# RF cables Overview

Edition 2017





### Foam line

The flexible low loss cable



The product series Spuma, S and SX provide lowest attenuation, high flexibility and optimal shielding. Products from the Spuma series are similar to the LMR® products from Times Microwave. The series with LSFH jacket material and the radiation cross-linked SX series with the RADOX® jacket offer extremely high flame protection.

#### Product series

- S
- Spuma
- Spuma-FR
- SX

#### **Benefits**

- Low loss
- Excellent shielding
- · Mostly halogen free

### Performance line

High temperature coax cable



The PTFE/FEP cables of our RG/K series are designed for applications up to 200 °C and are characterised by low losses, especially at high frequencies. The Enviroflex cables do not contain fluorine plastics either in the dielectric nor in the jacket and thus provide a robust and environmentally friendly option.

#### **Product series**

- RG (PTFE)
- K
- Enviroflex

#### Benefits

- RG standard
- Extended temperature range
- High power

### Standard line

High precision coax cables



Our standard line includes RG coaxial cables based on MIL standards as well as the halogen free and mechanically compatible alternatives of the Enviroflex basic, G, and GX. While the types with LSFH jackets offer low smoke and fire resistance, the ones with RADOX® jackets additionally offer a higher temperature range and maximum environmental resistance.

#### Product series

- RG (PE)
- Enviroflex
- G
- GX

#### Benefits

- RG standard
- High precision
- Halogen free options

# Foam line - the flexible low loss cable

 $\ensuremath{\mathsf{LMR}}^{\ensuremath{\$}}$  drop-in replacement and alike



Series	Spuma and S	Spuma-FR and S	SX
Dielectric material	SPE	SPE	SPEX
Jacket material	PE	LSFH	RADOX®
Halogen free	✓	✓	✓
Low smoke	-	✓	✓
Flame retardancy	-	✓ ✓	<b>✓</b> ✓
Temperature range	-40 to +85 °C	-40 to +85 °C	-40 to +105 °C
Weather resistance	✓ ✓	✓ ✓	<b>✓</b> ✓
Outer diameter (approx. in mm) 50	Ω		
3	-	S_01162_D-01 S_02162_B	-
5	Spuma_195	Spuma_195-FR-01	SX_03272_B-60
5.5	-	S_04162_B-01	SX_04172_B-60
6	Spuma_240	Spuma_240-FR-01 S_04262_D-02 S_04262_D-09	SX_04272_D-02
8	-	S_06162_D-03	-
10	Spuma_400	Spuma_400-FR-01 S_07262_BD	-
13	S_10172_B-11	Spuma_500-FR-01 S_10162_B-11	-
15	Spuma_600	-	-
Outer diameter (approx. in mm) 75	Ω		
3	-	S_02263	-
6	-	S_04263	-
10	S_07273-01	Spuma_400-FR-75	-

This reference matrix does not contain all cable types available. Please refers to the RF cable catalogue or contact your nearest HUBER+SUHER representative for your specific request.

#### Legend

The SX cables technically also belong to the performance line based on the temperature range. They are listed in the foam line due to the mechanical compatibility with the other products.

PE polyethylene

SPE foamed polyethylene

SPEX foamed polyethylene cross-linked LSFH low smoke free of halogen

RADOX® polyolefin, flame retardent (registered trade mark by HUBER+SUHNER)

LMR® brand of Times Microwave Inc.

# Performance line - high temperature coax cables

RG (PTFE) and alike



Series	RG/K	Enviroflex	Enviroflex basic
Dielectric material	PTFE/FEP	SPEX	SPE
Jacket material	FEP/PFA	RADOX®	LSFH
Halogen free	-	✓	✓
Low smoke	-	✓	✓
Flame retardancy	not flammable	✓ ✓	✓
Temperature range	-65 to +165 °C (FEP jacket) -80 to +205 °C (PFA jacket)	-40 to +105 °C	-40 to +85 °C
Weather resistance	<b>✓ ✓ ✓</b>	✓ ✓	<b>✓</b> ✓
Outer diameter (approx. in mn	n) 50 Ω		
1	K_01152-07	-	-
2	RG_178_B/U K_01252_D RG_196_A/U	Enviroflex_178 Enviroflex_178_D	Enviroflex_B178
3	RG_316_/U K_02252_D RG_188_A/U	Enviroflex_316 Enviroflex_316_D	Enviroflex_B316_D
4	RG_303_/U	-	-
5	RG_400_/U	Enviroflex_400	Enviroflex_B400
5	RG_142_B/U	Enviroflex_142	Enviroflex_B142
10	RG_393_/U	Enviroflex_393	-
Outer diameter (approx. in mn	n) 75 Ω		
2.5	RG_179_B/U RG_187_A/U	Enviroflex_179	-
3	K_02253_D-02	-	-
5	RG_302_/U	-	-

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#### Legend

The Enviroflex basic cables technically belong to the standard line based on the temperature range. They are listed in the performance line due to the mechanical compatibility with the other products.

PTFE polytetrafluoroethylene
SPEX foamed polyethylene cross-linked
FEP fluorinated ethylene propylene

PFA perfluoroalkoxy

RADOX® polyolefin, flame retardent (registered trade mark by HUBER+SUHNER)

# Standard line - high precision coax cables

RG (PE) and alike



Series	RG	Enviroflex basic and G	GX
Dielectric material	PE	PE	PEX
Jacket material	PVC	LSFH	RADOX®
Halogen free	-	✓	✓
Low smoke	-	✓	✓
Flame retardancy	-	✓	✓ ✓
Temperature range	−25 to +85 °C	-40 to +85 °C	-40 to +105 °C
Weather resistance	✓ ✓	✓ ✓	✓ ✓
Outer diameter (approx. in mm	) 50 Ω		
2	G_01132-06	-	-
3	RG_174_/U G_02232 G_02232-09 G_02232_D	G_02262	GX_02272 GX_02272_D-02
5	RG_58_C/U G_03232	Enviroflex_B58	GX_03272-04
5,5	RG_223_/U G_03232_D-01	Enviroflex_B223 G_03262_D-01	GX_03272_D-06
10	RG_213_/U	-	GX_07272
11	RG_214_/U RG_214_HIFLEX	Enviroflex_B214	GX_07272_D GX_07272_D-04
13	RG_217_/U	-	-
Outer diameter (approx. in mm	η 75 Ω		
3	G_02233 G_02233-01	G_02263-01 G_02263-05	-
4	-	-	GX_03173-01
5	G_03233	-	-
6	RG_59_B/U G_04133_D G_04233_D-01	G_04263-03	GX_04273 GX_04273-12
10	RG_11_A/U	-	GX_07273

This reference matrix does not contain all cable types available. Please refers to the RF cable catalogue or contact your nearest HUBER+SUHER representative for your specific request.

#### Legend

The GX cables technically belong to the performance line based on the temperature range. They are listed in the standard line due to the mechanical compatibility with the other products.

PE polyethylene

PEX polyethylene cross-linked

PVC polyvinylchlorid

LSFH low smoke free of halogen

RADOX® polyolefin, flame retardent (registered trade mark by HUBER+SUHNER)

### Cable and assembly tools

# 1. EVALUATE with our product finder



Choose suitable cables by using our "product finder".

The tool is available on our homepage or directly under:

http://products.hubersuhner.com

# 2. CALCULATE with the assembly calculator



Compare the suitable products and calculate the electrical performance by using the «RF assembly calculator». The tool is available on our homepage or directly under:

http://rfcablecalc.hubersuhner.com

# 3. CONFIGURE with the assembly configurator



By using the «RF assembly configurator» you can define the complete assembly.

The tool is available on our homepage or directly under:

http://rfwebpcf.hubersuhner.com

### Catalogues

#### RF Cable catalogue



http://literature.hubersuhner.com/ Technologies/Radiofrequency/ RFCablesEN/

#### RF Connector catalogue



http://literature.hubersuhner.com/ Technologies/Radiofrequency/ RFConnectorsEN/

#### MW Cable assembly catalogue



http://literature.hubersuhner.com/ Technologies/Radiofrequency/ MicrowavecablesEN/

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