



# LFE

## LFS-1 Flow Measurement System

The LFS-1 Flow Measurement System for Meriam LFEs takes advantage of the wide flow turndown and the percent of Reading precision of the LFE, as well as Meriam's calibration expertise, to provide a superior gas flow measurement solution. The integral flow computer makes real time corrections for changes in differential pressure, static pressure, temperature and relative humidity to provide the most accurate results possible. Calibration coefficients for up to five (5) LFEs can be stored in memory and called up for later use with a push of a button. For control or data transmission purposes, the LFS-1 Flow Measurement System has both analog and digital outputs. 4–20 mA and 0–10 volts analog output options are ideal for control and recording functions. RS-232 and RS-485 digital communications are standard.

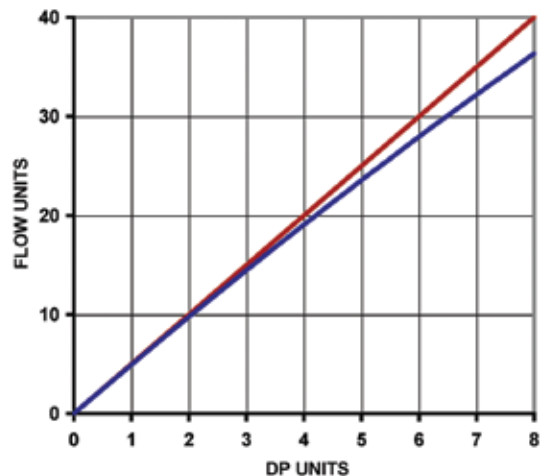
Special application requirements can often be accommodated by the LFS. For example, simultaneous flow measurement of two LFEs can be made and the summation of the two flows calculated and displayed. Or, for testing over a wide range for flow, the LFS can be set up to automatically switch from one LFE to an LFE of a different flow capacity as flow rate increases to a predetermined set point.

Meriam's LFS-1 provides standard system accuracy of  $\pm 1.0\%$  of Reading over a 10:1 flow turndown and  $\pm 1.1\%$  over 20:1 turndown. Calibration of the LFE and LFS-1 as a system makes this possible. Meriam can offer LFS accuracy as low as 0.60% of Reading over a 10:1 flow turndown by using better calibration standards. All LFS packages include complete instrumentation, system calibration and NIST traceable documentation. LFEs and systems cover gas flow ranges from 0.2 SCCM to 15,000 SCFM.

To provide the accurate answers you need in the shortest amount of time, please provide us with the following ordering data:

1. Model number.
2. Flowing gas data;
  - a. Flow rate in desired units.
  - b. Base conditions.
    - i. Pressure
    - ii. Temperature
  - c. Flowing conditions
    - i. Pressure
    - ii. Temperature
    - iii. Viscosity at flowing temperature.
  - d. Differential at maximum flow.
  - e. Specific gravity, if other than air.
  - f. Flowing gas, if other than air.
3. Readout instrument.
4. Description of installation configuration.
5. Line size.
6. Line Material.
7. Accuracy required

Typical Laminar Flow Element DP vs. Flow Curve



KEY  
 Red line: Straight line for reference  
 Blue line: Typical LFE calibration curve