

Quick-Fit plus

Field terminated RF connector system

Edition 2018/10



Revolutionise the RF deployment





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Your partner for system solutions

The HUBER+SUHNER Group is a leading global supplier of components and systems for electrical and optical connectivity. We offer technical knowledge in radio frequency technology, fiber optics and low frequency under one roof, thus providing a unique basis for continual innovation focused on the needs of our customers all over the world.

Field terminated RF connector product line

The HUBER+SUHNER Quick-Fit connector line is renowned worldwide for quality and is supporting a variety of corrugated cables with N, 4.1/9.5, 4.3-10 as well as 7/16 interfaces. With no loose parts and a minimum of assembly tools, the field terminated connectors offer a greatly simplified and economic approach to cable preparation and assembling. The Quick-Fit product line meets the requirements of multi-carrier, high channel-count transceivers such as base stations in today's indoor and outdoor mobile communication infrastructures.

Improve network reliability

Compact one-piece design

New Quick-Fit plus connector system for 1/2" corrugated cables

Thanks to their one-piece design, the new Quick-Fit plus connectors eliminate loose parts such as O-rings and washers. This allows extremely easy and fast assembling and removes the need for additional steps such as the application of grease on sealings. The innovative cable entry design allows the connectors to be mounted using standard wrenches, eliminating the need for expensive tools or calibrated torque wrenches.



MaxTool – All-in-one cable preparing tool

Clean cable preparing process

To achieve best performance of a field terminated connector, the cable-preparing process of a corrugated cable is as important as the use of a reliable connector system. Minor mistakes in the cable preparing can cause significant performance issues such as bad PIM or water ingress into the system.

The unique all-in-one assembly tool allows the installer to prepare the cable through a fully controlled process, eliminating operator errors and resulting in perfect cable preparation with no swarf or burrs.

This perfectly designed cable preparation process, along with the one-piece connector design, removes the risk of passive intermodulation caused by connectors in the overall system or network.



Key characteristics

- Extraordinary PIM stability
- Fast and easy cable preparing process
- Reliable "one click/positive stop" connector assembling
- One piece connector design
- Multi-brand cable compatibility
- High quality materials and platings

Very low level of interference with adjacent channels

Thanks to its extraordinarily passive even dynamic PIM stability, the Quick-Fit plus connector system ensures a very low level of interference with adjacent channels, making it the ideal choice for modern mobile infrastructure.

Stable system performance over time

The fast and easy cable preparation process of the revolutionary MaxTool saves installation time and does not result in any swarf or burrs which could produce PIM.

Quick and easy connector assembling

Thanks to the reliable "one click/positive stop" connector feature, only traditional adjustable wrenches are required to fix the connectors.

Simplified logistics and easy on-site handling

The connectors are supplied and assembled in one piece, which greatly simplifies logistics overall, as well as handling on site.

Wide-ranging of applications

Multi-brand cable compatibility – foam as well as plenum dielectric – to support a wide range of applications.

Reliable, also in harsh environments

High quality materials and platings provide excellent protection and reliability, also in harsh environments.

Interface types

N, 4.1/9.5*, 4.3-10**, 7/16

Patterns

Straight cable plugs, right angle cable plugs and straight cable jacks

Features

Benefits

Product range connectors

* on request

** 4.3-10: Some patterns available with screw, hand screw and push pull interface locking mechanism

Technical data connectors

General data	
Cable size/type	corrugated 1/2" annular
Interfaces	N, 4.1/9.5*, 4.3-10, 7/16

Electrical data (typical)	
Impedance	50 Ω
Frequency range	DC to 6 GHz
Return loss (gated measurement)	straight version: ≥ 30 dB up to 3.7 GHz right angle version: ≥ 28 dB up to 3.7 GHz
Passive intermodulation ¹⁾	typical -160 dBc, minimum -155 dBc

¹⁾ Carrier to 3rd order intermodulation product ratio with 2 x 20W (43 dBm) carrier power

Mechanical data (typical)	
Durability	≥ 100 matings
Temperature range (connector only)	-55 to +85 °C/-67 to 185 °F
IP rating	IP68 (according to IEC 60529)

Material data (main parts)	Material	Plating
Cable entry	Brass	SUCOPLATE
Connector head	Brass	SUCOPLATE
Outer contact	Brass	SUCOPLATE
Centre contact	Brass/CuBe	Silver
Insulators	PTFE/PEI	
Gaskets	Silicon	

* on request

Connector portfolio N

Cable compatibility

- Type a: HUBER+SUHNER Sucofeed_1/2, _1/2_LW, _1/2_FR, _1/2_PW
- Type b: RFS CELLFLEX LCF-50JFN, ICA12-50JPL, ICA12-50JPLW, ICA12-50JPLLW
- Type c: ANDREW/COMMScope LDF4-50A
- Type d: ANDREW/COMMScope HL4RPV-50
- Type e: ANDREW/COMMScope AL4RPV-50

Fig. 1

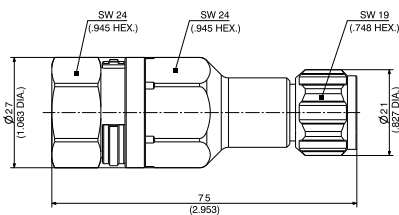


Fig. 2

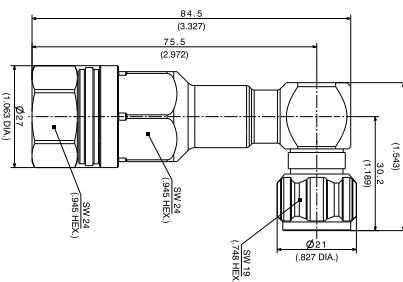
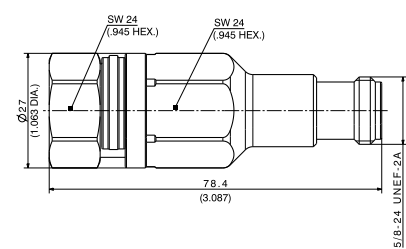


Fig. 3



Connector style	Type description	Item number	Assembly instruction	Cable type	Blade unit for tool 74_Z-0-12-18	Fig.
N male straight	11_N-50-12-60	85074817	DOC-0000736630, DOC-0000799919	a, b, c	green, 74_Z-0-12-21, 85068959	1
N male right angle	16_N-50-12-60	85074824		a, b, c	green, 74_Z-0-12-21, 85068959	2
N female straight	21_N-50-12-60	85074835		a, b, c	green, 74_Z-0-12-21, 85068959	3
N male straight	11_N-50-12-61	85074818		d	yellow, 74_Z-0-12-20, 85069095	1
N male right angle	16_N-50-12-61	85074825		d	yellow, 74_Z-0-12-20, 85069095	2
N female straight	21_N-50-12-61	85074836		d	yellow, 74_Z-0-12-20, 85069095	3
N male right angle	11_N-50-12-62	85091142		e	green, 74_Z-0-12-21, 85068959	1
N male right angle	16_N-50-12-62	85092145		e	green, 74_Z-0-12-21, 85068959	2
N female straight	21_N-50-12-62	85092237		e	green, 74_Z-0-12-21, 85068959	3

Connector portfolio 4.1/9.5

Cable compatibility

- Type a: HUBER+SUHNER Sucofeed_1/2, _1/2_LW, _1/2_FR, _1/2_PW
- Type b: RFS CELLFLEX LCF-50JFN, ICA12-50JPL, ICA12-50JPLW, ICA12-50JPLLW
- Type c: ANDREW/COMMScope LDF4-50A
- Type d: ANDREW/COMMScope HL4RPV-50

Fig 1.

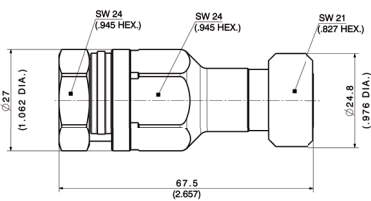


Fig 2.

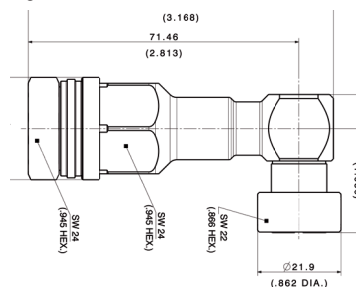
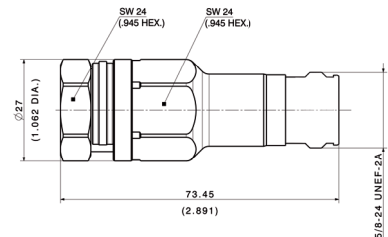


Fig. 3



Connector style	Type description	Item number	Assembly instruction	Cable type	Blade unit for tool 74_Z-0-12-18	Fig.
4.1/9.5 male straight	11_4195-50-12-60	on request, 85074819	DOC-0000736630, DOC-0000799919	a, b, c	green, 74_Z-0-12-21, 85068959	1
4.1/9.5 male right angle	16_4195-50-12-60	on request, 85074826		a, b, c	green, 74_Z-0-12-21, 85068959	2
4.1/9.5 female straight	21_4195-50-12-60	on request, 85074837		a, b, c	green, 74_Z-0-12-21, 85068959	3
4.1/9.5 male straight	11_4195-50-12-61	on request, 85074820		d	yellow, 74_Z-0-12-20, 85069095	1
4.1/9.5 male right angle	16_4195-50-12-61	on request, 85074827		d	yellow, 74_Z-0-12-20, 85069095	2
4.1/9.5 female straight	21_4195-50-12-61	on request, 85074838		d	yellow, 74_Z-0-12-20, 85069095	3

Connector portfolio 4.3-10 screw

Cable compatibility

- Type a: HUBER+SUHNER Sucofeed_1/2, _1/2_LW, _1/2_FR, _1/2_PW
- Type b: RFS CELLFLEX LCF-50JFN, ICA12-50JPL, ICA12-50JPLW, ICA12-50JPLLW
- Type c: ANDREW/COMMScope LDF4-50A
- Type d: ANDREW/COMMScope HL4RPV-50
- Type e: ANDREW/COMMScope AL4RPV-50

Fig 1.

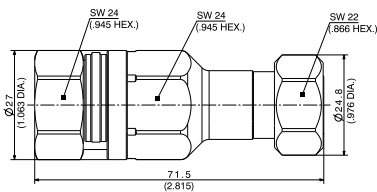


Fig 2.

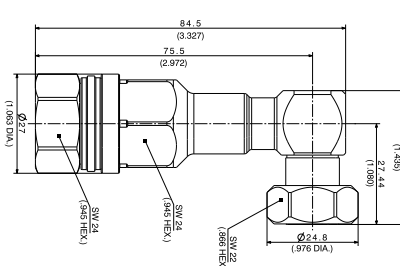
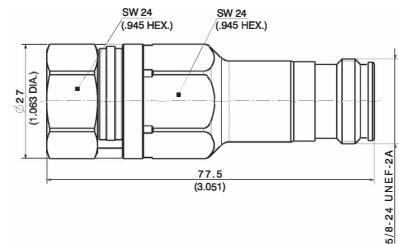


Fig. 3



Connector style	Type description	Item number	Assembly instruction	Cable type	Blade unit for tool 74_Z-0-12-18	Fig.
4.3-10 male straight	11_4310-50-12-X60	85067026	DOC-0000736630, DOC-0000799919	a, b, c	green, 74_Z-0-12-21, 85068959	1
4.3-10 male right angle	16_4310-50-12-X60	85067267		a, b, c	green, 74_Z-0-12-21, 85068959	2
4.3-10 female straight	21_4310-50-12-60	85067226 (fits all locking mechanisms)		a, b, c	green, 74_Z-0-12-21, 85068959	3
4.3-10 male straight	11_4310-50-12-X61	85067072		d	yellow, 74_Z-0-12-20, 85069095	1
4.3-10 male right angle	16_4310-50-12-X61	85067268		d	yellow, 74_Z-0-12-20, 85069095	2
4.3-10 female straight	21_4310-50-12-61	85067228 (fits all locking mechanisms)		d	yellow, 74_Z-0-12-20, 85069095	3
4.3-10 male straight	11_4310-50-12-X62	85086308		e	green, 74_Z-0-12-21, 85068959	1
4.3-10 male right angle	16_4310-50-12-X62	85092655		e	green, 74_Z-0-12-21, 85068959	2
4.3-10 female straight	21_4310-50-12-62	85092653		e	green, 74_Z-0-12-21, 85068959	3

Connector portfolio 4.3-10 hand screw

Cable compatibility

- Type a: HUBER+SUHNER Sucofeed_1/2, _1/2_LW, _1/2_FR, _1/2_PW
- Type b: RFS CELLFLEX LCF-50JFN, ICA12-50JPL, ICA12-50JPLW, ICA12-50JPLLW
- Type c: ANDREW/COMMScope LDF4-50A
- Type d: ANDREW/COMMScope HL4RPV-50

Fig 1.

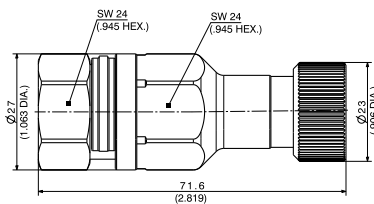


Fig 2.

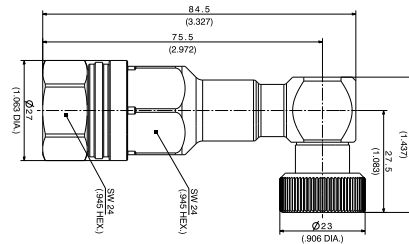
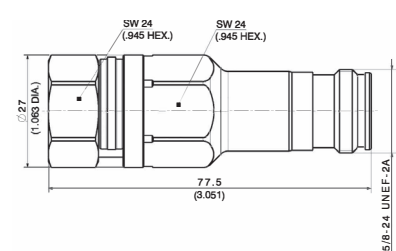


Fig. 3



Connector style	Type description	Item number	Assembly instruction	Cable type	Blade unit for tool 74_Z-0-12-18	Fig.
4.3-10 male straight	11_4310-50-12-Y60	85074839	DOC-0000736630, DOC-0000799919	a, b, c	green, 74_Z-0-12-21, 85068959	1
4.3-10 male right angle	16_4310-50-12-Y60	on request, 85074841		a, b, c	green, 74_Z-0-12-21, 85068959	2
4.3-10 female straight	21_4310-50-12-60	85067226 (fits all locking mechanisms)		a, b, c	green, 74_Z-0-12-21, 85068959	3
4.3-10 male straight	11_4310-50-12-Y61	85074840		d	yellow, 74_Z-0-12-20, 85069095	1
4.3-10 male right angle	16_4310-50-12-Y61	on request, 85074842		d	yellow, 74_Z-0-12-20, 85069095	2
4.3-10 female straight	21_4310-50-12-61	85067228 (fits all locking mechanisms)		d	yellow, 74_Z-0-12-20, 85069095	3

Connector portfolio 4.3-10 push-pull

Cable compatibility

- Type a: HUBER+SUHNER Sucofeed_1/2, _1/2_LW, _1/2_FR, _1/2_PW
- Type b: RFS CELLFLEX LCF-50JFN, ICA12-50JPL, ICA12-50JPLW, ICA12-50JPLLW
- Type c: ANDREW/COMMSCOPE LDF4-50A
- Type d: ANDREW/COMMSCOPE HL4RPV-50

Fig 1.

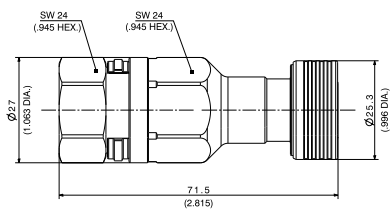


Fig 2.

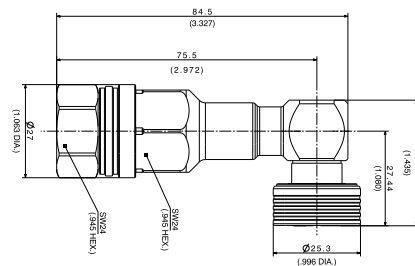
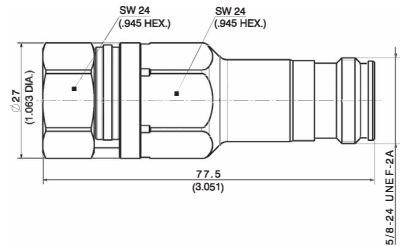


Fig. 3



Connector style	Type description	Item number	Assembly instruction	Cable type	Blade unit for tool 74_Z-0-12-18	Fig.
4.3-10 male straight	11_4310-50-12-Z60	85074828	DOC-0000736630, DOC-0000799919	a, b, c	green, 74_Z-0-12-21, 85068959	1
4.3-10 male right angle	16_4310-50-12-Z60	85074830		a, b, c	green, 74_Z-0-12-21, 85068959	2
4.3-10 female straight	21_4310-50-12-60	85067226 (fits all locking mechanisms)		a, b, c	green, 74_Z-0-12-21, 85068959	3
4.3-10 male straight	11_4310-50-12-Z61	85074829		d	yellow, 74_Z-0-12-20, 85069095	1
4.3-10 male right angle	16_4310-50-12-Z61	85074831		d	yellow, 74_Z-0-12-20, 85069095	2
4.3-10 female straight	21_4310-50-12-61	85067228 (fits all locking mechanisms)		c	yellow, 74_Z-0-12-20, 85069095	3

Connector portfolio 7/16

Cable compatibility

- Type a: HUBER+SUHNER Sucofeed_1/2, _1/2_LW, _1/2_FR, _1/2_PW
- Type b: RFS CELLFLEX LCF-50JFN, ICA12-50JPL, ICA12-50JPLW, ICA12-50JPLLW
- Type c: ANDREW/COMMScope LDF4-50A
- Type d: ANDREW/COMMScope HL4RPV-50
- Type e: ANDREW/COMMScope AL4RPV-50

Fig. 1

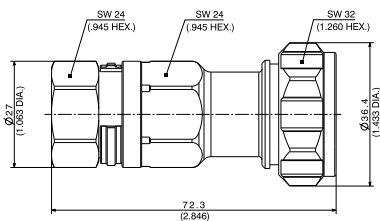


Fig. 2

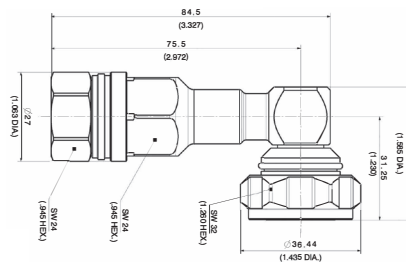
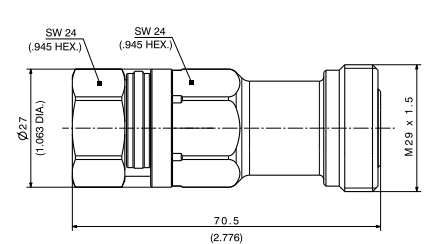


Fig. 3



Connector style	Type description	Item number	Assembly instruction	Cable type	Blade unit for tool 74_Z-0-12-18	Fig.
7/16 male straight	11_716-50-12-60	85074815	DOC-0000736630, DOC-0000799919	a, b, c	green, 74_Z-0-12-21, 85068959	1
7/16 male right angle	16_716-50-12-60	85074821		a, b, c	green, 74_Z-0-12-21, 85068959	2
7/16 female straight	21_716-50-12-60	85074832		a, b, c	green, 74_Z-0-12-21, 85068959	3
7/16 male straight	11_716-50-12-61	85074816		d	yellow, 74_Z-0-12-20, 85069095	1
7/16 male right angle	16_716-50-12-61	85074822		d	yellow, 74_Z-0-12-20, 85069095	2
7/16 female straight	21_716-50-12-61	85074833		d	yellow, 74_Z-0-12-20, 85069095	3
7/16 male straight	11_716-50-12-62	85092479		e	green, 74_Z-0-12-21, 85068959	1
7/16 male right angle	16_716-50-12-62	85092520		e	green, 74_Z-0-12-21, 85068959	2
7/16 female straight	21_716-50-12-62	85092603		e	green, 74_Z-0-12-21, 85068959	3

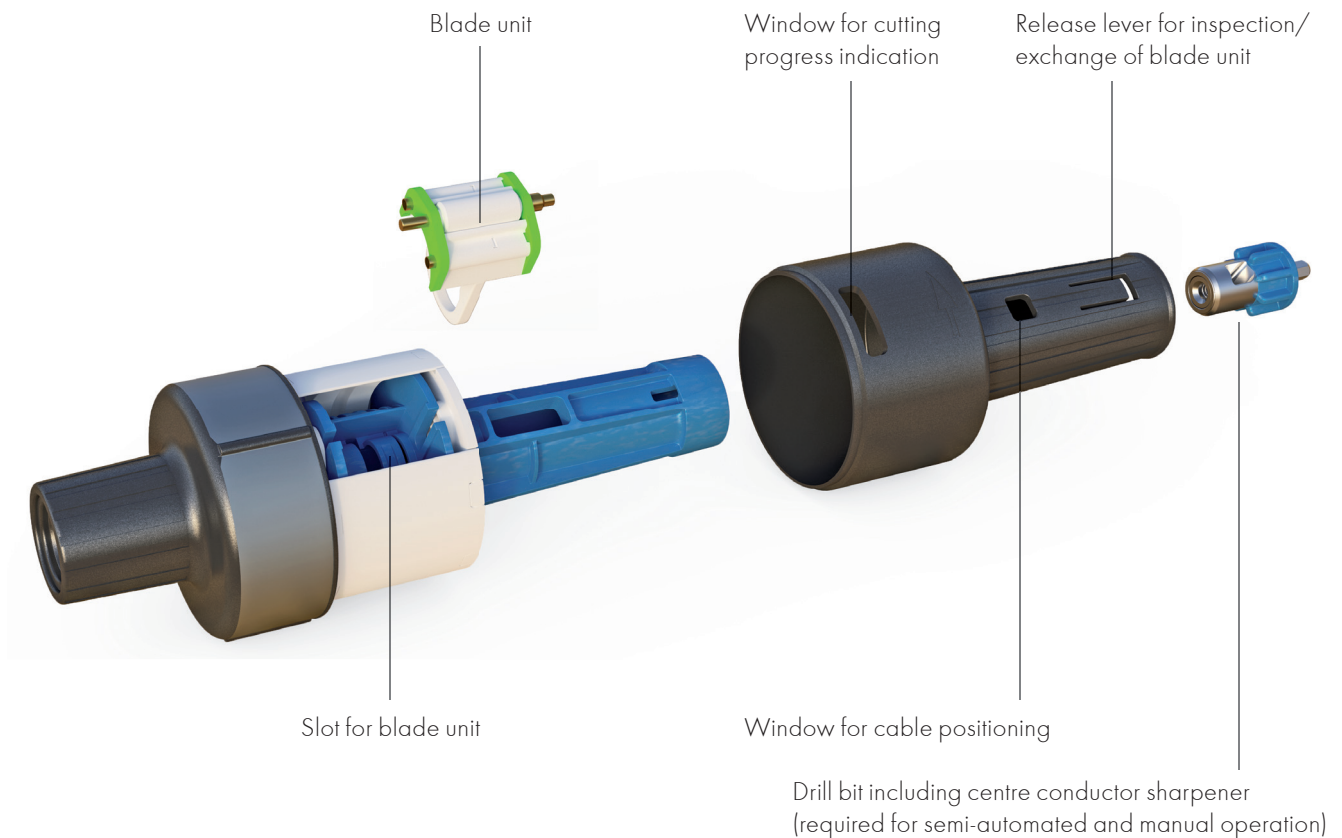
MaxTool – All-in-one cable preparing tool

- Fully controlled/zero defect cable preparing
- Perfect cutting process – no swarf – no PIM
- Easy-to-handle – easy-to-carry
- Ergonomic design
- Semi-automated and manual operation

Key characteristics



Overview



Preparing tools

Fig 1.



Fig. 2



Tools	Content	Type description	Item number	Instructions	Fig.
Starter kit	Cable preparing tool Drill bit/sharpener Blade unit (gn, yl) Jacket/diel. removers Fixed wrenches Screw driver Holster	74_Z-0-12-19	85069097	DOC-0000736630, DOC-0000799919, DOC-0000721673	1
Preparing tool	Cable preparing tool Drill bit/sharpener Blade unit (gn, yl) Jacket/diel. removers	74_Z-0-12-18	85066880		2

Spare parts

Fig. 1.



Fig. 2.



Fig. 3



Fig. 4



Fig. 5

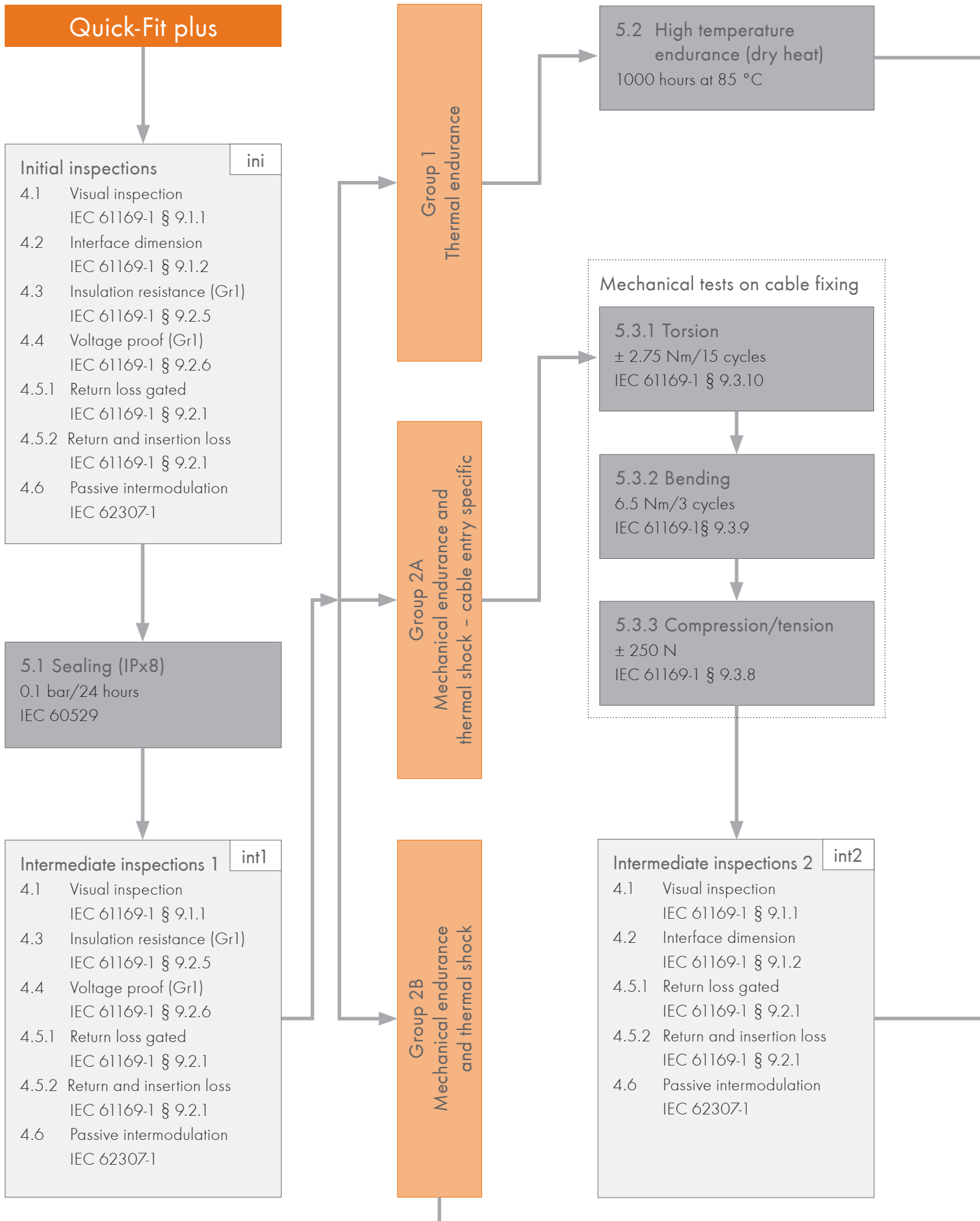


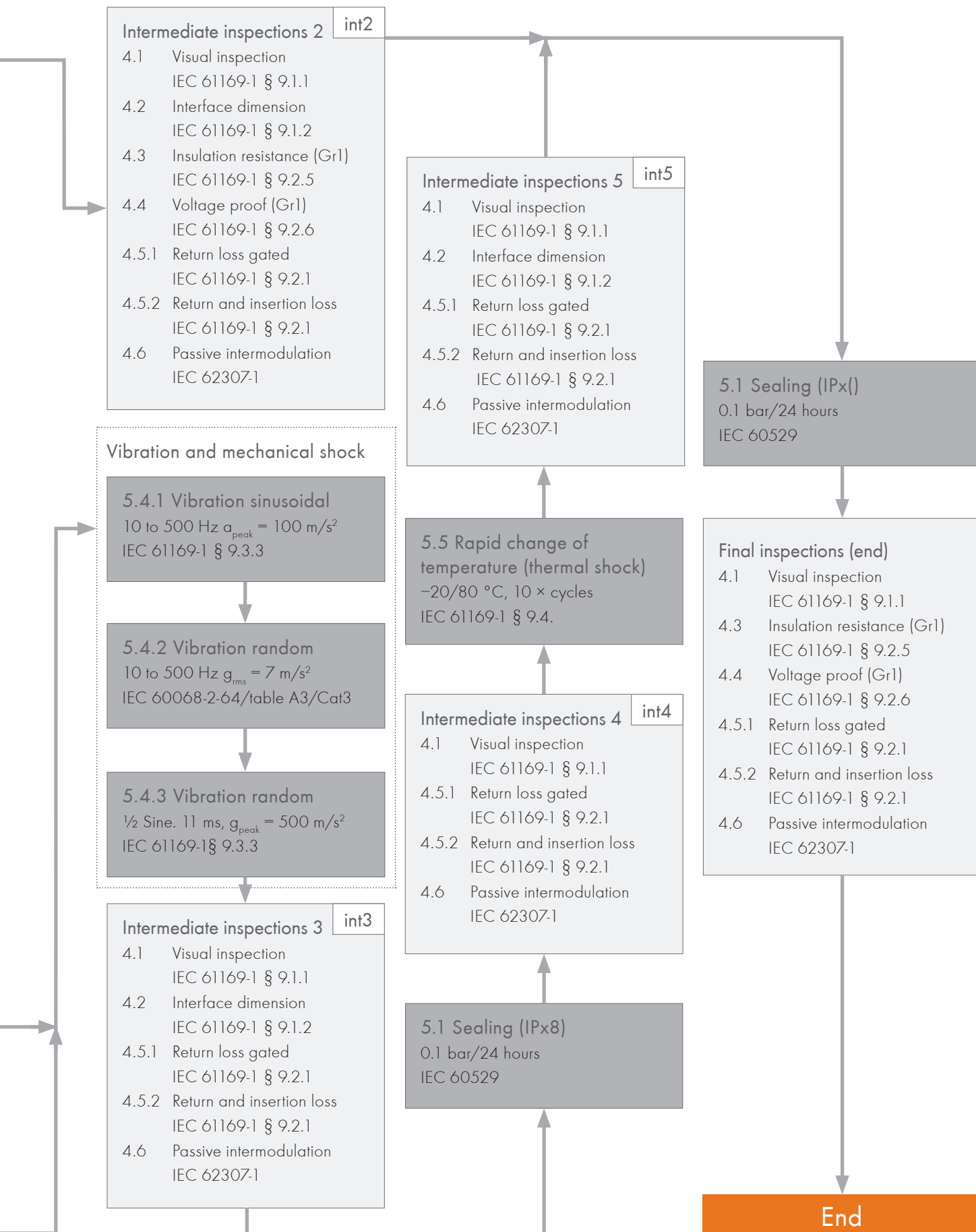
Fig. 6



Tools	Note	Cable compatibility	Type description	Item number	Instructions	Fig.
Box including blade unit green and remover	2 blade units and 2 removers per box	View Page 7, 8, 9, 10, 11,12	74_Z-0-12-21	85068959	DOC-0000736630, DOC-0000799919, DOC-0000721673	1
Box including blade unit yellow and remover	2 blade units and 2 removers per box	ANDREW/ COMMScope HL4RPV-50	74_Z-0-12-20	85069095		2
Drill bit/centre conductor sharpener	1 pce per packet	n/a	74_Z-0-12-23	85069100		3
Jacket/dielectric remover (plenum cables only)	5 pcs per packet	n/a	74_Z-0-12-22	85069099		4
Jacket/dielectric remover "nutcracker"	3 pcs per packet	n/a	74_Z-0-12-24	85089069		5
Holster including belt	without content	n/a	74_Z-0-0-637	85069101		6

Enhanced performance testing







SUCOFEEED – 1/2" corrugated cables

HUBER+SUHNER SUCOFEEED product range of corrugated coaxial cables with suitable stripping tools. The cables have excellent electrical, mechanical and environmental properties for indoor as well as outdoor installations.

The cables promise optimal shielding, low attenuation, low VSWR, remarkable intermodulation performance and flexibility for handling and installation on sites.

SUCOFEEED cables are available as made from copper as well as from aluminium. For the US IBC market plenum rated cable is part of our corrugated cable proposition.

Features

- Low IM distortion levels
- Low loss
- Flame retardant designs available
- High power capability
- High shielding effectiveness
- UV-resistant
- Guaranteed performance up to 3 GHz

Benefits

- High efficient signal distribution
- Excellent for multi-operator DAS
- Economic high performance solution if assembled with HUBER+SUHNER Quick-Fit connectors

SUCOFEED – corrugated cables



1/2" annular

Cable design	Order/type no.	SUCOFEED_1/2
	Dimension	1/2"
	Jacket version	PE
Inner conductor	Ø in mm	4.80
Dielectric	Ø in mm	12.10
Outer conductor	Ø in mm	13.80
Jacket	Ø in mm	15.90

Electrical data		
Typ. operating frequency	GHz	≤ 8
Impedance	Ω	50 ± 1
Capacitance	pF/m	75.9
Relative signal propagation	%	88
Signal delay	ns/m	3.80
Max. operating voltage	kVrms	1.60
Typ. attenuation at 1 GHz	dB/100 m	7.29
Typ. attenuation at 2 GHz	dB/100 m	10.62
Typ. attenuation at 2.2 GHz	dB/100 m	11.20
Typ. attenuation at 2.5 GHz	dB/100 m	12.02
Typ. attenuation at 3.0 GHz	dB/100 m	13.31
Max. power at 1 GHz (40 °C)	kW	≤ 1.040
Max. power at 2 GHz (40 °C)	kW	≤ 0.735
Max. power at 2.2 GHz (40 °C)	kW	≤ 0.701
Max. power at 2.5 GHz (40 °C)	kW	≤ 0.658
Max. power at 3.0 GHz (40 °C)	kW	≤ 0.600

General data		
Temp. range operating	°C	–55/+85
Temp. range installation	°C	–25/+ 60
Typ. weight	kg/100 m	25.0
Min. bending radius	mm	70

For detailed data sheets please go to www.hubersuhner.com and then search for "SUCOFEED".

SUCOFEED – corrugated cables



1/2" annular flame-retardant

Cable design	Order/type no.	SUCOFEED_1/2_FR
	Dimension	1/2"
	Jacket version	flame retardant
Inner conductor	Ø in mm	4.80
Dielectric	Ø in mm	12.10
Outer conductor	Ø in mm	13.80
Jacket	Ø in mm	15.90

Electrical data		
Typ. operating frequency	GHz	≤ 8
Impedance	Ω	50 ± 1
Capacitance	pF/m	75.9
Relative signal propagation	%	88
Signal delay	ns/m	3.80
Max. operating voltage	kVrms	1.60
Typ. attenuation at 1 GHz	dB/100 m	7.29
Typ. attenuation at 2 GHz	dB/100 m	10.62
Typ. attenuation at 2.2 GHz	dB/100 m	11.20
Typ. attenuation at 2.5 GHz	dB/100 m	12.02
Typ. attenuation at 3.0 GHz	dB/100 m	13.31
Max. power at 1 GHz (40 °C)	kW	≤ 1.040
Max. power at 2 GHz (40 °C)	kW	≤ 0.735
Max. power at 2.2 GHz (40 °C)	kW	≤ 0.701
Max. power at 2.5 GHz (40 °C)	kW	≤ 0.658
Max. power at 3.0 GHz (40 °C)	kW	≤ 0.600

General data		
Temp. range operating	°C	–40/+85
Temp. range installation	°C	–25/+ 60
Typ. weight	kg/100 m	27.6
Min. bending radius	mm	70

For detailed data sheets please go to www.hubersuhner.com and then search for "SUCOFEED".

SUCOFEED – corrugated cables



1/2" annular light weight (aluminium)

Cable design	Order/type no.	SUCOFEED_1/2_LW
	Dimension	1/2"
	Jacket version	PE
Inner conductor	Ø in mm	4.80
Dielectric	Ø in mm	12.20
Outer conductor	Ø in mm	13.80
Jacket	Ø in mm	15.90

Electrical data		
Typ. Operating frequency	GHz	≤ 8.8
Impedance	Ω	50 ± 1
Capacitance	pF/m	76
Relative signal propagation	%	88
Signal delay	ns/m	3.80
Max. operating voltage	kVrms	1.95
Typ. attenuation at 1 GHz	dB/100 m	7.76
Typ. attenuation at 2 GHz	dB/100 m	11.28
Typ. attenuation at 2.2 GHz	dB/100 m	11.89
Typ. attenuation at 2.5 GHz	dB/100 m	12.75
Typ. attenuation at 3.0 GHz	dB/100 m	14.10
Max. power at 1 GHz (40 °C)	kW	≤ 1.020
Max. power at 2 GHz (40 °C)	kW	≤ 0.721
Max. power at 2.2 GHz (40 °C)	kW	≤ 0.688
Max. power at 2.5 GHz (40 °C)	kW	≤ 0.645
Max. power at 3.0 GHz (40 °C)	kW	≤ 0.589

General data		
Temp. range operating	°C	–55/+85
Temp. range installation	°C	–40/+60
Typ. weight	kg/100 m	≤ 17.5
Min. bending radius (single/rep.)	mm	70/125

For detailed data sheets please go to www.hubersuhner.com and then search for type "SUCOFEED".

SUCOFEED – corrugated cables

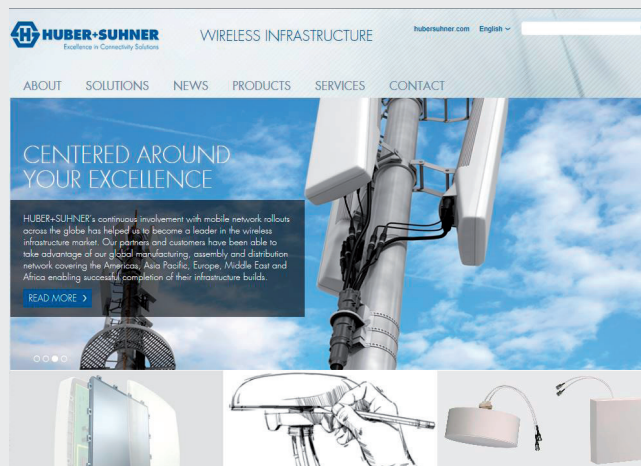


1/2" annular plenum

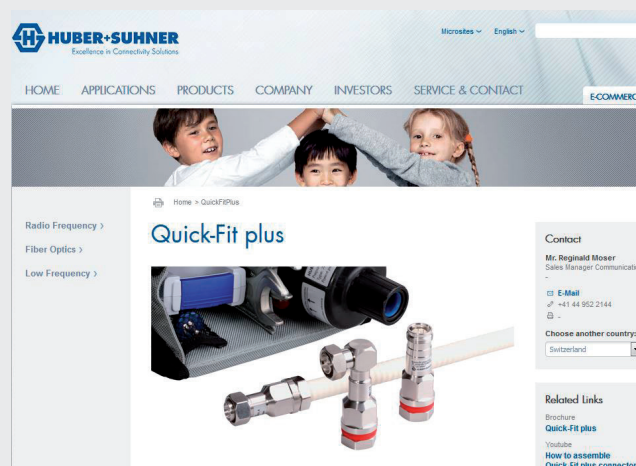
Cable design	Type description	SUCOFEED 1/2_PW
	Item number	85015684
	Dimension	1/2"
	Jacket version	plenum rated white PVC
Inner conductor	Ø in mm	4.8
Dielectric	Ø in mm	11.8
Outer conductor	Ø in mm	13.8
Jacket	Ø in mm	16
Electrical data		
Impedance	Ω	50
Max. operating frequency	GHz	6
Capacitance	pF/m	76
Velocity of signal propagation	%	88
Insulation resistance	10 ⁶ MΩm	≥ 5 ×
Min. screening effectiveness	dB	> 120
Max. operating voltage	kVrms (at sea level)	4
Mechanical data		
Weight	kg/100 m	26
Min. bending radius	static	mm
	repeated (max. 20 bendings)	mm
	dynamic	mm
Environmental data		
Temperature range	°C °F	–20 to + 80 –4 to + 176
Installation temperature	°C °F	–10 to + 60 +14 to + 140
Flammability		ETL listed to UL444, CMP/FT6
Smoke density		NFPA-262 (UL910)
2011/65/EC (RoHS)		compliant

Find out more about Quick-Fit plus

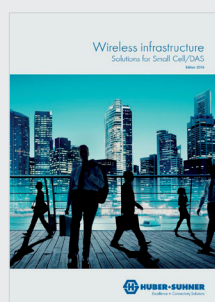
Visit wirelessinfrastructure.hubersuhner.com



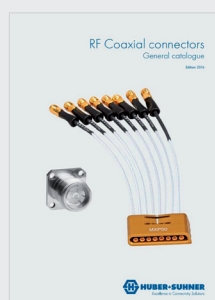
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