



OPTIMA SIGNAL CONDITIONER

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The Optima Signal Conditioner is an essential component of the Optima Human Performance System, a revolutionary force measurement system that offers a 10-fold improvement in accuracy over any force platform system on the market.

This signal conditioner works exclusively with Optima Force Plates and Optima Precision Calibration files to provide levels of accuracy never before seen in force platform systems:

- Average COP accuracy of just a fraction of a millimeter (typically less than 0.2)
- Crosstalk values typically $\pm 0.05\%$ of applied load
- Measurement accuracy typically $\pm 0.1\%$ of applied load*



STATE-OF-THE-ART SIGNAL CONDITIONING

1 kHz anti-aliasing filters, oversampling, and digital signal processing

Fully calibrated and NIST-traceable

Tested to medical-grade standards for safety, essential performance, and electro-magnetic compatibility

INTUITIVE AND EASY TO USE

Fully software configurable

Automatic balancing of strain gage bridges initiated by front-panel button or by software

Multiple Optima Signal Conditioners automatically synchronize data sampling

Analog inputs	Six four-arm strain gage bridge inputs
Bridge excitation	Channel independent, software configurable – 2.5, 5 or 10 VDC
Amplifier gains	Channel independent, software configurable – 500, 1000, 2000, 4000
Auto zero	Push button or software initiated
Anti-aliasing filter	1000 Hz low pass, 2-pole Butterworth
Analog output range	+/- 5 volts
Analog output reconstruction filter	1000 Hz low pass, 3-pole Butterworth
Analog output DAC	16 bit
Sample rate	Max: 1200 Hz/channel Min: 10 Hz/channel
Synchronization	Genlock, external trigger, internal clock
Digital Signal Processor	16 bit
Digital data	IEEE 754 floating point, 32 bit
Digital resolution	14 ENOB
Power supply	External medical grade (included)
Connectors	- Digital output: USB 2.0 - Sync/genlock: RCA phono - Power: 5.5 mm x 2.1 mm plug
	- Analog output: DB25S - Transducer Input: 26-pin circular type connector

* Minimum applied load of 222.4 N (50 lb)

The Optima Human Performance System is a medical grade system manufactured under ISO 9001:2008 quality systems.



This product meets the standards set by CE Directive 2006/95/EC and has successfully been tested to comply with medical electrical equipment standards regarding basic safety, essential performance and electro-magnetic compatibility: AAMI – ES 60601-1, CSA – EN 60601-1, UL-IEC – EN 60601-1, IEC – 60601-1-2.