AVC-1

ECS Advanced**IQ** Vent Controller

Specifications

Stock Number:	AVC-1
Dimensions:	12” (W) x 14” (H) x 8” (D)
	305mm (W) x 356mm (H) x 203mm (D)
Temperature Range:	40°F - 105°F (5°C - 40°C)
Power Supply:	120-240VAC, 50-60Hz/.5A
Sensing Inputs:	Six (6)
Sensor Type :	Zirconium Dioxide
Signal Output:	Common Trouble
Output Display:	Full Function LCD
Resolution:	1dp (nn.n%)
Accuracy:	1%
Sample Connection:	5/32” plastic tubing quick connect

General Description

The ECS Advanced**IQ** Vent Controller provides automatic oxygen venting and a continuous real-time monitoring of nitrogen/oxygen concentration levels within each dry/preaction fire sprinkler system. As a fire sprinkler system is filled with a continuous supply of nitrogen gas from the ECS Protector Nitrogen Generator System, the ECS Protector Vent, installed on the sprinkler system riser, allows oxygen rich gas to be vented from the fire sprinkler system. The ECS AVC-1 samples the discharge gas from each ECS Protector Vent connected to the controller. Over a fourteen (14) day period, the ECS Protector Vent will dilute the oxygen concentration in the fire sprinkler system to <2% oxygen. The gas flows out of the restricted orifice on the vent through pressure-rated tubing to provide slow controlled flow to the Advanced**IQ** Controller. Once the desired system gas composition is reached the controller will automatically close and stop the venting process thereby preventing continuous venting. One AVC-1 Controller is capable of individually controlling and monitoring six (6) ECS Protector Vents on six (6) separate fire sprinkler systems.

The AVC-1 is equipped with a programmable logic controller (PLC) LCD display to monitor and control the venting process as well as continuous monitoring of the nitrogen purity levels in the sprinkler systems. The AVC-1 includes a history log for reviewing data compiled from the sprinkler systems as well as the ability to remove the historical information for permanent storage.

The ECS Advanced**IQ** Controller includes the following functions:

- Individual pressure & purity monitoring for up to 6 zones
- Datalogging & historical trends for each zone
- Leak rate checks for each zone
- Quick purity check for each zone
- Quick pressure check for each zone
- Removeable datalog (flash drive)
- Form C dry contact supervisory

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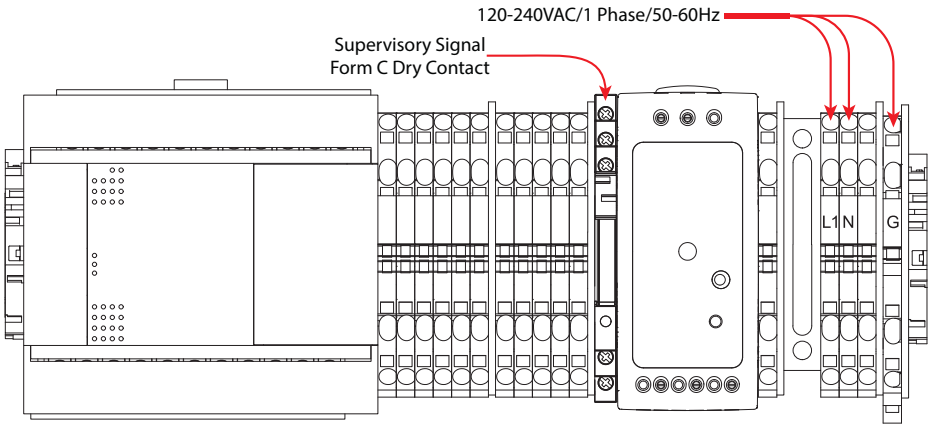
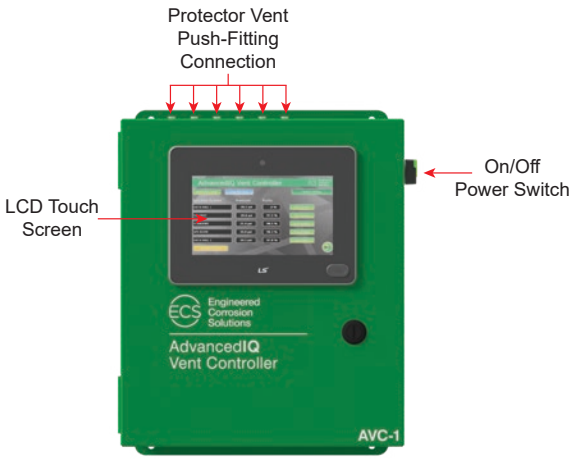
Installation Instructions

1. Mount the ECS AdvancedIQ Controller on a wall in the sprinkler riser room adjacent to the ECS Protector Vents installed on the sprinkler system riser (not included).
2. Remove the muffler from the restricted orifice on the Protector Vent and install a 5/32” push-connect fitting.
3. Connect the 5/32” tubing to the push-connect fitting on the Protector Vent.
4. Connect the opposite end of the 5/32” tubing to the appropriate push-connect fitting on the top of the AVC-1.
5. Repeat steps 2, 3, and 4 for each additional ECS Protector Vent connected to the AVC-1.
6. With the incoming power off, connect the incoming 120-240VAC/50-60Hz power supply to terminal block connects L1, N (Neutral), and G (Ground).
7. If AVC-1 is remotely monitored, connect the monitoring connection from building monitoring system to the Supervisory Signal Form-C (Common (C) and Normally Open (N.O.) or Normally Closed (N.C.)) contacts.



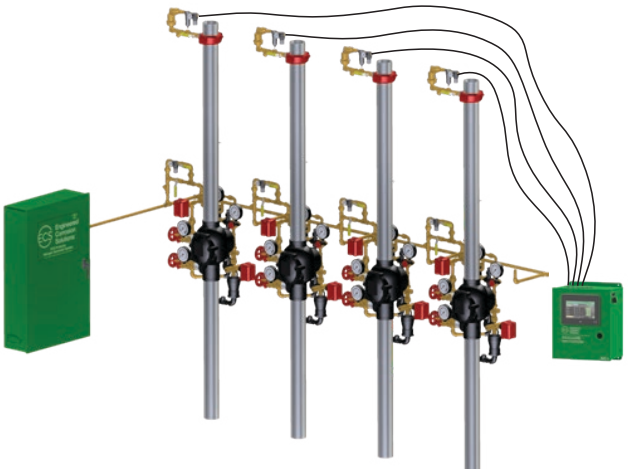
Operating Instructions

1. Turn on/off power switch to “On” position and allow AVC-1 to initialize.
2. Depress the “Vent” button on the LCD display to initiate the fourteen (14) day dry pipe nitrogen inerting (DPNI) venting process to all vents connected to the controller.
    a. The DPNI venting process can be initiated on an individual system basis, if desired.



ECS Nitrogen Generator with AdvancedIQ Controller:

(typical installation schematic)



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