BEST CONTACTS FOR YOUR SUCCESS

Telegärtner
KARL GÄRTNER GMBH

NETWORKING COMPONENTS
COAXIAL CONNECTORS
CABLE ASSEMBLIES
PRECISION TURNED PARTS
PLASTIC INJECTION MOULD PARTS
INDUSTRIAL ELECTRONICS

Coax

Coaxial Cables

in Bulk Rings or on Cable Drums

Coaxial Cables

In addition to the wide range of coaxial connectors, Telegärtner offers suitable coaxial cables with a characteristic impedance of either 50 or 75 Ohm. This enables a one-stop shopping process for connectors and cables for our customers. Using the Coax Configurator, customers can also easily create and order their own cable assemblies online.
The coaxial cable range at Telegärtner includes standard RG cables, high-quality PTFE cables, Low Loss cables as well as hand-formable and highly shielded Semi Flex cables. Furthermore, the portfolio encompasses special cables like a suitable cable for drag chains or a railway-approved Low Loss cable. Telegärtner also offers UL approved versions for selected cable types.
Coaxial cables can be ordered ex stock in coiled and tied standard unit rings. Selected types are also available on complete cable drums.

Simple RG Cables

- well-known standard worldwide
- single or double braid as outer conductor
- jacket made of PVC, PE or other compound material
- available in 50 Ohm and 75 Ohm
- for many various applications

RG Cable with Jacket Made of PTFE/FEP

- single or double braid as outer conductor
- high-quality jacket made of PTFE or FEP
- resistant to oil, UV radiation and chemicals
- available in 50 Ohm and 75 Ohm
- for applications in harsh environments
- high-temperature resistant

Low Loss Cables

- foil and single braid as outer conductor in combination with foamed dielectric for lowest signal loss
- jacket made of PVC, PE or other compound material
- for long transmission lines
- available in 50 Ohm and also in 75 Ohm for HDTV

Semi Flex Cables

- very dense outer conductor braid that has been soaked in tin for high screening effectiveness
- available with or without FEP jacket (outdoor application possible)
- hand-formable, keeps the shape after bending
- available in 50 Ohm
- can be installed in highly electrically radiating environments (for example in devices like mobile communications antennas)
- for frequencies up to 18 GHz

Portfolio Highlights

X-bend 58 PUR

- 50 Ω
- used for drag chains
- very flexible and robust
- designed for approx. 2 Mio bending cycles
- resistant to oil and UV radiation, flame retardant, halogen free

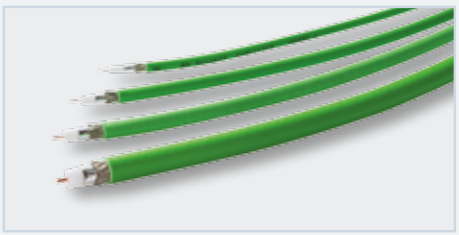
RG-58 Types

- 50 Ω
- very common coax cable for various applications
- flexible design with inner conductor made of 19 strands
- available with jacket made of PVC, PE or flame retardant compound material

Low Loss 400 Rail FR LS ZH

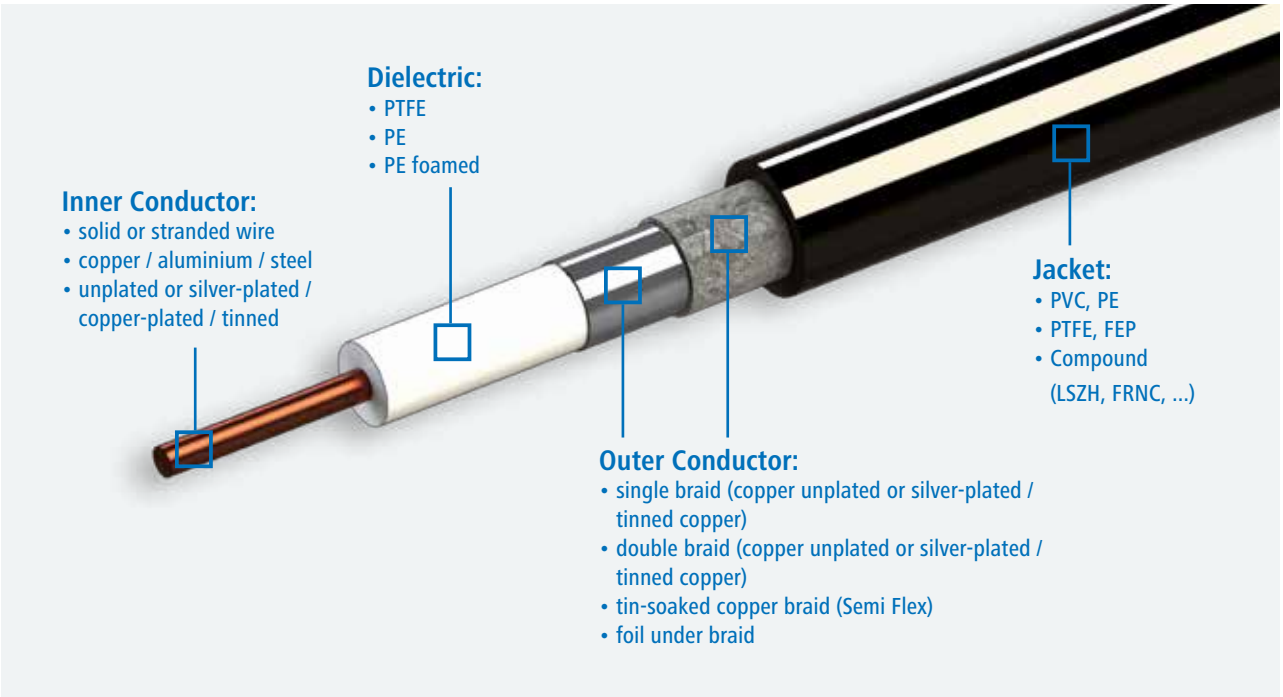
- 50 Ω
- approved for installation and use in trains
- very robust
- highly flame retardant according to EN 45545-2, NFF 16101
- low attenuation
- halogen free

Low Loss HD



- 75 Ω
- designed for studio equipment and broadcast vans
- HDTV, usable for 4K
- Flame retardant jacket and thus well-suited for indoor installation

General Design of Coaxial Cables



Criteria for Selecting Suitable Coaxial Cables

A variety of technical characteristics is shown in the product table of this brochure. Using this table will help you easily and quickly find the right cable for your application. The most important characteristics are briefly described here:

■ Impedance 50 Ohm or 75 Ohm

Almost every system works with 50 Ohm technology. For broadcast and video applications, 75 Ohm systems are used.

■ Insertion Loss (Attenuation)

Insertion loss describes the total electrical loss along an electrical line (ratio of input to output power). This value is mainly determined by cable diameter, material of the dielectric and the transmission frequency. Low Loss Cables for example are characterized by particularly good, that is, low values of insertion loss. Compared to corresponding RG-Cables of the same size, the signal attenuation is significantly lower, especially when using higher frequencies.

■ Screening Effectiveness

Screening effectiveness describes how well a cable prevents electrical energy escaping from or entering into a transmission line. Improving this value is achieved by applying double braids, foil under braid (Low Loss Cables) or tin-soaked braids (Semi Flex Cables) as the outer conductor.

■ Temperature Range

Depending on the materials used, cables may be applied in different ambient temperature ranges. Cables with PE or PVC jackets can be used up to approx. 80°C, cables with PTFE or FEP jacket up to approx. 200°C. PTFE or FEP jackets are furthermore resistant to oil, UV radiation or chemicals.

	Type	Order No. Ring	Length / Ring [m]	Order No. Drum	Length / Drum [m]*	Cable Group	Inner Conductor Ø [mm]	Inner Conductor Design	Inner Conductor Material	Dielectric Ø [mm]	Dielectric Material	Outer Conductor Screen	Outer Conductor Material	Cable Jacket Ø [mm]	Cable Jacket Material	Cable Jacket Colour	Power [W] at 2 GHz	Screening Effectiveness [dB]	Velocity of Propagation [%]	Attenuation [dB/100m] at … GHz 1	2	3	4	5	6	Typ. Frequ. up to [GHz]	Temp. Range [°C] min.	max.	Min. Bend. Radius [mm] single	multiple	Remark
50 Ohm RG-Types	RG-178	L01000B0001	50	L01000T0001	1000	G3	0,30	stranded	CWS	0,87	PTFE	single	CuS	1,85	FEP	brown-transparent	35	>60	70	163	239	299	350	396	438	6	-55	+200	10	20	passes UL 94 V-0
	RG-316	L01000C0002	50	L01000T0002	1000	G7	0,51	stranded	CWS	1,52	PTFE	single	CuS	2,5	FEP	brown-transparent	75	>60	70	91	132	163	190	214	235	6	-55	+200	15	30	passes UL 94 V-0
	RG-174	L01000D0009	100	L01000T0009	500	G7	0,48	stranded	CW	1,52	PE	single	CuZ	2,8	PVC	black	-	-	66	97	142	181	209	236	261	6	-20	+70	30	60	-
	RG-174 UL	L01000C0009	100	-	-	G7	0,48	stranded	CW	1,5	PE	single	CuZ	2,65	PVC	black	-	-	66	110	171	220	264	303	340	6	-40	+85	10	20	UL-listed (E81280)
	RG-58 PVC	L01000C0003	100	L01000T0003	500	G1	0,9	stranded	CuZ	2,95	PE	single	CuZ	4,95	PVC	black	-	-	66	59	87	108	126	143	157	6	-20	+70	25	50	-
	RG-58 PE	L01000B0004	100	-	-	G1	0,9	stranded	CuZ	2,95	PE	single	CuZ	4,95	PE	black	40	>53 (100-900 MHz)	66	71	102	127	148	166	183	6	-40	+85	25	50	-
	RG-58 PVC FR LS ZH UL	L01020B0025	100	L01020T0025	1000	G1	0,93	stranded	CuZ	2,85	PE	single	CuZ	4,9	FRNC	black	40	-	66	65	97	122	144	163	181	6	-40	+80	15	30	UL-Style 1375 (80°C / 30V)
	X-bend 58 PUR	L01021B0020	100	-	-	G5	0,9	stranded	Cu	2,95	PP	single	Cu	5,4	PUR	black	20	-	66	58	85	105	123	139	153	2 moved	-20	+60	-	55 moved	designed for drag chains
single-braided outer conductor	RG-213	L01002B0001	100	L01002T0001	500	-	2,25	stranded	Cu	7,25	PE	single	Cu	10,3	PVC	black	140	>57 (100-900 MHz)	66	25	38	48	56	64	72	6	-55	+85	50	100	-
	RG-213 LS ZH	L01002H0002	100	-	-	-	2,25	stranded	Cu	7,25	PE	single	Cu	10,3	LSZH	black	140	>57 (100-900 MHz)	66	25	38	48	56	64	72	6	-30	+70	50	100	
50 Ohm RG-Types	RD-316	L01020D0009	50	L01020T0009	1000	G8	0,51	stranded	CWS	1,52	PTFE	double	CuS	2,9	FEP	brown-transparent	90	>70	71	92	135	170	200	227	251	2,5	-55	+200	15	30	-
	RG-142	L01000B0007	25	-	-	-	0,94	solid	CWS	2,95	PTFE	double	CuS	5,0	FEP	brown-transparent	200	-	70	49	73	93	110	126	140	6	-55	+200	30	120	-
	RG-223	L01001C0003	100	L01001T0003	500	G5	0,9	solid	CuS	2,95	PE	double	CuS	5,4	PVC	black	35	>78 (100-900 MHz)	66	49	73	91	104	117	130	6	-30	+70	25	50	-
	RG-223 LS ZH	L01001E0003	100	L01001S0003	500	G5	0,9	solid	CuS	2,95	PE	double	CuS	5,4	LSZH	black	35	>78 (100-900 MHz)	66	49	73	91	107	122	135	6	-30	+70	25	50	-
	RG-400	L01001B0006	25	L01001T0006	500	G5	1,0	stranded	CWS	2,95	PTFE	double	CuS	4,95	FEP	brown-transparent	-	-	70	58	-	106	-	-	-	6	-55	+200	120	200	-
double-braided outer conductor	RG-393	L01001B0007	25	-	-	-	2,4	stranded	CuS	7,25	PTFE	double	CuS	9,9	FEP	brown-transparent	800	>80	70	23	34	-	-	-	-	6	-55	+200	50	100	passes UL 94 V-0
	RG-214	L01002B0000	100	L01002T0000	500	-	2,25	stranded	CuS	7,25	PE	double	CuS	10,8	PVC	black	100	>78 (100-900 MHz)	66	25	38	52	62	70	78	6	-30	+70	50	100	-
	RG-214 LS ZH	L01002C0000	100	-	-	-	2,25	stranded	CuS	7,25	PE	double	CuS	10,8	LSZH	black	100	>78 (100-900 MHz)	66	25	38	52	-	-	-	6	-30	+70	50	100	-
50 Ohm Low Loss	Low Loss 100 Flex FR ZH	L01020B0026	100	-	-	G7	0,48	stranded	Cu	1,5	PE	double	Tape Al-PET-Al + CuZ	2,8	FRNC	black	15	>90	66	83	120	148	173	194	214	6	-20	+75	15	30	-
	Low Loss 195	L01020C0023	100	L01020T0023	500	G1	0,95	solid	Cu	2,8	PE foam	double	Tape Al-PET-Al + CuZ	5,0	PVC	black	100	>85 (100-900 MHz)	80	40	57	70	81	91	100	6	-30	+70	25	50	-
	Low Loss 195 FR LS ZH UL	L01020D0023	100	-	-	G1	0,95	solid	Cu	2,8	PE foam	double	Tape Al + CuZ	5,0	FRPE	black	100	>90	75	40	57	70	81	91	100	6	-40	+85	15	50	UL/CSA Rated CMR/MPR (PCC-FT4), UL-1666, E170516
	Low Loss 240	L01021B0017	100	L01021T0017	500	G30	1,4	solid	Cu	3,8	PE foam	double	Tape Al-PET-Al + CuZ	6,1	PVC	black	180	>90 (100-900 MHz)	84	26	38	47	55	62	69	6	-30	+70	30	60	-
	Low Loss 240 FR LS ZH	L01021B0018	100	-	-	G30	1,4	solid	Cu	3,8	PE foam	double	Tape Al + CuZ	6,1	HFS80T	black	170	>90	81	27	38	47	-	-	65	6	-40	+85	60	120	passes UL 94 V-0
	Low Loss 240 Flex	L01021C0005	100	L01021T0005	1000	G30	1,4	stranded	Cu	3,9	PE foam	double	Tape Al-PET-Al + CuZ	5,4	PE	black	50	>85 (30-1000 MHz)	80	32	45	56	64	72	79	6	-30	+70	60	120	-
	Low Loss 400 ZH	L01022B0010	100	L01022T0010	500	G37	2,74	solid	Cu	7,24	PE foam	double	Tape Al-PET + CuZ	10,3	LSZH	black	370	>90 (100-1000 MHz)	85	14	20	25	29	32	36	6	-40	+85	50	100	-
	Low Loss 400 FR LS ZH UL	L01022D0003	100	-	-	G37	2,74	solid	AlCu	7,24	PE foam	double	Tape Al + CuZ	10,29	FRPE	black	370	>90	85	14	20	25	29	33	36	6	-40	+85	25	100	UL/CSA Rated CMR/MPR (PCC-FT4), UL-1666, E170516
foil and braid as outer conductor	Low Loss 400 Flex	L01022B0017	100	-	-	G37	2,7	stranded	Cu	7,24	PE foam	double	Tape Al-PET + CuZ	10,3	PUR	black	-	>90 (100-1000 MHz)	80	17	23	-	-	-	-	6	-40	+85	50	100	-
	Low Loss 400 Rail FR LS ZH	-	-	L01022T0023	500	G37	2,74	solid	AlCu	7,3	PE foam	double	Tape Cu + Cu	10,1	FR LSZH	black	410	>85	85	13	20	25	28	34	37	11	-40	+85	25	50	railway-approved
50 Ohm Semi Flex	Semi Flex .85	L01030D0001	25	L01030T0001	1000	G11	0,54	solid	CWS	1,68	PTFE	single	CuZ	-	-	-	80	>110 (1000-9000 MHz)	70	73	108	135	159	180	200	18	-65	+180	6	25	-
	Semi Flex .85 (FEP Jacket)	L01030B0023	25	L01030T0023	1000	G11	0,54	solid	CWS	1,68	PTFE	single	CuZ	2,5	FEP	blue-transparent	80	>110 (1000-9000 MHz)	70	73	108	135	159	180	200	18	-65	+180	6	25	-
	Semi Flex .141	L01030E0000	25	L01030T0000	500	G10	0,94	solid	CuS	2,95	PTFE	single	CuZ	-	-	-	290	>110	70	42	62	78	92	105	116	18	-65	+180	10	40	-
tin-soaked single braided outer conductor	Semi Flex .141 (FEP Jacket)	L01030B0021	25	L01030T0021	500	G10	0,94	solid	CuS	2,95	PTFE	single	CuZ	4,1	FEP	blue-transparent	290	>110	70	42	62	78	92	105	116	18	-65	+180	10	40	-
	Semi Flex .250	L01031B0000	25	-	-	G9	1,67	solid	CuS	5,31	PTFE	single	CuZ	-	-	-	730	>110	70	25	38	49	58	66	74	18	-65	+180	40	120	-
75 Ohm RG-Types	RG-179	L01000C0000	50	L01000T0000	1000	G4	0,3	stranded	CWS	1,6	PTFE	single	CuS	2,55	FEP	brown-transparent	65	>60	70	92	131	161	187	209	230	6	-55	+200	15	30	passes UL 94 V-0
	RG-59	L01001B0001	100	L01001T0001	500	G2	0,6	solid	CW	3,7	PE	single	Cu	6,15	PVC	black	-	-	66	43	63	78	91	103	113	6	-40	+80	30	90	-
single-braided outer conductor	RG-59 ZH	L01001B0011	100	-	-	G2	0,58	solid	CW	3,7	PE	single	Cu	6,1	HM4	black	-	-	66	39	-	-	-	-	-	6	-20	+70	30	90	-
75 Ohm Low Loss	Low Loss HD 0.6/2.8 FR NC	L01020B0038	100	L01020T0038	1000	G41	0,6	solid	Cu	2,8	PE foam	double	Tape Al-PET-Al + CuZ	4,5	FRNC	green	-	>100	78	36	52	64	74	83	91	6	-20	+60	25	50	-
	Low Loss HD 0.8/3.7 FR NC	L01021B0023	100	L01021T0023	1000	G39	0,8	solid	Cu	3,7	PE foam	double	Tape Al-PET-Al + CuZ	5,9	FRNC	green	-	>100	78	28	40	50	59	66	73	6	-20	+60	40	80	-
	Low Loss HD 1.0/4.8 FR NC	L01021B0024	100	-	-	G27	1,0	solid	Cu	4,8	PE foam	double	Tape Al-PET-Al + CuZ	7,0	FRNC	green	-	>100	78	23	34	43	50	57	63	6	-20	+60	45	90	-
foil and braid as outer conductor	Low Loss HD 1.6/7.3 FR NC	L01022B0014	100	-	-	G48	1,6	solid	Cu	7,3	PE foam	double	Tape Al-PET-Al + CuZ	10,3	FRNC	green	-	>100	78	16	25	32	38	43	48	6	-20	+60	60	120	-

Key: Cu = Copper Al = Aluminium CW = copper-plated steel wire Z = tinned S = silver-plated Tape = Foil FR = flame retardant NC = non-corrosive LS = low smoke PE = Polyethylene PTFE = Polytetrafluorethylene

* manufacturing tolerance approx. 10%, possibly few cable pieces on one drum

FEP = Fluorethyleneпropylene PUR = Polyurethane ZH = zero halogen UL = Underwriters Laboratories

More Customised: assembling RF cables online

Do you want to assemble RF cables with coaxial connectors individually and add strain relief, labelling and cable length according to your requirements? Then the COAX configurator developed by Telegärtner is just what you need:

… **simple,** and is available to you around the clock

… **fast,** and allows you to configure your customised assembly with just a few clicks, thanks to a logical and easy-to-understand user-guidance

… **user-orientated,** and offers you exactly the information you require in order to configure your individual cable assembly

User-friendly input mask …

… and creation of a clear specification (PDF)

⇨ for individually assembled RF cables

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T00013A0203 2nd edition 12/2017