

48089 Fremont Blvd
Fremont, CA 94538
(510) 623-9600
www.loadstarsensors.com



DI-1000

High Precision Resistive Load Cell to USB Adapter

Users Guide

Table of contents:

1	INTRODUCTION.....	7
2	MODULE DETAILS.....	8
2.1	External DI-1000 Connections.....	8
2.2	DI-1000 Mechanical Dimensions.....	9
3	STEP BY STEP OPERATING GUIDE.....	11
3.1	Plug in the AC power adapter to your DI-1000.....	11
3.2	Attach your load cell to the DI-1000.....	11
3.3	Special sensor grounding considerations.....	13
3.4	Connect the USB Host to the DI-1000.....	14
3.5	Installing Virtual COM port drivers.....	14
3.6	Communicating with the DI-1000 using Hyperterminal.....	14
3.7	Initial set up of the DI-1000.....	14
4	CALIBRATING THE DI-1000.....	16
4.1	mVolt Calibration.....	16
4.2	Resistor Calibration (Rcal).....	16
4.3	2-Point Calibration.....	16
4.4	Quadratic Calibration.....	17
4.5	Cubic Calibration.....	17
5	ADDITIONAL CONSIDERATIONS.....	18
5.1	Effect of Improper Grounding on typical resolution.....	18
5.2	Noise (nV) vs Amplifier Gain.....	18
5.3	Effect of Sample Rate on typical resolution (bits).....	18
6	DI-1000 COMMAND SUMMARY.....	19
6.1.1	. UNIT ↵.....	19
6.1.2	LC ↵.....	19
6.1.3	ID ↵.....	19
6.1.4	TARE.....	20
6.1.5	GAIN ↵.....	20
6.1.6	SPS ↵.....	20
6.1.7	CAL ↵.....	20
6.1.8	mVOLT ↵.....	21
6.1.9	RCAL ↵.....	21
6.1.10	2PCAL ↵.....	21
6.1.11	QUAD ↵.....	21
6.1.12	CUBIC ↵.....	21
6.1.13	W ↵.....	21
6.1.14	WC ↵.....	21
6.1.15	WU ↵.....	22
6.1.16	R ↵.....	22
6.1.17	SETTINGS ↵.....	22
6.1.18	? ↵.....	22
	DI-1000 TECHNICAL SPECIFICATIONS.....	23

List of figures:

Figure 1: Load cell Wiring Block Connections	8
Figure 2: Power and Host connections	8
Figure 3: DI-1000 Mechanical Top View	9
Figure 4: Mechanical Long Side View (shows battery switch)	9
Figure 5: Mechanical End View (Power adapter and host connector)	9
Figure 6: Removable Wiring Connector End (Load cell connection)	10
Figure 7: Four Wire Load Cell Wiring Schematic	11
Figure 8: Six Wire Load cell Wiring Schematic	12
Figure 9: Help menu. Displayed with "? ←" command	14
Figure 10: RCAL equivalent schematic	16
Figure 11: Typical RMS noise Values (nV) vs. sample rate	18
Figure 12: Typical noise free equivalent resolution (bits)	18

This is a “Table of Contents preview” for quality assurance

The full manual can be purchased from our store:

[https://the-checkout-tech.com/manuals/loadstar/DI-1000 user manual.html](https://the-checkout-tech.com/manuals/loadstar/DI-1000%20user%20manual.html)

And our free Online Keysheet maker:

<https://the-checkout-tech.com/Cash-Register-Keysheet-Creator/>

[HTTPS://THE-CHECKOUT-TECH.COM](https://THE-CHECKOUT-TECH.COM)