High-Voltage Contact Upgrade for PV-100

An innovative upgrade for your PicoView® 100 series is now available. The new gold-plated spring bellows replacement assembly provides optimal long-term reliability and durability to PicoView voltage modules.

This technical note will guide you through upgrading the voltage modules of your PV-100. If you are unsure of your ability to install this upgrade, New Objective will install it for you at no additional charge. Please contact our sales office for additional information.

Tools required for upgrade (user supplied)

* Adjustable wrench
* Needle-nose pliers
* Common pliers (optional)

Gold plated spring bellows assembly

WARNING: If you are using your PicoView® source, the high-voltage supply must be turned off and the LCQ™ instrument must be placed in standby, prior to making these modifications. Additionally, the UTM and/or CTM must be removed from the PicoView unit and the high-voltage cable must be disconnected from the module.

Uncoated Tip Module Conversion

1. Locate the uncoated tip module (UTM). Separate the UTM base from the cover, as described in the PV-100 manual (Sections 5.4 and 5.5). If a high-voltage MicroTee is still in the UTM, please remove. Figure 1 shows the UTM base.
2. Using needle-nose or conventional pliers, remove the 6-32 set screw protruding from the mounting block on the base of the UTM by turning the screw counterclockwise, as in Figure 2. Figure 3 shows the UTM after the set screw has been removed.
3. Locate the spring bellows assembly in the upgrade kit (Figure 4). Screw the threaded end of the bellows into the block. Tighten the bellows assembly with needle-nose pliers (Figure 5).
4. Locate the UTM cover. Remove the female high-voltage LEMO connector with an adjustable wrench by turning the nut counterclockwise until the connector is free of the housing, as shown in Figure 6.
5. Locate the replacement LEMO assembly from the upgrade kit (Figure 7). Insert the replacement LEMO assembly into the UTM as shown in Figure 8. Using the adjustable wrench, screw the new connector into the UTM cover until it is firmly tightened. (The connector should be tight enough so that you cannot unscrew it without the wrench.) You are now finished with the UTM upgrade.
6. Return old high-voltage LEMO connector to New Objective using the pre-addressed, pre-paid shipping envelope provided.

Figure 1 Uncoated tip module (UTM)

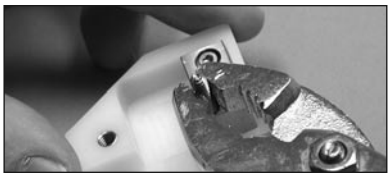

Figure 2 Remove screw set

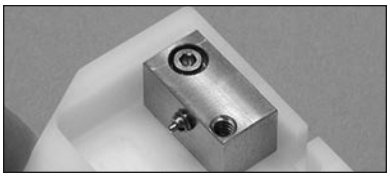

Figure 3 Screw set removed

Figure 4 Spring bellows assembly

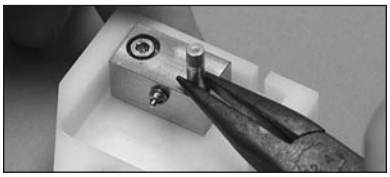

Figure 5 Screw spring bellows into block

Figure 6 Remove LEMO connector

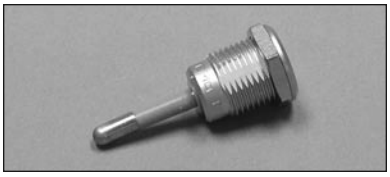

Figure 7 Replacement LEMO assembly

Figure 8 Insert replacement LEMO assembly

Figure 9 Tighten firmly

Coated Tip Module Conversion

1. Locate the coated tip module (CTM). Separate the CTM base from the cover, as described in the PV-100 manual (Sections 5.2 and 5.3). Figure 1 shows the CTM base.
2. Using needle nose or conventional pliers, remove the 6-32 set screw protruding from the base by turning the screw counterclockwise, as shown in Figure 2. Figure 3 shows the CTM after the set screw has been removed.
3. Locate the spring bellows assembly in the upgrade kit. Screw the threaded end of the bellows into the CTM base. Tighten the bellows assembly gently with pliers, as shown in Figure 4. (Proceed carefully, as it is possible to strip the thread in the CTM base if overtightened.)
4. Locate the CTM cover. Remove the female high-voltage LEMO connector with an adjustable wrench by turning the nut counter-clockwise until the connector is free of the housing, as shown in Figure 5.
5. Locate the replacement LEMO assembly in the upgrade kit. Insert the replacement LEMO assembly into the CTM as shown in Figure 6. Using the adjustable wrench, screw the new connector into the CTM cover until it is firmly tightened, as shown in Figure 7. (The connector should be tight enough so that you cannot unscrew it without the wrench.) You are now finished with the CTM upgrade.
6. Return old high-voltage LEMO connector to New Objective using the pre-addressed, pre-paid shipping envelope provided.

Figure 1 Coated tip module (CTM)

Figure 2 Loosen set screw with pliers and remove

Figure 3 Set screw removed

Figure 4 Screw spring bellows replacement assembly into CTM base

Figure 5 Remove the high-voltage LEMO connector

Figure 6 Insert replacement LEMO assembly

Figure 7 Tighten firmly

Please return the old high-voltage LEMO connectors to New Objective using the enclosed pre-addressed, pre-paid shipping envelope.

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