

MLT0015 High Grade Isotonic Transducer

Transducer Series

Description

The MLT0015 High Grade Isotonic Transducer measures isotonic contractions, that is the measurement of displacements without changes in force. The transducer connects to the ML142 GP Amp or any ADInstruments Bridge Amp. (except ML118 Quad or ML119 Octal Bridge Amps)



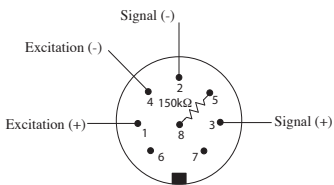
Operation

Mount the transducer by its support rod with the scale on the lever arm facing upwards. Without applying any force to the lever arm, use the adjusting screw to balance the arm when the counterweight is positioned at the rotation centre (see diagram below). Attach the muscle using thread to one of the holes along the arm. The load can be balanced by moving the counterweight in the direction of the scale printed on the arm. This is achieved by turning the screw at the end of the lever arm. If the muscle is attached to the outermost hole on the arm, the scale can be read directly. Forces greater than 5 g can be measured by attaching the muscle to one of the more inner holes along the lever arm. In this case, multiply the reading on the scale by a factor of $90/d$ where d is the distance in mm from the rotation centre to the hole where the muscle is attached. Lines indicating weight on the scale are nominal and not supposed to be accurate.

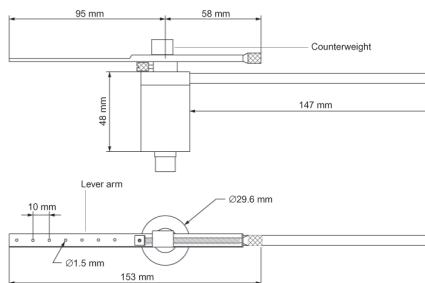
Application

The MLT0015 High Grade Isotonic Transducer is suitable for isolated tissue studies and has been designed for operation with our range of organ bath models.

Technical Diagram



Wiring Diagram



Schematic Diagram

Caution

Read "Statement of Intended Use" on our website or in "Getting Started with PowerLab" before use.

Specifications

Excitation voltage:	10 V DC nominal (12 V DC max.)
Input resistance:	1 K Ω
Displacement range:	$\pm 15^\circ$ (0 – 30°) equivalent to ± 24 mm (0 – 48 mm)
Resolution:	5 mg
Output:	1.5 mV (corresponding to 20° in lever displacement)
Linearity:	0.5 % from base of the scale in the lever displacement range
Frequency range:	0 - 15 Hz with an organ attached
Counterweight:	11 g
Counterweight scale:	0 – 5 g with 1 g divisions and 250 mg subdivisions
Lever weight:	2 g
Body:	55 mm \times 29 mm (2.17" \times 1.14") (length, diameter)
Support rod:	150 mm \times 6 mm (5.90" \times 0.24") (length, diameter)
Lever length:	90 mm (3.54") with 7 fixation points at 10 mm (0.39") intervals. The first point is 30 mm (1.18") from the rotation centre.
Cable length:	2 m (6.56')
Weight (including cable):	180 g
Connector:	8-pin DIN

All specifications were tested at the time of printing and are subject to change.

Ordering Information

MLT0015 High Grade Isotonic Transducer

For use with:

ADInstruments Bridge Amps (except ML118 Quad or ML119 Octal Bridge Amps)