

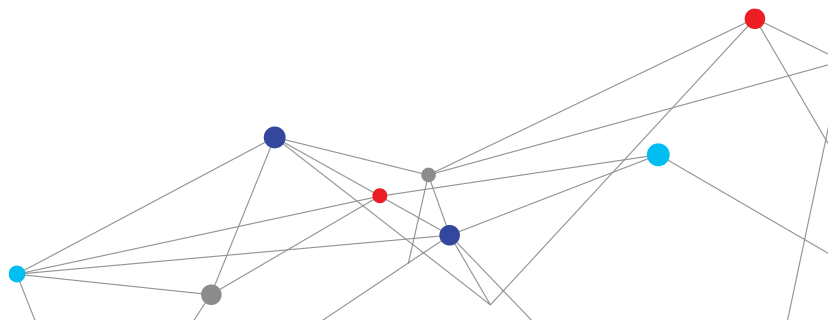
# SOUND EXAMINER SOUND LEVEL METERS SE-400 SERIES

The TSI Quest™ Sound Examiner Sound Level Meters SE-400 are engineered to accurately measure noise levels in highly variable environments, including those that require intrinsic safety. These meters compute average sound pressure level ( $L_{EQ}/L_{AVG}$ ) over the run time, helping you to more accurately assess occupational and environmental noise levels. All models are ready to use with no set-up required.

## Features and Benefits

- + Red models have Intrinsic Safety approvals
- + Intuitive interface allows for out-of-box use with little to no training
- + User selectable data logging intervals for download and analysis with TSI Quest Detection Management Software (sold separately)
- + Averaging functionality allows for easy measurement in variable environments
- + Printing capability with optional digital printer\* provides hard copy documentation in the field
- + Choose from models with Class/Type 1 or Class/Type 2 microphones, dependent on your application
- + SE-401 and SE-402-R models include removable preamp
- + Meets applicable industry standards
- + Useful tool as part of a Hearing Conservation Program; be confident that data collected is accurate

\* Not available on Intrinsically Safe models.



# ACCURATE AND INTUITIVE ANALYSIS MODELS FOR MANY APPLICATIONS



## Choice of Microphones

- + User can specify microphone type (Class/Type I or Class/Type II) based on application.
- + Select Type II for general duty; Type I accuracy for legal metrology.

## Removable preamp\*

- + Preamp can be easily removed to enable interference-free low-level monitoring, especially for remote use.

## Aerodynamic shape

- + Minimizes disturbance to sound fields being measured, assuring accurate readings.

## Onboard data logging

- + Allows user to capture maximum, minimum and peak values for thorough analysis.
- + Can be used with TSI Quest Detection Management Software DMS to manage compliance with hearing conservation programs.

## Conformance to standards

- + Meets IEC 61672-1 (2002) and ANSI S1.43-1997 (R2007) standards and is CE certified.
- + Intrinsic Safety approvals on SE-401-IS and SE-402-IS.



## SOUNDPATROL PORTABLE DIGITAL PRINTING (OPTIONAL)\*

- + Enables hard-copy documentation of measurement results in the field.
- + Facilitates noise ordinance enforcement and on-the-spot citation issuance.

\* Does not apply to Intrinsically Safe models.

# CHOOSE THE MODEL THAT BEST MEETS YOUR NEEDS

|   | Sound Examiner SE-401 | Sound Examiner SE-402 | Sound Examiner SE-402-R | Sound Examiner SE-401-IS | Sound Examiner SE-402-IS |
|---|-----------------------|-----------------------|-------------------------|--------------------------|--------------------------|
| Product No.                             | SE-401                | SE-402                | SE-402-R                | SE-401 IS                | SE-402 IS                |
| DMS Compatible                          | +                     | +                     | +                       | +                        | +                        |
| Data Logging                            | +                     | +                     | +                       | +                        | +                        |
| External AC/DC Output                   | +                     | +                     | +                       |                          |                          |
| Serial Printing for SoundPatrol Feature | +                     | +                     | +                       |                          |                          |
| Class/Type 2 Accuracy                   |                       | +                     | +                       |                          | +                        |
| Class/Type 1 Accuracy                   | +                     |                       |                         | +                        |                          |
| Remote Capability with Removable Preamp | +                     |                       | +                       |                          |                          |
| Intrinsic Safety Approval               |                       |                       |                         | +                        | +                        |

## Detection Management Software

Designed for dosimetry, sound level measurements, heat stress assessments and environmental monitoring, this advanced software helps safety and occupational professionals:

- + Configure instrumentation and save pre-configured setups
- + Retrieve, download, share, and save instrument data
- + Create charts, tables, and reports to intuitively interpret your measurements
- + Export and share recorded results



The software integrates with TSI Quest Detection Solutions data logging instruments and will help you improve both operating efficiency

# SPECIFICATIONS

## SOUND EXAMINER SOUND LEVEL METERS SE-400

### Measurements

|                              |  |
|------------------------------|--|
| Parameters                   | SPL, L <sub>Max</sub> , L <sub>Min</sub> , L <sub>Pk</sub> (peak), L <sub>EQ</sub> /L <sub>AVG</sub> , L <sub>E</sub> , Elapsed Time |
| Peak and Frequency Weighting | A, C, Z  |
| Response Time                | Fast and Slow  |
| Ranges                       | 110 dBA total dynamic measurement range.<br>Overall range 30 - 140 dBA (single range)  |
| Max Peak Level               | 143 dBA (sampled peak)   |
| Exchange Rates               | 3, 4, 5 dBA  |
| Status Indicators            | Run, Stop, Battery Status, OL (overload),<br>UR (under-range), Run-Time, Locked Status   |

### Physical

|                       |  |
|-----------------------|--|
| Size                  | 11.2" (L) x 2.8" (W) x 1.3" (D) /<br>28.4 cm (L) x 7.1 cm (W) x 3.3 cm (D)<br>(with preamp and microphone)   |
| Weight                | SE-401 model: 12.9 oz / 367.5 g<br>(with preamp and microphone)<br>SE-402 model: 13.4 oz / 380.5 g<br>(with preamp and microphone)<br>SE-401-IS model: 14.5 oz / 410 g<br>(with preamp and microphone)<br>SE-402-IS model: 14.5 oz / 410 g<br>(with preamp and microphone) |
| Housing               | ABS Polycarbonate IP65.<br>(Enclosure rated to IP65. Microphone<br>and external connectors not IP rated.)  |
| Tripod Mount          | Standard photographic mount on backside<br>accepts ¼" - 20 screw threads   |
| Drop Protection       | Minimum 2 meters onto concrete,<br>2 times on each face. Acceptable<br>microphone damage.  |
| <b>Environmental</b>  |  |
| Operating Temperature | 14 °F to 122 °F (-10 °C to 50 °C)  |
| Humidity              | 0 to 90% RH, non-condensing  |
| Storage Temperature   | -4 °F to 140 °F (-20 °C to 60 °C)  |
| Atmospheric Pressure  | Operating: 80 to 110 kPa<br>Storage: 50 to 150 kPa   |

Specifications are subject to change without notice.

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### Power / Electrical Characteristics

|  |  |
|--|--|
| <b>Battery</b>   | Lithium Polymer: 2500 mAHr for<br>standard models / 1500 mAHr for<br>IS models, rechargeable<br>Run-Time: 18 hours minimum (excluding<br>the backlight) for standard models / 8 hours<br>for IS models |
| <b>Battery Life</b>  | 3 years or 500 cycles (service replaceable)  |
| <b>Battery Charge</b>  | USB charger is provided with instrument.<br>Battery charge time: 8 hours (approx.)<br>2MB (34 days at 1-minute logging)  |
| <b>Internal Memory</b>   | USB Interface  |
| <b>Communications</b>  | USB Interface  |
| <b>Standard Microphones</b>  | Class/Type 1 Precision QE4936 microphone<br>Class/Type 2 General QE7052 microphone   |
| <b>Preamplifier</b>  | Preamp directly accepts ½"<br>(13.2 mm) microphone   |
| <b>Remote Cable</b>  | Drives up to 50 ft (15 m) of cable with<br>negligible signal loss (not available on IS)  |
| <b>Ports and Connections</b>   |  |
| <b>AC/DC Output</b>  | 3.5 mm stereo (tip - AC, center ring - DC,<br>ring - Gnd); not applicable to IS models   |
| <b>I/O Connector</b>   | RS-232 (I/O connector not applicable<br>to IS models)  |
| <b>USB</b>   | Conforms to USB 2.0, mini-USB connector  |
| <b>Conformance to Standards</b>  |  |
| <b>IEC 61672-1 (2002)</b>  | Electroacoustics, Sound Level Meters,<br>Part 1: Specifications  |
| <b>ANSI S1.43-1997 (R2007)</b>   | American National Standards:<br>Specifications for Integrating Averaging<br>Sound Level Meters   |
| <b>ANSI S1.4-1983 (R2006)</b>  | Specifications for Sound Level Meters  |
| <b>CE Mark</b>   | Self Certified   |
| <b>Intrinsic Safety Standards</b><br>(SE-401 IS and SE-402<br>IS models) | Contact factory for detailed information   |



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|                |                               |                  |                              |
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