

Technical Service Bulletin 040705

Periodic Flow Meter Testing Alert



Comark IOT-equipped transmitters feature an IOT coolant flow interlock based on the Universal Flow Monitors LL series flow meter. This flow meter contains a normally-open microswitch, which switches to the closed state when a user-set flow rate threshold is exceeded. This closure satisfies the transmitter collector cooling interlock and allows high voltage to be applied to the IOT. If this flow meter were to fail for any reason, there would exist the possibility of high voltage being applied to the IOT without the proper collector cooling in place. This condition would result in the catastrophic failure of the IOT within several minutes. For this reason, Comark strongly recommends that all its IOT customers test the proper operation of their flow meters at regular and frequent intervals. Regular flow meter testing should consist of the following steps:

1. Close HPA cooling valve to reduce HPA flow rate.
2. Verify active collector cooling alarm is registered as HPA flow rate crosses desired alarm threshold (nominally 10 gal/min unless otherwise indicated).
3. Open valve to restore HPA flow rate to original level.
4. Verify collector cooling alarm has cleared, but is stored in fault history.
5. Press fault reset to clear stored cooling fault.
6. Repeat procedure for each HPA and RF dummy load.

NOTE: Flow meter testing is also featured in Service Bulletins 030606 (IOX/DCX) and 040123 (DCX Paragon) addressing periodic interlock checks. Comark recommends that all interlocks be checked at regular intervals.

Flow meter failures usually fall into two categories:

- Flow meter actuator becomes stuck due to dried glycol. This failure may be prevented by exercising the flow meter at regular intervals. Once this failure has occurred, it can sometimes be cleared by temporarily increasing (by shutting off other HPAs) and decreasing flow rate to stuck meter to work the actuator loose. It can sometimes also be eliminated by removing the entire meter assembly and soaking it denatured alcohol.
- Microswitch becomes stuck internally. The occurrence of this failure may be minimized by exercising the flow meter at regular intervals. Once this failure has occurred, the microswitch must be replaced. Note that Comark does not stock the microswitch assembly; the entire flow switch must be ordered. Replacement microswitches may be obtained through a local Universal Flow Monitors distributor.

By properly exercising and testing of the flow meters contained in your Comark transmitter, you will minimize failures of these units and ensure maximum IOT protection at all times.

Here at Comark, we are constantly striving to improve the satisfaction of both our new and existing customers. Please do not hesitate to contact Comark Customer Service with any questions you may have concerning the contents of this service bulletin.

Comark Communications LLC
104 Feeding Hills Road
Southwick, MA 01077 U.S.A.
(800) 345-9295
www.comarktv.com