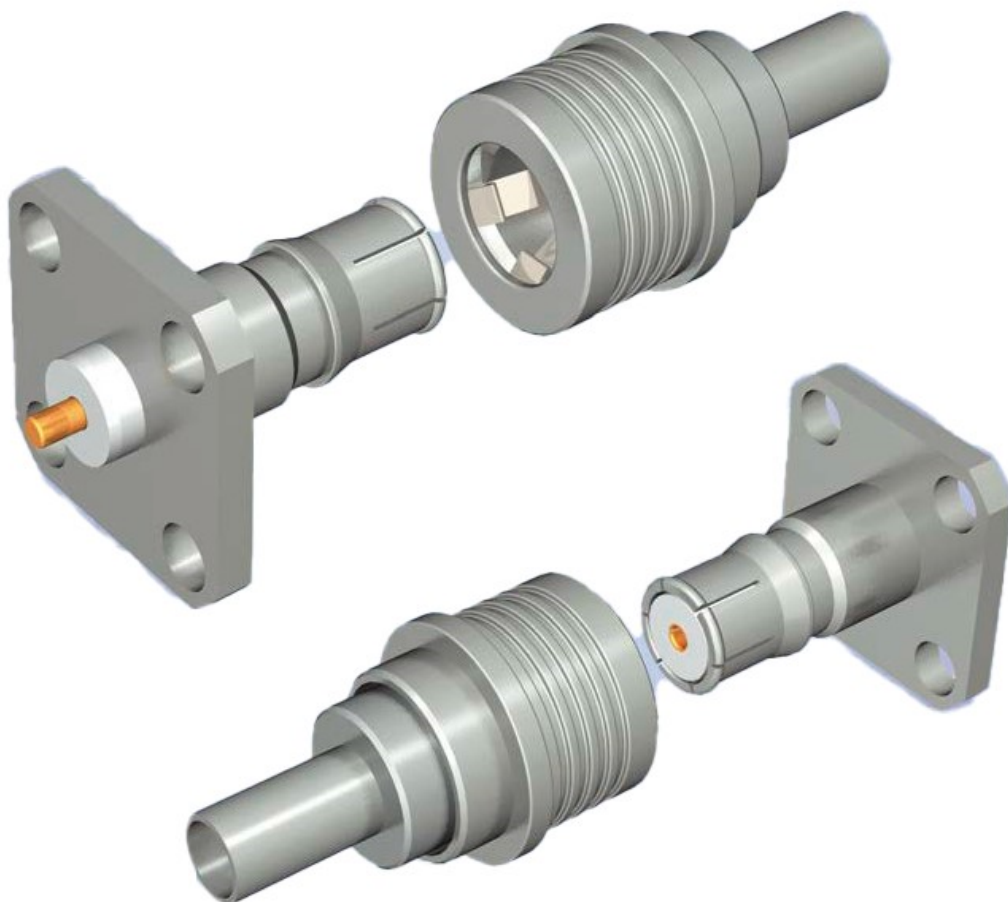


QLS[®] - QUICK LOCK STANDARD RF Coaxial Connectors



QLS[®] RF-coaxial connectors – the advanced QMA

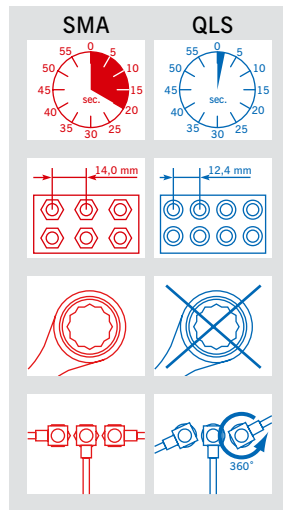
The QLS[®] (Quick Lock Standard) connector family features similar interface dimensions like the SMA connector family. The difference is that instead of a threaded coupling, a quick-lock mechanism is being used.

This connector family is suitable for the standard ranges of flexible and semi-rigid cables and is also available in PCB and panel mount versions.

With the characteristic impedance of 50 ohm, the return loss of QLS[®] coaxial connectors is optimised for frequencies up to 6 GHz.

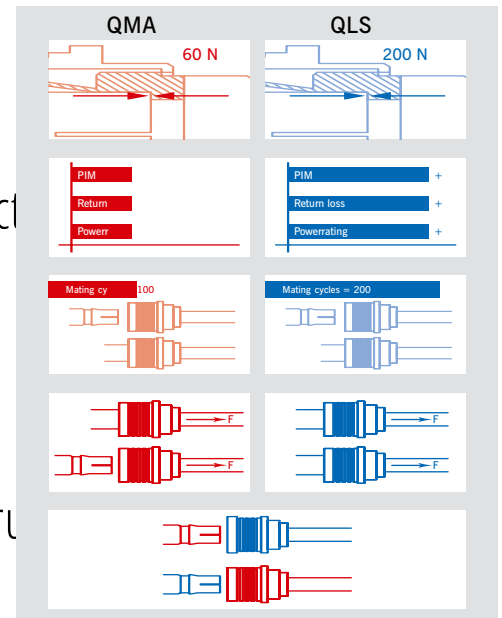
Advantages over SMA connectors

- Easier, faster and safer mounting due to the quick-lock mechanism
- Higher packing density, as no space for mounting tools is required (lower connector pitch distance)
- Panels are no longer scratched or damaged as no torque spanner is used
- Simplified field installation of cable connectors due to the flexible positioning of the cables

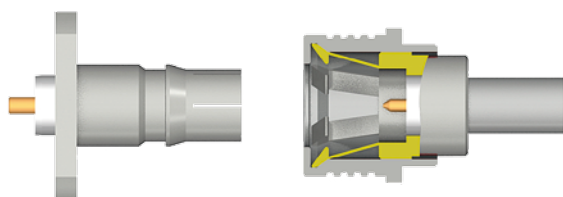


Advantages over QMA connectors

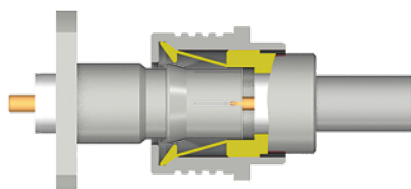
- Higher contact pressure between plug and jack
- Better electrical performance and higher contact pressure
- Considerably higher mating cycles
- The mechanism prevents unlocking through through load at the cable



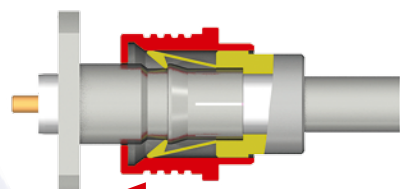
Functional description / Funktionsbeschreibung



Unlocked system /
Geöffnetes Stecksystem

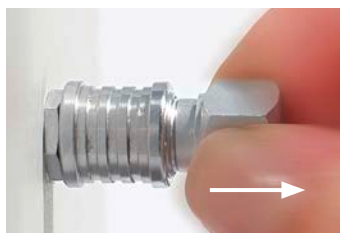
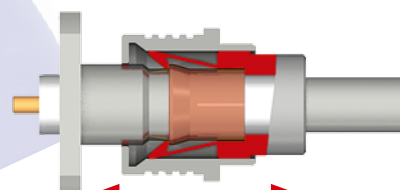


Easy mating – hold on the
locking sleeve only /
Einfaches Stecken – nur an
Schiebehülse halten



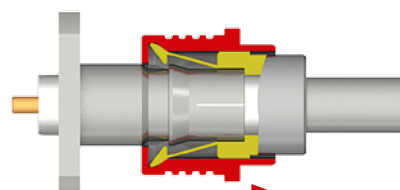
Locking – Push the **locking sleeve** until final position is reached: tactile and audible mechanism /

Verriegeln – **Schiebehülse** bis zum Anschlag drücken: spürbarer und hörbarer Mechanismus



Locked system –
blocked locking mechanism /

Geschlossenes Stecksystem –
Verriegelung geschlossen



Unlocking – Pull only on the **locking sleeve** to demate: tactile and audible mechanism /

Entriegeln – zum Öffnen nur an der **Schiebehülse** ziehen: spürbarer und hörbarer Mechanismus

Engagement force/
Steckkraft

Interface retention force/
Haltekraft Steckbereich

Disengagement force/
Abzugskraft

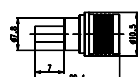
Symbols and conventions Symbole und Konventionen



For Press-in use/
Für Press-in Anwendungen

2,5 mOhm

A comma is used as decimal point for all figures./
Ein Komma wird als Dezimaltrennung verwendet.



All dimensions on drawings are stated in mm./
Alle Zeichnungsmaße sind in mm angegeben.

Available platings Verfügbare Oberflächen

- White bronze/Weißbronze
- Silver/Silber
- Silver + White bronze/Silber + Weißbronze
- Nickel
- Gold
- NiP+ Gold
- Tin/Lead / Zinn/Blei

Technical specification / Technische Daten

Electrical characteristics	Elektrische Eigenschaften	
Impedance	Wellenwiderstand	50 Ohm
Operating frequency	Betriebsfrequenz	DC to / bis 6 GHz optimized DC to / bis 18 GHz working range (interface)
Return loss (typical)	Rückflusdämpfung (typisch)	DC-3 GHz ≥ 35 dB 3 to / bis 6 GHz ≥ 30 dB 6 to / bis 10 GHz ≥ 20 dB 10 to / bis 18 GHz ≥ 15 dB
Insertion loss	Einfügedämpfung	0,25 dB max.
Insulation resistance	Isolationswiderstand	≥ 5 x 10 ³ MOhm
Contact resistance:	Kontaktwiderstand	
Center contact	Innenleiter	≤ 3 mOhm
Outer contact	Außenleiter	≤ 2,5 mOhm
Current carrying capacity	Strombelastbarkeit	≤ 2 A DC
Dielectric withstanding voltage	Spannungsfestigkeit	1500 V rms 50 Hz, at sea level
Operating voltage	Betriebsspannung	≤ 500 V rms 50 Hz, at sea level
Power Handling	Max. Leistungsübertragung	220 W @ T=23 °C / 1,0 GHz 125 W @ T=23 °C / 2,2 GHz
Passive intermodulation	Passive Intermodulation	145 dBc static @ 2 x 20 W @ 1,8 GHz
Mechanical characteristics	Mechanische Eigenschaften	
Engagement force	Steckkraft	30 N typ.
Disengagement force	Abzugskraft	10 N typ.
Interface retention force	Haltekraft Steckbereich	≥ 200 N
Mating cycles	Steckzyklen	≥ 200
Connector pitch	Steckerabstand	12,4 mm min. center to center
IP rating	Dichtigkeitsschutzklasse	On request / Auf Anfrage
Environmental specification	Umweltdaten	
Operating temperature range	Betriebstemperaturbereich	-40° C (-40° F) up to / bis +85° C (185° F)
Vibration	Vibration	IEC68-2-64 random, 5-20 Hz; 1,29 (m/s²)/Hz 20-500; -3 dB (octave)
Corrosion	Korrosion	IEC 60169-1 16,7 (48 h)
Humidity	Luftfeuchtigkeit	IEC 60169-1 16,3 (96 h)
Thermal Shock	Temperaturwechsel	IEC 60169-1 16,4 (-40° C / + 85° C)
Materials	Werkstoffe	
Housing	Gehäuse	Brass / Messing
Solder housing	Lötbares Gehäuse	Brass / Messing
Center pin contact	Kontaktstift	Brass / Messing
Center socket contact	Buchsenkontakt	Copper beryllium / Kupfer Beryllium
Spring basket	Federkorb	Stainless steel / Nirosta
Insulator	Isolierteil	PTFE
Crimp ferrule	Crimphülse	Copper / Kupfer Brass / Messing

All products are RoHS conform. / Alle Produkte entsprechen RoHS.

Standard plating	Standard Oberflächen	
Housing	Gehäuse	White bronze / Weißbronze
Solder housing	Lötbares Gehäuse	Au
Center pin contact	Kontaktstift	Au
Center socket contact	Buchsenkontakt	Au
Spring basket	Federkorb	passivated / passiviert
Crimp ferrule	Crimphülse	White bronze / Weißbronze

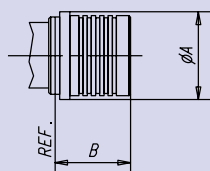
Alternative plating	Alternative Oberflächen	
Housing	Gehäuse	Au or NiP + Au
Solder housing	Lötbares Gehäuse	Au or NiP + Au
Center pin contact	Kontaktstift	Au
Center socket contact	Buchsenkontakt	Au
Spring basket	Federkorb	passivated / passiviert
Crimp ferrule	Crimphülse	Au or NiP + Au

Other platings on request. / Andere Oberflächen auf Anfrage.

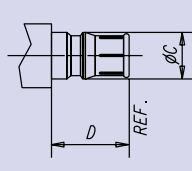
Substantial advantages over QMA are specified bold blue. / Blaue fettgeschriebene Angaben sind wesentliche Vorteile gegenüber QMA.

Interface dimensions / Steckbereich

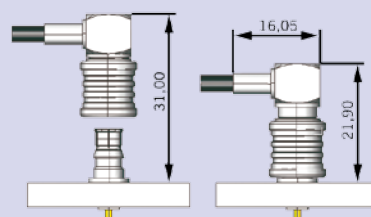
Plug/Stecker



Jack/Buchse



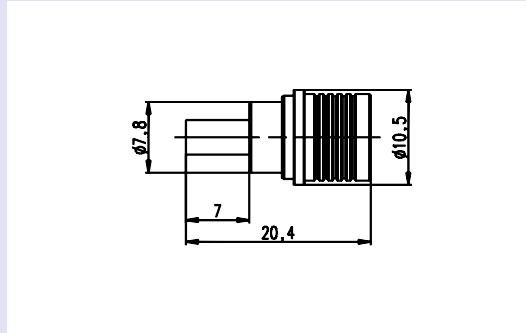
Mounting profile / Einbau



	Plug / Stecker		Jack / Buchse	
	mm		mm	
	min.	max.	min.	max.
A	nom. 10,5			
B		9,035		
C			nom. 5,57	
D			9,1	

Some connectors may have a specification that differs from the above mentioned data. / Es ist möglich, dass bei einigen Steckverbindern die Spezifikation abweicht.

QLS® Cable mount plug (m) 50 ohm
QLS® Kabelstecker (m) 50 Ohm



Solder Crimp version
Strip dimensions available on request

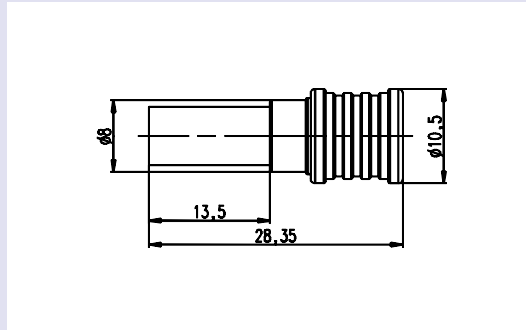
Löt-Crimpversion
Kabelzuschnitt auf Anfrage

Part No.
Artikel-Nr.
3873.QLS.1410.02 5
3873.QLS.1410.05 5

Cable Group
Kabelgruppe
2 (RG 174, RG 316)
5 (RG 316 /D)

Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Cable mount plug (m) 50 ohm
QLS® Kabelstecker (m) 50 Ohm



Solder Crimp version
Strip dimensions available on request

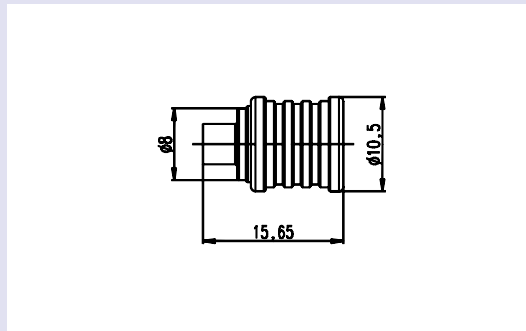
Löt-Crimpversion
Kabelzuschnitt auf Anfrage

Part No.
Artikel-Nr.
3934.QLS.1410.08 5

Cable Group
Kabelgruppe
8 (RG 142 B/U, RG 400/U)

Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Cable mount plug (m) 50 ohm
QLS® Kabelstecker (m) 50 Ohm



Solder Solder version
Strip dimensions available on request

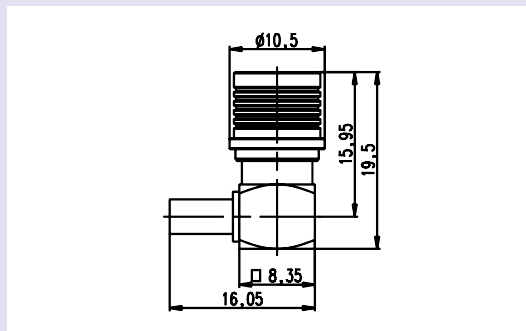
Löt-Lötversion
Kabelzuschnitt auf Anfrage

Part No.
Artikel-Nr.
3935.QLS.1410.06 5
3935.QLS.1410.07 5

Cable Group
Kabelgruppe
6 (RG 405/U, UT 85)
7 (RG 402/U, UT 141)

Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Cable mount angle plug (m) 50 ohm
QLS® Kabelwinkelstecker (m) 50 Ohm



Solder Crimp version
Strip dimensions available on request

Löt-Crimpversion
Kabelzuschnitt auf Anfrage

Part No.
Artikel-Nr.
3900.QLS.1420.01 5
3900.QLS.1420.02 5
3900.QLS.1420.05 5

Cable Group
Kabelgruppe
1 (RG 178, RG 196 A/U)
2 (RG 174, RG 316)
5 (RG 316 /D)

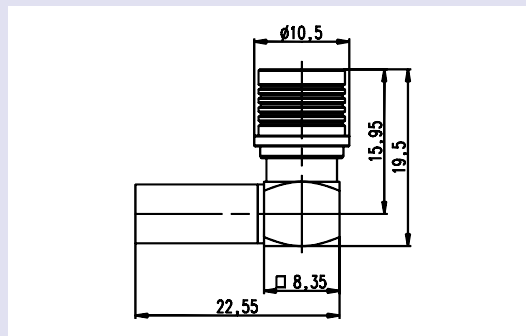
Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Cable mount angle plug (m) 50 ohm
QLS® Kabelwinkelstecker (m) 50 Ohm



Solder Crimp version
Strip dimensions available on request

Löt-Crimpversion
Kabelzuschnitt auf Anfrage



Part No.
Artikel-Nr.

3901.QLS.1420.08 5

Cable Group
Kabelgruppe

8 (RG 142 B/U, RG 400/U)

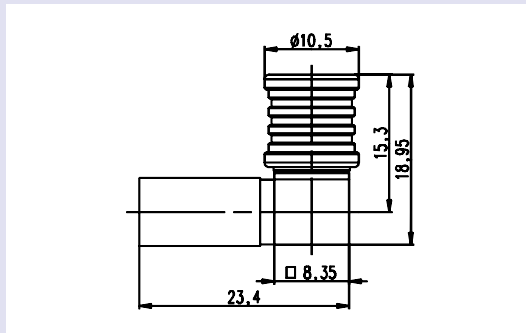
Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Cable mount angle plug (m) 50 ohm
QLS® Kabelwinkelstecker (m) 50 Ohm



Solder Crimp version
Strip dimensions available on request

Löt-Crimpversion
Kabelzuschnitt auf Anfrage



Part No.
Artikel-Nr.

3974.QLS.1420.08 5

Cable Group
Kabelgruppe

8 (TZC 500 25)

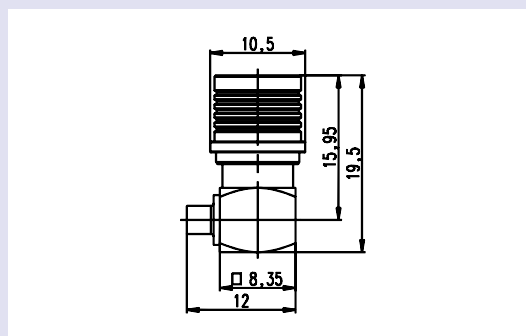
Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Cable mount angle plug (m) 50 ohm
QLS® Kabelwinkelstecker (m) 50 Ohm



Solder Solder version
Strip dimensions available on request

Löt-Lötversion
Kabelzuschnitt auf Anfrage



Part No.
Artikel-Nr.

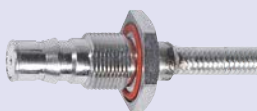
3902.QLS.1420.06 5
3902.QLS.1420.07 5

Cable Group
Kabelgruppe

6 (RG 405/U, UT 85)
7 (RG 402/U, UT 141)

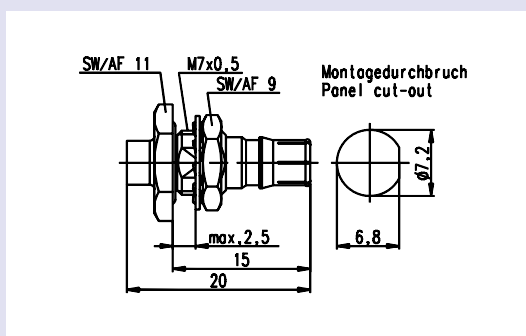
Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Cable mount bulkhead jack (f) 50 ohm
QLS® Chassiskabelbuchse (f) 50 Ohm



Rear mounting
Solder Solder version
With panel seal
Strip dimensions available on request

Einbau von hinten
Löt-Lötversion
Mit Dichtring
Kabelzuschnitt auf Anfrage



Part No.
Artikel-Nr.

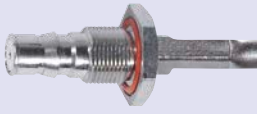
3903.QLS.2812.07 5

Cable Group
Kabelgruppe

7 (RG 402/U, UT 141)

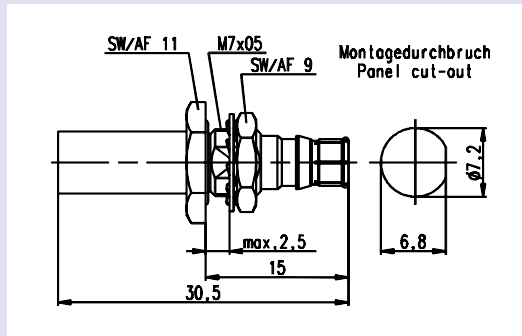
Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Cable mount bulkhead jack (f) 50 ohm
QLS® Chassiskabelbuchse (f) 50 Ohm



Rear mounting
Solder Crimp version
With panel seal
Strip dimensions available on request

Einbau von hinten
Löt-Crimpversion
Mit Dichtring
Kabelzuschnitt auf Anfrage



Part No.
Artikel-Nr.
3962.QLS.2812.08 5

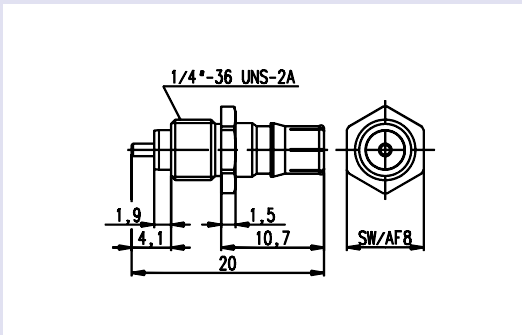
Cable Group
Kabelgruppe
8 (RG 142 B/U, RG 400/U)

Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Screw-in jack (f) 50 ohm
QLS® Einschraubbuchse (f) 50 Ohm



Front mounting
Einbau von vorne



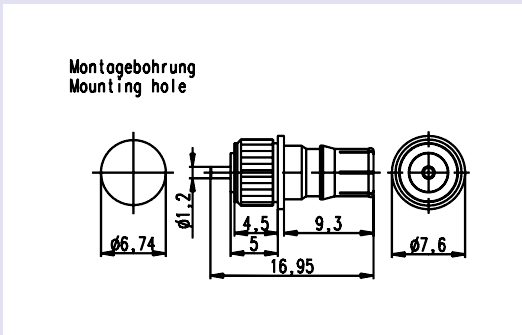
Part No.
Artikel-Nr.
3904.QLS.2014.10 5

Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Press-in jack (f) 50 ohm
QLS® Einpressbuchse (f) 50 Ohm



Front mounting
Press-in Bulkhead
Einbau von vorne
Press-in Chassis



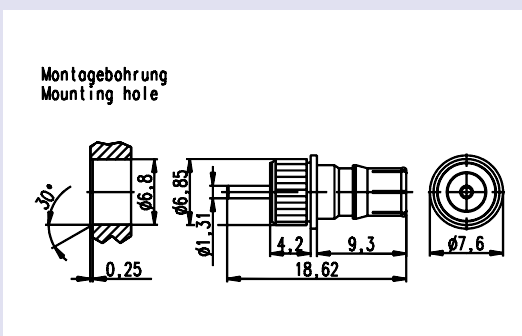
Part No.
Artikel-Nr.
3890.QLS.2010.09 5
3890.QLS.2010.09 1

Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Press-in jack (f) 50 ohm
QLS® Einpressbuchse (f) 50 Ohm



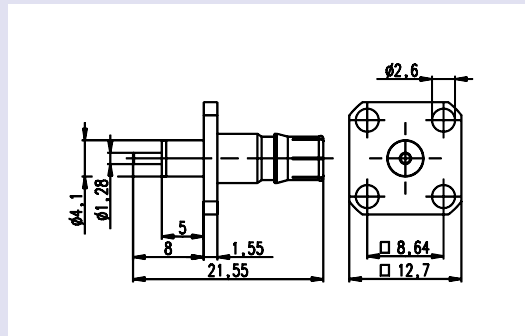
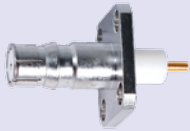
Front mounting
Press-in Bulkhead
Einbau von vorne
Press-in Chassis



Part No.
Artikel-Nr.
3905.QLS.2010.09 5

Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

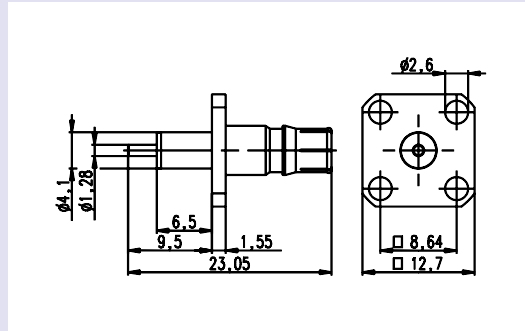
QLS® Flange mount jack (f) 50 ohm
QLS® Flanschbuchse (f) 50 Ohm



Part No.
Artikel-Nr.
3906.QLS.2018.19 5

Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

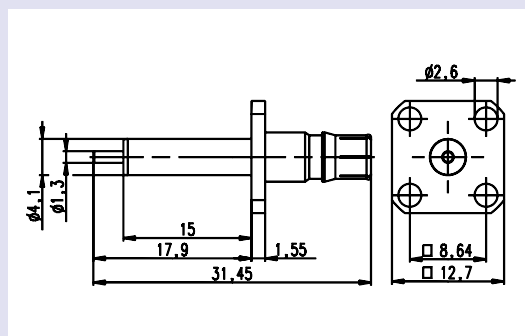
QLS® Flange mount jack (f) 50 ohm
QLS® Flanschbuchse (f) 50 Ohm



Part No.
Artikel-Nr.
3907.QLS.2018.19 5

Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

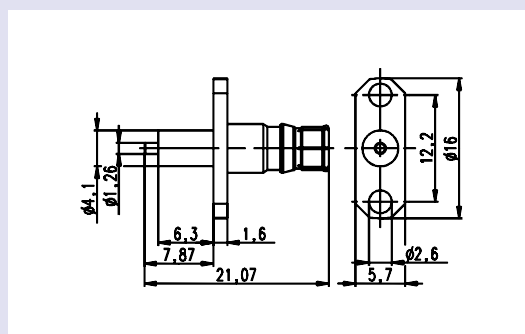
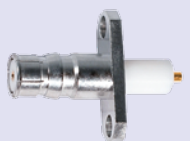
QLS® Flange mount jack (f) 50 ohm
QLS® Flanschbuchse (f) 50 Ohm



Part No.
Artikel-Nr.
3908.QLS.2018.19 5

Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® Flange mount jack (f) 50 ohm
QLS® Flanschbuchse (f) 50 Ohm

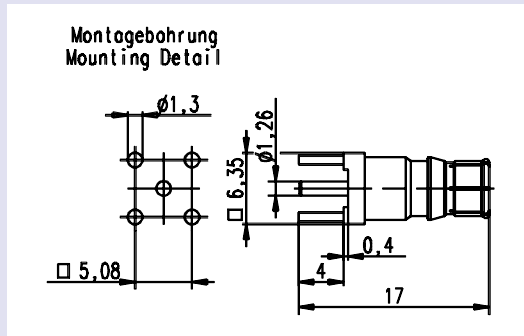


Part No.
Artikel-Nr.
3943.QLS.2017.19 5

Plating/Oberflächenausführung
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage



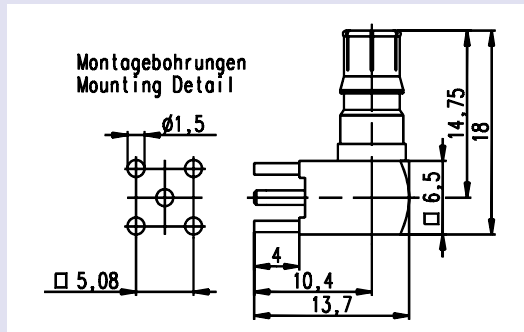
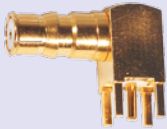
QLS® PCB mount jack (f) 50 ohm
QLS® Anbaubuchse (f) 50 Ohm



Part No.
Artikel-Nr.
3912.QLS.2510.00 3

Plating/Oberflächenausführung
3 = NiP + Gold
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

QLS® PCB mount angle jack (f) 50 ohm
QLS® Anbauwinkelbuchse (f) 50 Ohm



Part No.
Artikel-Nr.
3909.QLS.2520.00 3

Plating/Oberflächenausführung
3 = NiP + Gold
5 = White bronze/Weißbronze
1 = Au
Other Platings on request
Andere Oberflächen auf Anfrage

Tools Werkzeuge



Part No.
Artikel-Nr.
AGK 2353

Crimp tool
without inserts

Crimpzange
ohne Einsätze

Crimp inserts Crimpeinsätze



Crimp Hex Crimpsechskant	Cable group Kabelgruppe	Part No. Artikel.-Nr.	Notes Bemerkungen
2,67	1	AGK 2708	
3,25	2	AGK 2709	
3,65	5	AGK 2710	
4,52	3	AGK 2711	
5,41	8	AGK 2712	
6,50	8	AGK 2713	
8,23	4	AGK 2714	
5,41/3,25/2,67	8	AGK 2719	Full crimp/Vollcrimp
2,67/0,70	Special/Spezial	AGK 2720	Full crimp/Vollcrimp
3,25/0,70	1, 2, 5	AGK 2721	Full crimp/Vollcrimp
4,52/1,69	3	AGK 2722	Full crimp/Vollcrimp
5,41/1,69	8 (RG 58)	AGK 2723	Full crimp/Vollcrimp
6,50/1,69	8 (RG 59)	AGK 2724	Full crimp/Vollcrimp
3,25/1,69/0,70	1, 2, 5	AGK 2725	Full crimp/Vollcrimp



Tools Werkzeuge



Part No.
Artikel-Nr.
AGK 2365

Crimp tool
with inserts

Crimpzange
mit Einsätze

Crimp inserts Crimpeinsätze



Crimp Hex Crimpsechskant	Cable group Kabelgruppe	Part No. Artikel.-Nr.	Notes Bemerkungen
2,67	1	AGK 2726	
3,25	2	AGK 2727	
4,52	3	AGK 2728	
5,41	8	AGK 2729	
6,50	8	AGK 2730	
8,23	4	AGK 2731	
10,90	8	AGK 2732	
1,2/2,95/4,6	A, D	AGK 3069	For 1.6/5.6 Series/Serie
1,2/3,65/6,5	C, F	AGK 3069	For 1.6/5.6 Series/Serie
4,52/3,25/2,67	3	AGK 2740	Full crimp/Vollcrimp
5,41/4,52/3,25	3, 8	AGK 2741	Full crimp/Vollcrimp
4,52/1,69	3	AGK 2742	Full crimp/Vollcrimp
5,41/1,69	8 (RG 58)	AGK 2743	Full crimp/Vollcrimp
6,50/1,69	8	AGK 2744	Full crimp/Vollcrimp
5,41/4,52/1,70	8 (RG 58)	AGK 2745	Full crimp/Vollcrimp
6,50/4,52/1,70	8	AGK 2746	Full crimp/Vollcrimp
6,50/5,41/1,70	8	AGK 2747	Full crimp/Vollcrimp

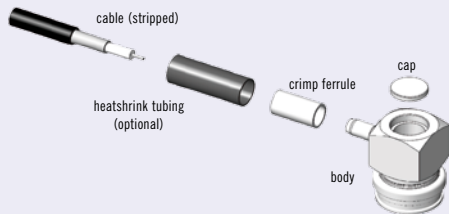




M 184

Cable mount angle plug/jack
Kabelwinkelstecker/-buchse

Using parts:



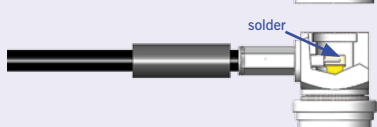
- 1.) Slide the crimp ferrule and the heatshrink tubing (opt.) onto the cable.
- 2.) Fan the braid and slide the cable into the body.



- 3.) Slide the ferrule over the braid.



- 4.) Crimp the ferrule with crimping tool.
- 5.) Solder the center contact.



- 6.) Press in the cap to mechanical end stop.

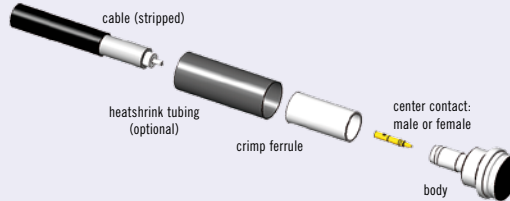


- 7.) Slide the optional heatshrink tubing over the crimp ferrule and heatshrink it in place.

M 185

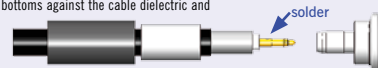
Cable mount plug/jack
Kabelstecker/-buchse

Using parts:



- 1.) Slide the crimp ferrule and the heatshrink tubing (opt.) onto the cable.

- 2.) Slide the center contact on until it bottoms against the cable dielectric and solder the center contact.



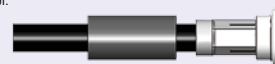
- 3.) Fan the braid and slide the cable into the body.



- 4.) Slide the ferrule over the braid.



- 5.) Crimp the ferrule with crimping tool.

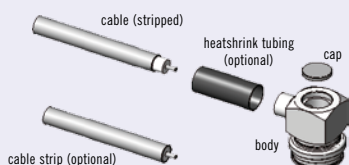


- 6.) Slide the optional heatshrink tubing over the crimp ferrule and heatshrink it in place.

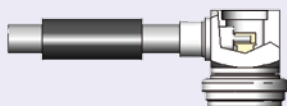
M 186

Cable mount angle plug/jack
Kabelwinkelstecker/-buchse

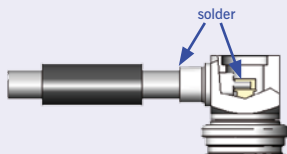
Using parts:



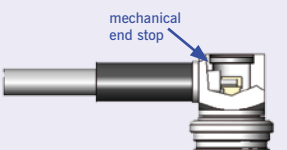
- 1.) Slide the heatshrink tubing (opt.) onto the cable.
- 2.) Push the cable in the body until final stop.



- 3.) Solder inner and outer contact.



- 4.) Press in the cap to mechanical end stop.

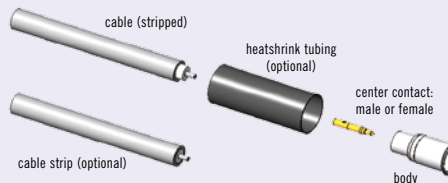


- 5.) Slide the optional heatshrink tubing over the crimp ferrule and heatshrink it in place.

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Cable mount plug/jack
Kabelstecker/-buchse

Using parts:



- 1.) Slide onto the cable heatshrink tubing (optional).

- 2.) Slide the center contact on until it bottoms against the cable dielectric and solder the center contact.



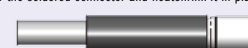
- 3.) Push the cable with soldered center contact until final stop.



- 4.) Solder the connector in place.



- 5.) Slide the optional heatshrink tubing over the soldered connector and heatshrink it in place.





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