UNEITEFIRE SYSTEMS

TRUE ADVANCED PURGE

MODEL TAP-G3
WITH ADC™
USER GUIDE

Serial Number ____________________________________________________________

Date of Installation ____________ Date of Commissioning _____________

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SAFETY INFORMATION

This manual contains safety information that is important to know and understand. This information is provided for the safety of installers, operators, and users of the UNITED Fire Systems TRUE ADVANCED PURGE Model TAP-G3 with ADC™ device. Carefully read, understand, and follow instructions identified by these symbols.

![DANGER]

The use of the word “DANGER” identifies an immediate hazard with a likelihood of death or serious personal injury if instructions, including recommended precautions, are not followed.

![WARNING]

The use of the word “WARNING” identifies the presence of hazards or unsafe practices that could result in death, personal injury, or serious property damage if instructions, including recommended precautions, are not followed.

![CAUTION]

The use of the word “CAUTION” identifies possible hazards or unsafe practices that could result in personal injury or property damage if instructions, including recommended precautions, are not followed.

![IMPORTANT]

The use of the word “IMPORTANT” identifies special instructions, not related to hazards that should be followed.

FOREWORD

This manual is written for those who are responsible for the use of the Model TAP-G3 device. This manual MUST be read thoroughly and understood completely before use of the device.

IMPORTANT NOTICES TO USERS

When using this equipment, personnel must employ safe engineering practices and observe all related local regulations, health, and safety procedures, and legal requirements for safety.

Nitrogen is not a poisonous gas. However, in a concentrated form, there is a risk of asphyxiation. The exhaust from the Model TAP-G3 device contains nitrogen which quickly disperses in the atmosphere. DO NOT directly inhale the output gas from the exhaust mufflers.
The Model TAP-G3 device is classified as non-hazardous for transportation purposes and as non-flammable for fire regulations. This equipment is for indoor use only. Do not operate outdoors.

Installation, commissioning, and maintenance of the Model TAP-G3 device must be conducted ONLY by trained, qualified personnel, in accordance with the instructions in the UNITED Fire Systems P/N 33-TG3ICM-000 Installation, Commissioning, and Maintenance Manual.

UNITED Fire Systems NITROGEN-PAC™ sprinkler corrosion inhibiting systems are to be installed, commissioned, and maintained by qualified, trained personnel in accordance with:

- The applicable UNITED Fire Systems Installation, Commissioning, and Maintenance Manuals.
- National Fire Protection Association No. 70, “National Electrical Code®”.

Any questions on the information in this manual should be addressed to:

UNITED Fire Systems
Division of United Fire Protection Corporation
1 Mark Road
Kenilworth, NJ USA 07033
908-688-0300
www.unitedfiresystems.com
LIMITED WARRANTY
TRUE ADVANCED PURGE MODEL TAP-G3 WITH ADC™

What Does This Warranty Cover?
This warranty covers all manufacturing defects in material and workmanship of TRUE ADVANCED PURGE Model TAP-G3 with ADC™ devices.

How Long Does The Coverage Last?
This warranty lasts for eighteen (18) months from the date of shipment to the original purchaser.

What Will UNITED Fire Systems Do?
UNITED Fire Systems will repair, replace, or refund the purchase price of, at its option, any defective Model TAP-G3 device at no charge.

What Does This Warranty Not Cover?
Equipment that has NOT been commissioned by UNITED Fire Systems or a trained distributor is not covered under this warranty. Equipment that is not properly installed and maintained per UNITED Fire Systems manual P/N 33-TG3MAN-000 is not covered. Equipment that has been repaired or tampered with not in accordance with the instructions in manual P/N 30-NPSICM-000 is not covered. This warranty does not cover ordinary maintenance in accordance with manual P/N 33-TG3MAN-000. Any problem that is caused by abuse, misuse, or an act of God (such as a flood) is not covered. Transportation and shipping charges to return product to UNITED Fire Systems or for UNITED Fire Systems to ship repaired or replacement product are not covered. Also, consequential and incidental damages are not recoverable under this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply.

How Do You Obtain Service?
In order to eligible for service under this warranty, your equipment must have been commissioned by UNITED Fire Systems or a trained distributor. If something goes wrong with your Model TAP-G3 device, contact:

UNITED Fire Systems
Division of UNITED Fire Protection Corporation
1 Mark Road
Kenilworth, NJ USA 07033
908-688-0300
www.unitedfiresystems.com

Is This The Entire Warranty?
This limited warranty is the entire warranty given by UNITED Fire Systems to the purchaser of the Model TAP-G3 device. There are no other warranties expressed or implied, beyond those required by law.

How Do State and Federal Laws Apply?
This warranty gives you specific legal rights per Federal law. You may also have other rights which vary from state to state.
1. GENERAL INFORMATION

1.1. GLOSSARY. All glossary terms are defined in reference to their use in this manual. Refer to this glossary for definitions of unfamiliar terms encountered when reading and using this manual.

1.1.1. Air. Air is the naturally occurring gas making up Earth’s atmosphere. Air consists of a mixture of gases, of which two predominate (see the glossary terms Nitrogen and Oxygen).

1.1.2. Dried Compressed Air. Dried compressed air refers to the output of the NITROGEN-PAC™ refrigerated dryer. This compressed air has been conditioned for entry into the nitrogen generator cabinet.

1.1.3. Microbiologically Influenced Corrosion (MIC). Microbiologically influenced corrosion (also known as MIC) occurs inside steel dry and preaction sprinkler pipes in the presence of certain microbes. This form of corrosion causes thinning of pipe walls, possibly leading to failure under water pressure. Pinhole leaks can occur, leading to water damage. Roughening of the internal pipe surface leads to unpredictable hydraulics, impairing the effectiveness of the sprinkler system. The tubercles formed by the microbes can loosen, clogging sprinkler heads and impairing or preventing the discharge of water onto a fire. MIC microbes can be aerobic, growing in the presence of oxygen, or anaerobic, not needing oxygen but growing in the presence of water. Prevention of MIC results in longer life and better functionality of the sprinkler system. MIC can be inhibited by using nitrogen to displace oxygen and dry out the inside of the pipe.

1.1.4. Nitrogen (N\textsubscript{2}). Nitrogen is a naturally occurring diatomic gas present in Earth’s atmosphere at a concentration of approximately 78% (v/v). All references to “nitrogen” in this manual are the output from the nitrogen outlet of the SC Series assembly. This outlet delivers gas that is at least 98 percent (v/v) nitrogen, at a pressure dew point of approximately -40°F. The pressure dew point of nitrogen is much lower than of compressed air, making nitrogen much more effective at drying out the inside of a sprinkler pipe.

1.1.5. Oxidation Corrosion. Oxidation corrosion (also known as rust) occurs inside steel dry and preaction sprinkler pipes in the presence of oxygen and water. This form of corrosion causes thinning of pipe walls, possibly leading to failure under water pressure. Pinhole leaks can occur, leading to water damage. Roughening of the internal pipe surface leads to unpredictable hydraulics, impairing the effectiveness of the sprinkler system. Loose rust particles can clog sprinkler heads, impairing or preventing the discharge of water onto a fire. Prevention of oxidation corrosion results in longer life and better functionality of the sprinkler system. Oxidation corrosion can be inhibited by using nitrogen to displace oxygen and dry out the inside of the pipe.

1.1.6. Oxygen (O\textsubscript{2}). Oxygen is a naturally occurring diatomic gas present in Earth’s atmosphere at a concentration of approximately 21% (v/v). Oxygen is discharged from the nitrogen generator cabinet after being separated from dried compressed air by the separator membrane.

1.1.7. Purging. Because of its low dew point, the nitrogen introduced into the sprinkler piping by the NITROGEN-PAC™ system absorbs liquid water. To ensure complete drying of the pipe interior, saturated nitrogen within the pipe must be replaced by dry nitrogen. Purging ensures that this process occurs.

1.2. DEVICE PURPOSE. The UNITED Fire Systems TRUE ADVANCED PURGE Model TAP-G3 with ADC™ is designed to automatically purge air from within dry-pipe or preaction fire sprinkler system piping and replace the air with 98% nitrogen from a NITROGEN-PAC™ sprinkler corrosion inhibiting system. The device also automatically samples, analyzes, and displays the percentage of nitrogen in the pipe.

**Advanced Sensor Technology**
The Model TAP-G3 device uses the most advanced zirconium dioxide technology available today, overcoming many of the limitations of other sensor types. The result is stable nitrogen purity readings and long sensor life, without the need for manual intervention to adjust or calibrate device readings.
Active Drift Control
The Model TAP-G3 device features Active Drift Control, an automatic analysis of sensor drift and application of correlation and gain offsets to maintain device accuracy regardless of sensor status. This analysis and drift control is routinely performed by algorithms built into the device control system every time the TAP-G3 automatically measures the nitrogen purity in the piping. No user involvement or special reference gas is required, and no other similar device available today offers this active method of controlling the accuracy of the displayed nitrogen value.

1.3. FUNCTIONAL DESCRIPTION. Refer to Figure 1.

Figure 1
Functional Description and General Arrangement

A. The Model PVA-2 Purge Vent Assembly is connected to the preaction or dry-pipe fire sprinkler piping, usually at the end of a branch line near the Inspector’s Test valve. A float valve allows air or nitrogen pressure through, but a float will block the outlet when water fills the pipe.
B. Plenum-rated flexible tubing connects the outlet of the Model PVA-2 to the inlet of the Model TAP-G3 device. The tubing permits mounting of the Model TAP-G3 device at any convenient location.
C. The display on the front of the Model TAP-G3 device allows visual monitoring of the nitrogen concentration in the fire sprinkler piping and the device status. The display also includes five (5) pushbutton switches for device control.
1.4 MAIN Screen. See Figure 2. The MAIN screen is the primary display for users of the TRUE ADVANCED PURGE Model TAP-G3 device.

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WARNING

The Model TAP-G3 device contains NO user-serviceable adjustments or parts inside the enclosure. Users should NOT open the enclosure door at any time. Only factory-qualified technicians should use the factory-supplied keys to open the enclosure door. Read and observe the DANGER message below.

---

DANGER

RISK OF ELECTROCUTION

Voltages and currents associated with the Model TAP-G3 device are LETHAL. Follow all instructions provided. Work involving power MUST be performed ONLY by qualified individuals. All required precautions to prevent contact with live electrical conductors and equipment MUST be taken. Failure to comply with these instructions is an immediate hazard with a likelihood of death or serious personal injury!

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Figure 2

Model TAP-G3 MAIN Screen

1.4.1 Current Time. Displays the current time programmed into the Model TAP-G3 device. The programmed time cannot be changed by the user (including standard-to-daylight and daylight-to-standard time). The displayed time is either the local time (if factory-set or programmed by a qualified technician at the time of commissioning) or Coordinated Universal Time (UTC). See Table 1 for conversions from UTC to USA time zones.

Table 1

Conversions From Coordinated Universal Time (UTC) To USA Local Time Zones

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<th>TIME ZONE</th>
<th>STANDARD TIME</th>
<th>DAYLIGHT TIME</th>
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<tbody>
<tr>
<td>EASTERN</td>
<td>UTC MINUS 5 HOURS</td>
<td>UTC MINUS 4 HOURS</td>
</tr>
<tr>
<td>CENTRAL</td>
<td>UTC MINUS 6 HOURS</td>
<td>UTC MINUS 5 HOURS</td>
</tr>
<tr>
<td>MOUNTAIN</td>
<td>UTC MINUS 7 HOURS</td>
<td>UTC MINUS 6 HOURS</td>
</tr>
<tr>
<td>PACIFIC</td>
<td>UTC MINUS 8 HOURS</td>
<td>UTC MINUS 7 HOURS</td>
</tr>
<tr>
<td>ALASKA</td>
<td>UTC MINUS 9 HOURS</td>
<td>UTC MINUS 8 HOURS</td>
</tr>
<tr>
<td>HAWAII</td>
<td>UTC MINUS 10 HOURS</td>
<td>N / A</td>
</tr>
</tbody>
</table>
1.4.2 Current Date. The current date is displayed in MM / DD / YYYY format.

1.4.3 Operating Mode Display. The Operating Mode Display indicates the current operating mode of the TAP-G3 device. See 2.2 for explanations of each operating mode.

1.4.4 Nitrogen Purity Display. The Nitrogen Purity Display indicates the purity of nitrogen present in the fire sprinkler pipe, as of the last measurement made by the TAP-G3 device. Normal air is approximately 78% nitrogen, so no reading less than 78% is expected. Maximum reading is 100%.

1.4.5 Purge Status. This area indicates the current Purge Mode status of the device. See 2.2.2 for an explanation of Purge Mode.

1.4.6 Function Buttons. Five (5) function buttons are provided to select various functions, depending on the screen being displayed.

1.4.7 Function Button Labels. Five (5) function button labels appear above the function keys. These labels indicate the function of the button immediately below the label.

1.4.7.1 (F1) NORMAL MODE Button – Operating this button places the Model TAP-G3 device into NORMAL mode. See 2.1.

1.4.7.2 (F2) PURGE MODE Button – Operating this button places the Model TAP-G3 device into PURGE mode. Placing the device into PURGE mode is part of system commissioning, and the time when PURGE mode begins is chosen as part of the commissioning process.

1.4.7.3 (F3) N2 Button – Operating this button initiates the NITROGEN PURITY SAMPLING sequence. See 2.4 C. The duration of NITROGEN PURITY SAMPLING during manual sampling is factory-set at five (5) minutes, but can be changed at commissioning, if necessary.

1.4.7.4 (F4) FAULTS Button – Operating this button changes the display from the MAIN screen to the FAULTS screen. See Section 3 for more information on FAULTS, the FAULTS Screen, and the function buttons that appear with the FAULTS screen.

1.4.7.5 (F5) SETUP Button – Operating this button changes the display to the PASSWORD REQUIRED FOR SETUP screen. Proceeding beyond this screen is necessary ONLY during system commissioning, or if any parameters require adjustment. Normal use of the Model TAP-G3 device does NOT require proceeding beyond the PASSWORD REQUIRED FOR SETUP screen, and does NOT require a password. If the PASSWORD REQUIRED FOR SETUP screen is reached, operate function button (F1) to return to the MAIN screen.

---

IMPORTANT

When multiple TAP-G3 devices are associated with a single NITROGEN-PAC™ system, no more than one (1) PURGE mode should be initiated at the same time. Refer to Model TAP-G3 device Installation, Commissioning, and Maintenance Manual P/N 33-TG3ICM-000 for additional information on PURGE sequencing.
2. OPERATING MODES

2.1 NORMAL Mode. The Model TAP-G3 device will be in NORMAL mode most of the time after 98% nitrogen purity is established in the piping. The device defaults to NORMAL mode upon power-up, and will automatically enter ACTIVE DRIFT CONTROL and NITROGEN PURITY SAMPLING mode at the programmed time each day. See 2.3 for more information on ACTIVE DRIFT CONTROL mode.

2.2 PURGE Mode. PURGE mode purges pressurized air from the sprinkler system piping, allowing the NITROGEN-PAC™ sprinkler corrosion inhibiting system to replace the air in the sprinkler system piping with 98% nitrogen. PURGE mode is manually activated with function button F2 on the MAIN screen. The PURGE mode sequence is:

2.2.1 The Model TAP-G3 device purges for a pre-determined time period. The factory-default period is 1435 minutes (23 hours 55 minutes). The MAIN screen displays PURGE ON, and also displays a countdown timer from the pre-determined time period to zero.

2.2.2 After this time period, the Model TAP-G3 device automatically enters NITROGEN PURITY SAMPLING mode for five (5) minutes, and then updates the MAIN screen nitrogen purity display.

2.2.3 If the displayed Nitrogen Purity value is LESS than the pre-determined Nitrogen Purity Threshold (factory-default of 98%), the device re-enters PURGE mode per 2.2.1.

2.2.4 If the displayed Nitrogen Purity value is GREATER THAN or EQUAL TO the pre-determined Nitrogen Purity Threshold (factory-default of 98%), the device enters NORMAL Mode (see 2.1).

2.2.5 If the cycle described in 2.2.1 through 2.2.3 repeats for 21 days and the displayed Nitrogen Purity value is still LESS than the pre-determined Nitrogen Purity Threshold (factory-default of 98%), the device shows a NITROGEN PURITY NOT MET fault. The display begins flashing red. See 3.2 for more information on this fault.
2.3 ACTIVE DRIFT CONTROL Mode. This mode occurs automatically once per day whether the Model TAP-G3 device is in NORMAL or PURGE mode. No user intervention is required to initiate ACTIVE DRIFT CONTROL, and user intervention is prevented during this mode’s sequence. The ACTIVE DRIFT CONTROL sequence is:

2.3.1 See Figure 5. At 12:00 midnight displayed Current Time, the Model TAP-G3 device enters ACTIVE DRIFT CONTROL mode. Note that all function button labels are blanked, indicating that the mode cannot be changed while ACTIVE DRIFT CONTROL is ongoing. Depending upon the previous mode, the screen display will be:

![Figure 5](ACTIVE DRIFT CONTROL Screens – 12:00 Midnight)

2.3.2 See Figure 6. At 12:50AM displayed Current Time, the Nitrogen Purity Display blanks, indicating the Model TAP-G3 device is completing the ACTIVE DRIFT CONTROL process. All function button labels remain blanked.

![Figure 6](ACTIVE DRIFT CONTROL Screens – 12:50 AM)
2.3.3 See Figure 7. At 1:00AM displayed Current Time, the Model TAP-G3 device enters NITROGEN PURITY SAMPLING mode, indicating the device is making a new measurement of the nitrogen purity in the sprinkler piping.

**Figure 7**

NITROGEN PURITY SAMPLING Screens – 1:00 AM

2.3.4 See Figure 8. At 1:05AM displayed Current Time, the Model TAP-G3 device returns to the previous mode. To prevent all possible conflicts with other modes, the function button labels remain blanked for a short period.

**Figure 8**

Previous MODE Screens – 1:05 AM

2.3.5 See Figure 9. At 1:10AM, all functionality of the previous mode returns.

**Figure 9**

Previous MODE Screens – 1:10 AM
2.4 NITROGEN PURITY SAMPLING Mode. See Figure 10. This mode initiates when:

   A. The Current Time is 1:00 AM. This is part of the ACTIVE DRIFT CONTROL sequence, and occurs automatically. See 2.3.3 and Figure 7. The duration of NITROGEN PURITY SAMPLING as part of ACTIVE DRIFT CONTROL is fixed at five (5) minutes.

   B. The Model TAP-G3 device is in PURGE mode, and the pre-determined purge time period (as shown on the MAIN screen) reaches zero. This sampling occurs automatically while in PURGE mode. See 2.2.2. The duration of NITROGEN PURITY SAMPLING during the PURGE sequence is factory-set at five (5) minutes, but can be changed at commissioning, if necessary.

   C. The “N2” function button (F3) is operated manually. The duration of NITROGEN PURITY SAMPLING during manual sampling is factory-set at five (5) minutes, but can be changed at commissioning, if necessary.

   ![NITROGEN PURITY SAMPLING Screen](image)
3. FAULTS. The TRUE ADVANCED PURGE Model TAP-G3 device monitors for four (4) different faults that can affect proper operation of the system, and provides a visual signal plus a relay contact operation to alert users that attention is required. The four faults are:

3.1 LOW PRESSURE Fault. This fault occurs when a pressure switch in the Model TAP-G3 device enclosure does not receive a minimum value of air or nitrogen pressure from the sprinkler system. Typical reasons for this fault are:
   A. A break or clog in the flexible tubing between the sprinkler system and the inlet port of the Model TAP-G3 device.
   B. An accumulation of water at a low point in the tubing or at the Model PVA-2 purge vent assembly.
   C. Failure at the pressure source (NITROGEN-PAC™ system). This will typically be accompanied by a low pressure signal from the preaction sprinkler system valve itself, or tripping of a dry-pipe sprinkler system. Any of these is a reason for service by a qualified technician who can diagnose and eliminate the reason for the fault.

3.2 NITROGEN PURITY NOT MET Fault. This fault occurs when the Model TAP-G3 device completes a 21-day long cycle in PURGE mode and the displayed Nitrogen Purity value is less than the pre-determined Nitrogen Purity Threshold (factory-default of 98%). This fault is a reason for service by a qualified technician who can diagnose and eliminate the reason for the fault. See 2.2 for more information on PURGE mode.

3.3 SENSOR COMM FAILURE Fault. This fault occurs when the programmable logic controller (PLC) loses communication with the gas sensor in the Model TAP-G3 device. This fault is a reason for service by a qualified technician who can diagnose and eliminate the reason for the fault.

3.4 LOW NITROGEN PURITY Fault. This fault occurs if the displayed Nitrogen Purity value in the sprinkler system piping falls below the pre-determined Nitrogen Purity Threshold (factory-default of 96% in NORMAL mode.). The appearance of this fault switches the device to NORMAL mode. This fault is a reason for service by a qualified technician who can diagnose and eliminate the reason for the fault.

3.5 Local Signaling. All faults cause the display background to flash RED on and off, regardless of the screen currently being displayed

3.6 Remote Signaling through Contact Operation. The Model TAP-G3 device contains two (2) single-pole double-throw (SPDT) volt-free contacts for remote signaling of faults.

3.6.1 Contact K1. The volt-free SPDT contacts labeled K1 will transfer on any of three (3) faults:
   A. The LOW PRESSURE fault – see 3.1.
   B. The NITROGEN PURITY NOT MET fault – see 3.2.
   C. The SENSOR COMM FAILURE fault – see 3.3.
3.6.2 Contact K2. The volt-free SPDT contacts labeled K2 will transfer on LOW NITROGEN PURITY fault – see 3.4.

3.7 FAULTS Screen. The FAULTS screen displays the current status of each fault described in 3.1 through 3.4, and is equipped with a CLEAR function button.

3.7.1 Accessing The FAULTS Screen. See Figure 11. To access the FAULTS screen, operate function button F4 (labeled FAULTS) on the MAIN screen. The FAULTS screen (see Figure 12) will appear.

3.7.2 Clearing FAULTS. All faults remain active until manually cleared. To clear a fault:
   A. Ensure that the reason for the fault has been properly diagnosed and eliminated by a qualified technician.
   B. See Figure 13. Operate function button F4 (labeled CLEAR). The appearance of the display should return to that shown in Figure 12.

3.7.3 Returning To The MAIN Screen. See Figures 12 or 13. From either display, operate function button F1 (labeled <<). The screen will return to the MAIN screen.
4. SETUP. The MAIN screen of the TRUE ADVANCED PURGE Model TAP-G3 device permits access by authorized personnel to the screens needed for setup and commissioning of the device. The purpose of this manual section is to guide users who inadvertently enter the pre-password SETUP screens.

Use of the Model TAP-G3 device does NOT require access to the SETUP screens. Access to SETUP screens is only permitted after entry of a password. No password is required to use the Model TAP-G3 device once setup and commissioning is complete.

4.1 PASSWORD REQUIRED FOR SETUP Screen. See Figure 14. This screen displays the identification header PASSWORD REQUIRED FOR SETUP, and a scrolling reminder reading Authorized Personnel ONLY! In the event this screen is inadvertently accessed, operate function button F1 (labeled <<) to return to the MAIN screen.

![Figure 14](image)

4.2 PASSWORD Screen. See Figure 15. In the event this screen is inadvertently accessed, operate function button F1 (labeled ESC), followed by operating function button F1 (now labeled << on the PASSWORD REQUIRED FOR SETUP screen) to return to the MAIN screen.

![Figure 15](image)
5. OPERATING PARAMETERS. See Table 2. This table indicates the standard factory-default operating parameters of the Model TAP-G3 device, and also indicates which of these parameters may be changed by a qualified technician during setup and commissioning. In the event any of the parameters are in fact changed, the new values should be recorded in the column indicated. Table 2

<table>
<thead>
<tr>
<th>MODE</th>
<th>PARAMETER</th>
<th>FACTORY DEFAULT</th>
<th>IS PARAMETER ADJUSTABLE?</th>
<th>PARAMETER CHANGED TO</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>PURGE</td>
<td>PURGE DURATION</td>
<td>1435 MINUTES</td>
<td>YES</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>SAMPLE DURATION</td>
<td>5 MINUTES</td>
<td>YES</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PURGE THRESHOLD</td>
<td>98%</td>
<td>YES</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PURGE CYCLES</td>
<td>21</td>
<td>NO</td>
<td>N / A</td>
<td></td>
</tr>
<tr>
<td>NITROGEN PURITY (MANUAL)</td>
<td>SAMPLE DURATION</td>
<td>5 MINUTES</td>
<td>YES</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FAULT THRESHOLD</td>
<td>96%</td>
<td>YES</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>LOW PRESSURE</td>
<td>DELAY</td>
<td>5 MINUTES</td>
<td>YES</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>FAULT ACTIVE DURATION</td>
<td>5 SECONDS</td>
<td>YES</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MINIMUM PRESSURE THRESHOLD</td>
<td>5 PSIG</td>
<td>NO</td>
<td>N / A</td>
<td>5</td>
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<tr>
<td>ACTIVE DRIFT CONTROL</td>
<td>OCCURS AT:</td>
<td>12:00 MIDNIGHT</td>
<td>NO</td>
<td>N / A</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>CHAMBER OPEN DURATION</td>
<td>50 MINUTES</td>
<td>NO</td>
<td>N / A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CHAMBER SAMPLE DURATION</td>
<td>10 MINUTES</td>
<td>NO</td>
<td>N / A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SPRINKLER SYSTEM SAMPLE DURATION</td>
<td>5 MINUTES</td>
<td>NO</td>
<td>N / A</td>
<td></td>
</tr>
</tbody>
</table>

NOTE 1 – 1435 minutes = 23 hours 55 minutes
NOTE 2 – 96% chosen as factory-default to prevent unwarranted fault signals from minor variations in nitrogen concentration mainly due to temperature fluctuations.
NOTE 3 – The TAP-G3 device waits for factory-set 5 minutes after beginning pressure sensing to allow measured pressure to stabilize.
NOTE 4 – The pressure must remain at or below the minimum pressure threshold for the chosen duration for the FAULT signal to be activated.
NOTE 5 – Normal supervisory pressure in preaction and dry-pipe sprinkler systems can be from 13 to 40 PSIG. Model TAP-G3 setting avoids unwarranted fault signals from normal pressure fluctuation.
NOTE 6 – Parameters chosen for optimum ACTIVE DRIFT CONTROL performance.

For additional information on operating parameters, refer to TRUE ADVANCED PURGE Model TAP-G3 device Installation, Commissioning and Maintenance Manual P/N 33-TG3MAN-000.