAFLEX® cables with flame or fire retardant jackets (suffix JFN resp. JFL), with connectors sealed by shrinking sleeve, meet the requirements of IEC 60 332-1.

RADIAFLEX® cables with corrugated outer conductor are sealed like LCF feeders. Each connector is packed with a heat shrinking sleeve.

## Tools

RADIAFLEX® smooth wall cables do not need special trimming tools. Instead, common tools like a saw and a cable knife are sufficient. The offered hand tool kit already comprises all necessary tools.

Corrugated RADIAFLEX® cables should be trimmed by special tools which are shown in the Transmission Line Products section of this catalog.

For instruction how to trim the cables see at the 'Installation guide lines' which are available on request.



# RADIAFLEX® Connectors and Trim Tools

## Selection Guide

	ALFU12-50	RLKW12-50 RLKU12-50
<b>CONNECTORS:</b>		
Connector, N-male	NM-RA12-010	NM-RA12-010
Connector, N-female	NF-RA12-011	NF-RA12-011
Connector, 7-16-male	716M-RA12-010	716M-RA12-010
Connector, 7-16-female	716F-RA12-011	716F-RA12-011
Trimming tool for above connectors	–	–
Spare blade for trimming tool	–	–

	RLF78-50 RLFW78-50 RAY78-50 RAY78-50B RLFU78-50	RLKL78-50 RLKU78-50 RLKW78-50	RLF114-50 RLFW114-50 RAY114-50 RAY114-50B RLFU114-50	RLK114-50 RLKW114-50 RLKU114-50 RLKL114-50 RLV114-50 RLVU114-50 RLVU114-50B
<b>CONNECTORS:</b>				
Connector, N-male	NM-RA78-014	NM-RA78-014	NM-RA114-014	NM-RA114-014
Connector, N-female	NF-RA78-015	NF-RA78-015	NF-RA114-015	NF-RA114-015
Connector, 7-16-male	716M-RA78-014	716M-RA78-014	716M-RA114-014	716M-RA114-014
Connector, 7-16-female	716F-RA78-015	716F-RA78-015	716F-RA114-015	716F-RA114-015
Trimming tool for above connectors	–	–	TRIM-114-C12	TRIM-114-C12
Spare blade for trimming tool	–	–	TRIM-B04	TRIM-B04

	RLF158-50 RLFW158-50 RAY158-50 RAYU158-50 RLFU158-50 RAYU158-50T	RLKU158-50 RLVU158-50 RLVU158-50B RLV158-50
<b>CONNECTORS:</b>		
Connector, N-male	NM-RA158-014	NM-RA158-014
Connector, N-female	NF-RA158-015	NF-RA158-015
Connector, 7-16-male	716M-RA158-014	716M-RA158-014
Connector, 7-16-female	716F-RA158-015	716F-RA158-015
Trimming tool for above connectors	TRIM-114-C12	TRIM-114-C12
Spare blade for trimming tool	TRIM-B04	TRIM-B04

	RCF12-50	RSF12-50	RCF78-50
<b>CONNECTORS:</b>			
Connector, N-male	NM-LCF12-070	NM-SCF12-070	NM-LCF78-072
Connector, N-female	NF-LCF12-070	NF-SCF12-070	NF-LCF78-072
Connector, 7-16-male	716M-LCF12-070	716M-SCF12-070	716M-LCF78-072
Connector, 7-16-female	716F-LCF12-070	716F-SCF12-070	716F-LCF78-072
Trimming tool for above connectors	TRIM-12-L	TRIM-12-S-06	TRIM-78-L
Spare blade for trimming tool	TRIM-B03	TRIM-B01	TRIM-B03

	RCF114-50	RCF158-50	RHCA12-50
<b>CONNECTORS:</b>			
Connector, N-male	NM-LCF114-072	NM-LCF158-072	NM-LCF12-070
Connector, N-female	NF-LCF114-072	NF-LCF158-072	NF-LCF12-070
Connector, 7-16-male	716M-LCF114-072	716M-LCF158-072	716M-LCF12-070
Connector, 7-16-female	716F-LCF114-072	716F-LCF158-072	716F-LCF12-070
Trimming tool for above connectors	TRIM-114-C12	TRIM-114-C12	–
Spare blade for trimming tool	TRIM-B04	TRIM-B04	–

## RADIAFLEX® Accessories

### Safe and efficient installation of RADIAFLEX® cable with clic-clamps

- Simple mounting of cables by using wall plugs and screws.
- Simply push in by hand, clamp will grip and click by applying slight pressure.

#### Material:

**CLIC-CLAMP:** Polyamide black, halogen free, fire class UL94HB

**ROUND BASE:** Polypropylene, black halogen free, fire class UL94HB

**RSB CLIP/SCREWS:** Stainless steel

#### OPERATING TEMPERATURE:

-40°C to 85°C (-40°F to 176°F)



#### DIMENSIONS

Round base RB-50-4	50 mm (2") in height
Round base RB-80-4	80 mm (3.15") in height
Screw SC-4595-1	4.5 x 95 mm (.18 x 3.74")
Screw SC-45125-2	4.5 x 125 mm (.18 x 4.92")
Drilling hole for PLUG-6-1	6 x 35 mm (.24 x 1.38")
Screw SC-865-1	M8 x 65 mm (M8 x 2.56")
Screw SC-895-1	M8 x 95 mm (M8 x 3.74")
Drilling hole for PLUG-8-2	10 x 35 mm (.39 x 1.38")

#### Standard Installation

TYPE	ROUND BASE	CLIC-CLAMP	SCREW	PLASTIC PLUG
<b>Cable Size 1/2"</b>				
ALF	RB-50-4	CC-12-2	SC-4595-1	PLUG-6-1
RLK	RB-80-4	CC-12-2	SC-45125-2	PLUG-6-1
RCF	RB-50-4	CC-12-2	SC-4595-1	PLUG-6-1
RSF	RB-50-4	CC-12-2	SC-4595-1	PLUG-6-1
<b>Cable Size 7/8"</b>				
RLF	RB-50-4	CC-78-2	SC-4595-1	PLUG-6-1
RLK	RB-80-4	CC-78-2	SC-45125-2	PLUG-6-1
RAY	RB-80-4	CC-78-2	SC-45125-2	PLUG-6-1
RLV	RB-80-4	CC-78-2	SC-45125-2	PLUG-6-1
RCF	RB-50-4	CC-78-2	SC-4595-1	PLUG-6-1
<b>Cable Size 1-1/4"</b>				
RLF	RB-50-4	CC-114-2	SC-4595-1	PLUG-6-1
RLK	RB-80-4	CC-114-2	SC-45125-2	PLUG-6-1
RAY	RB-80-4	CC-114-2	SC-45125-2	PLUG-6-1
RLV	RB-80-4	CC-114-2	SC-45125-2	PLUG-6-1
RCF	RB-50-4	CC-114-2	SC-4595-1	PLUG-6-1
<b>Cable Size 1-5/8"</b>				
RLF	RB-50-4	CC-158-2	SC-4595-1	PLUG-6-1
RLK	RB-80-4	CC-158-2	SC-45125-2	PLUG-6-1
RAY	RB-80-4	CC-158-2	SC-45125-2	PLUG-6-1
RLV	RB-80-4	CC-158-2	SC-45125-2	PLUG-6-1
RCF	RB-50-4	CC-158-2	SC-4595-1	PLUG-6-1

#### Fire Protection Installation

TYPE	ROUND BASE	STEEL CLAMP	SCREW/WASHER	METAL PLUG
<b>Cable Size 1/2"</b>				
ALF	RB-50-4	RSB-12	SC-865-1, W-84-1	PLUG-8-2
RLK	RB-80-4	RSB-12	SC-895-1, W-84-1	PLUG-8-2
RCF	RB-50-4	RSB-12	SC-865-1, W-84-1	PLUG-8-2
RSF	RB-50-4	RSB-12	SC-865-1, W-84-1	PLUG-8-2
<b>Cable Size 7/8"</b>				
RLF	RB-50-4	RSB-78	SC-865-1, W-84-1	PLUG-8-2
RLK	RB-80-4	RSB-78	SC-895-1, W-84-1	PLUG-8-2
RAY	RB-80-4	RSB-78	SC-895-1, W-84-1	PLUG-8-2
RLV	RB-80-4	RSB-78	SC-895-1, W-84-1	PLUG-8-2
RCF	RB-50-4	RSB-78	SC-865-1, W-84-1	PLUG-8-2
<b>Cable Size 1-1/4"</b>				
RLF	RB-50-4	RSB-114	SC-865-1, W-84-1	PLUG-8-2
RLK	RB-80-4	RSB-114	SC-895-1, W-84-1	PLUG-8-2
RAY	RB-80-4	RSB-114	SC-895-1, W-84-1	PLUG-8-2
RLV	RB-80-4	RSB-114	SC-895-1, W-84-1	PLUG-8-2
RCF	RB-50-4	RSB-114	SC-865-1, W-84-1	PLUG-8-2
<b>Cable Size 1-5/8"</b>				
RLF	RB-50-4	RSB-158-001	SC-865-1, W-84-1	PLUG-8-2
RLK	RB-80-4	RSB-158-001	SC-895-1, W-84-1	PLUG-8-2
RAY	RB-80-4	RSB-158-001	SC-895-1, W-84-1	PLUG-8-2
RLV	RB-80-4	RSB-158-001	SC-895-1, W-84-1	PLUG-8-2
RCF	RB-50-4	RSB-158-001	SC-865-1, W-84-1	PLUG-8-2

### Cable tie for installation of RADIAFLEX® cable to external messenger wire

#### MODEL NAME: TAS-100L

Use for all sizes of RADIAFLEX® cable

#### Base Material:

**TIE:** Polyamide 6.6 UV resistant

**LOCK:** Polypropylene, UV resistant

**FIRE CLASS:** UL94HB, halogen free

**OPERATING TEMPERATURE:** -40°C to 85°C (-40°F to 176°F)

## Wireless Indoor Solutions

### RADIAFLEX® Accessories

#### Considerations and clamp spacing

##### Installation of RADIAFLEX® cables

Together with the RADIAFLEX® cables complete sets of installation material are offered. This installation material has to fulfill various different requirement in order to ensure trouble-free RF operation during the entire lifetime of the radiating cable being installed. Moreover, the installation material has to fulfill safety aspects in case of a fire impact. RFS' installation material and installation method fit to all these requirements.

##### General consideration for installation

As a radiating cable has to be considered as a 'long antenna', the RF transmitted and received by the cable follows the same principal physical rules as for a common compact antenna. Therefore, there already has to be considered basic rules where to install the cable. For example, a radiating cable always requires a minimum distance from the walls and other cables. Putting it into cable ducts or behind false ceilings with screening effects would influence the performance severely. Generally, the radiating cable should always 'see' the mobile for proper operation. Obstacles between the radiating cable and the mobile user causes more or less losses depending on the material, which have to be considered during the system planning phase.

##### Installation on the wall

This is the most common kind of installation of RADIAFLEX®. Using clic-clamps and round bases ensures a quick fastening of the cable by just pushing the cable into the clamp by hand. The size of the round base guarantees the correct distance from the wall.

For fast speed train application in tunnels a special heavy-duty clamp has been developed for cable sizes of 1 1/4" and 1 5/8" (HDC series).

This heavy duty clamp features the additional assembling of up to four clic-clamps. Those clic-clamps are easily snapped onto the heavy-duty clamp without the need of any tool. It allows to install other cables, like fiber optic cables, along the RADIAFLEX® and is then useful for all kind of train tunnels.

##### Installation on messenger wire

The other method to install RADIAFLEX® cables is the use of messenger wires. Again, the offered installation material guarantees the correct installation of the cable for all frequencies.

##### Clamp spacing

For proper long-term operation, a minimum clamp spacing is recommended. It depends on the size of the cable to be installed. The recommended clamp spacing is valid for the installation with:

- clic-clamp and round base
- heavy duty clamp
- messenger wire with cable tie

##### Recommended clamp spacing

The following recommended clamp spacing is valid for all RADIAFLEX® series.

CABLE SIZE	SPACING
1/2"	0.3 m (12") for RSF12-50 0.5 m (20") for others
7/8"	0.9 m (3 ft)
1 1/4"	1.3 m (4.25 ft)
1 5/8"	1.5 m (5 ft)

