

System Studies Incorporated 289H-M LSS Monitor

Loop Surveillance System



Advanced monitoring in a smaller package

To meet the monitoring demands of a small office, System Studies offers a “mini” monitor based on the highly successful 289H Loop Surveillance System (LSS)[™]. Reduced in size but not in function, the 289H-M LSS[™] provides all of the features of its predecessor in a compact, rack mountable configuration.

Because it receives much of its instruction from PressureMAP and shares PressureMAP’s device database, the 289H-M LSS has minimal data storage requirements of its own. This eliminates the need for expensive memory components and results in a simpler, more dependable monitor.

How it works

The 289H-M LSS sequentially accesses raw data from pressure and flow transducers, contact alarms, and contactor devices installed at central office and field locations. It then stores the device information for PressureMAP.

PressureMAP calls the 289H-M LSS every two hours to obtain readings. When contact is made with the 289H-M, it requests data for each designated monitoring point, starting with device relay number one and ending with the last working relay.

PressureMAP then interprets the data and performs the analysis required to prioritize dispatch information and identify alarm conditions. This data, as well as device history information, is made available to users via PressureMAP’s user-access menus and reports.

In addition to providing readings during the scheduled calling cycle, the 289H-M will alert PressureMAP between calling cycles if a possible alarm condition occurs at one of the monitored devices.

Cost savings and monitoring advantages

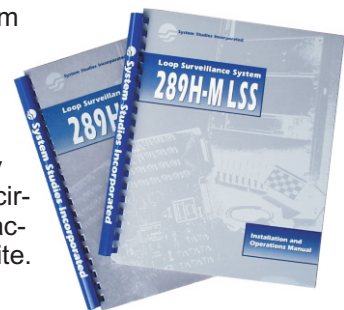
- **Easy Installation.** The 289H-M LSS can be installed and placed in operation in a fraction of the time required for other small office monitors. And with PressureMAP’s conversion worksheets, cutovers from existing system are greatly simplified.

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- **No Programming and Data Input.** Since the 289H-M LSS does not require a database, there are no new setup procedures to learn and perform. Also, the need for time-consuming data input is eliminated.
- **No Backups and Restorals.** With no database to maintain, the normal precaution of manually backing up your office monitor is not required—nor are restoral or reprogramming.
- **Tone Generation Capabilities.** The 289H-MT models contain electronic components that make it possible to place a pseudo-data tone on dedicated pairs to prevent them from being stolen. With PressureMAP’s 289H Diagnostics, you can select tone frequencies, change or restore default values, and apply tone to desired pairs.
- **Alert Capabilities.** Along with providing readings during the PressureMAP calling cycle, the 289H-M LSS will also notify PressureMAP when a possible alarm condition is detected.
- **LAN Access.** If desired, the 289H-M can be ordered with a LAN Controller Card that makes it possible for PressureMAP to access data and receive alerts using a company’s local area network (LAN).
- **Simplified Sparton Conversion.** To assist in the process of cutting over from a Sparton monitor, the 289H-M can be ordered with a special 36 pair dedicated card. This card accepts the existing cables used to connect the transducer cross-connect block to the Sparton, eliminating the need for costly rewiring.
- **Adaptability.** The 289H-M LSS works with all central office switches on all POTS lines. It also reads both resistive transducers and the 4 to 20 milliamperes (mA) current loop devices.
- **Diagnostic Benefits.** All device circuits wired to the 289H-M monitor can be evaluated for trouble and manually tested from PressureMAP for resistive leakage, voltage (both AC & DC) and capacitance. This function gives you the ability to remotely test device circuits without having to actually visit the monitor site.



Model Variations

The 289H-M accommodates one Controller Card, one Utility Card and one Relay Card, but there are numerous ordering options. For example, there are three types of relay cards, plus you can select LAN, Tone, or both LAN and Tone capabilities for most of the relay cards offered. See accompanying ordering chart for model options.

Specifications

Chassis Design: The 289H-M LSS chassis is constructed of cold rolled steel and equipped with openings in the rear panel for accessing cable connectors, power and alarm connection modules, and phone line/network connection inputs. Access to the power and alarm disable switches is available by removing the front/top panel.

Dimensions: Height: 3.5 in (8.89 cm), Width: 15 in (38.1 cm), Depth: 11.5 in (29.21 cm).

Shipping Weight: 14 pounds (6.3 kg).

Rack Size: Can be mounted in either a 23-inch or 19-inch equipment rack using specially designed L-type brackets.

Modem: 9600 baud.

LAN Connection: With LAN Controller Card, provides two-way communications between 289H-M and PressureMAP over company's local area network.

Power: -48 VDC nominal (operates in the range of 40 to 56.7 volts direct current), fused at 1.3 amp.

Grounding: Can operate with integrated ground and isolated ground.

Operating Temperature Range: -40 to +120 degrees Fahrenheit (-40 to + 48.89 Centigrade).

Humidity: 0-95 percent Relative Humidity.

Foreign Voltage Check: Each conductor is checked for presence of high AC voltage prior to the initial test.

Foreign Battery Check: The line is grounded to remove the presence of leakage charge and test for foreign battery.

Resistive Measurement: Ability to read any resistive contactor, transducer, device or pair resistance over the range from 1 kilohms to 25 megohms.

Current Loop Measurement Ability to read any transducer which has a 4–20 milliampere transmitter output and operates from 12–40 VDC at the transmitter.

Pair Diagnostics: The 289H-M LSS, in conjunction with the PressureMAP software, can perform the following tests on dedicated and subscriber pairs:

Leakage Test—resistance on tip/gnd, ring/gnd and across tip and ring

Voltage—both AC and DC readings on tip/gnd and ring/gnd

Capacitance indicates a possible OPEN circuit, either Inside or Outside of the office

Feature Summary

- Reads resistive, loop current and addressable devices (depending on model)
- Operates on all POTS lines regardless of type or manufacturer of switch
- Provides subscriber off-hook detection (with 25-pair Subscriber Cards only)
- User-definable alert sensitivity
- Alert call-out capability
- Provides open/in, open/out detection
- Performs automatic calibration to onboard standards
- Checks pair quality prior to taking readings
- Accommodates software tuning from PressureMAP software
- Performs PressureMAP menu-directed diagnostics for troubleshooting
- Special connector block enables monitor repair or relocation without interfering with voice or data transmission
- Tone generation capability (requires Tone Utility Card)
- Provides high speed access to realtime readings



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