

Operating Instructions Reflector for Fixed Installations 0.5" (RFI)



Take time out now to read these operating instructions before using the Reflectors for Fixed Installations. These instructions contain also important safety information.

Purpose of the Reflectors for Fixed Installations

In many applications the change in dimension between various points on a structure over time are to be known. To minimize preparation time prior to each repeated measurement it is of advantage if the required number of reflectors can be installed permanently to the structure.

The Reflectors for Fixed Installations are designed for taking static measurements with a Leica Laser Tracker in order to monitor small relative movements over longer periods of time.

Attaching the Reflectors

The reflectors can e.g. be hot glued in place or attached with clamps. Clamps with shafts of various diameters and offsets are available. The 0.5 inch ball is made of aluminum and an attachment via magnetic nests is not possible.



Warning

Liquid hot glue can reach temperatures up to 200 °C (395 °F). Danger of burns.



Caution

Apply hot glue to the outside of the aluminum ball only. Do not apply excessive pressure, when using clamps to attach the reflectors.



- when it has to be **right**

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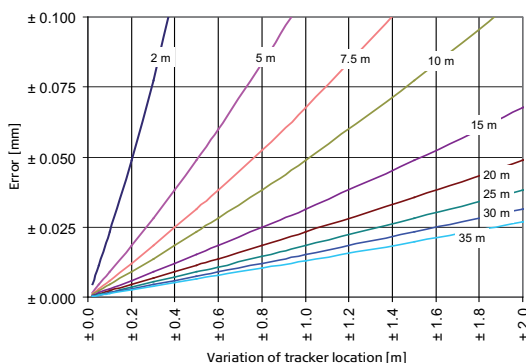
Requirements for the Measurement Setup

The solid glass prism within the reflectors are only roughly centered and once attached to the measuring object the orientation of the reflectors should not be changed anymore (roll-, pitch- and yaw angle). It is also important that the tracker location at each of the repeated measurement remains the same, otherwise the entry angle at the reflector will change and lateral errors will be introduced into the measurements.

Depending on the distance between reflectors and Tracker the error curve changes.

This chart indicates the size of the maximum point error if the tracker location changes between the measurements.

Error introduced due to change of tracker location



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Technical data

Centering of optics:	not specified
ADM Distance Offset:	not applicable, due to no centering of optics and due to relative measurements
Shape (ball):	not specified
Material (ball):	blue anodized aluminum, none magnetic
Radius (ball):	6.35 mm (0.2500 in)
Max. acceptance angle:	$\pm 50^\circ$
Weight:	3 g (0.11 oz)
Type of retro reflector:	solid glass prism, $\varnothing$ 8mm (0.3150 in)
Operating temperature:	+5° to +40° C (+41° to +104° F)
Storage temperature:	-10° to +60° C (-14 ° to +140° F)
Max. temperature applied to outside of aluminum ball for periods of time < 1 minute i.e. liquied hot glue:	up to +200° C (+392° F)

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Product specifications subject to change without notice.

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