SCS

SMP STATIC MANAGEMENT PROGRAM

SMP Server API
Hosted on Microsoft Windows Machine

Network Switch

SMP Manager Web App
Accessed via web browsers

WS Aware

WS Aware

Ground Master

EM Aware

Ion Pro

STATE OF THE ESD INDUSTRY

Past

- HBM (human body model) most prevalent failure mode
- S20.20 level of compliance sufficient for most operations

Current

- CDM (charged device model) largest source of ESD issues
- Must assure customers of ability to safely handle Class 0 components
- Continuous monitoring is essential in high-reliability, high value environments
  - Critical to include SMT equipment
- Diagnosing ESD problems can be challenging – data required

Future

- Process control is inevitable. Customers will come to expect this.
- High levels of automation, ultra-sensitive components, and shop floor software will drive manufacturers to proactively manage their ESD initiatives
- Compliance verification replaced by auditing data – inspections inadequate

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WHAT IS THE BEST SOLUTION?

System based on continuous detection in production areas

- Ongoing readings at every stage where product could be damaged
- Constant collection, reporting and analysis of data

Equal attention to machine, bench and personnel monitoring

User-friendly tools for ESD coordinators who wear many hats

Ability to demonstrate robust static control measures to customers

Transition away from reactive, fire-fighting approaches to proactive programs based on active management of entire ESD environment

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Static Management Program (SMP)

ELIMINATE PAPER LOGS

PROCESS EFFICIENCY

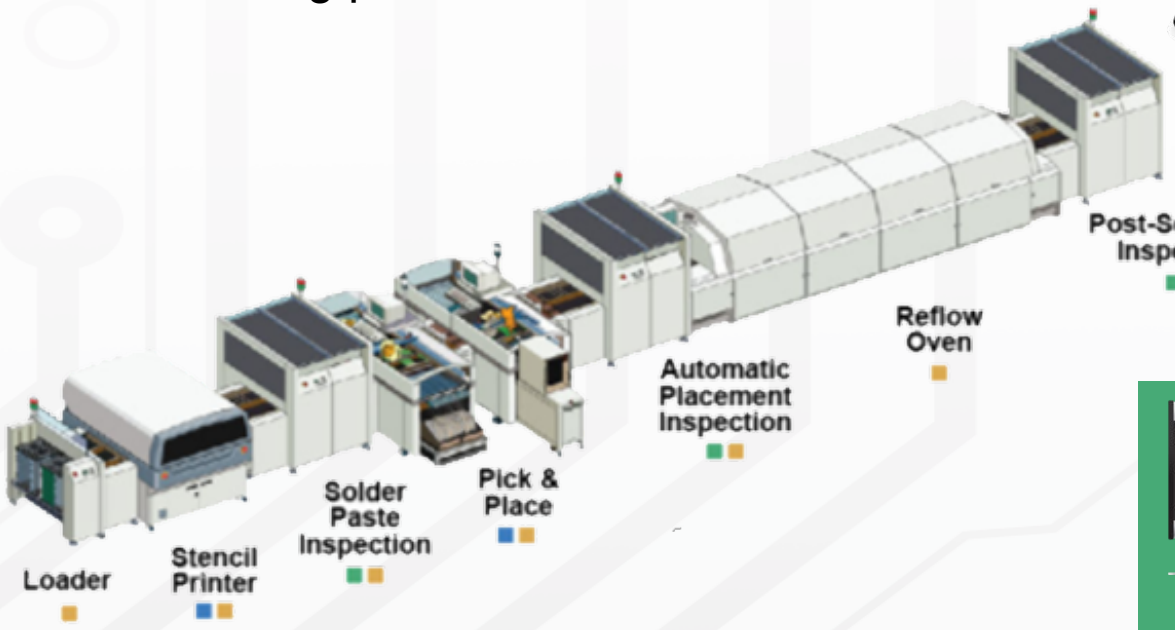
LATEST TECHNOLOGY

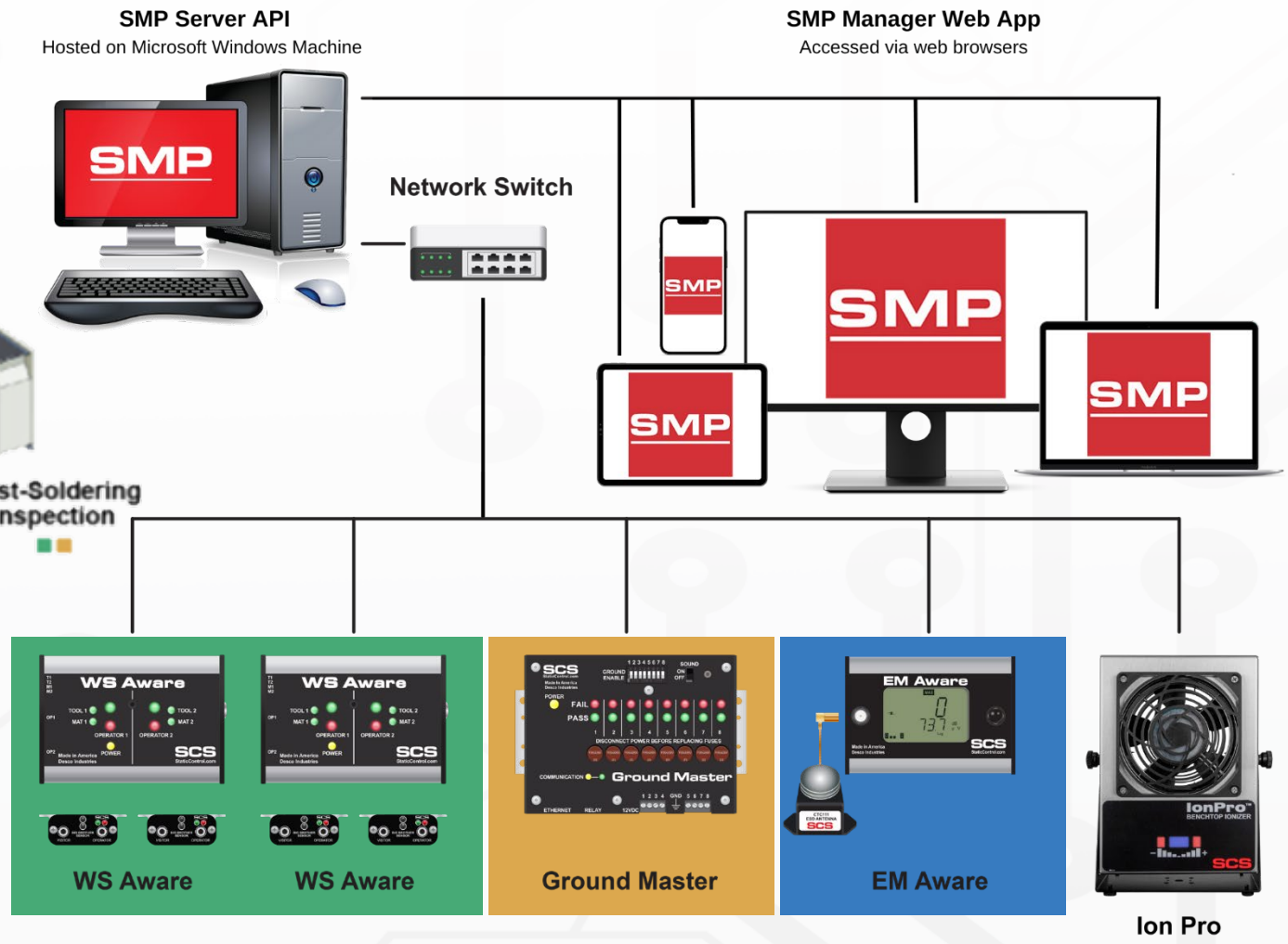
PROGRAM VALIDATION

- Capture, record, and report on data
- Find and measure ESD Events and EOS
- Prevent component failures
- Reduce losses due to ESD, EMI Voltage and EOS
- Increase yields and reduces rework
- Increase customer satisfaction

STATIC MANAGEMENT PROGRAM (SMP)

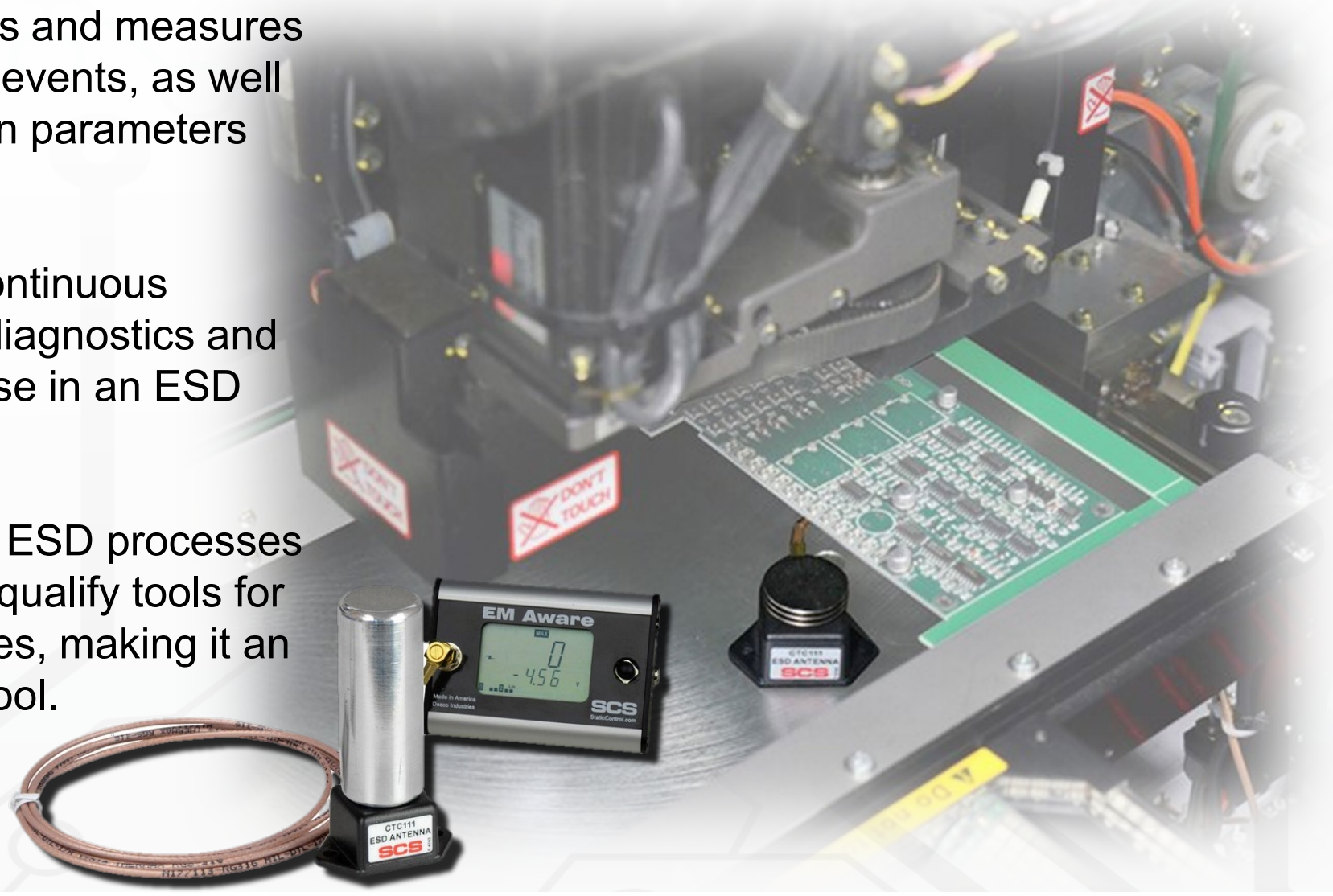
SCS Static Management Program (SMP) continuously monitors your ESD process control system throughout all stages of manufacturing. The SMP Software captures data from SCS workstation, equipment and ESD event continuous monitors and provides a real-time picture of critical manufacturing processes.





EM AWARE MONITOR

- The EM Aware Monitor detects and measures electrostatic discharge (ESD) events, as well as static voltage and ionization parameters (depending on the model).
- The EM Aware Monitor is a continuous monitor with comprehensive diagnostics and troubleshooting features for use in an ESD environment.
- Provides monitoring of critical ESD processes and is an instrument that can qualify tools for handling ESD-sensitive devices, making it an essential ESD management tool.



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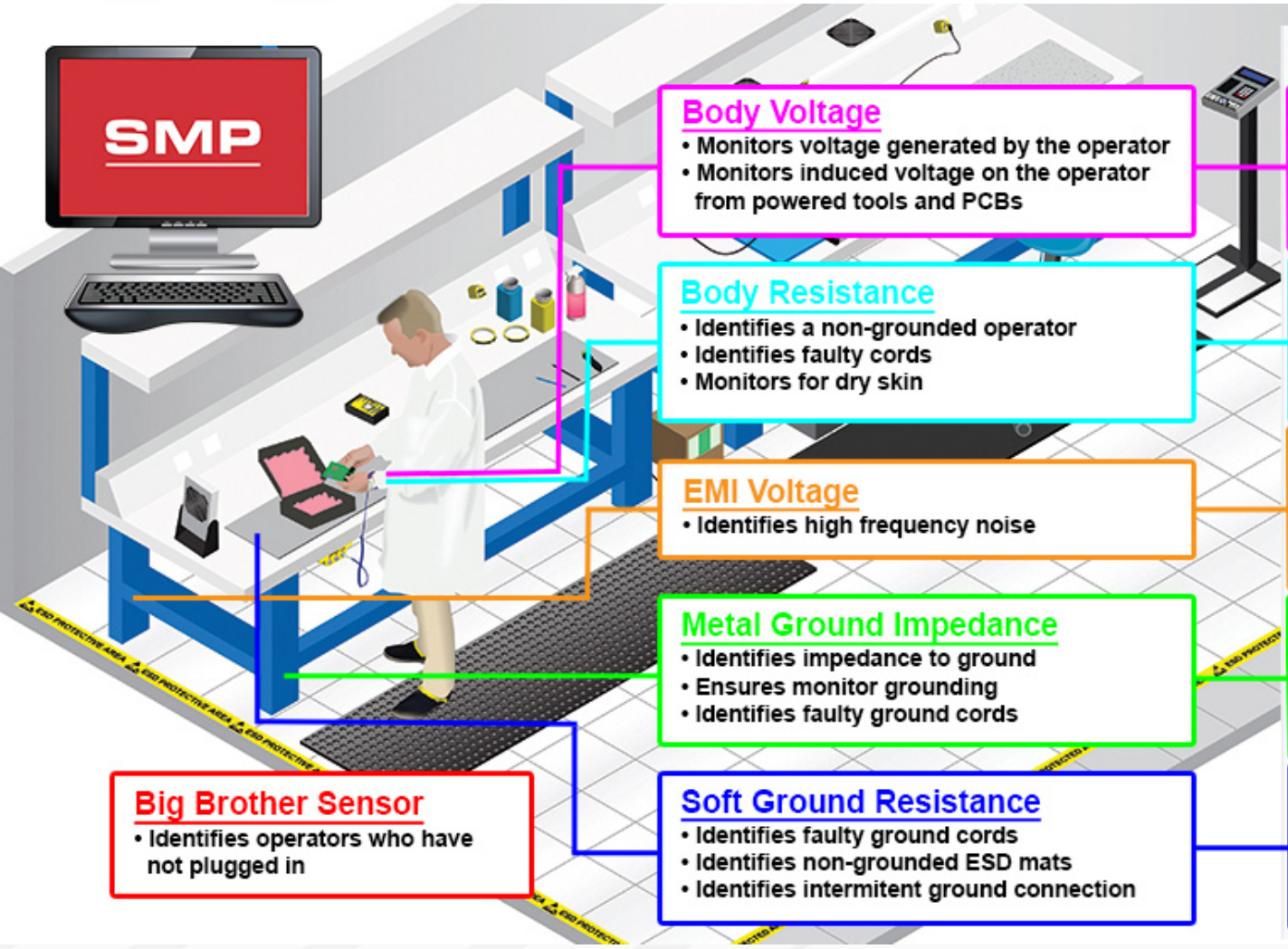
WS AWARE MONITOR

- Continuously monitors all grounding parameters in full compliance with ANSI/ESD S20.20 in accordance with ESD TR1.0-01-01, as well as high-frequency noise (EMI) on ground.
- It utilizes dual wrist straps for a continuous resistivity check of human body connection. The monitor uses advanced digital signal processing technology for reliable monitoring with ultra-low control voltage.
- Optional Big Brother remote terminals allow the monitor to alarm when an operator approaches static sensitive components but does not plug in his/her wrist strap properly.
- Continuously monitors the path-to-ground integrity of two operators, two conductive or dissipative worksurfaces, and two metal tools

WS AWARE MONITOR



Body Voltage
- Monitors voltage generated by the operator
- Monitors induced voltage on the operator from powered tools and PCBs

Body Resistance
- Identifies a non-grounded operator
- Identifies faulty cords
- Monitors for dry skin

EMI Voltage
- Identifies high frequency noise

Metal Ground Impedance
- Identifies impedance to ground
- Ensures monitor grounding
- Identifies faulty ground cords

Big Brother Sensor
- Identifies operators who have not plugged in

Soft Ground Resistance
- Identifies faulty ground cords
- Identifies non-grounded ESD mats
- Identifies intermitent ground connection

Workstation 1

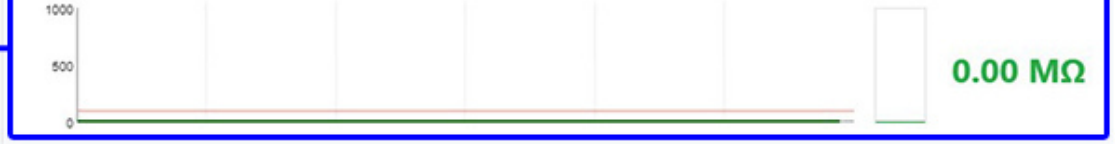
Operator Body Voltage 1

Operator Body Resistance 1

Metal Ground EMI Voltage 1

Metal Ground Impedance 1

Soft Ground Resistance 1



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GROUND MASTER MONITOR

- Ground Master Monitor is designed to provide continuous monitoring of proper ground connections of up to eight tools.
- Ground Master Monitor measures impedance in accordance with ANSI/ESD S20.20
- Ground Master Monitor also monitors EMI Voltage signals on each ground, to assist in diagnostics of equipment lockups and malfunctions.
- Ground Master Monitor provides intelligent information to a facility monitoring system with detailed status on each ground connection.

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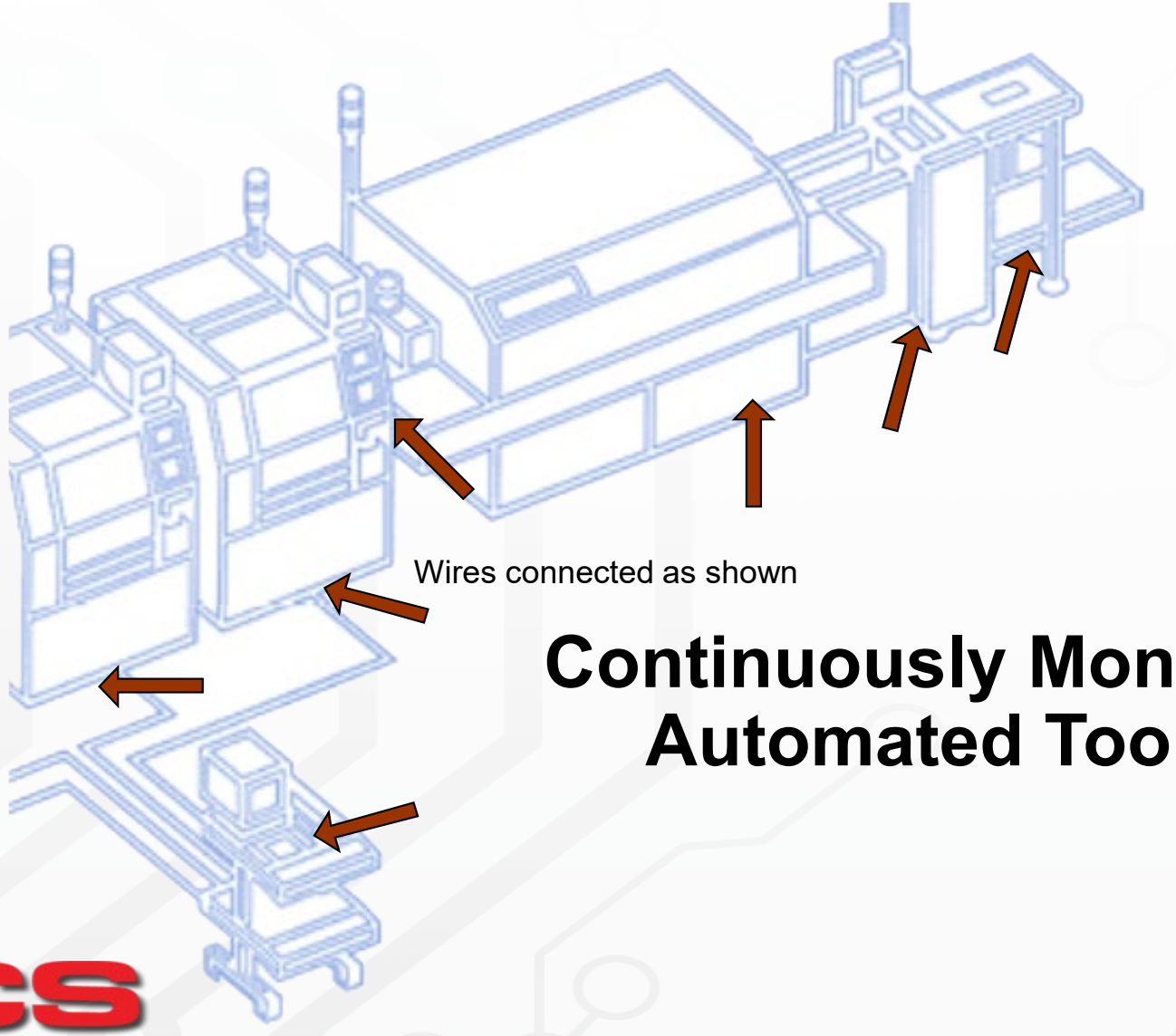
GROUND MASTER MONITOR



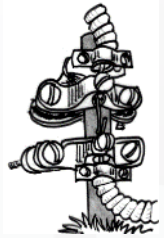
Wires connected as shown

Continuously Monitors Automated Tools

Wires to monitored tools

To SMP

Reference Ground



SCS

ION PRO™ BENCHTOP IONIZER

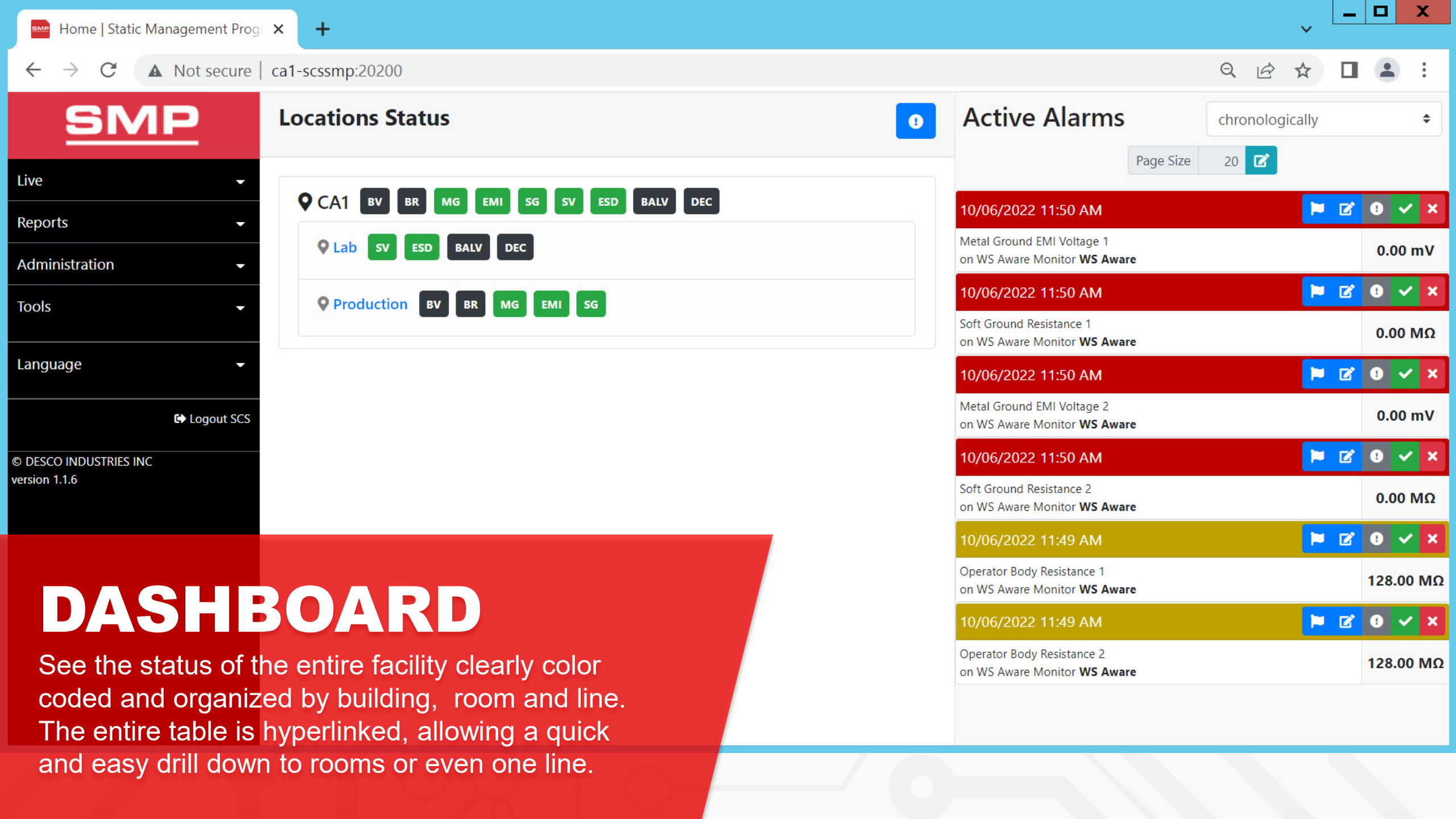
- **Steady-state DC Benchtop Ionizer with Ion Gauge™ Technology**
  Produces excellent neutralization performance using an ion collecting plate to sample both balance and discharge time.
- **Discharge Time Monitoring**
  Alarms if the ionizer requires maintenance due to inefficient neutralization
- **Less than 2 Seconds Discharge Time with ±3 Volts Balance**
  Meets the ANSI/ESD S20.20 required limits for ionization tested per ANSI/ESD STM3.1 and ESD TR53
- **Ethernet Connectivity**
- Provides network communication with Static Management Program (SMP) to collect and report the statuses for balance and discharge time

SCS

DIAGNOSTIC KITS

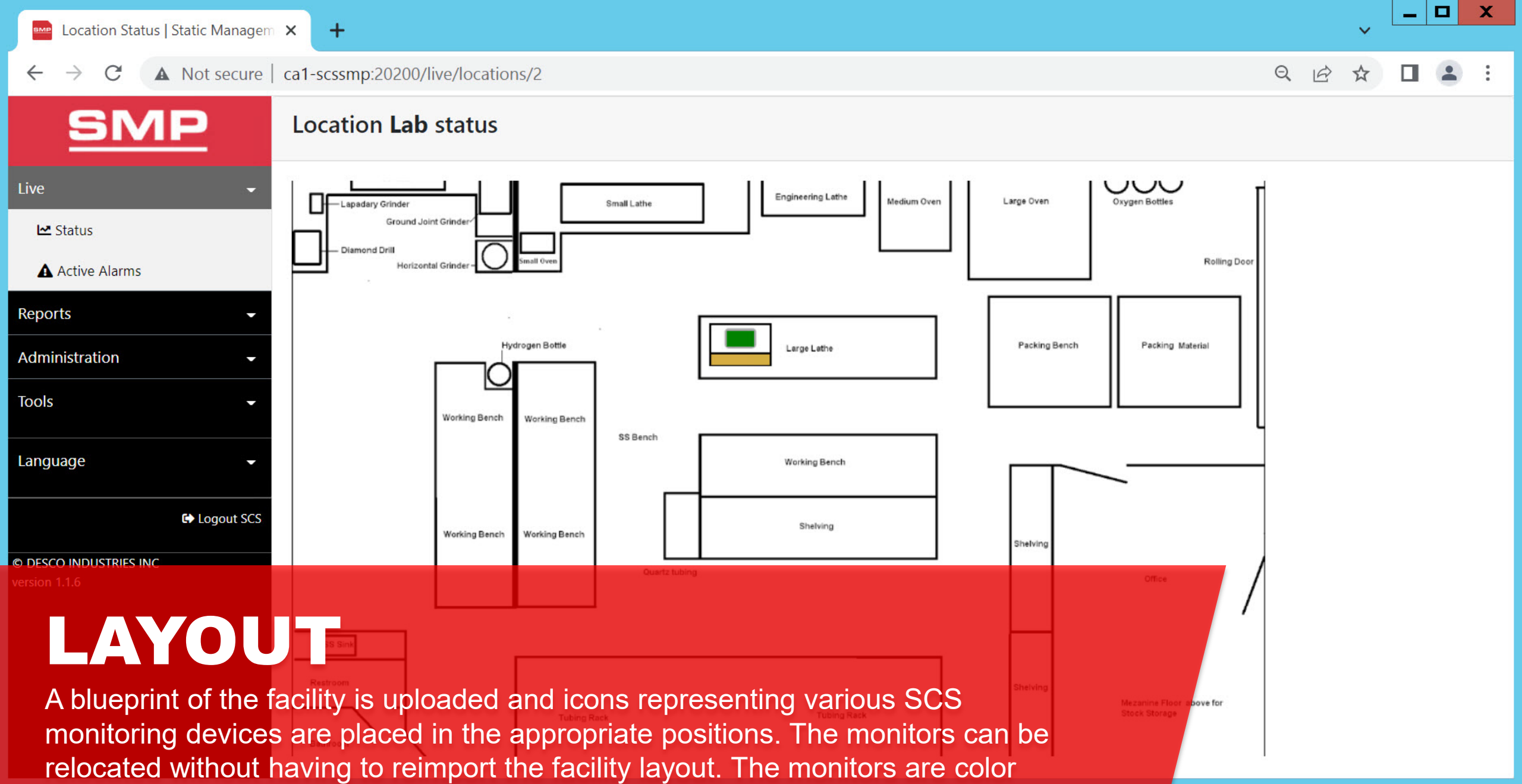
770050	770051	770052
SMP Diagnostic Kit	**ESD Event Diagnostic Kit**	**Workstation Diagnostic Kit**
Kit Includes: •(1) 770121 SMP Software License •(1) 770044 Ground Master Monitor •(1) 770067 WS Aware Monitor •(3) 770066 EM Aware Monitors •(1) 8-Port Ethernet Switch •(6) CAT5E Cables	**Kit Includes:** •(1) 770121 SMP Software License •(4) 770066 EM Aware Monitors •(1) 5-Port Ethernet Switch •(5) CAT5E Cables	**Kit Includes:** •(1) 770121 SMP Software License •(4) 770067 WS Aware Monitors •(1) 5-Port Ethernet Switch •(6) CAT5E Cables

NEW
SCS
SMP
WEB APP



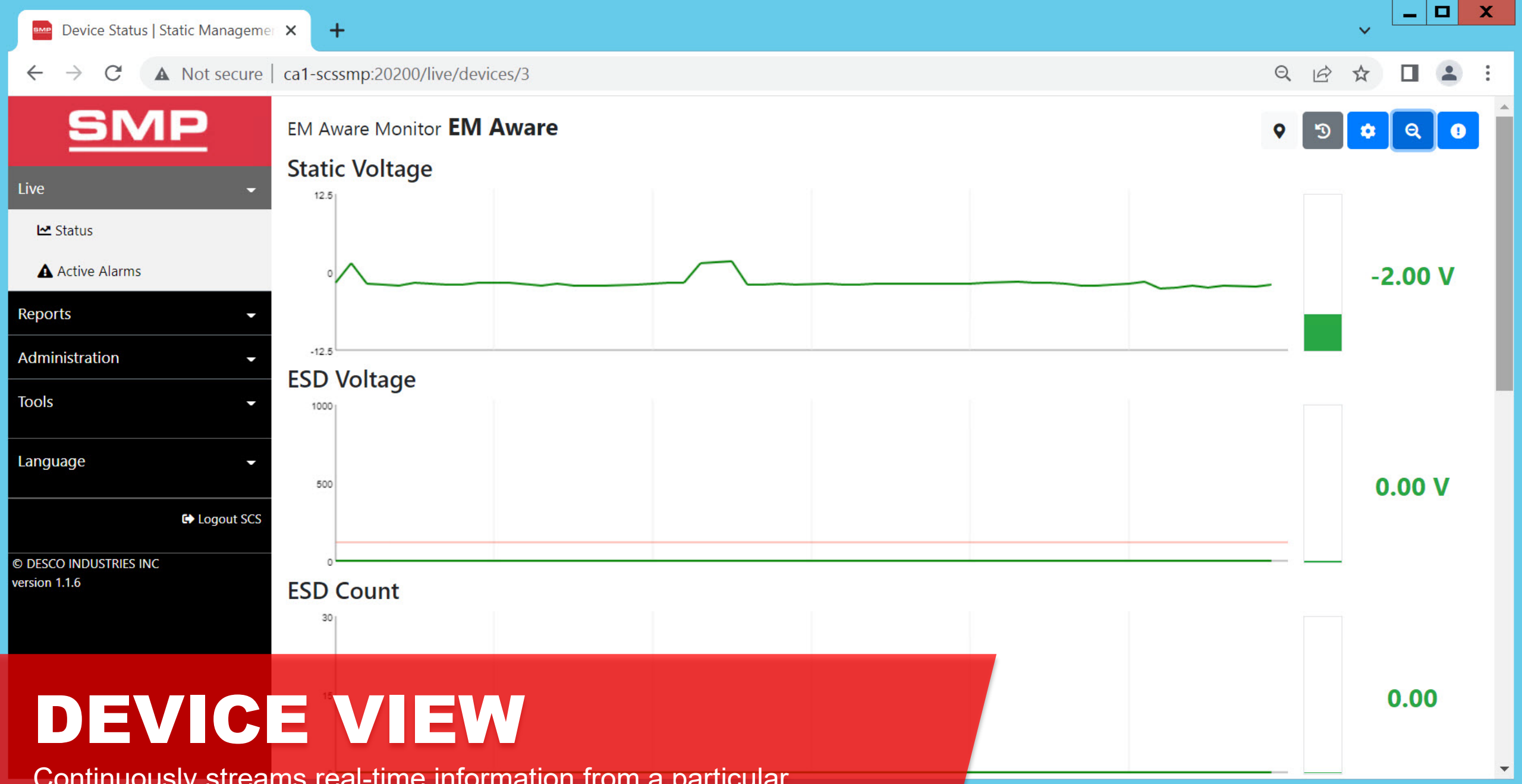
DASHBOARD

See the status of the entire facility clearly color coded and organized by building, room and line. The entire table is hyperlinked, allowing a quick and easy drill down to rooms or even one line.



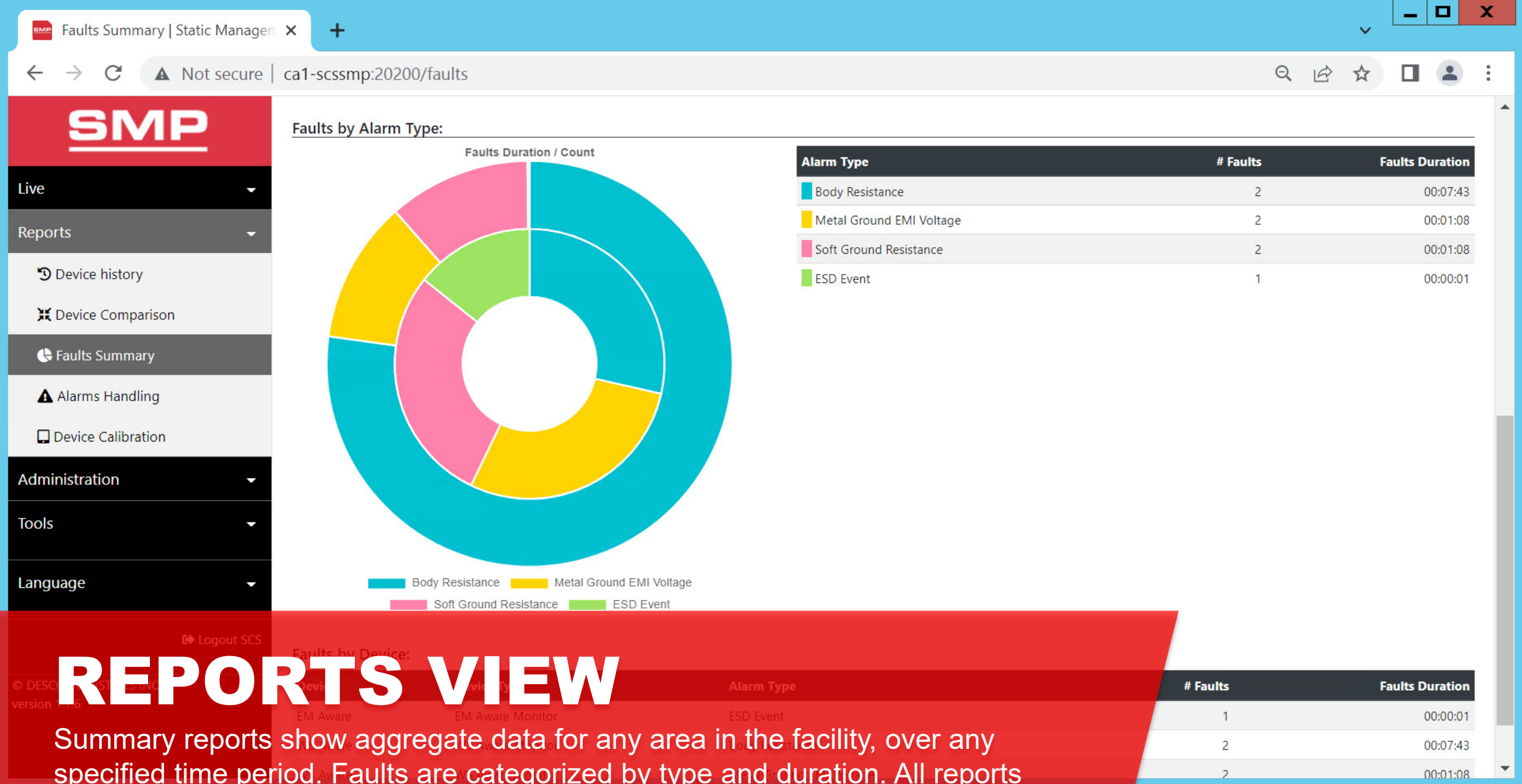
LAYOUT

A blueprint of the facility is uploaded and icons representing various SCS monitoring devices are placed in the appropriate positions. The monitors can be relocated without having to reimport the facility layout. The monitors are color coded depending on status and hyperlinked to the individual devices.



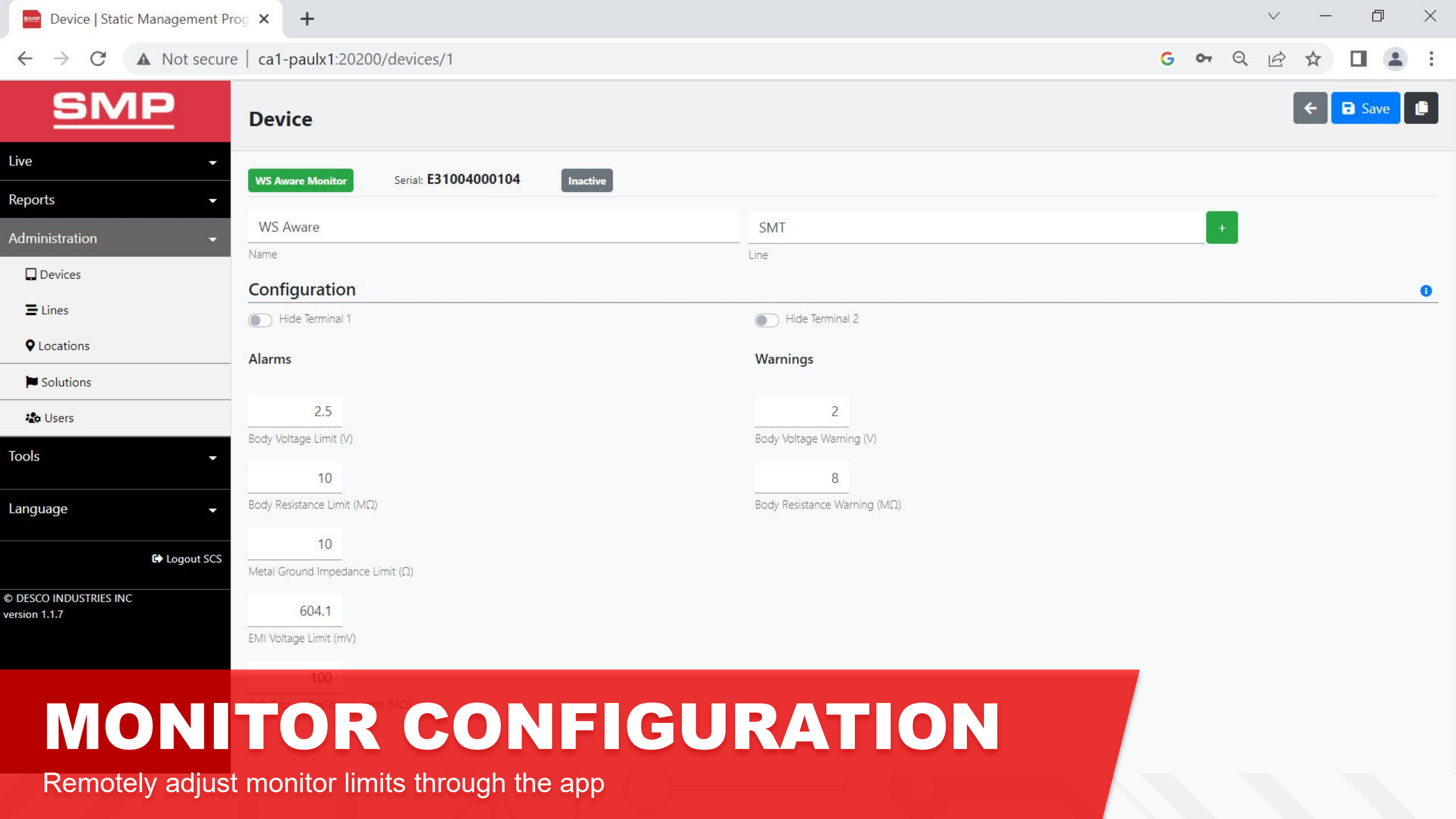
DEVICE VIEW

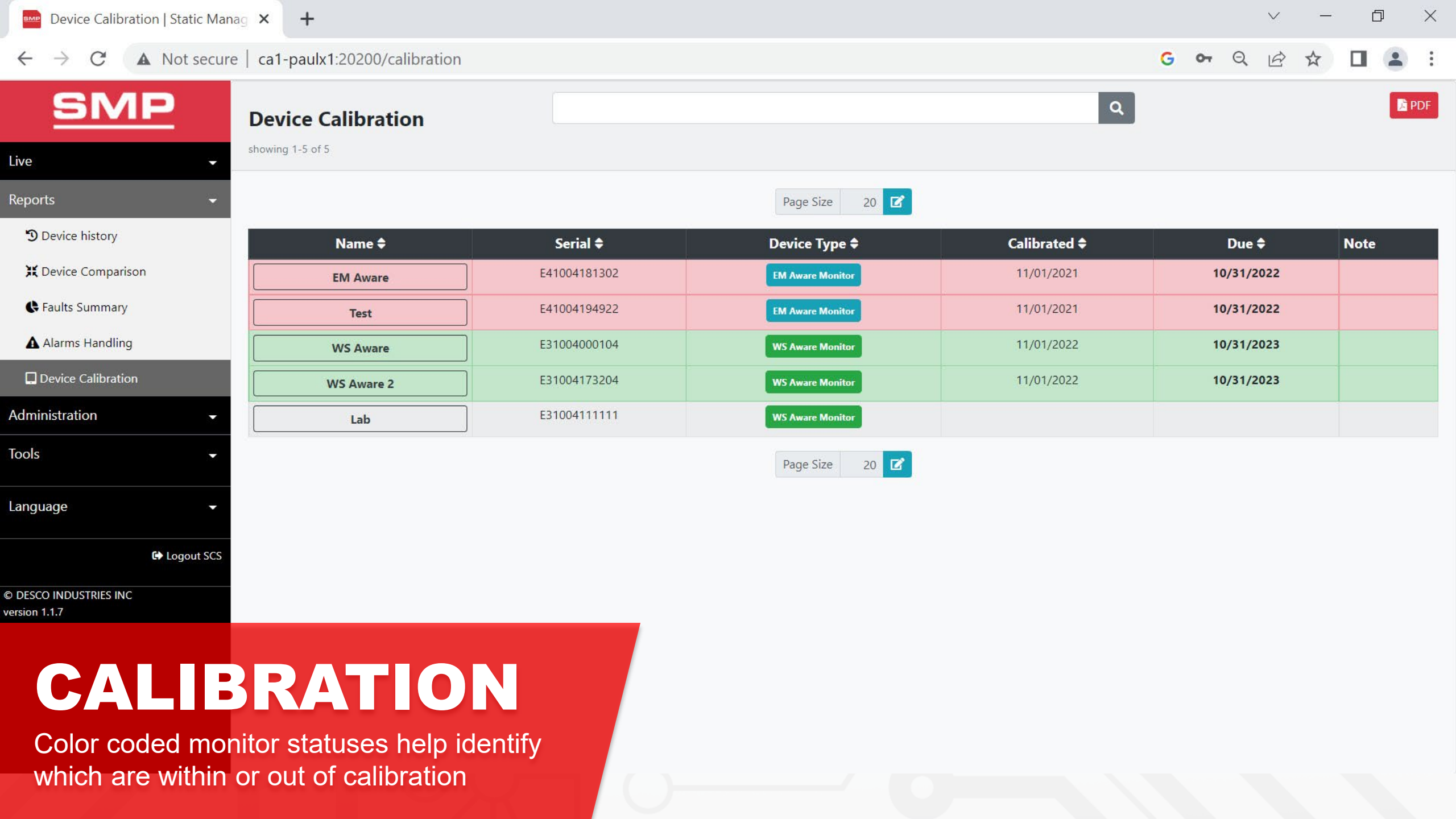
Continuously streams real-time information from a particular monitoring device and shows a list of recent alarms for the device



REPORTS VIEW

Summary reports show aggregate data for any area in the facility, over any specified time period. Faults are categorized by type and duration. All reports can NOW be printed to PDF or shared view email from the app.


Device | Static Management Prog
Not secure | ca1-paulx1:20200/devices/1
SMP
Live
Reports
Administration
Devices
Lines
Locations
Solutions
Users
Tools
Language
Logout SCS
© DESCO INDUSTRIES INC
version 1.1.7
Device
Save
WS Aware Monitor
Serial: E31004000104
Inactive
WS Aware
Name
SMT
Line
Configuration
Hide Terminal 1
Hide Terminal 2
Alarms
Warnings
2.5
Body Voltage Limit (V)
2
Body Voltage Warning (V)
10
Body Resistance Limit (MΩ)
8
Body Resistance Warning (MΩ)
10
Metal Ground Impedance Limit (Ω)
604.1
EMI Voltage Limit (mV)
100
MONITOR CONFIGURATION
Remotely adjust monitor limits through the app


Device Calibration | Static Manag
Not secure | ca1-paulx1:20200/calibration
SMP
Live
Reports
Device history
Device Comparison
Faults Summary
Alarms Handling
Device Calibration
Administration
Tools
Language
Logout SCS
© DESCO INDUSTRIES INC
version 1.1.7
Device Calibration
showing 1-5 of 5
PDF
Page Size 20
Name
Serial
Device Type
Calibrated
Due
Note
EM Aware
E41004181302
EM Aware Monitor
11/01/2021
10/31/2022
Test
E41004194922
EM Aware Monitor
11/01/2021
10/31/2022
WS Aware
E31004000104
WS Aware Monitor
11/01/2022
10/31/2023
WS Aware 2
E31004173204
WS Aware Monitor
11/01/2022
10/31/2023
Lab
E31004111111
WS Aware Monitor
Page Size 20
CALIBRATION
Color coded monitor statuses help identify which are within or out of calibration

WHAT IS THE PAYBACK?

Instead of spending money on just prevention, not knowing if products are protected, and unable to determine payback…

- Companies can now determine and measure their ROI
- Savings may be realized from:
  - Higher yields & process efficiencies
  - Elimination of costly inspections
  - Fewer customer complaints
  - Less re-work and lower field returns
  - Budgets driven by performance data
- Leverage SMP to attract and retain customers
  - New source of competitive advantage
  - Tip the scale in project negotiations

CONTACT US

For more information,
please visit

StaticControl.com