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



Technical Data Sheet

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 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.

Material Specifications

PL-259, UHF male, Solder-On, Cable End Connector		Part Number 7500-UHF
Description	Material	Plating
Insulator	PTFE	White
Shell	Brass	Silver
Pin	Brass	Silver
Body	Brass	Silver

Mechanical Specifications

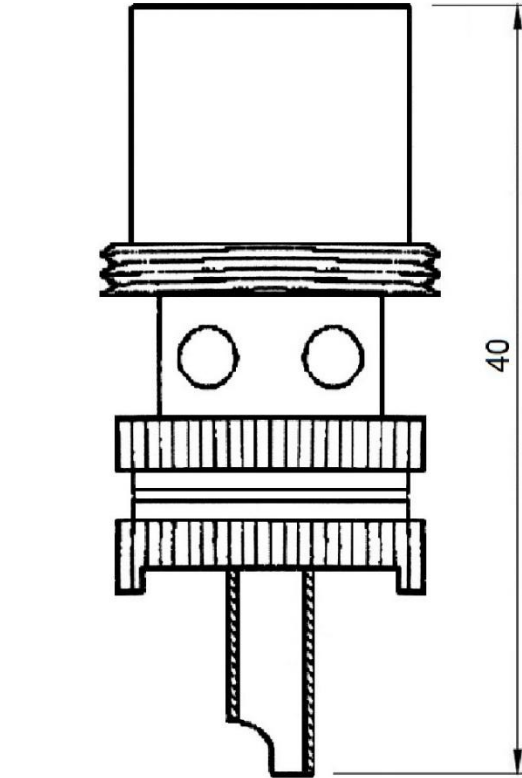
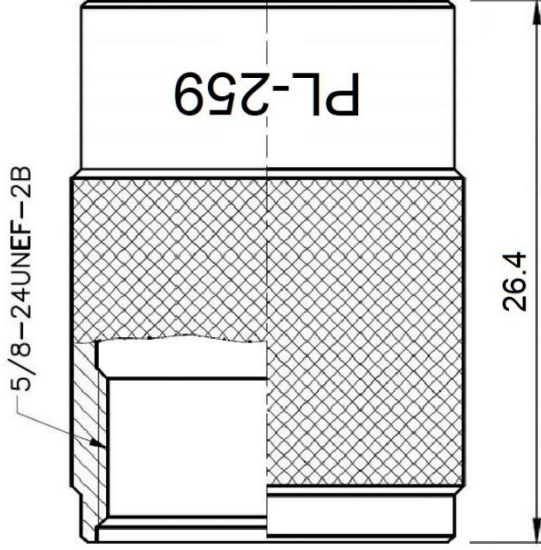
Size	Dimension
Length	1.58 in (40.2 mm)
Width	0.705 in (17.9 mm)
Height	0.705 in (17.9 mm)
Weight	0.8 oz (22 g)

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-solder-connector-for-0-405-inch-od-coax-7500-uhf/>



SPECIFICATIONS

VOLTAGE RATING: 500 VOLTS RMS
IMPEDANCE: NON CONSTANT
FREQUENCY RANGE: 0-300

FIT:

For all 0.390 to 0.400 OD Coax Types Including RG-8, RG-213, Belden 9913, LMR-400

w/ 7508-S Reducer

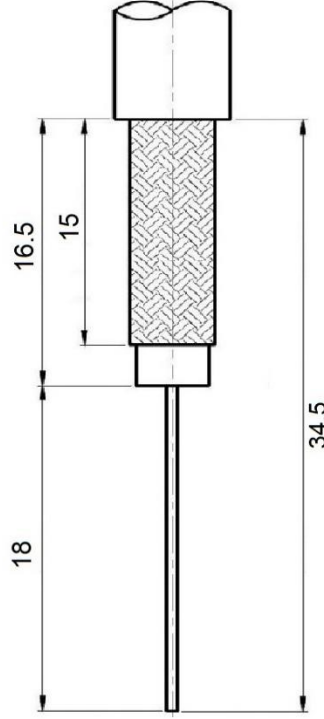
For all 0.240 OD Coax Types Including RG-8X, mini 8, RG-59, Belden 9258, LMR-240

w/ 507-S Reducer

For all 0.195 OD Coax Types Including RG-58, RG-142, RG-223, RG-400, LMR-195

w/ 7506-S Reducer

For all 0.100 OD Coax Types Including RG-174, RG-178, RG-188, RG-196, Belden 8216, LMR-100



Alternate stripping required
when using reducers

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

DRAWING NO: 7500-UHF

FILE NO : .

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

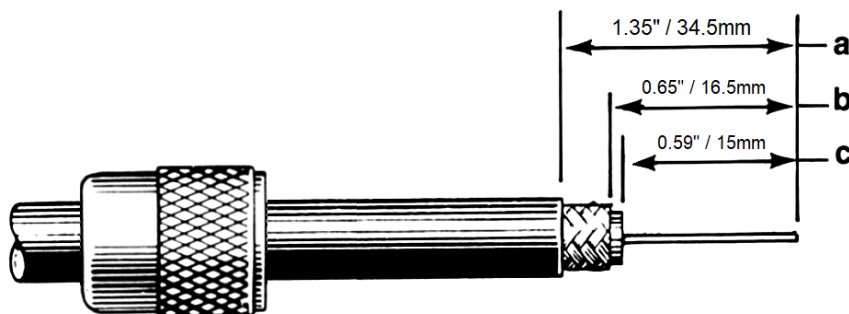
Installation Guide

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-8, RG-11, RG-83, RG-213, RG-393, LMR-400, Belden 8237, Belden 8267, Belden 9011, and Belden 9913.

Coax Stripping:

First cut your cable to the desired length and then strip the black jacket back approximately 1.35 inch. When the jacket is stripped cut the braid/foil back 0.65 of an inch from the fresh cut end. Finally, cut back the dielectric 0.59 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.

Once the cable is prepped, make sure to put the sleeve of the PL-259 on the cable before you put the body of the PL-259 on the cable, with the knurled end of the sleeve closest to the tip of the connector.



Main Body Install:

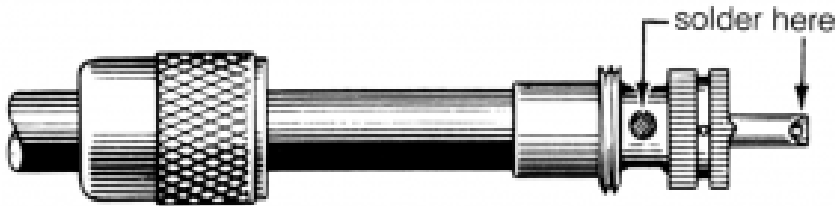
Put the PL-259 main body on the end of the cable and grip it with a pair of pliers and begin screwing it to the right (clockwise) till the center conductor is flush with the tip end of the center pin of the PL-259 connector itself.

FAQ #1: Why wont the center conductor go into the connector?

Answer 1: The center is bend 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 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.

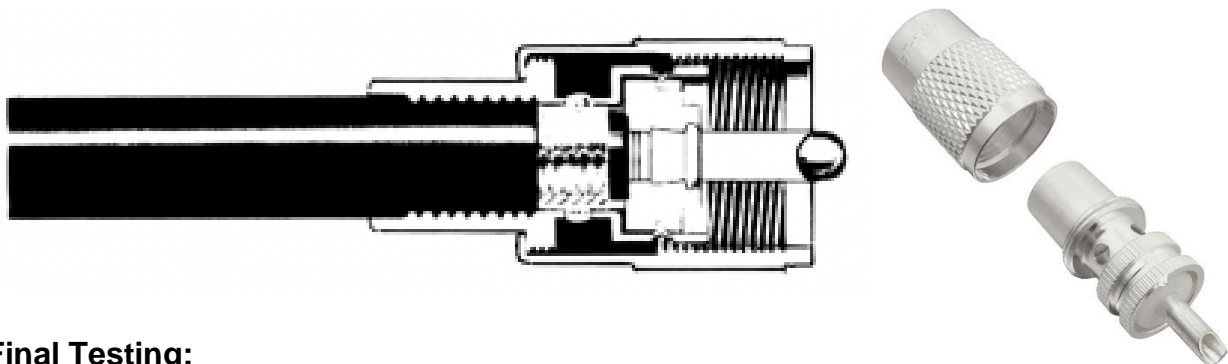


Soldering Guide:

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 (which should have been put on the cable before the PL-259 was screwed on the cable) and slide it up the cable onto the connector and screw it up 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!