

Optical Displacement Gage | **os5000**



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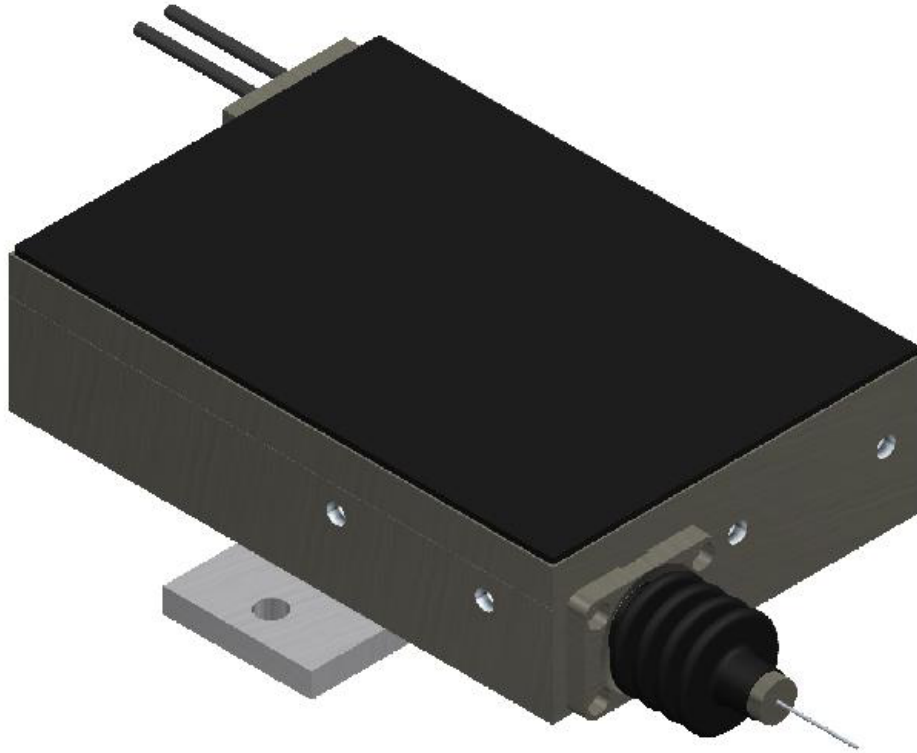


Figure 1 – os5000 Displacement Gage

Introduction:

This installation guide provides details regarding the installation of the os5000 displacement gage shown in Figure 1. This gage is designed to measure displacements, cracks, and expansion joints over a 12 mm range.

Preparation:

Surface Preparation and Layout - The surface must be properly prepared prior to mounting the gage. The surface should be clean and flat where the gage is to be attached. The moving section that is to be monitored should move in a direction near perpendicular to the face of the gage where the wire rope exits through bellows.

Gage Installation:

The os5000 comes standard with a mounting strap attached to the bottom of the gage. This allows the gage to be easily attached to a surface with two ¼ inch or M6 screws. The gage can also be mounted by removing this strap and utilizing any of the ¼-20 UNC mounting holes provided on the gage. Typical strap mounting is described below.

- Position the gage on the stationary surface to monitor such that the wire rope exit is aligned with the direction of movement.
- Mark the hole locations for the gage then remove the gage and drill two holes. The gage mount will accept ¼ inch or M6 screws.
- Secure the gage in place. Tighten to substrate securely to prevent any movement.
- Determine the range of displacement to be measured and the current relative position of the two parts. The midpoint of the measurement range should coincide with the midpoint of the travel of the moving part as much as possible. The os5000 gage has limited range of 12mm.



- Attach the wire rope to the moving substrate. It is recommended to clamp it to the substrate. If a loop is placed on the end of the wire rope, it should be a tight fit over the post (hook) since the loop will have flex in it and cause error in the measurements. To maximize accuracy, strip the FEP jacket off of the wire rope and clamp directly on the stainless steel wire.

Mechanical Protection:

For many installations mechanical protection will be needed to protect the gage from the environment. The gage is rated for IP67 protection. Protection for the wire rope may be needed in harsh environments to protect from ice, snow and animals to insure the best measurement accuracy possible. Suggestions include feeding a portion of the wire rope through a pipe or protect it with a shroud appropriate for the installation conditions.

Optical Connections:

The os5000 gage is a pass through design that allows multiple gages to be installed in series. The gage is available either unterminated (UT) or with FC/APC connectors.