LARSON DAVIS
A PCB PIEZOTRONICS DIV.

MODEL **730IS**

SPARTAN™ INTRINSICALLY SAFE NOISE DOSIMETER

- ATEX, UL 913, IECEx, FCC, CAN/CSA C22.2 approved
- Wireless operation, charging, and Bluetooth low-energy communication (available without Bluetooth for radio-free zones)
- Full control and live monitoring via LD Atlas™ app [1]
- Download and view measurements, generate reports, and share annotated data from your mobile device.
- Built-in bump and motion detection
- Automatic dosimeter calibration

TYPICAL APPLICATIONS

- Worker noise exposure measurements
- Risk mitigation studies
- Measuring for Compliance to OSHA, ACGIH, ISO 9612, and EU Directive 2003/10/EC

CE

ATEX/IECEx
II 1G Ex ia IIC T165 °C Ga
I 1M Ex ia I Ma
IECEx ETL 19.0045X
ITS20ATEX205538X
-10 °C ≤ TAMB ≤ +50 °C

CAN/USA
Class I, Zone 0, AEx ia IIC T165 °C Ga
Class I, Division 1, Groups A, B, C & D, T165 °C
-10 °C ≤ TAMB ≤ +50 °C

Intertek

WIRELESS WORKER NOISE MEASUREMENTS IN EXPLOSIVE ENVIRONMENTS

The Spartan™ Intrinsically Safe Noise Dosimeter Model 730IS is designed to safely make noise exposure measurements, even for workers in explosive environments, such as those found in the petrochemical industry and pharmaceutical manufacturing. Simple design and intuitive setup make getting worker noise dose measurements easy and fast. With Spartan-IS, control test setup and measurements either on the device itself or directly from the Larson Davis Atlas™ mobile app. All essential tasks can be completed from your iOS® or Android® device.

LD Atlas offers interference-free monitoring using low-energy Bluetooth, ensuring that you get the valuable data you need the first time. When a test is complete, Spartan-IS communicates with LD Atlas to download the data, which is viewable directly from a phone or tablet. Generate reports, including the full data file, from the mobile interface before sharing via email. For high security, radio-free zones, option 730-NBT without Bluetooth is available and allows setup and data download through G4 LD Utility software via a USB connection.

To begin testing, simply remove the dosimeters from their rugged case and attach them to workers. After a shift, place the dosimeters back in the case where they will charge wirelessly. The G4 LD Utility software offers another option for control of your testing. With all the functionality of the LD Atlas mobile app, G4 LD Utility adds the ability to complete “what-if” analysis to model potential changes and determine the impact of different data selections.

SPECIFICATIONS

Performance	
Standards	ANSI S1.25-1991 (R2017), IEC 61252 Ed. 1.2
Linear Operating Range	52 – 140 dB rms A-weighted
Dynamic Range	94 dB
Peak Range	78 – 143 dB Peak, C-weighted
Peak Weightings	A, C, Z
RMS Weightings	A, C, Z
Time Weightings	Slow, Fast, Impulse
Frequency Range	20 Hz to 10 kHz
Data Logging	Selectable 1 second or 1 minute samples
Logged data	L_{Aeq}, L_{Ceq}, L_{Cpeak}, L_{Zpeak}, L_{ASmax}, L_{AFmax}, TWA3, TWA5, Motion
Memory	8 GB internal
Communications	Bluetooth Low Energy 4.1 USB 2.0 (Micro-B connector)
Battery	Rechargeable NiMH
Run Time	Charged by USB: 30 hours typical Charged by Qi: 20 hours typical
Charge Time	16 hours from full discharge
Charger	Qi-compliant wireless or USB
Compliance	CE, ROHS, WEEE
Approvals	ATEX, UL 913, IECEx, FCC, CAN/CSA C22.2
Motion	Overall motion percentage and bump
Languages	English, Spanish, Italian, French, Portuguese, German, Finnish
Virtual Dosimeter	
Virtual Dosimeters	4 independent with configurable LED indication
Exchange Rate	3, 4, 5, 6
Criterion Level	70.0 to 100.0 dB
Threshold	70.0 to 100.0 dB
Alarms	2 independent with configurable indication
Measurement Results	Dose; ProjDose; L_{AVG}; TWA(8); Proj TWA(8); Lex,8h; Lep,d; Proj Lep,d

Summary Measured Values (Common to all virtual dosimeters)

$L_{\omega T}$ (SPL), $L_{\omega eq}$ (Leq), $L_{\omega pk}$ (Lpeak), $L_{\omega TMax}$ (Lmax), $L_{\omega TMin}$ (Lmin) where
ω = A, C, or Z frequency weighting
T = F, S, or I time weighting
Lpeak, Lmax, & Lmin including time of occurrence
L_{C-A}, Exposure (Pa^2s & Pa^2h), Motion
Exceedance count and time for 2 rms and 3 peak thresholds
Overload count, duration, and percentage

Mechanical	
Display	Color LCD 176 x 176 pixels, always on with low light sensor and front light
Ingress Protection	IP65
Weight	130 g (4.6 oz.) including clips and windscreen
Dimensions	85 x 54 x 39 mm (3.35 x 2.13 x 1.54 in.) dosimeter only

SPECIFICATIONS (CONTINUED)

Microphone	¼-inch Model 375A03
Operating Temperature	–10 to +50 °C (14 to 122 °F)
Operating Humidity	Up to 90% RH, non-condensing
1/1 Octave Filters (optional)	
Filters	31.5 Hz to 8 kHz
Event Audio Recording (optional)	
Format	16-bit .wav
Sample Rate	8 kHz
Recording Time	Fixed: 2 s pre-trigger and 10 s post-trigger
Trigger Source	L_{AS}, L_{AF}, L_{CS}, L_{CF}, $L_{Aeq,1s}$, $L_{Ceq,1s}$

ORDERING INFORMATION

730IS	Spartan 730IS noise dosimeter with one windscreen and two clips. Includes calibration certificate				
730IS-PKxx-EU 730IS-PKxx-UK 730IS-PKxx-US	Complete Spartan 730IS noise dosimeter kit that includes quantity 'xx' dosimeters and one USB to Bluetooth dongle. Each dosimeter includes one windscreen, two clips, and a calibration certificate. Versions without CAL150 calibrator available. [2]				
	'xx'	Spartan 730IS Dosimeters	Calibrator (Qty 1)	Calibration Adapter	Case
	01	1	CAL150	1 x ADP109	CCS056
	03	3	CAL150	2 x ADP109	CCS057
	05	5	CAL150	2 x ADP109	CCS058
	10	10	CAL150	2 x ADP109	CCS059
	- EU includes a Type C power plug for use in Europe - UK includes a Type G power plug for use in the UK - US includes a Type A power plug for use in North America				
730-ESR	Spartan 730IS option to add event sound recording				
730-OB1	Spartan 730IS option to add 1/1 octave filters				
730-NBT	Spartan 730IS option to remove Bluetooth capability				
Accessories [3]					
CAL150	Class 2 calibrator, with user-selectable output 94 or 114 dB at 1 kHz, ½ in. opening with ¼ in. adaptor (ADP109) and calibration certificate included				
WS012-XX	Replacement windscreen for Spartan 730IS. Available in 1, 3, 5, 10, or 25 packs where XX is the number of windscreens				
730-CLIPS	Replacement clip for Spartan 730IS, Qty 2				
Intrinsic Safety Ratings					
ATEX/IECEx	II 1G Ex ia IIC T165 °C Ga I 1M Ex ia I Ma IECEx ETL 19.0045X ITS20ATEX205538X -10 °C ≤ TAMB ≤ +50 °C				
USA/CANADA	Class I, Zone 0, AEx ia IIC T165 °C Ga Class I, Division 1, Groups A, B, C & D, T165 °C -10 °C ≤ TAMB ≤ +50 °C				

[1] May require intrinsically safe mobile device
[2] See Product Specification Sheet for full list of accessories
[3] Versions without CAL150 calibrator available

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Larson Davis offers a full line of noise and vibration measurement instrumentation such as Class 1 and 2 sound level meters, outdoor noise monitoring systems, personal noise dosimeters, human vibration meters, audiometric calibration systems, microphones and preamplifiers, and data analysis software. Instrumentation is used in community and environmental noise monitoring, measurement of building acoustics, managing worker exposure to noise and vibration, and various automotive, aerospace, and industrial applications. Larson Davis is a division of PCB Piezotronics, Inc., a wholly owned subsidiary of MTS Systems Corporations.

DS-0223 revC 1020

MTS SENSORS

MTS Sensors, a division of MTS Systems Corporation (NASDAQ: MTSC), vastly expanded its range of products and solutions after MTS acquired PCB Piezotronics, Inc. in July, 2016. PCB Piezotronics, Inc. is a wholly owned subsidiary of MTS Systems Corp.; IMI Sensors and Larson Davis are divisions of PCB Piezotronics, Inc.; Accumetrics, Inc. and The Modal Shop, Inc. are subsidiaries of PCB Piezotronics, Inc.