

Description

The IR Plethysmographs use an infrared photoelectric sensor to detect changes in tissue blood volume. The MLT1020PPG features a velcro strap, the MLT1020FC has a spring clip suitable for readings from a finger or toe and the MLT1020EC features an ear clip.

The IR Plethysmographs can be connected to the ML110 Bridge Amp, ML112 Quad Bridge Amp, ML142 GP Amp, or directly to a Pod port of a PowerLab.



MLT1020EC

MLT1020FC



MLT1020PPG

Operation

The velcro strap and finger clip models use reflected infrared light, and work best where the light can reflect from the bone beneath the tissue. They are especially good for the finger or forehead (directly over the centre of the eyebrow is an excellent location). The ear clip, on the other hand, uses infrared light transmitted through the tissue, and so works best on fleshy areas such as the earlobe. The amplitude of the signal depends primarily on the volume of blood in the capillary bed directly beneath the sensor, so it may be necessary to move the sensor around to find the best signal.

The clips should attach to fleshy areas with no problems. When using the model with the Velcro strap to attach to a finger or toe, take care that the strap is firm, but not so tight as to restrict blood flow. If you are taking measurements where the Velcro strap is too short to be useful (such as from the leg or head), then you can lightly wrap an elastic bandage around the sensor and body part to hold the sensor in place.

Ambient light may affect the output: if it does, a covering of black, opaque material over the sensor and location should remove such interference.

Note

The IR Plethysmographs are normally used with AC coupling in the Input Amplifier dialog box (in Chart software) turned on.

Applications

The IR Plethysmographs can be used to record changes in blood volume as the arterial pulse expands and contracts the microvasculature.

WARRANTY: ADInstruments PowerLab Systems, Front-end and Pod Signal Conditioners are warranted against defects in materials and workmanship for a period of 3 years from the date of purchase. Transducers are covered by a 12 month warranty. Third party products are covered by the manufacturer's warranty. Warranties are void if the product has been damaged due to negligence. Consumables and electrodes are not covered by a warranty. All questions regarding service and warranty should be directed to your nearest PowerLab authorized distributor or one of the offices listed below.

Caution

- Read "Statement of Intended Use" on our website or in "Getting Started with PowerLab" before use.
- Do not use with Electrocautery devices.
- Do not immerse the device in fluids.
- Do not handle the device by its cable.

Specifications

Excitation:	6 to 9 V DC
Output:	5 to 50 mV (typical finger application at rest)
Output impedance:	1 k Ω nominal
Sensor size:	15 x 15 x 6.3 mm (0.59" x 0.59" x 0.25")
Weight:	28 g
Connector:	8-pin DIN

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

Ordering Information

MLT1020EC IR Plethysmograph - Ear Clip
MLT1020FC IR Plethysmograph - Finger Clip
MLT1020PPG IR Plethysmograph - Velcro Strap

For use with:
ML110 Bridge Amp
ML112 Quad Bridge Amp
ML142 GP Amp

Note: Unsuitable for use with the ML118 Quad Bridge or ML119 Octal Bridge Amp

PowerLab and MacLab are registered trademarks of ADInstruments Pty Ltd. All other trademarks are the property of their respective owners. TT1/01

U-MLT1020-WD-04A

ADInstruments Pty Ltd
ISO 9001:2000 Certified
Quality Management System

Reg. No. 1053



www.ADInstruments.com

North America

Tel: +1 888 965 6040
Fax: +1 866 965 9293
info@adinstruments.com

Japan

Tel: +81 52 932 6462
Fax: +81 52 932 6755
info@adi-japan.co.jp

United Kingdom

Tel: +44 1865 891 623
Fax: +44 1865 890 800
info@adi-europe.com

Australia & New Zealand

Tel: +61 2 9899 5455
Fax: +61 2 9899 5847
info@adi.com.au

Germany

Tel: +49 6226 970105
Fax: +49 6226 970106
info@adinstruments.de

Indian Subcontinent

Tel: +91 11 3105 2800
Fax: +91 11 2766 2591
india@adinstruments.com

Asia

Tel: +86 21 5830 5639
Fax: +86 21 5830 5640
info@adinstruments.com.cn

South America

Tel: +56 2 356 6749
Fax: +56 2 356 6786
info@adi-sudamerica.com

South East Asia

Tel: +60 3 8023 6305
Fax: +60 3 8023 6307
seasia@adinstruments.com

International

Tel: +61 2 9899 5455
Fax: +61 2 9899 5847
info@adi.com.au