



SDT ULTRAChecker : Datasheet

Description:

The SDT ULTRAChecker is an ultrasound solution specifically designed to utilize the complete range of second generation SDT ultrasound sensors, both airborne and structure borne, featuring a built-in preamplifier. With the audible rendering, it enables comprehension inspection, while the real-time display of RMS values, in either a bar graph or numerical format facilitates immediate diagnosis.



Specifications:

General		
Function		Ultrasound measurement device
Operable with		FlexID2, LUBESense1, RS2T, RS2N, AIRSense, ULTRASense, ParaDish2, RS2A, ExtUsAmp (cable for external transducers only , since v 3.1.508)
Measurement interface		1 channel via a 7 pole LEMO connector
Maximum cable length	m (ft)	Up to 30 (98) (since v 3.1.535)
Sensitivity		Class I exceeding ASTM 1002-11 requirements for gas leak detection with the appropriate sensor.
Display		160x128 pixels Color OLED
Keyboard		5 function keys
Measuring range	dB μ V _{RMS}	-6 to 99.9 (reference 0 dB = 1 μ V)
Resolution	digits	0.1
Measurement bandwidth	kHz	35 to 42
Signal amplification	dB	+30 to +102 by step of 6 dB
RMS period time		250 ms (main screen) / 3 sec (bar graph)
Sampling frequency	kHz/ksps	64, post-heterodyne
ADC Resolution	bits	12
Firmware update		Via SDT Updater https://sdtultrasound.com/support/software/
		<i>A firmware update may be required to support the new SDT sensors</i>
Environmental		
Operating temperature range	°C (°F)	-10 to +50 (14 to 122) non-condensing
IP rating		IP 42
Compliance		EMC compliant (directive 2014/30/EU) ROHS compliant (directive 2011/65/EU)

Standards		EN 61326-1:2013, EN 55011:2016 + A1:2017, EN 61000-4-2:2009, EN 61000-4-3:2006 + A1:2008 + IS1:2009 +A2:2010
Mechanical		
Housing material		ABS
Dimensions Housing	mm (in)	158x59x38.5 (6.22x2.32x1.51)
Weight	g (oz)	164 (5.78)
Output interface		USB Mini-B 5-pin/App/Web 6.35 mm audio jack (see SDT LEAKReporter app)
<i>The USB port can be utilized as a power source when used with an external battery</i>		
Power		
Battery		2 AA batteries
Autonomy*		7 hours
<i>Varies dependent on the battery and use</i>		
Audio		
Operable with		provided headset only (Peltor 3M)
Maximum audio output (limitation)	dB SPL	+83 with the provided headset
Headset (PPE)		25 dB NRR
Warranty		
Lifetime warranty		Visit www.sdtultrasound.com for details

Kit content:

Reference	Designation FS.ULC.002-01
FU.ULC.001-01	ULTRAChecker w/o Batteries (S/N 557 YYY XXXX)
FU.ULC.UGD.001-01	ULTRAChecker – User’s guide w/ datasheet
SIBAT1,5VALK-AA (x2)	BATTERY Alkaline 1,5V AA (Maxell-Panasonic-Duracel-Sanyo)
FU.SEN.UTS.001-01	ULTRASense US sensor (S/N 006 YY NNNN)
FU.SEN.RS2T.001-01	RS2T THREADED sensor w/o cable (black cover, S/N 532 YY XXXX)
FUCABLSPLE7LE7-10	CABLE SPIRAL – LEMO7P<>LEMO7P L=6/18dm Black/Black
SA.CP2.MMF.002-B	NEEDLE Assembly 133 mm CP2
FUSEACMAG-02	Curved magnetic foot D30*23
FUHDPH-21	HT52B-112 3M PELTOR CH-3 FLEX2 Listen only headphones w/ neckband
SICABUSBAUSBBM	SB2412 USB2.0 Cable usb type A<>USB type B5 mini,1.8m-black
FUTOOLSCRDRIV	IT3874 Screwdriver set w/ 6 bits - grey w/ led - no print
FU.ULC.CBOX.001-01	T6 Evolution plastic case blue/grey locks - ULTRAChecker (w/logo SDT+foam)

Accessories:

Reference	Designation
FU.SEN.LUBE.001	LUBESense1 w/o cable (Blue cover – S/N 540 YY XXXX)
FU.SEN.RS2N.001	RS2NL100 NEEDLE CONTACT PROBE W/O CABLE (NL=82mm - BLACK COVER - S/N 535 YY XXXX)

FU.SEN.RS2N.002	RS2NL300 NEEDLE CONTACT PROBE W/O CABLE (NL=275mm - BLACK COVER - S/N 535 YY XXXX)
FU.SEN.RS2N.003	RS2NL500 NEEDLE CONTACT PROBE W/O CABLE (NL=470mm - BLACK COVER - S/N 535 YY XXXX)
FU.SEN.AIR.001	AIRSense – Airborne US Sensor (S/N 007 YY NNNN)
FU.PAR2.005	PARABOLIC SENSOR - PARADISH2 (LASER CLASS 2, <1mW) (S/N 524 YY XXXX)
FU.FLX2.001	FlexID2 - W/ AMPLI (NEW PCB) - GOOSENECK 400mm W/O SENSOR (S/N 002 YY NNNN) FA.FLX2.R16.001-01 : REMOVABLE SENSOR 16mm FOR FLX2 (PLASTIC HOUSING) S/N DYYNNNN FA.FLX2.R10.001-01 : REMOVABLE SENSOR 10mm FOR FLX2 (PLASTIC HOUSING) S/N CYNNNN
FU.SEN.RS2A.001	RS2 - AIRBORNE OPEN SENSOR - IP40 W/O CABLE (BLACK COVER - S/N 537 YY XXXX)
FA.SENS.CABL.002	COILED CABLE 7P LE7<>J3M W/ PRE-AMPLIFIER FOR EXT. CUSTOMER US SENSOR (S/N 009 YY NNNN)

Note: Please note that additional details can be found in the download section of the SDT website at www.sdtultrasound.com

Safety recommendations:

- Read and follow the user manual carefully.
- Do not expose the equipment to rough handling or heavy impacts.
- Do not attempt to disassemble the instrument.
- Refrain from using the equipment in areas where its usage is prohibited such as Ex Zones.
- Do not expose the equipment to high humidity or direct contact with water.
- All repairs and calibrations must be performed by SDT or authorized service centers.
- Using any headset or other sensor than the ones supplied with the instrument can result in internal damage to the equipment.
- Inspectors should avoid listening at max volume for extended periods of time.

7	CMA 2023/07/17	Item volume, section safety recommendations	RGO
6	CMA 2023/05/23	Compatibility with RS2A + ExUsAmp and clarification	RGO
5	CMA 2022/02/25	Compatibility with Paradish2 (firmware >=3.1.508)	CGI
4	CMA 2021/03/01	Safety recommendations, max cable length	RGO
3	CGR 2021/01/04	Corrections, new info	CMA
2	CMA 2020/12/15	Added sensor compatibility	CGR
1	CMA 2020/06/25	Original version	CGR
Ver.	Editor	Nature of modification	Verified

*The information herein is believed to be accurate to the best of our knowledge.
Due to continuous research and development, specifications are subject to change without prior notice.*