

P-212.80T HV Piezo Actuator for Cryogenic Temperature

DANGER



Risk of electric shock when touching the HV piezo actuator!

The Teflon tape wrapped around the actuator is not intended as protection against electric shock. The customer is responsible for safe connection and installation of the P-212.80T HV piezo actuator when implementing the total system. Touching the P-212.80T HV piezo actuator can result in death or serious injury due to electric shock.

- Only authorized and qualified personnel must install, operate and maintain the P-212.80T HV piezo actuator.
- Only touch and handle the P-212.80T HV piezo actuator when it is shorted via the short-circuit plug which is included in delivery.
- When implementing the total system, make sure to maintain the necessary safety and insulation distances.

NOTICE



Risk of damage when the Teflon and Kapton tape is removed!

The Teflon and Kapton tape wrapped around the actuator is intended as protection against contamination and as a strain relief of the leads. Contamination of the piezo ceramics and/or unpermissible forces on the leads can result in damage to the actuator.

- Remove the tape only when necessary and when the actuator is installed at the site of operation.
- When the tape is removed, avoid touching the piezo ceramics and the leads.

NOTICE



Risk of damage by cooling or heating!

Since the components of the actuator have different coefficients of thermal expansion (CTE), the thermo-mechanical loading which occurs during cooling or heating can cause fractures of the piezo ceramics. Fractures of the piezo ceramics can result in failure of the actuator due to electrical breakdown.

- Cool or heat the actuator only when necessary.
- Cool or heat the actuator only when it is shorted via the short-circuit plug which is included in delivery or connected to a piezo controller.
- Design the system so that the actuator is **not** exposed to any uncontrolled thermo-mechanical loading by the system parts. Do **not** connect any additional components to the piezo ceramics of the actuator (e. g. sensors or coating).
- Prevent condensation. If condensation occurs, let the actuator dry before operation (4 hours at 60 °C).
- Observe the recommended cooling and heating rates:
 - Cooling to 77 K or 4 K, and unfreezing back to room temperature: 20 K/h
 - Heating to 150 °C, and cooling back to room temperature: 30 to 40 K/h

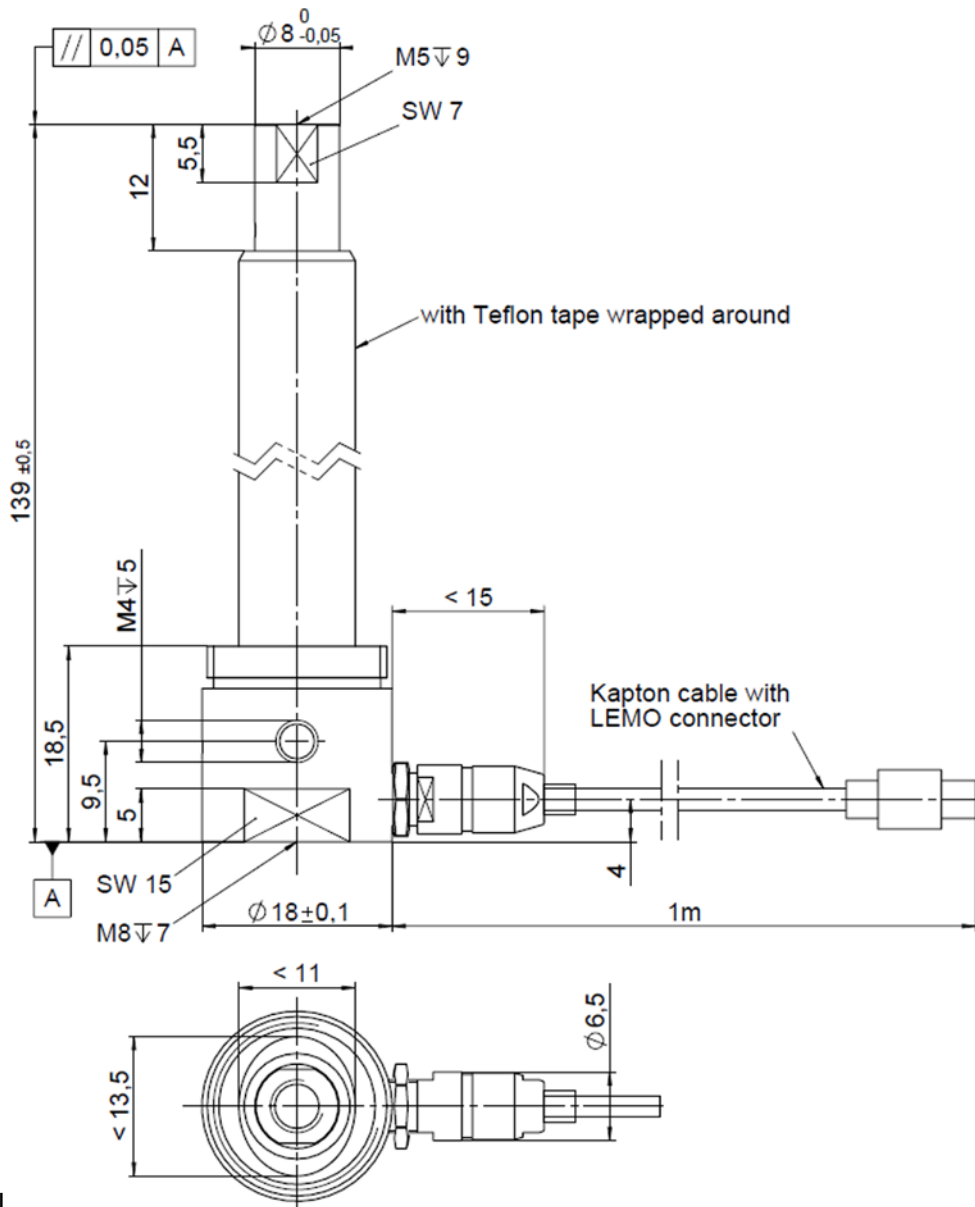


Figure 1: P-212.80T dimensions in mm, decimal places separated by commas