



Solartron
Metrology

Single Leaf Analogue Flexure model AUS



user leaflet

AMETEK[®]
ULTRA PRECISION TECHNOLOGIES

1.0: Safety Summary

Terms in this Manual

WARNING statements identify conditions or practices that could result in personal injury or loss of life.

CAUTION statements identify conditions or practices that could result in damage to the equipment or other property.

Symbols in this manual



This symbol indicates where applicable cautionary or other information is to be found.

WARNINGS:

Do not operate in explosive atmosphere

To avoid explosion, do not operate this equipment in an explosive atmosphere.

NOTES:

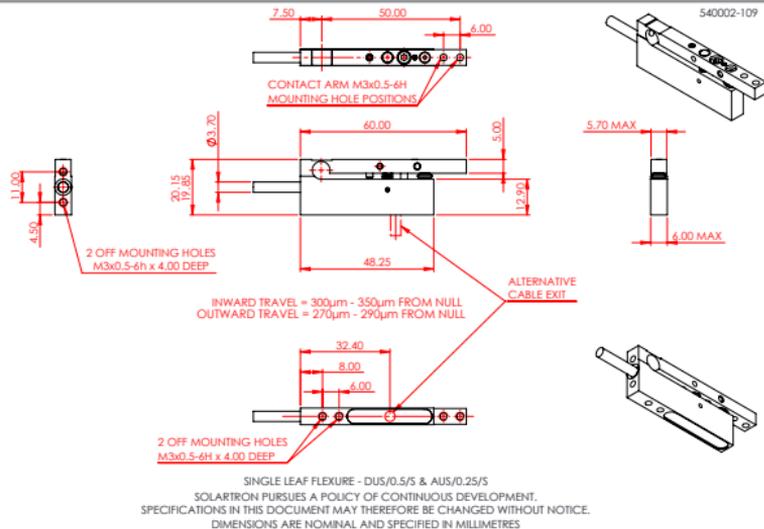
This equipment contains no user serviceable parts

This equipment must be returned to your Solartron dealer for all servicing and repair (see Return of Goods).

Low Voltage

This equipment operates at below the SELV and is therefore outside the scope of the Low Voltage Directive.

2.0: Flexure Description



Shown is the Solartron Single Leaf Flexure - refer to Solartron website for latest drawing.

Mounting of the gauge is facilitated by means of either of two pairs of M3 by 4 mm deep threaded holes detailed above.

Mounting of the contact arm (not supplied) is facilitated by a pair of M3 threaded holes in the radius arm as detailed above.

2.0: Flexure Description

Flexure Mounting

The flexures may be mounted in close proximity - a minimum of 6 mm centres – the width of the moving radius arm is manufactured smaller than the body to reduce the risk of contact with adjacent gauges.

Care must be observed whilst mounting the gauges not to stress the flexure hinge – handle only by the fixed body.

Contact Arm Attachment

The attachment of the contact arms (not supplied) must be undertaken carefully - so as not to stress the flexure hinge where possible it is better to attach the arms before mounting the gauge.

Arm length and mass is best kept to the absolute minimum to maintain the optimum results for accuracy and repeatability.

On-axis stylus contact lift will prolong the life of the gauge and produce the best results, if this is not possible then lift must be kept to the absolute minimum.

The reference calibration distance from the centre of the flexure hinge to the outer arm attachment hole is 50 mm, the gauge is calibrated over 500 microns, therefore for every 1 mm over 50 mm an increase of 10 microns will be available as calibrated range but the output will reduce in the same proportion and will need to be gain corrected to achieve direct reading.

Tip contact force will also reduce in proportion.