



150 Dodd Street SE
Marietta, GA. 30060

Phone: 770-973-6251
Fax: 678-401-3854

Email: info@mgs4u.com
Website: www.mgs4u.com

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



Technical Data Sheet

This PL-259, UHF male, solder-on, cable end 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 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.

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	0.72 in (18.2 mm)
Height	0.72 in (18.2 mm)
Weight	0.22 oz (8 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/>

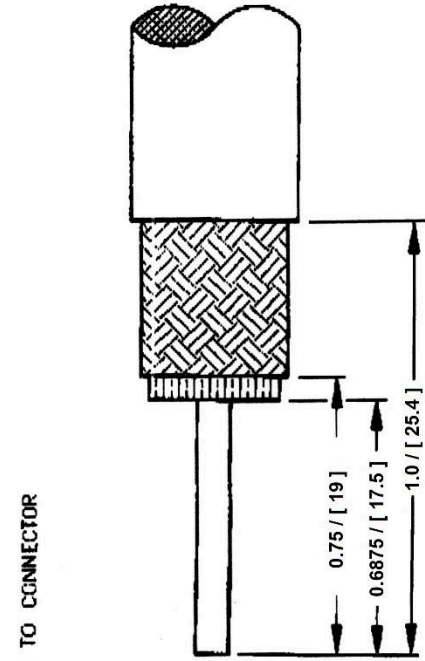
ENVELOPE / ASSEMBLY DRAWING

SPECIFICATION CONTROL DRAWING

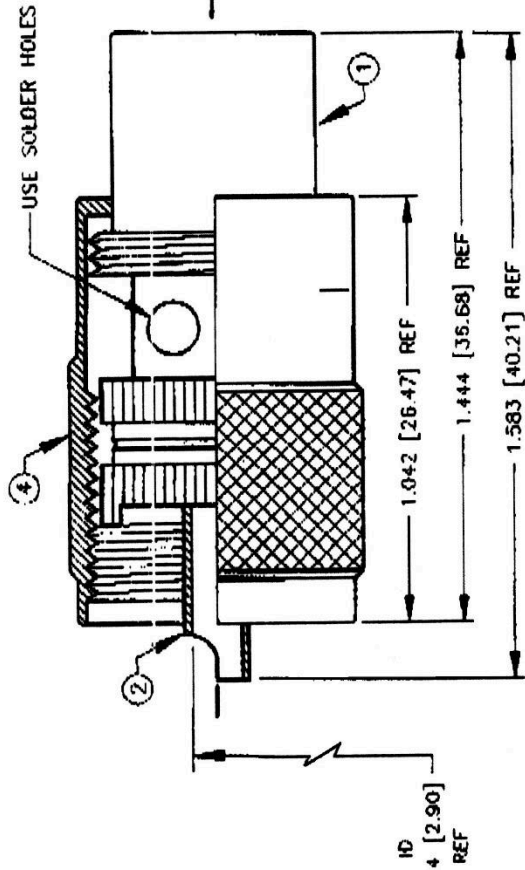
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REV	DESCRIPTION	DATE	APPROVED

ALTERNATE STRIPPING REQUIRED WHEN USING REDUCERS



SUGGESTED STRIPPING INSTRUCTIONS



SPECIFICATIONS:

- VOLTAGE RATING: 500 VOLTS RMS
 IMPEDANCE: NON CONSTANT
 FREQUENCY RANGE: 0-300
 (A) FOR RG-8, 8A, 213/U
 (B) FOR RG-9, 9A, 9B
 (C) FOR BELDEN 9913, 9914, RG-8/U TYPE, RG-393/U & TIMES LMR-400
 W/7508-S REDUCER:
 (D) FOR RG-58, 58A, 58C, 141, 141A, 400/U
 (E) FOR RG-55, 55A, 55B, 142, 142A, 142B & 223/U
 W/7507-S REDUCER:
 (F) FOR RG-59, 59A, 59B, 62, 62A, 620 71, 140 & 210/U
 (G) FOR ANTENNA SPECIALIST K214 & PRO-FLEX 800, TIMES AA3095 &
 COMM/SCOPE 2275 & 2279 CABLE
 (H) FOR RG-8/X & 30/U, BELDEN 9258, TIMES LMR-240 &
 LMR-240 ULTRAFLEX
 W/7506-S REDUCER:
 (I) FOR RG-174, RG-178, RG-188, RG-196, LMR-100, LMR-110, LMR-100A &
 BELDEN 8216

DIMENSIONS ARE IN INCHES AND [MILLIMETERS]	
UNLESS OTHERWISE NOTED TOLERANCES ARE:	
DECIMALS	DIAMETER



Max-Gain Systems, Inc.
 150 Dodd Street SE, Marietta, GA. 30060
 Phone: (770) 973-6251 | Fax: (678) 401-3854
 Website: www.mgs4u.com | E-Mail: sales@mgs4u.com

ITEM	DESCRIPTION	QTY	MATERIAL	FINISH	APPROVALS	DATE
4	SHELL	1	BRASS	SILVER		
3	DIELECTRIC	1	PIPE	WHITE		
2	PIN	1	BRASS	SILVER		
1	BODY	1	BRASS	SILVER		

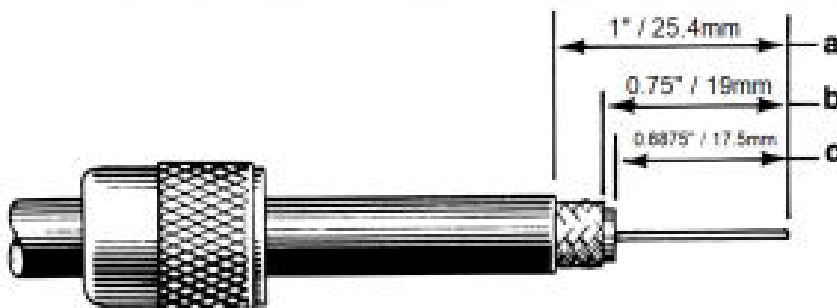
Installation Guide

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 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.

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:

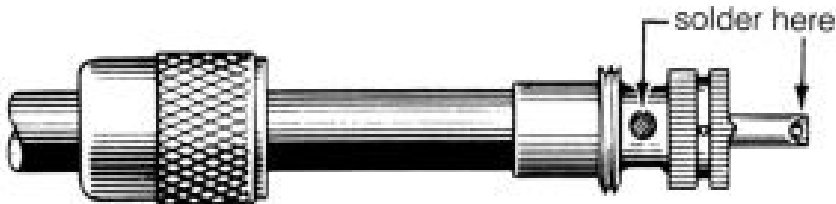
Put the PL-259 main body on the end of the cable and grip it with a pair of pliers and begin screwing it to the right (clockwise) till the center conductor is flush with the tip end of the center pin of the PL-259 connector itself.

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.

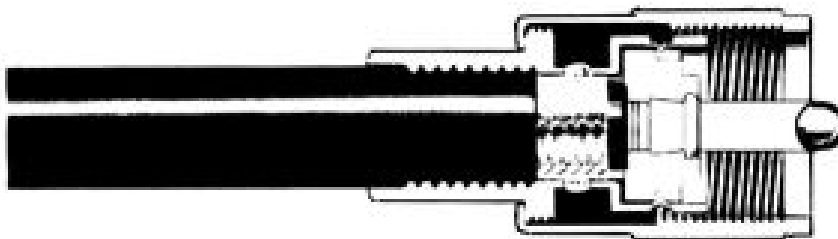


Soldering Guide:

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!