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PL-259, UHF male, Solder-On, Cable End, Quick Connect Connector



Technical Data Sheet

This PL-259, UHF male, solder-on, cable end quick connect connector is one of several thousand RF products available from Max-Gain Systems, Inc. This adapter is a between series coaxial adapter.

This connector is made from a Solid Brass body that is precision machined and plated with silver for superior performance and value. This PL-259, UHF male, solder-on, cable end connector has a PTFE dielectric and a silver plated brass center pin. The UHF male side (also known as a PL-259 connection) is by far the most popular connection type used in Amateur Radio. This version has a special outer shell that makes any piece of coax, that this is used on, a quick connect connector. This RF connector fits (but not limited to) RG-8, RG-11, RG-83, RG-213, RG-393, LMR-400, and other 0.405 Inch OD Coax. In order to fit smaller coax diameters, a reducer can be used. 7508-S (UG-176) for 0.240 diameter coax, 7507-S (UG-175) for 0.195 diameter coax, 7506-S (UG-174) for 0.100 diameter coax.

The Quick Connect sleeve / collar is also available individually to retro fit standard PL-259 connectors that are already installed on a piece of coax. See the individual quick connect sleeves here: <https://mgs4u.com/product/7500-qc/>. These sleeves are only to be used on PL-259 connectors that are soldered on with two or four holes around the main body. This sleeve is the long version of these QC sleeves. For the short version QC sleeve for crimp-on style connectors, see here: <https://mgs4u.com/product/7505-qc/>.

Material Specifications

PL-259, UHF male, Solder-On, Cable End QC Connector

Part Number 7500-QC-KIT

Description	Material	Plating
Insulator	PTFE	White
Shell	Brass	Silver
Pin	Brass	Silver
Body	Brass	Silver

Mechanical Specifications

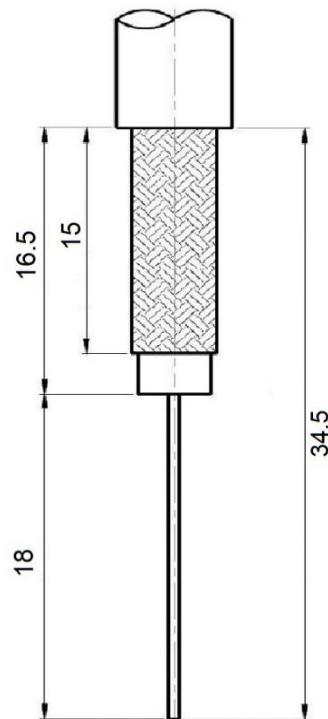
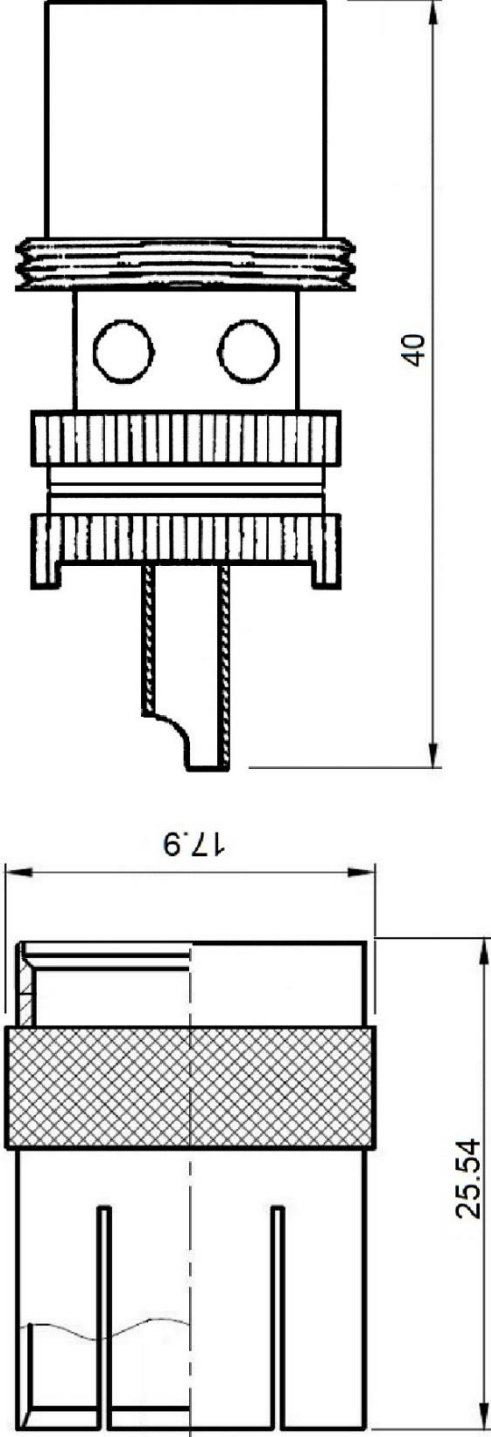
Size	Dimension
Length	1.58 in (40.2 mm)
Width	0.705 in (17.9 mm)
Height	0.705 in (17.9 mm)
Weight	0.8 oz (22 g)

Environmental Specifications

Temperature	Spec
Operating Range	-65 to +165 deg C

Compliance Certifications (see product page for current documentation)

Availability Click the following link (or enter part number in the "SEARCH" bar at the top of any page of the website) to obtain additional part information including price, inventory and certifications: <https://mgs4u.com/product/pl-259-uhf-male-quick-connect-solder-connector-0-405-inch-od-coax-7500-qc-kit/>



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TITLE: PL-259 UHF male Solder On, Quick Connect
 for LMR-400, RG-213, RG-8

DRAWING NO: 7500-QC-KIT
 FILE NO : .

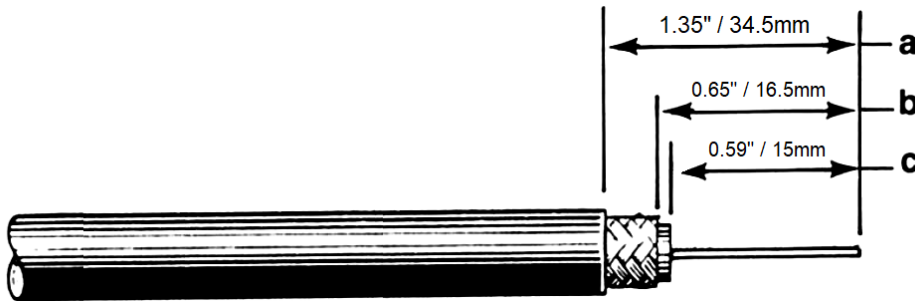
UNLESS OTHERWISE SPECIFIED TOLERANCES		PART NO	DATE
0.5-5	±0.2	APPROVED	DATE
5-30	±0.4	CHECKED	DATE
30-120	±0.6	DRAWN	DATE
120-315	±1		
315-1000	±1.6		
1000-2000	±2.4		
UNIT: mm			
SCALE: .			
NO. DESCRIPTION	MATERIAL		
PIN	BRASS	SILVER	
SHELL	BRASS	SILVER	
DIELECTRIC	TEFLON	WHITE	
BODY	BRASS	SILVER	
		FINISH	

Installation Guide

We will begin by installing the PL-259 connector on a piece of LMR-400. This process is the same for all the other types of cable that fit the PL-259 connector. These connectors fit on a wide range of coax types including: RG-11, RG-213, RG-213/U, RG-393, RG-393/U, RG-8, RG-8/U, RG-8A, RG-83, LMR-400, LMR-400 Ultraflex, Belden 7810A, Belden 8216, Belden 83269, Belden 83284, Belden 84316, and other 0.39 and 0.405 Inch OD Coax.

Coax Stripping:

First cut your cable to the desired length and then strip the black jacket back approximately 1 inch. When the jacket is stripped cut the braid/foil back 0.75 of an inch from the fresh cut end. Finally, cut back the dielectric 0.6875 of an inch from the fresh end down to the center conductor. The braid needs to be cut back further than the dielectric to insure that none of the braid or foil is touching the center conductor which could cause a short.



Main Body Install:

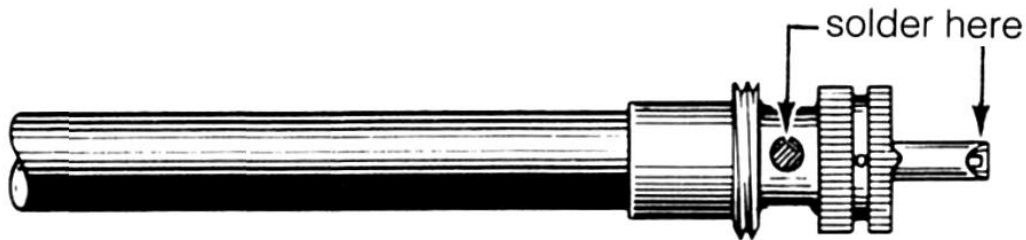
Put the PL-259 main body on the end of the cable, grip it lightly with a pair of pliers on the knurled portions, and begin screwing it to the right (clockwise) till the center conductor is flush with the tip end of the center pin of the PL-259 connector itself and to where you can see the braid of the coax through the solder holes.

FAQ: Why wont the center conductor go into the center pin of the connector?

Answer 1: The center is bent off of center. Ensure the center conductor is perfectly straight before screwing the connector body onto the coax.

Answer 2: The tip of the center conductor was flattened by diagonal cutters when cutting the coax. To fix this, use a pair of pliers to compress the flared bits of the tip to round back out the tip of the center conductor.

Answer 3: The strands spread apart making the center conductor too large. LMR-400 coax is available in solid core and stranded versions. When cut, the strands of the stranded version can "loosen" and come separated. You will need to re-tighten the strands by twisting them back to their original diameter.



Soldering Guide:

This soldering guide is for soldering Max-Gain Systems, Inc. PL-259 connectors. These are approximate measurements for our PL-259 connectors, which adhere to industry standards for this type connector. If you choose to use this guide for connectors sold by others who do NOT adhere to these standards, the measurements could be off and result in a poor installation.

Now we begin soldering the PL-259 connector to the cable. Begin by applying heat to the center pin of the PL-259 connector with your soldering iron. Before proceeding, allow sufficient time for the soldering iron tip to reach full operating temperature and clean the tip of the iron by wiping it with a damp sponge. Be sure the soldering iron is on the bottom side of the center pin. The heat rises and heats up the pin faster. When the pin is heated, apply the solder to the tip of the center conductor. Allow sufficient solder to flow to seal the center conductor inside the center pin.

Once the center pin is sealed with solder, move the soldering iron to the holes of the PL-259. Make sure to fill all four of the holes with solder flush with the top of each hole. Once all four holes of the PL-259 are filled with solder let the connector cool down. When the connector is cool take the sleeve / collar and screw it onto the connector body (which should only take 1.5 turns) and seat it into place.



Final Testing:

When this is completed, as a final test, you should always check resistance from the center pin to the body with an ohmmeter in a low resistance scale. After verifying that there are no braid – to – center pin shorts on the other end of the coaxial cable, you should see infinite resistance (open).

As a final check, inspect the tip of the center pin to be certain that there is no excess solder present. This could interfere with easy insertion of the tip of the PL-259 into the female (SO-239) connector. If there is a tiny bit of excess solder present, it can usually be easily removed. Lightly scrape the soft solder with the edge of a knife blade until smooth. This completes your PL-259 installation, and the connector is ready for use!