



**Product Alert - Detector Electronics Corporation
- LS2000 Open Path Combustible Gas Detector**

January 19, 2024

Type of Notification: Performance Related Concern

FM Approvals has been made aware of a potential safety risk pertaining to the LON version of the LS2000 Open Path Combustible Gas Detector, Models: LS2000Sx14xxxxR and LS2000Sx14xxxxRM. There have been reported instances of these detectors being non-responsive.

Company Identity: Detector Electronics Corporation
Address: 6901 West 110th Street, Minneapolis, MN 55438 USA
Contact Information: Phone: +1 800-765-3473 extension 3 or +1 952-941-5665 extension 3
Email: techsupport.det-tronics@carrier.com

Product Identity: LS2000Sx14xxxxR and LS2000Sx14xxxxRM
Description: Open Path Combustible Gas Detector
Make/Model: LS2000

Nameplate Data: Explosionproof for installation in Class I, Division 1, Groups B, C, D T4, Ta = -50°C to +75°C; dust-ignition proof Class II/III, Division 1, Groups E, F, G T4, Ta = -50°C to +75°C hazardous (classified) indoor/outdoor locations ANSI/ISA-12.13.04 and FM 6325.

FM Approval Status: FM Approved

Hazard Involved: The products in question have a potential safety risk pertaining to the LON version of the LS2000 Open Path Combustible Gas Detectors. Under certain conditions the equipment can enter a non-responsive state while appearing to be in normal condition. The Specific model serial numbers and label serial numbers are listed in the table below:

If you suspect you are in possession of one of the referenced LS2000 Open Path Combustible Gas Detectors bearing the FM Approvals certification mark, please follow the instructions in the attached bulletin.

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Affected units:

Label Serial	Module SN	Label Serial	Module SN	Label Serial	Module SN	Label Serial	Module SN
16APR010366	32189	17FEB003512	35496	17APR012572	36762	19DEC040097	47347
16MAY014874	32796	16DEC037135	34934	17APR012843	36768	19DEC039703	47310
16MAY012803	32581	16DEC039535	34922	17JUN017348	36792	19DEC039843	47326
16MAY014425	32562	16DEC040692	34933	17JUN017364	37144	19DEC039259	47314
16MAY013263	32593	16DEC040696	34977	17MAY016476	36730	20JAN000347	47508
16MAY013611	32727	16NOV036814	34767	17JUN017593	36764	20FEB003122	47979
16JUN018047	33162	16NOV036818	34930	17JUN018020	37157	20FEB002679	47682
16AUG023334	33538	16NOV036483	34702	17JUN018398	37185	20JAN001936	47665
16AUG024571	33568	16NOV036503	34775	17JUN018411	37018	20MAR005296	48479
16AUG024805	33712	16NOV036801	34791	17APR013582	36881	20SEP022907	50349
16SEP028034	33789	17JAN001923	35392	17JUN020319	37326	20DEC028122	51222
16SEP029039	33788	17MAR006353	35909	17MAY015425	36895	21JUL024142	53012
16SEP028559	33775	17MAR006661	35878	17JUN018634	37035	21DEC036268	53859
16OCT032094	34234	17MAR006662	35875	17APR013576	36880	22MAR106664	55157
16OCT032168	34479	17MAR008034	35961	17JUN018825	37028	16JUN018605	33155
16NOV033774	34214	17MAR008042	35997	17JUN019126	37050	16NOV036520	34710
16NOV034773	34212	17MAR008255	36118	17JUN019129	37041	16NOV036514	34712
16DEC037674	34715	17MAR008258	36120	17JUN019131	36780	16NOV036502	34722
16DEC039760	34766	17MAR008276	36210	17JUN019732	37336	16NOV036815	34764
17JAN000438	35326	17MAR009770	34978	17JUN020314	37311	17OCT031867	38973
17JAN000441	35328	17FEB005232	35869	17APR013436	36827	22MAR005729	54901
17JAN000584	35311	17APR010043	36212	17OCT032030	38935	22MAR005735	55207
17JAN002181	34761	17APR012270	36331	17SEP030868	38958	22MAR005752	55240
17JAN002275	35443	17APR012570	36124	17SEP030028	38718	22MAY011246	55159
17JAN002277	35470	17APR011261	36296	17SEP030067	38731	22JUN012215	55195
17JAN002279	35458	17APR011971	36384	17SEP031226	38741	22MAY011466	55199
17JAN002281	35456	17MAR006973	35939	17SEP029327	39136	22MAR005736	55205
17JAN002283	35467	17APR013664	36716	17OCT032578	39131	22MAY011462	55206
17JAN002327	35473	17APR013666	36706	17NOV036456	39198	22MAR106532	55180
17JAN002517	35478	17APR012842	36759	17SEP029324	38561	22APR007537	55187
17JAN002520	35487	17APR012847	36750	17SEP028892	38544	22APR007540	55190
17JAN002523	35486	17JUN017312	36782	19DEC039491	47094	22APR007544	55192
17FEB003235	35805	17JUN017343	37112	19DEC040410	47507		



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SAFETY NOTICE

SAFETY NOTICE

#33-1010-1.0

Date: October 30, 2023
To: Valued Customers and End Users
From: Lu Wang, Managing Director
Subject: SAFETY NOTICE – Model LS2000 LON Version Open Path Gas Detectors

This Safety Notice communicates a potential risk that certain **LS2000 LON Version Gas Detector** products may not be performing their intended gas detection functions.

Our records indicate that your organization may have purchased one or more **LON Versions of the LS2000Sx14**. Carefully review this Safety Notice and take the applicable next steps detailed below.

Detailed Description

The **LS2000 Gas Detectors** are a line of optical open path gas detectors comprised of a transmitter and receiver that are designed to provide continuous monitoring of the atmosphere in industrial applications for potentially explosive gas leaks.

The **LS2000 LON Versions (numeric code 14)** are specifically designed to connect to a Det-Tronics EQP control system. There have been reported instances of these detectors being non-responsive. The root cause has been traced to a built-in firmware feature that automatically sets the receiver Gain based on installation conditions.

Affected Products

Below is the list of products that are affected and are within the scope of the *Required Actions*.
 LS2000 LON version model and part numbers:

Models	LS2000Sx14xxxnR	LS2000Sx14xxxnRM
Part numbers	011758-nnn	011759-nnn

Where 'x' denotes a letter, and 'n' denotes a number.



Implemented Actions

Det-Tronics is actively working on permanent corrective measures, which are currently being validated. Further communications on these corrective measures will be provided as soon as available.

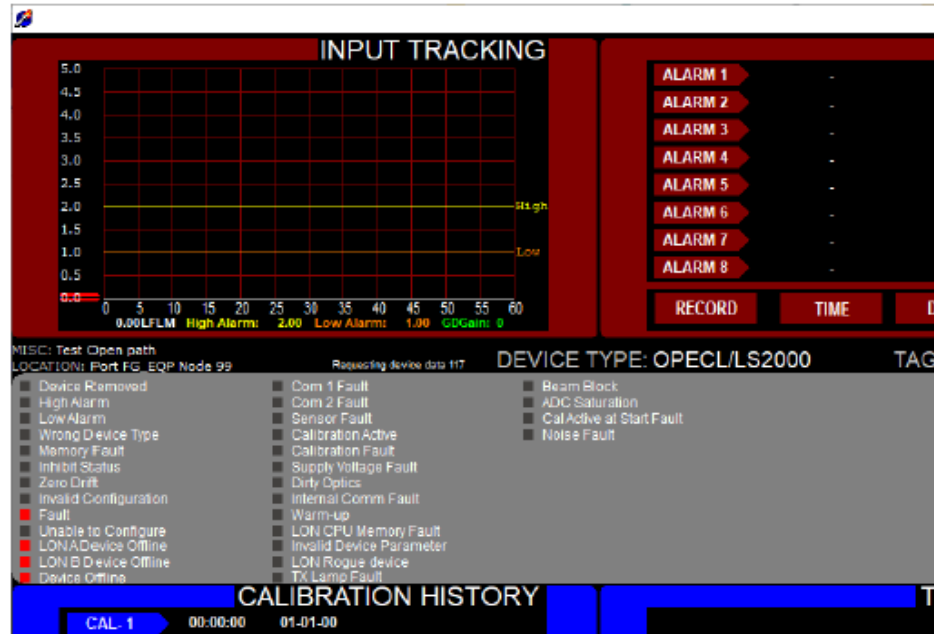
In the meantime, it is important that you follow the *Required Actions* to address the potential risk of having a non-responsive LS2000 LON version product within ten (10) days from the date of this notice.

Required Actions

1. Confirm the number of LS2000 LON versions you have installed.
2. For each LS2000 LON unit, verify its Gain. This can be accomplished in one of 3 ways:
Method 1: via the S3 software,
Method 2: via the EQP Panel/UI (v 7.49 and above), or
Method 3: via the HART connection to the receiver in the field.

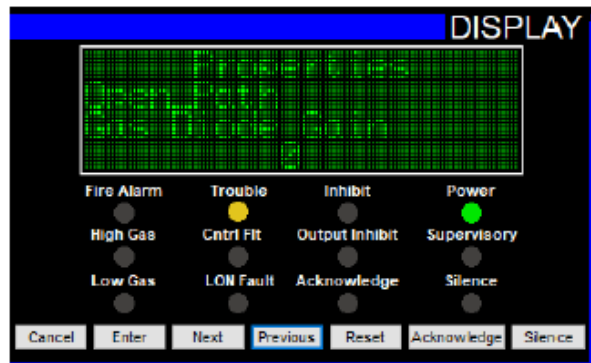
Method 1: Evaluation via S3 software:

A PC with S3 software connected to the EQP controller can also be used to verify the gain of each LS2000 LON version from the point display, where the gain is indicated as 'GDGain' in green text under the input tracking graph as shown in the following figure:



Method 2: EQP Controller faceplate access to 'Gas Diode Gain':

- a. Press 'Enter' on the controller faceplate.
- b. Press 'Next' to move the cursor '>' to 'Display Devices'.
- c. Press 'Enter'.
- d. Press 'Next' to scroll through the list of EQP nodes on the system. When 'Open Path' is displayed press 'Enter'.
- e. Then press 'Next' 72 times or press 'Previous' 11 times to see the 'Properties' screen as shown in the following figure:



Method 3: HART connection to the receiver in the field:

- a. Connect a HART handheld device to the HART connection pins on the terminal board in the receiver.
 - b. From the 'Detector Setup' menu navigate to the 'Sensor Setup' menu.
 - c. Item 5 on the Sensor Setup menu is the Gain.
3. If an LS2000 is found to have a 'Gas Diode / GD Gain' of 2, 3 or 4 using Method 1 or 2, or to have a 'Gain' of 1, 2 or 5 using Method 3, then the gas response should be checked with the "optical test film test" and the "beam block test" per the Det-Tronics LS2000 Instructions manual (95-8714). This test should be repeated on a monthly basis until corrective measures are implemented. For units with higher Gain values, no further action is required. If a unit is found to be non-responsive, then it should be power cycled, and the response tests repeated.
 4. Please send a reply that you have carefully reviewed this Safety Notice and will take the *Required Actions* using the [Reply to Det-Tronics](#) form included at the end of this notice.
 5. If you are a channel partner or distributor, communicate the contents of this Safety Notice to end users to whom you sold potentially affected LS2000 LON version products.



Contact Information

We thank you for your attention to this matter. If there are any questions regarding this Safety Notice, please use the following contact information:

Phone: +1 800-765-3473 extension 3 or +1 952-941-5665 extension 3
Email: techsupport.det-tronics@carrier.com
Website: det-tronics.com



REPLY TO DET-TRONICS (Customer Action Required)

In order to ensure that our mutual records accurately reflect that the *Required Actions* are understood and performed, please complete the following steps:

Fill in the information and answer all questions below. Submit the completed document within **two weeks** of this letter to Det-Tronics Technical Support (techsupport.det-tronics@carrier.com).

Please complete the following information:

Date:			
Company Name:			
Invoicing Address:			
Name:			
Job Title:			
Phone:		Email:	

Please use the attached data collection sheet to provide information on the installed LS2000 LON version products that will assist with upcoming planned mitigations.

I hereby confirm that (check the one that applies):

<input type="checkbox"/>	As an end user, I have received, read and understand the contents of this Safety Notice 33-1010 and will flow down the Safety Notice to appropriate internal personnel and departments who will ensure that the required actions are performed.
<input type="checkbox"/>	As a distributor or channel partner, I will communicate this Safety Notice to my potentially affected end user customers and ensure that the required actions are performed.

Full Name	Date	Signature

