

# Hall A and Hall C Report

## July 19, 2019

### Hall A – Bigbite – ECAL

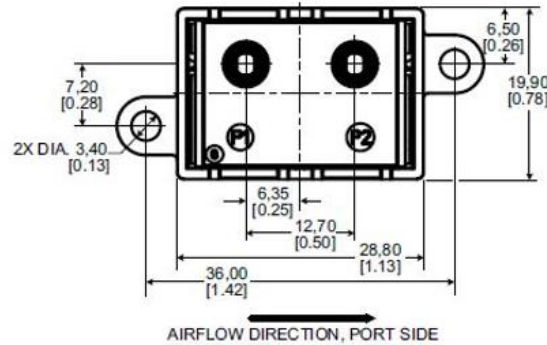
- Assembled nine supermodules (in all, 62).

### Hall A – Gas System

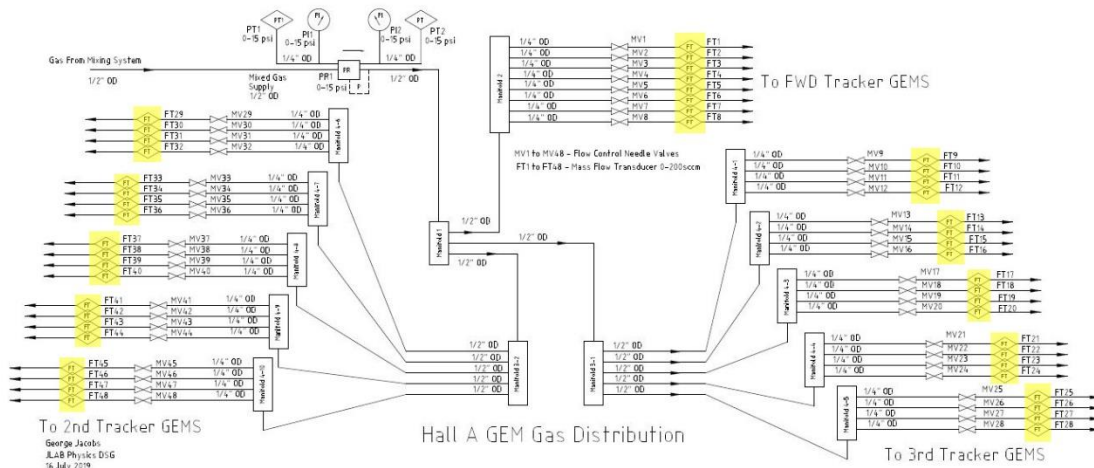
- Procured two Honeywell Zephyr HAF Series mass flow meters to test for potential use in GEM detector's 48-channel distribution flow monitoring.
  - Sensor is low cost (~\$90 each), small (~1.5" L x ~0.75" W), and high-accuracy that reads  $\pm 200$ -sccm flow and communicates via I<sup>2</sup>C protocol.

Flow Range (sccm)	Accuracy Error (% FS)
-200 to -11.1	$\pm 9$
-11.1 to -0	$\pm 0.25$
0	$\pm 0.01$
0 to 40	$\pm 0.25$
40 to 200	$\pm 2.5$

Accuracy errors for flow ranges for Honeywell Zephyr HAF series mass flow meter.



Schematic of Honeywell Zephyr HAF series mass flow meter.



P&I Diagram for Hall A GEM Gas Distribution. Forty-eight flow meters, represented by diamonds and highlighted in yellow in diagram, are needed to remotely monitor flow at different GEM detectors.

### **Hall C – EPICS**

- Developed new startup script for HV CSS screens to open screens from a common directory in a temporary workspace, creating consistent environments for multiple users.
- Created workspace and startup script for CSS screens based on Hall C Magnet HMI screens.
  - ★ Screens accessible from cdaq16 using executable *go\_magnets-css*.

### **Hall C – CAEN HV Test Station**

- Tested three A1535 modules; all failed.
  - ★ Module #0556 – Ch. 22 will not ramp up
  - ★ Modules #775 and #776 have intermittent ramping failures.
- Developed novice, expert, voltage monitor, and current monitor CSS-BOY screens for 16 CAEN-7030TN high voltage boards and 8 CAEN-A1535 high voltage boards.
  - ★ Allows testing of multiple boards simultaneously via EPICS.