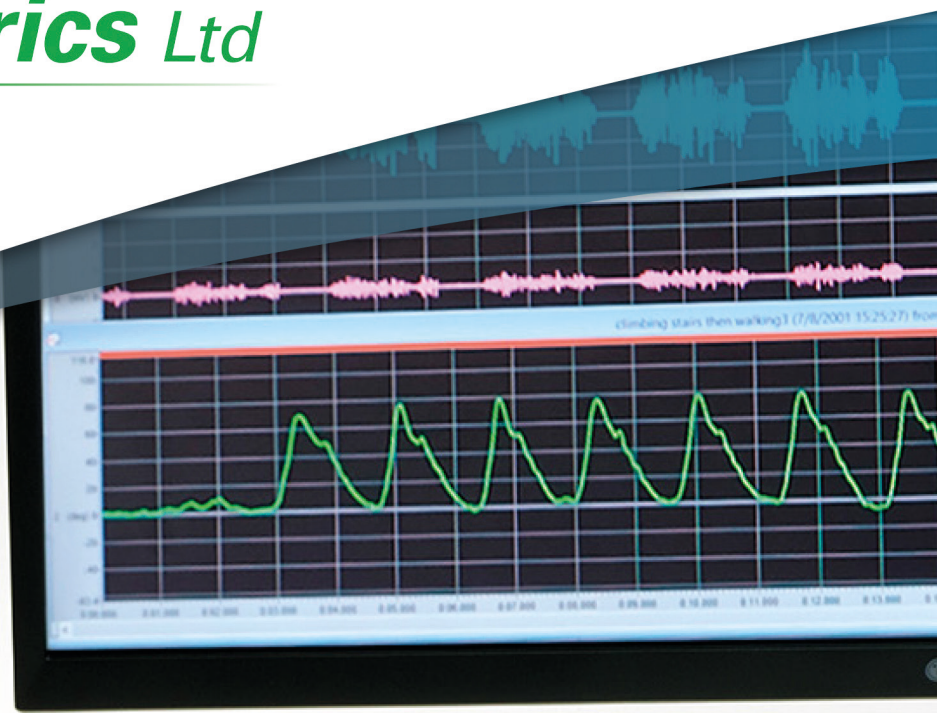




Biometrics Ltd



↔DataLINK↔

LABORATORY SYSTEMS

MOVEMENT ANALYSIS

EMG

DATA ACQUISITION



LABORATORY SYSTEMS

Laboratory Systems are versatile, powerful data acquisition tools providing real-time data collection and display of physiological parameters such as dynamic joint movement, EMG, and force.

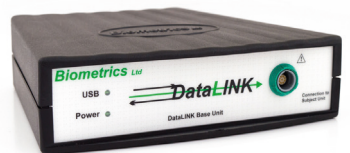
The combination of DataLINK general purpose data acquisition units with the most often requested Biometrics' sensors in either basic or enhanced configurations provides for a wide range of studies. All the Laboratory Systems may be easily expanded at any time with the addition of other sensors/instruments.



↔DataLINK↔

DataLINK is a general purpose programmable data acquisition system allowing the user to collect both analog and digital data from a wide variety of wired sensors. Sensors connect to a small, lightweight subject unit with programmable instrumentation amplifiers and power supplies for energizing the sensors, sampling and converting the inputs into a digital output.

 biometricsltd.com/datalink



EMG SENSOR

The EMG sensor (SX230) provides excellent quality of signal and ease of use. Unique to the design is the amplifier's Input Impedance of $> 10,000,000 \text{ M Ohms}$. What this means in practice is that little or no skin preparation and no conducting gels are required, yet the quality of the record signal is absolutely superb for both static and dynamic applications. Various bandwidths are available to suit individual user requirements.

 biometricsltd.com/surface-emg-sensor



SPECIFICATIONS

Electrodes	Integral dry reusable	Supply Voltage	+3.50 to +10.0 Vdc
Gain	1000 (100 also available)	CMRR @ 60 Hz (dB)	> 96 dB
Bandwidth	20 - 460 Hz	Input Impedance	> 10,000,000 Ohms
Noise	< 5 μV	Mass	5 g (excluding cable & plug)
Cable	Highly flexible grade, length 1.25 m (custom lengths on request)	Additional Bandwidths	5 - 480 Hz 5 - 1000 Hz



ELECTROGONIOMETERS

For over 30 years, the Biometrics Electrogoniometer has been the gold standard for dynamic joint angle measurement in fields such as biomechanics, ergonomics, gait analysis and sports science.

Robust, lightweight and flexible the 'SG' series twin-axis Electrogoniometers are ideal for quick, accurate measurements in up to two planes of movement. For example, a single goniometer on the wrist will dynamically measure both flexion/extension and radial/ulnar deviation.

 biometricsltd.com/goniometer



TORSIOMETERS

Biometrics Ltd 'Q' series single-axis Torsiometers are designed for measurement of rotations in one plane, e.g. forearm pronation/supination of neck axial rotation. If a Torsiometer is bent nominally in planes X-X or Y-Y the output remains constant.

 biometricsltd.com/goniometer



SPECIFICATIONS

JOINT	SENSOR	MEASURED OUTPUT
Wrist	SG65	Flexion/extension, radial/ulnar deviation
Wrist (large)	SG75	Flexion/extension, radial/ulnar deviation
Elbow	SG110	Flexion/extension
Knee	SG150	Flexion/extension
Hip	SG150	Flexion/extension, abduction/adduction
Back	SG150/B	Flexion/extension/lateral flexion
Neck	SG110	Flexion/extension/lateral flexion
Forearm	Q150	Pronation/supination
Neck	Q110	Axial rotation
Transducer type	Strain gauge	
Life ¹	600,000 cycles typical	
Accuracy	± 2° measured over a range of ± 90°	
Repeatability	1° measured over a range of 90°	



WIRELESS ELECTROGONIOMETERS

Using the same technology as our world standard Electrogoniometer for dynamic joint angular measurements - DataLITE wireless Goniometers incorporate a wireless transmitter to send data to the computer for display, analysis and transfer to custom applications in real-time.

  biometricsltd.com/wireless-sensors



EVENT MARKERS

An event marker allows time marks to be superimposed on the recorded data and enables the operator to highlight specific events during data collection.



OPTICAL SYNCHRONIZATION

The same function as an event marker but with a LED built into the hand held switch for use to activate start recording for precise synchronization with camera based motion analysis systems.



CONTACT ASSEMBLY SWITCH

An assembly of four Force Sensing Resistor Sensors (FSRs) each on 1.5 meters of cable, for use as switches to indicate contact e.g. heel and toe strike or palmer contact. The sensors are thin and robust and are usually placed inside the subject's shoe or glove for convenience.

 biometricsltd.com/switches

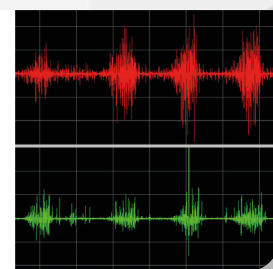


MANAGEMENT & ANALYSIS SOFTWARE

Biometrics Management and Analysis Software for is a comprehensive tool for EMG, Electrogoniometer and associated sensor analysis including real-time data analysis as the data is collected.

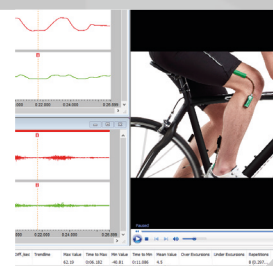
The software includes a dynamic link library for real-time transfer to third-party applications compatible with Windows 8 & 10.

 biometricsltd.com/analysis-software



VIDEO SYNCHRONIZATION

The Biometrics Analysis Software can display video files and fully time synchronize them with data collected during a recording. The video does not have to start or stop at the same time as the recording as they can easily be synchronized after capture.



LABORATORY SYSTEMS

8 Channel EMG System	LS850
1 x Data Acquisition Unit	DataLINK DLK900
1 x Management & Analysis Software	V10
8 x EMG Sensors	SX230-1000
1 x EMG Earthing Strap	R606
1 x EMG Sensor Tape (350/pack)	T350
1 x Event Marker	IS2
1 x Optical Synchronization Record Start/Stop	IS2LED
1 x Contact Switch Assembly	FS4

16 Channel EMG System	LS1650
2 x Data Acquisition Unit	DataLINK DLK900
1 x Management & Analysis Software	V10
16 x EMG Sensors	SX230-1000
2 x EMG Earthing Strap	R606
2 x EMG Sensor Tape (350/pack)	T350
1 x Event Marker	IS2
1 x Optical Synchronization Record Start/Stop	IS2LED
1 x 16 Channel Synchronization Cable	SL200

8 Channel Goniometer System	LS800
1 x Data Acquisition Unit	DataLINK DLK900
1 x Management & Analysis Software	V10
7 x Twin-Axis Electrogoniometers *	2 x SG65, SG110, SG150, 1 x SG110/A
8 x Interconnecting Leads	4 x J1000, 4 x J1500
1 x Double Sided Tape (10/pack)	T10
1 x Event Marker	IS2
1 x Optical Synchronization Record Start/Stop	IS2LED
1 x Contact Switch Assembly	FS4

* Choice of sizes available

 biometricsltd.com/systems-portable

Biometrics Ltd manufactures variations of DataLOG and DataLINK (sensors and instruments) for Data Acquisition which are CE marked medical devices in Europe, independently certified to Safety Standard of the International Electrotechnical Commission IEC 60601-1:2005 + A1:2012 and BS EN 60601-1:2006 + A1:2013, conforming to the European Medical Device Directive 93/42/EEC as amended by Directive 2007/47/EC, conforming to the council Directive relating to Electromagnetic Compatibility by the application of BS EN 60601-1-2. Other variations are available as non medical devices.

8 Channel Goniometer & EMG System	LS900
1 x Data Acquisition Unit	DataLINK DLK900
1 x Management & Analysis Software	V10
8 x Twin-Axis Electrogoniometers *	2 x SG65, SG110, SG110/A, SG150
1 x Torsiometer	Q110
8 x Interconnecting Leads	4 x J1000, 4 x J1500
1 x Double Sided Tape (10/pack)	T10
1 x Event Marker	IS2
1 x Optical Synchronization Record Start/Stop	IS2LED
1 x Contact Switch Assembly	FS4
8 x EMG Sensors	SX230-1000
1 x EMG Earthing Strap	R606
1 x EMG Sensor Tape (350/pack)	T350

16 Channel EMG & Goniometer System	LS1800
2 x Data Acquisition Unit	DataLINK DLK900
1 x Management & Analysis Software	V10
16 x EMG Sensors	SX230-1000
2 x EMG Earthing Strap	R606
2 x EMG Sensor Tape (350/pack)	T350
1 x Event Marker	IS2
1 x Optical Synchronization Record Start/Stop	IS2LED
1 x 16 Channel Synchronization Cable	SL200
8 x Twin-Axis Electrogoniometers *	2 x SG65, SG110, SG110/A, SG150
1 x Torsiometer	Q150
16 x Interconnecting Leads	4 x J1000, 4 x J1500
2 x Double Sided Tape (10/pack)	T10
1 x Contact Switch Assembly	FS4

Biometrics Ltd maintains to the highest standard a Quality Management System that is independently accredited to ISO 13485:2016 and EN ISO 13485:2016.

The Quality Management system has been in continuous operation for over 15 years and is independently audited by SGS on an annual basis. The scopes of the certifications include: Design, development, manufacture, sales, installation and service of computerized physiological data capture, evaluation documentation and exercise systems.

UK
Units 25-26
Nine Mile Point Ind. Est.
Newport
NP11 7HZ

UK Tel: +44 1495 200 800
Fax: +44 1495 200 806

USA
PO Box 340
Ladysmith
VA 22501

No Am Toll Free: 800 543 6698
Email: sales@biometricsltd.com
Web: www.biometricsltd.com



ISO 13485:2016
EN ISO 13485:2016
Certificate no. GB05/66471

