

BEST CONTACTS FOR YOUR SUCCESS



**Telegärtner**

KARL GÄRTNER GMBH

NETWORKING COMPONENTS

COAXIAL CONNECTORS

CABLE ASSEMBLIES

PRECISION TURNED PARTS

PLASTIC INJECTION MOULD PARTS

INDUSTRIAL ELECTRONICS

## Contact Reliability in Push-Pull Technology



**QLS<sup>®</sup> Quick Lock Standard**  
Quick-Locking Coaxial Connectors

# Coaxial Connectors

## QLS® Quick Lock Standard

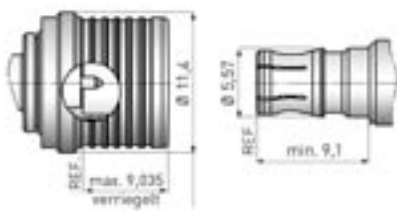
The RF connector series QLS (Quick-Lock-Standard) is a secure and reliable alternative to standard SMA connectors. The patented locking mechanism of the QLS series gives it the distinct advantage of allowing a time-saving connection without the need for any tooling. This locking mechanism also guarantees an extremely high butt contact

force on the outer conductor, which is normally only achieved with a threaded coupling mechanism. This high contact force results in excellent coupling reliability, even under mechanical stress such as vibration or due to the attached cable being pulled. The QLS connectors are 100 % compatible with QMA connectors.

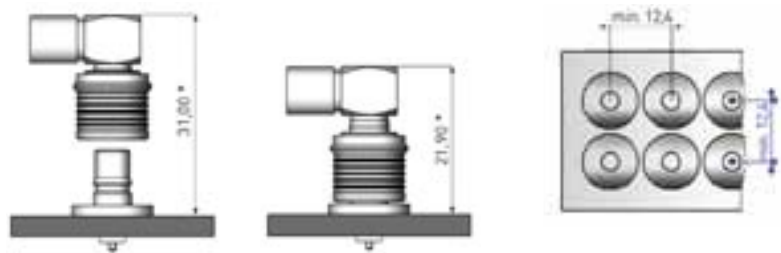


### Technical Data

Mating Face



Mounting Dimensions



### Mechanical Characteristics

<b>Durability (mating cycles)</b>	> 200
<b>Insertion force</b>	30 N typ.
<b>Withdrawal force</b>	20 N typ.
<b>Interface contact force</b>	> 200 N
<b>Materials:</b> Outer conductor	CuZn39Pb3
Pin contact	CuZn39Pb3
Socket contact	CuBe2
Spring basket	stainless steel
Insulator	PTFE
Crimp ferrule	Cu / CuZn39Pb3
<b>Finish:</b> Inner conductor	Au
Outer conductor	Au/ CuSnZn3 (Telealloy)
Other metal parts	CuSnZn3 (Telealloy)
Spring contact	passivated

### Electrical Characteristics

<b>Contact resistance:</b> Inner conductor	< 3 mOhm
Outer conductor	< 2.5 mOhm
<b>Insulation resistance</b>	> 5 GOhm
<b>Voltage proof</b>	1.5 kVeff/50 Hz
<b>Impedance</b>	50 Ohm
<b>Working Voltage</b>	< 500 Veff/50 Hz
<b>Frequency range up to</b>	6 GHz (18 GHz)

### Climatic Characteristics

<b>Climatic category acc. to IEC 68-1</b>	40/85/21
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QLS® is a registered trademark of the partners of the QLS alliance.

# QLS Benefits

QLS	VS.	SMA
<p>engagement time &lt; 2 sec</p> <p>higher packaging density</p> <p>12,4 mm</p>		<p>engagement time &gt; 20 sec</p> <p>14 mm</p> <p>Nm</p>
<ul style="list-style-type: none"> <li>• quicker to engage due to Push-Pull mechanism (self-locking)</li> <li>• higher packaging density, since tooling is not required</li> <li>• no requirement for torque spanner for high, defined contact force</li> </ul>		

QLS	VS.	QMA
<p>200 N</p> <p>higher transmission performance</p>		<p>60 N</p> <p>lower transmission performance</p>
<p>secure locking mechanism</p> <p>200 mating cycles</p>		<p>more prone to accidental disconnection</p> <p>100 mating cycles</p>
<ul style="list-style-type: none"> <li>• higher contact force (QLS: 200 N, QMA: 60 N)</li> <li>• better electrical characteristics (intermodulation, return loss, contact reliability)</li> <li>• higher mating cycles (QLS: 200, QMA: 100)</li> <li>• accidental disconnection by pulling on the attached cable practically impossible</li> </ul>		

QLS	QMA
<p>100 % compatible</p>	

## QLS – How it functions

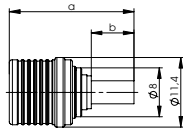
- locking sleeve stainless steel spring

JACK PLUG
- lock
- contact force: 200 N

locked
- unlock

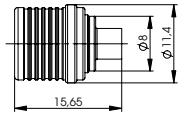
# Order Information

## QLS Straight Plug Crimp



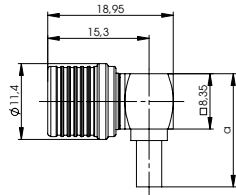
Order no.	Cable group/cable	Finish	Remarks	Dimensions	Assembly	Crimp die
J01420A0005	G7 (RG-316/U)	Tealloy	solder/crimp	a=20.4, b=7	C4203	N01001A0009
J01420A0055	G7 (RD-316)	Tealloy	solder/crimp	a=20.4, b=7	C4214	N01001A0014
J01420A0065	G1 (RG-58C/U)	Tealloy	solder/crimp	a=27.9, b=13	C4205	N01001A0005
J01420A0015	G5 (RG-223/U)	Tealloy	solder/crimp	a=28.4, b=13.5	C4205	N01001A0005

## QLS Straight Plug



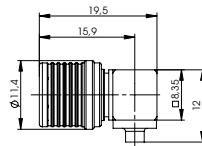
Order no.	Cable group/cable	Finish	Remarks	Assembly
J01420A0075	G11 (UT-85)	Tealloy	solder/solder	C29
J01420A0025	G10 (UT-141)	Tealloy	solder/solder	C29

## QLS Angle Plug Crimp



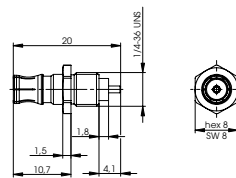
Order no.	Cable group/cable	Finish	Remarks	Dimensions	Assembly	Crimp die
J01420A0085	G3 (RG-178B/U)	Tealloy	solder/crimp	a=17.1	C4314	N01001A0010
J01420A0035	G7 (RG-316/U)	Tealloy	solder/crimp	a=17.1	C4303	N01001A0009
J01420A0095	G8 (RD-316)	Tealloy	solder/crimp	a=17.1	C4314	N01001A0014
J01420A0115	G1 (RG-58C/U)	Tealloy	solder/crimp	a=23.1	C4305	N01001A0005
J01420A0105	G1 (RG-223/U)	Tealloy	solder/crimp	a=23.6	C4305	N01001A0005
J01420A0045	G30 (1.5/3.8)	Tealloy	solder/crimp	a=23.6	C4306	N01001A0007

## QLS Angle Plug



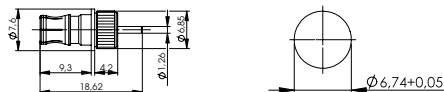
Order no.	Cable group/cable	Finish	Remarks	Assembly
J01420A0125	G11 (UT-85)	Tealloy	solder/solder	C30
J01420A0135	G10 (UT-141)	Tealloy	solder/solder	C30

## QLS Screw-in Jack



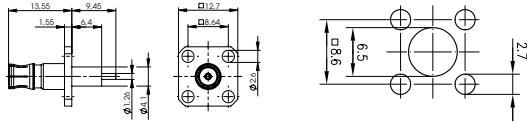
Order no.	Finish
J01421A0005	Tealloy

## QLS Press-in Jack



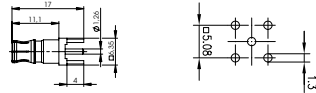
Order no.	Finish	Mount. dim.
J01421A0015	Tealloy	Z112

### QLS Flange Mount Jack



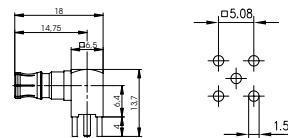
Order no.	Finish	Mount. dim.
J01421A0025	Telealloy	Z029

### QLS Receptacle, female, for Printed Circuits



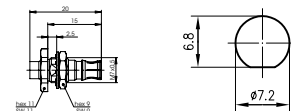
Order no.	Finish	Mount. dim.
J01421A0033	Gold	Z025

### QLS Angle Receptacle, female, for Printed Circuits



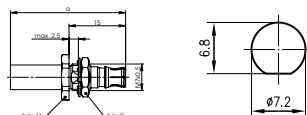
Order no.	Finish	Mount. dim.
J01421A0043	Gold	Z079

### QLS Bulkhead Jack



Order no.	Cable group/cable	Finish	Remarks	Dimensions	Assembly
J01421A0055	G10 (UT-141)	Telealloy	löt/löt	Z027	C31

### QLS Bulkhead Jack Crimp



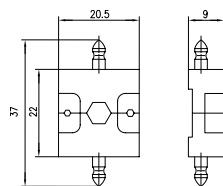
Order no.	Cable group/cable	Finish	Remarks	Dimensions	Assembly	Crimp die
J01421A0065	G5 (RH-223/U)	Telealloy	solder/crimp	Z027	C4405	N01001A0005
J01421A0075	G1 (RG-58C/U)	Telealloy	solder/crimp	Z027	C4405	N01001A0005

### Crimp Tools



Order no.	Remarks
N00000A1273	Crimp tool without crimp die; to be ordered separately

### Crimp Dies



Order no.	Cable group/cable	Remarks
N01001A0010	G3 (RG-178B/U)	3-way die (HEX 0.80/1.69/2.67)
N01001A0009	G7 (RG-316/U)	3-way die (HEX 0.80/1.69/3.25)
N01001A0014	G8 (RD-316)	3-way die (HEX 0.80/1.69/3.65)
N01001A0005	G1 (RG-58C/U); G5 (RG-223/U)	3-way die (HEX 1.46/1.69/5.41)
N01001A0007	G30 (1.5/3.8)	2-way die (HEX 1.69/6.48)

## Utilize the Contacts within the Telegärtner Group



The Telegärtner group offers you a complete and varied network of services. If you, as a customer, are already working successfully with Telegärtner in one of the following product areas, you can also profit from our outstanding performance in other areas – and exploit the resulting synergies. Please contact your authorised Telegärtner sales partner to receive additional catalogues and information material!



### Networking Components

Telegärtner offers an extensive line of connection components for telecommunications and data transmission technology. We can provide, on the one hand, high performance, active and passive components for transmission via copper cables and, on the other, connection and distribution components for fibre optics.

### Coaxial Connectors

Whether you require coaxial connectors for high power transfer in the area of transmission, subminiature connectors for dense packaging, or precision connectors for laboratory equipment, Telegärtner can meet your every need with its extensive line of standard products – as well as, naturally, connectors specially designed to meet individual customer specifications.

### Cable Assembly

On request, Telegärtner can provide ready-to-use RJ45 and fibre optic patch cords, coaxial cables and a wide range of other cables which we assemble ourselves. The advantage: cablespecific connectors together with reliable, low-loss RF cables. In addition to conventional coax cables, we also pre-assemble semirigid, semi-flex, and corrugated cables.

### Precision Turned Parts

Telegärtner Gerätebau manufactures precision turned parts of the highest quality. These include form turned pieces with diameters from 10 mm to 65 mm; straight turned parts with diameters from 6 mm to 26 mm; parts made from brass, aluminium, steel, stainless steel, and other materials. Our extensive knowledge in postprocessing techniques such as grinding and milling, galvanic surface treatment as well as heat treatment round off our service offerings.

### Plastic Injection Mould Parts

Under the motto: "integrating ideas, reducing process costs, accelerating production", Telegärtner Kunststofftechnik brings its comprehensive know-how to bear on complex material combinations, from product development right up to series production, from multi-component injection moulding, across in-mould and MID 3D techniques, to automation and clean room technologies.

### Industrial Electronics

Telegärtner Elektronik offers active/passive sub-assemblies for industrial electronics, telephone and entryway speaker systems as well as emergency call systems. We offer everything from development (hardware and software) based on customer specifications, to technical consultation and prototype testing and acceptance by the TÜV (the leading technical approval institution in Germany), up to production in small and large series. Device construction covers every aspect from PCB population and sub-assembly mounting, up to complete device manufacturing.

**Telegärtner**  
**Karl Gärtner GmbH**

Lerchenstr. 35  
D-71144 Steinenbronn

Tel.: +49 (0) 7157 / 125-100  
Fax: +49 (0) 7157 / 125-120

E-Mail: [info@telegaertner.com](mailto:info@telegaertner.com)  
Web: [www.telegaertner.com](http://www.telegaertner.com)

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