



## Point IR detection for solvents

2108N5002 ATEX Searchpoint Optima Z comprising:  
2108B2003 ATEX Ethylene version Searchpoint Optima Plus and  
2108D3232 Ethanol/Ethyl Acetate calibration 0-100%LEL (EN60079-20-1)

2108N5102 UL Searchpoint Optima Z comprising:  
2108B2103 UL Ethylene version Searchpoint Optima Plus and  
2108D3232 Ethanol/Ethyl Acetate calibration 0-100% LEL (EN60079-20-1)

## Application

- For the detection of Ethanol, Ethyl Acetate, and any mixture of these two solvents; in the range 0 to 100% LEL. LEL values are those as defined in EN60079-20-1
- Cross sensitivities to other primary target solvents
- For use in sampling system with flow rate of 1 to 2 L/min

## Calibration

- This calibration enables cross calibration with Propane. Factory calibration is performed to determine the reading in % LEL that will be generated when 1% V/V Propane is applied. The reading is marked on the unit.
- If required, user calibration should be in accordance with the operating instructions. 1% V/V Propane must be used to perform the calibration. The span gas concentration must be entered as the % LEL value which can be found on the label of the unit.

## Cross Sensitivities

Typical Cross Sensitivities	
Gas	Relative Response
Acetone	0.56
1-Butanol	0.57
1-Butyl Acetate	0.64
Ethanol	1.18
Ethyl Acetate	0.91
Ethylene	0.51
n-Hexane	0.64
iso-Propanol	0.79
MEK (2-Butanone)	0.56
Mineral Spirit 60/95	0.61
o-Xylene	0.80
Propane	0.95
Toluene	0.74

Contact Honeywell Analytics for other solvent cross sensitivities

Find out more

[sales@norrscope.com](mailto:sales@norrscope.com)

## Overview

Solvents are used worldwide in many industries. Detecting of solvent levels is undertaken for both safety (flammable and toxic) and process control (optimisation). Historically, OPTIMA PLUS and sampling systems have been supplied into the print industry and some into the conversion (coatings industry).

The market has evolved with the primary requirements being tighter, relative response between solvent types and mixes enabling more cost effective selection of solvents and

thereby maximising customer process efficiency whilst improving safety.

This product addresses the detection of these alternate solvent mixes.

This is a customisation of the Ethylene Optima Plus unit and the specification of that product is taken as a base. All points in the Ethylene Optima Plus specification are applicable. The unit is default calibrated on propane for the detection of Ethanol/Ethyl Acetate mixtures.

### Specification

Standard Ethylene unit: 2108B2003 Ethylene Searchpoint Optima Plus - ATEX Approved or 2108B2103 Ethylene Searchpoint Optima Plus UL approved (see specification below in black).

**Plus calibration - part number: 2108D3232 calibration for Ethanol, Ethyl Acetate, and any mixture of these two solvents; in the range 0 to 100% LEL. (see below in bold). See table for other solvent cross sensitivities.**

### Output

Measuring Range	4-20mA sink or source, (Default current source)
Inhibit	1-3mA (Default 2mA)
Warning	0-6mA (Default 3mA *)
Fault	0 mA
Over Range	20-21.5mA (Default 21mA)
Digital Output	Optional Multidrop Modbus RS485 (via DVC/DX100(m))
Material	316 stainless steel
Weight	1.6kg

### Accuracy

Optima PLUS (ET)	Baseline < ±2% LEL, 50% FSD <±3% LEL
Repeatability	< ±2% LEL at LEL 50% FSD
Linearity	< 5% FSD
Calibration Curve	<b>&lt; +/-5%LEL or +/-10% of reading whichever is greater</b> <b>For mixtures of Ethanol and Ethyl Acetate ranging from 0 to 60% Ethanol with the balance Ethyl Acetate in the range 0-100% LEL to EN60079-20-1</b>
Cross Sensitivities (refer to table)	<b>+/-7%LEL or +/-15% of reading which ever is greater, for other solvents up to 80 %LEL, after applying cross sensitivity factors</b>
Response Time	<b>T50 &lt; 6 seconds, T90 &lt; 8 seconds (for sampling system, flow rate 2 L/min)</b>
Operational and Certified	-40°C to +65°C temperature range
Drift with Time and Over Temperature Range	-40°C to + 65°C Baseline < ±2% LEL 50% FSD < ±4% LEL
Drift with Pressure	0.1% (of reading) per mbar
Power Supply	18-32V (24V nom) DC, < 4.5W max
Environmental Protection	IP 66/67
Diagnostics (and Re-calibration)	Via certified Hand Held Interrogator
Safety Approvals	ATEX: BAS99ATEX2259X II 2 GD Ex d IIC Gb Ex tb IIIC Db T96°C (Tamb -40°C to +65°C) T86°C (Tamb -40°C to +55°C) IP 66/67 Vmax=32Vdc Pmax=8W UL / CSA Class 1, Div 1, groups B, C, and D (-40°C to +65°C) GOST and IECEx
Performance Approvals	EN60079-29-1, BVS 03 ATEX G 016 X, CSA C22.2 152.
EMC Compliance	EN 50270
Software	EN 50271

\* Note for ATEX compliance the warning value should not be set between 3 and 5mA

### Please Note:

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