Liquid Level Sensors
For Monitoring Refrigerant Levels in Commercial Air Conditioning and Refrigeration Systems

The Sporlan LLS (Liquid Level Sensor) is used in commercial air conditioning and refrigeration systems to monitor refrigerant levels.

The Sporlan LLS uses a patented capacitive sensor and a calibration algorithm for measuring refrigerant levels. The sensor section is 2.2” (56 mm) in length with an analog output. It is mounted in the bottom of the vessel containing liquid refrigerant.

If the system does not offer or allow for a 1”-16 threaded receptacle for the LLS, Sporlan offers a convenient vessel that may be piped into the system. The C-300-LLS ASM Shell can be easily attached to the system via copper fittings.

The output voltage (0.6 to 4.4 V) has a linear relationship to the liquid level.

Formula: \[ V_{out} = (\text{Percent Liquid Level} \times 3.8) + 0.6 \]
Percent Liquid Level: 0% = Empty, 100% = Full
Vout Accuracy: +/- 5%

Features
Liquid Level Sensor (LLS) Assembly
- R-134a, R-1234ze, and R-22 compatible. Contact Sporlan regarding compatibility with other refrigerants
- Fluid Temperature Range: -13°F to 131°F (-25°C to 55°C)
- Ambient Operating Temperature Range: -40°F to 158°F (-40°C to 70°C)
- Withstand/Storage Temperature: -67°F to 203°F (-55°C to 95°C)
- Operating pressure range: 450 PSIG (31 bar)
- UV resistant to allow outdoor use
- 15’ cable (attached)
  - Red wire: 5 VDC
  - White wire: Output
  - Black wire: DC ground
- Output voltage: (0.6 to 4.4 V) with linear relationship to the liquid level
- Shell available separately

C-300-LLS ASM Shell (Sold Separately)

Sporlan offers a convenient vessel that may be piped into a system. This allows one to monitor refrigerant levels in decentralized systems where it may be very challenging to precisely calculate the overall refrigerant charge. This can improve system safety and efficiency for systems with multiple evaporators operating at varying conditions.
Dimensions

LLS - Liquid Level Sensor Assembly
Item Number 952836

Top View

C-300-LLS ASM - Shell
Item Number 402554

Top View

Side View

Wolverine Gasket
(Supplied with LLS)
WARNING – USER RESPONSIBILITY

Failure or improper selection or improper use of the products described herein or related items can cause death, personal injury and property damage.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

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For safety information see the Safety Guide at www.parker.com/safety or call 1-800-CParker.

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FOR USE ON REFRIGERATION and/or AIR CONDITIONING SYSTEMS ONLY

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