

Trimming Coaxial Probes

Instruction Sheet for SmartLine Transmitters: GWR SLG720 Level Transmitters

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Please take appropriate steps to avoid ESD damage when handling transmitter electronics assemblies.



All local electrical codes, and relevant service and repair regulations must be observed.



When installed as explosion-proof or flame-proof in a hazardous location, keep covers tight while the transmitter is energized. Disconnect power to the transmitter in the non-hazardous area prior to removing end caps for service. When installed as non-incendive or non-sparking equipment in a hazardous location, disconnect power to the transmitter in the non-hazardous area, or determine that the location is non-hazardous before disconnecting or connecting the transmitter wires.

Tools required

Required tools depend on options ordered.

For this item	Use this tool
Coaxial probe outer tube removal/installation	Pipe wrenches (2x)
M3 set screw for coaxial coupler (SCA)	AF 1.5 mm Allen key
Inner rod probe	AF 7 mm wrench (2x)
Inner rod probe nut	AF 8 mm wrench
Mounting thread ¾" and 1" process connector	AF 40 mm wrench
Mounting thread 1-½" process connector	AF 50 mm wrench
Mounting thread 2" process connector	AF 60 mm wrench
Coaxial probe outer tube threads (SCA)	Process compatible thread locking compound (i.e. Loctite 242) ¹
Rod and tube trimming	Metal saw
Tool to drill hole in outer tube	Drill and 6.0 mm drill bit/drill press

¹ Thread locking compound is recommended. The thread locking compound must be process compatible

Procedure

The Coaxial probe consists of an inner rod conductor and a coaxial outer tube shield. To trim the coaxial probe to required length, both inner rod and coaxial outer tube need to be trimmed off by the same amount.

Step – 1: Turn off transmitter power.

Step – 2: Remove transmitter from installed location.

Step – 3: Depending on the length of the coaxial probe the outer tube may be constructed from a single length of tube or be assembled using several tube segments joined to each other using tube couplers. The amount of probe to be trimmed will dictate the extent of disassembly required. Starting from the end of the probe farthest from the process connector, remove the appropriate number of outer tube sections to be able to complete the trimming operation. If the probe is under 2.0 m in length, it will be secured to the process connector by an internal thread. Use a wrench to hold the process connector by its flats and a pipe wrench to unscrew the outer coaxial tube. If the probe is over 2.0 m in length, the section of tube to be trimmed may be secured by a tube coupler. To release the tube, loosen the two M3 set screws holding the coupler in place, then use two pipe wrenches to unscrew the tube from the coupler.

Note: if only a small length of the probe requires trimming, only the end segment of the tube will need to be removed from the assembly.

Step – 4: The inner rod of a coaxial probe is constructed out of 1.0 m rod segments. If the coaxial probe is under 1.0 m long, there will only be one rod. Otherwise, there will be at least one rod segment and a single rod end segment. The end segment will have only one threaded end. Determine how many rod segments need to be removed to complete the trimming operation. Use two 7 mm wrenches to unscrew the rods from each other, taking care not to misplace the lock washer and M5 x 20 mm stud holding the rods together. If only a small length of the probe requires trimming, only the end segment of the rod will need to be removed from the assembly.

Step – 5: Mark and trim the relevant outer tube and rod segments. Avoid trimming the coupler region of the outer tube and internal thread region of the inner rod (flat area). Refer to [Figure 1](#).

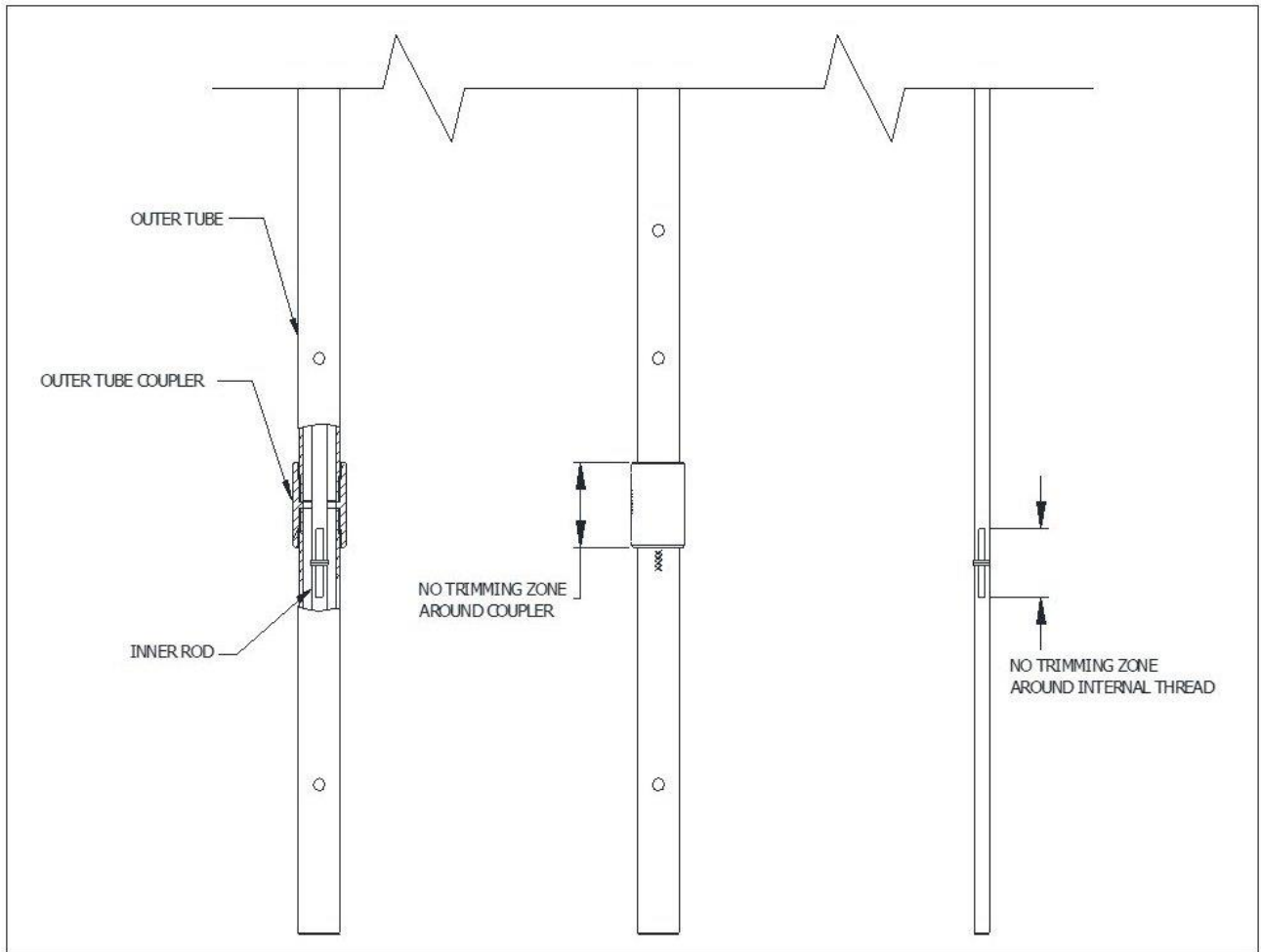


Figure 1 - No Trimming Zones on Outer Tube and Inner Rod

Step – 6: Drill a 6.0 mm hole through the end of the outer tube at location shown in **Figure 2**.

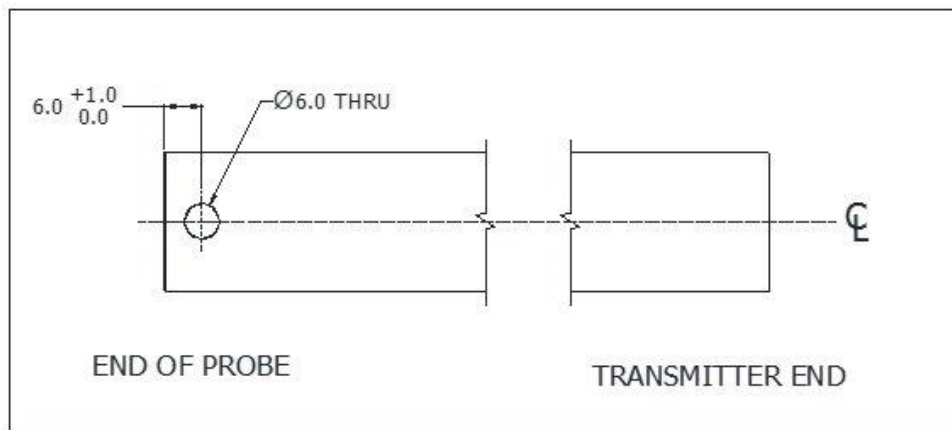


Figure 2 - Drill Hole Position on Outer Tube

Step – 7: Reassemble the rod probe. Tighten each rod connection to 6.0 Nm (4.4 ft-lbs).

Step – 8: Reassemble the outer coaxial tube. Tighten each tube segment to 30 Nm (22 ft-lbs), replacing the M3 set screws into the coaxial tube couplers as required. Tighten M3 set screws to 1.0 Nm (8.8 in-lbs).

Step – 9: Insert the new spacer (HPN 50126585-001) provided by the Coaxial Probe Trimming Kit (HPN 50125208) into the end of tube. Align the holes in the end spacer with the newly drilled holes in the outer tube and insert the two pins (HPN 50126585-002) provided by the Coaxial Probe Trimming Kit. Refer to **Figure 3**.

Step – 10: Re-configure the probe length in sensor setup according to the SLG700 User's Manual 34-SL-25-11.

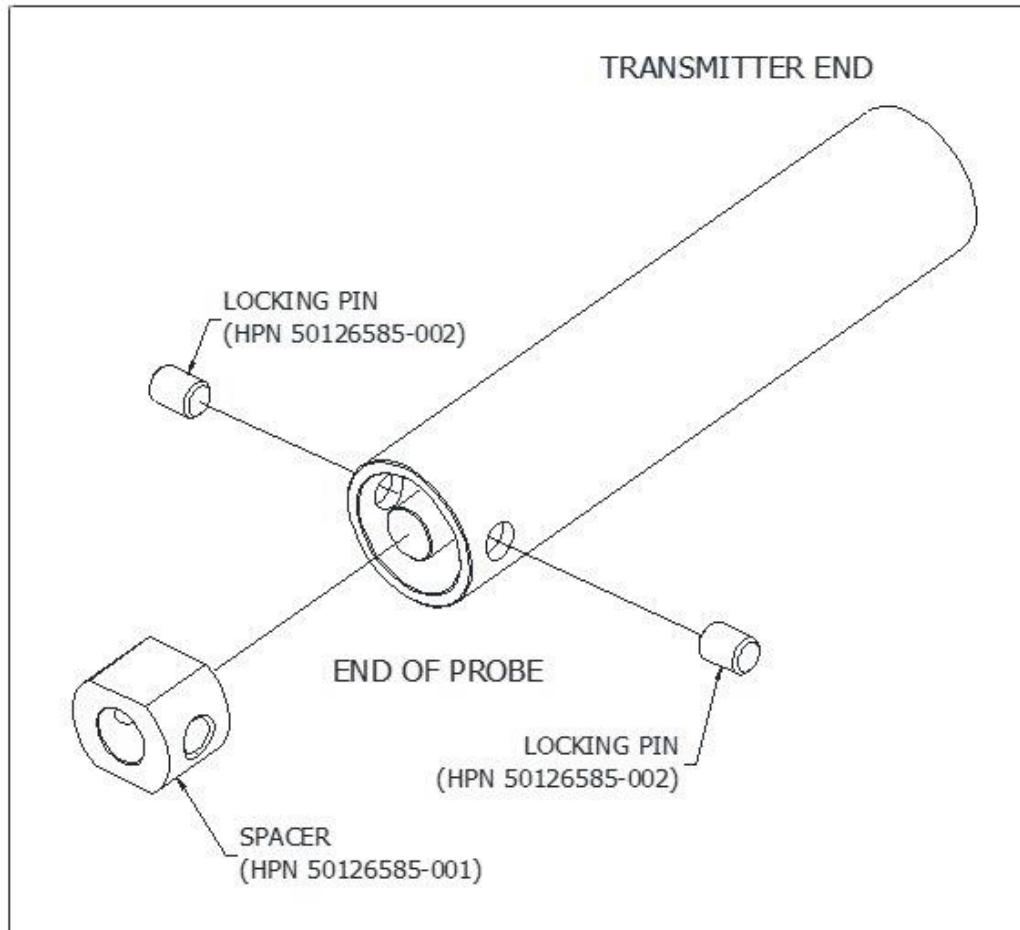


Figure 3 - Spacer and Locking Pin Installation

Sales and Service

For application assistance, current specifications, pricing, or name of the nearest Authorized Distributor, contact one of the offices below.

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