

PRODUCT DATASHEET

AutroGuard® V-430 multicriteria protector series

Features

- MultiAngle/MultiWavelength optical smoke sensing technology
- Rate of Rise Heat sensing technology
- 3 certified smoke sensitivity classes
- 6 certified Heat Response Categories
- Integrated sounder (optional)
- Integrated visual alarm device (VAD) (optional)
- Occupies only one address even with visual alarm device and sounder
- 360° visible dual color LED indicator (red/yellow)
- Ultra-low current consumption
- Automatic addressing in the base
- Patented rotatable bayonet ring for easy and reliable mounting
- Integrated short circuit isolator in the base
- Integrated tag holder on the base

Application/Description

AutroGuard® V-430 multicriteria protector provides a new generation technology that simplifies installation and commissioning, and increases fire safety.

Extreme sensor dynamics provide reliable detection that has greatly reduced detection time and nuisance alarms, and expanded the use to cover even more application areas. The type of operation is configurable to Heat, Optical or Multisensor, covering several applications.

It has a wide range of fire safety features included in one single device, providing significant reduction of wiring and installation costs - and a cleaner look.

The self-sensing technology ensures that the protector is as reliable as when it left the factory for its entire life cycle.



DYFI^{3D} technology

AutroGuard® utilizes *DYFI^{3D}* technology; MultiAngle/ MultiWavelength detection with advanced algorithms analyze the unique signatures for each type of fire and nuisance source in a 3D space, enabling the protector to accurately distinguish between real fires and nuisance alarm sources.

SelfVerify®

The SelfVerify® system function provides a calibrated and automatic self-test every 24 hours. It tests the signal path to the system panel, alarm devices and output units. In this way, the self-test ensures that the protector is able to initiate an alarm when it should, and at the correct sensitivity level according to EN 54 part 5 and 7 throughout its lifetime.

Additionally, an advanced Pulse Response Signal analysis is run every other second, verifying 100 % of the components in the signal chain and 99% of the components in the protector.

Cover Detection

As an add-on feature, AutroGuard® V-430 provides Cover Detection. We use ultraviolet light to detect if the protector is covered by a dust cap or any other object, and a fault message will appear. The feature can be turned off during maintenance.

Integrated sounder (not available for UL variants)

AutroGuard® can be delivered with an integrated EN 54-3 approved sounder (optional). Sound patterns and sound levels are configurable, with a maximum sound output of 93 dBA at 1 m range.

Integrated Visual Alarm Device (VAD)

AutroGuard® can be delivered with an EN 54-23 compliant integrated Visual Alarm Device (VAD) (optional). It is available in white or red color, and is configurable to 4 different intensities. The flash rate is also configurable (1 or 2 sec.)

Operation classes

AutroGuard® can be set to three different *Operation Classes*, allowing you to choose the protector’s detection method and calculation.

| Operation class | Description |
|-----------------|---------------------------------------------------------------------|
| Multi | Optical and heat detection (see Heat Response Categories (EN 54-5)) |
| Heat only | Thermal detection only (see Heat Response Categories EN 54-5) |
| Smoke only | Optical detection only |

Sensitivity classes

AutroGuard® can be programmed to three different sensitivity classes.

| Sensitivity class | Application |
|-------------------|---------------------------------------------------------------------|
| High | Clean environments, for example laboratories, data rooms etc. |
| Medium | Normal environments, for example offices and hospitals etc. |
| Low | Industrial environments, for example, factories and warehouses etc. |

Heat response categories

AutroGuard® can be set to six different heat response categories (EN 54-5).

| Category | Typical application temperature °C | Maximum application temperature °C | Minimum static response temperature °C | Maximum static response temperature °C |
|----------|------------------------------------|------------------------------------|----------------------------------------|----------------------------------------|
| A1 | 25 | 50 | 54 | 65 |
| A1S | 25 | 50 | 54 | 65 |
| A1R | 25 | 50 | 54 | 65 |
| A2S | 25 | 50 | 54 | 70 |
| B | 40 | 65 | 69 | 85 |
| C* | 55 | 80 | 84 | 100 |

*Applies to heat only

Technical specifications

| | | |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Dimensions | See "Dimensions and outlines" | |
| Weight | 127 g (172 g including base) | |
| Housing material | PC ABS, flammability classification UL94 V-0 | |
| Colour | White: RAL9010 Black: RAL9005 Customized colours available on request. | |
| Ingress protection | IP44D (IP55 when used with conduit box) | |
| Current consumption base - Average | 60 µA | |
| Current consumption protector - Average | 60 µA | |
| Current consumption – Normal (base + protector) | 120 µA | |
| Current consumption - alarm indicator (Red LED indicator ON) | 1,8 mA | |
| Current consumption - fault indicator (Yellow LED indicator ON) | 2.3 mA | |
| Quiescent Current Sounder | 160µA (+ 120µA for protector and base) | |
| Quiescent Current VAD | 320µA (+ 120µA for protector and base) | |
| Quiescent Current Sounder + VAD | 360µA (+ 120µA for protector and base) | |
| Minimum and maximum rated operating voltage | 10,0V - 26,0V for protector base 18,0V - 26,0V for protector base when add-on boards (VAD/Sounder) are mounted on protector | |
| Rated operating voltage (applies to UL variant) | 24,0V for protector | |
| Average current consumption alarm | 1,9 mA (the alarm current is the quiescent current + LED indicator current) | |
| Average current consumption with external LED | 5,40 mA | |
| Sensitivity (applies to UL variant) | 2.16% ± 0.54% %/ft obscuration | |
| Heat detector spacing (applies to UL variant) | 30 x 30 ft | |
| Protector base | V-100 Standard base for protector series V-430 V-110 standard base with SIL2 approval, with remote LED output for protector series V-530 V-120 EX base with SIL2 approval, without remote LED output for protector series V-530 | |
| System compatibility | <ul style="list-style-type: none"> • V-430/V-530: AutoSafe system version 4.11 or newer • System version 4.11.3 or newer is required for variants with integrated alarm devices. • AutoGuard Protectors require AutoSafe loop panel: version 1.6 or newer • AutoGuard Protectors require AutoPrime version 2.2.0 • Loop Driver Module BSD-310/BSD-311 revision 7 or newer | |
| Operating temperature for EN54 variants | -30 to +70 °C (+80 °C when configured to heat detection only) | |
| Operating temperature for UL variants | 0 to +38 °C | |
| Storage temperature | Maximum 85 °C | |
| Operating humidity | 10 % - 95 % RH (non-condensing) | |
| Cable requirements | Minimum 0.14 mm ² / AWG26 Maximum 2.5 mm ² / AWG14 | |
| Country of origin | Norway | |
| EN 54 approval | Heat | EN 54-5:2017 |
| | Optical smoke | EN 54-7:2018 |
| | Multisensor | EN 54-29:2015 |
| | Short circuit isolator (Base) | EN 54-17:2005 |
| Maritime approval (M variants) | MED B | |
| UL approval (UL variants are not EN54 approved) | Smoke and Multi: UL 268, ULCS529 Heat (only Heat Response Category A1 is UL approved): UL 521, ULC S530 | |
| For details on certifications, see Autronica's product web. | | |

Technical specifications, integrated visual alarm device (VAD)

| VAD colour | VAD intensity | Current consumption VAD 0,5Hz (LED indicator not incl) | Current consumption VAD 1Hz (LED indicator not incl) | Description |
|------------|-------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| White | High Intensity: C-3-12 | 21,0 mA | - | At a given mounting height, the <i>Coverage Volume</i> of a VAD is defined by the diameter of the coverage, given in meters. <i>Example:</i> C-3-12 corresponds to a ceiling-mounted device giving a coverage cylindrical volume of 12 m at 3 m height. For a white VAD, high intensity is to be configured. |
| | Medium Intensity: C-3-9 | 13,8 mA | - | |
| | Low Intensity: C-3-6 | 10,6 mA | 20,8mA | |
| | Open Class O-2,5-4 (specified at 2.5 m height) | 4.8 mA | 8,9mA | |
| Red | High Intensity: C-3-8 | 19.7 mA | - | |
| | Low Intensity: C-3-5 | 12.8 mA | - | |
| | Open Class O-2,5-4 (specified at 2.5 m height) | 8.5 mA | 16,6mA | |

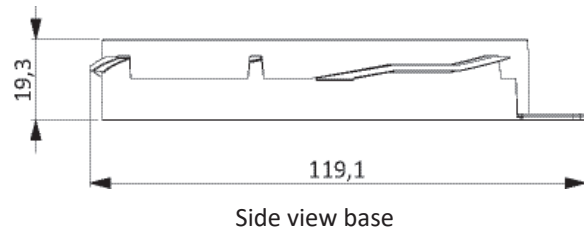
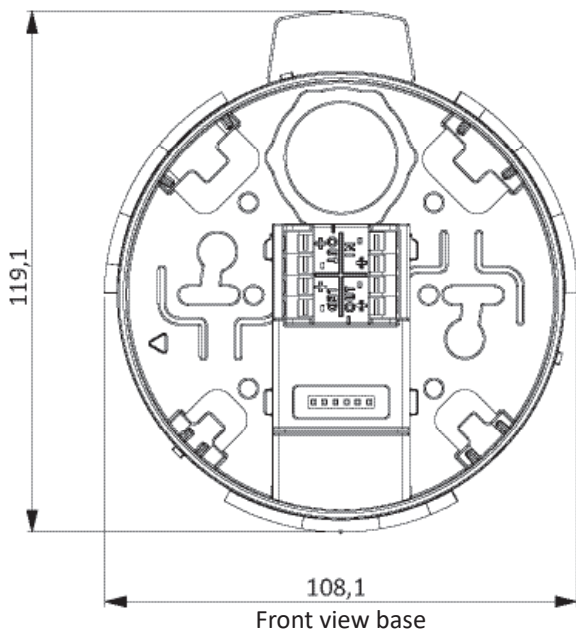
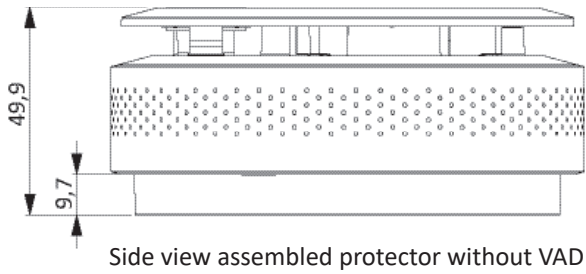
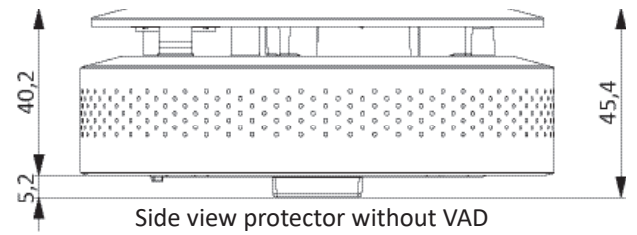
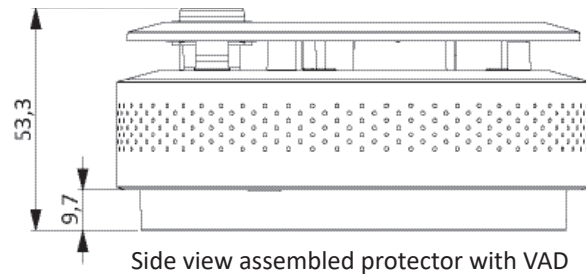
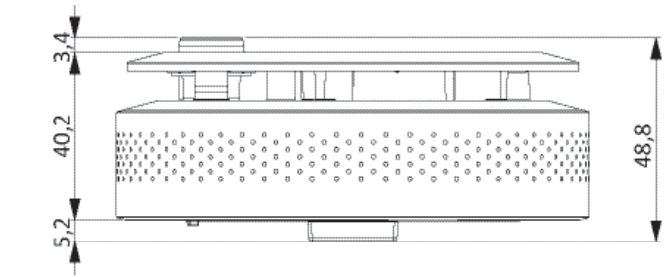
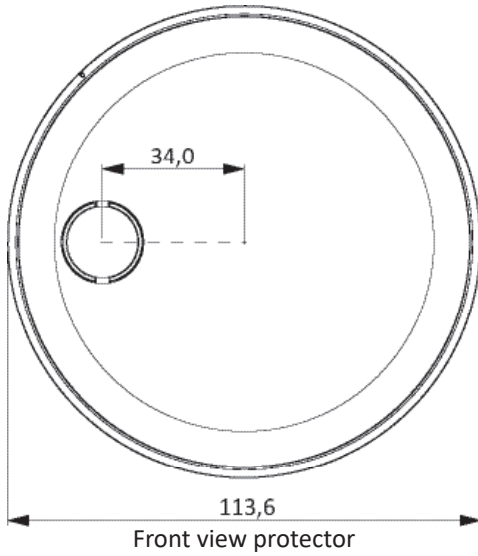
Technical specifications, integrated visual alarm device (VAD) and sounder

| Technical specifications INTEGRATED VAD + Sounder | | | | | | |
|---------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------|--------|--------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VAD colour | VAD intensity | Current Consumption VAD + Sounder (LED indicator NOT included) 0,5Hz | | Current Consumption VAD + Sounder (LED indicator NOT included) 1Hz | | Description |
| White | High Intensity: C-3-12 | 23,3mA | 26,9mA | - | - | At a given mounting height, the <i>Coverage Volume</i> of a VAD is defined by the diameter of the coverage, given in meters. <i>Example:</i> C-3-12 corresponds to a ceiling-mounted device giving a coverage cylindrical volume of 12 m at 3 m height. For a white VAD, high intensity is to be configured. |
| | Medium Intensity: C-3-9 | 16,1mA | 19,7mA | - | - | |
| | Low Intensity: C-3-6 | 12,9mA | 16,4mA | 23,1mA | 26,7mA | |
| | Open Class O-2,5-4 (specified at 2.5 m height) | 7,1mA | 10,6mA | 11,2 mA | 14,8 mA | |
| Red | High Intensity: C-3-8 | 22,0mA | 25,5mA | - | - | |
| | Low Intensity: C-3-5 | 15,1mA | 18,6mA | - | - | |
| | Open Class O-2,5-4 (specified at 2.5 m height) | 10,8mA | 14,3mA | 18,9mA | 22,4mA | |

Technical specifications, integrated sounder (FAD)

| | |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sound pressure (dB @ 1m) | High volume - maximum: 93 dBA @ 1 m range |
| Current consumption, sounder | HIGH VOLUME: 6,25mA (incl. 120µA for protector and base) |
| | LOW VOLUME: 2,63mA (incl. 120µA for protector and base) |
| Quiescent Current | 160µA (+ 120µA for protector and base) |
| Sound patterns | 16 standard tone types/frequencies and corresponding ringing patterns are available. In addition, ringing patterns for the standard tone types/frequencies can be configured to meet other user requirements. |

Dimensions and outlines (in mm)



Ordering information

Use the following matrix in order to find the correct part number. The *example* below shows the type key for a marine certified V-430 including Cover Detection & SelfVerify, integrated sounder and integrated white VAD.

* Sounder is not available for UL variants.

| Model | Description | | | | | | | | | | | | | | |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------------------------|-------|-------------------|----|--------------------------------------------------------------|------|--------------------------------------------------------------|------|------------------------------------------------------------|--------|---------------------------------------------------------------------------|--------|-------------------------------------------------------------------------|
| V-430 | AutoGuard® Multicriteria protector | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Type</th> <th>Extra feature/alarm method</th> </tr> </thead> <tbody> <tr> <td>Blank</td> <td>No extra feature</td> </tr> <tr> <td>S</td> <td>Sounder (requires AutoSafe system version 4.11.2 or later) *</td> </tr> <tr> <td>VADW</td> <td>White VAD (requires AutoSafe system version 4.11.2 or later)</td> </tr> <tr> <td>VADR</td> <td>Red VAD (requires AutoSafe system version 4.11.2 or later)</td> </tr> <tr> <td>S-VADW</td> <td>Sounder and white VAD (requires AutoSafe system version 4.11.2 or later)*</td> </tr> <tr> <td>S-VADR</td> <td>Sounder and red VAD (requires AutoSafe system version 4.11.2 or later)*</td> </tr> </tbody> </table> | Type | Extra feature/alarm method | Blank | No extra feature | S | Sounder (requires AutoSafe system version 4.11.2 or later) * | VADW | White VAD (requires AutoSafe system version 4.11.2 or later) | VADR | Red VAD (requires AutoSafe system version 4.11.2 or later) | S-VADW | Sounder and white VAD (requires AutoSafe system version 4.11.2 or later)* | S-VADR | Sounder and red VAD (requires AutoSafe system version 4.11.2 or later)* |
| Type | Extra feature/alarm method | | | | | | | | | | | | | | |
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| VADW | White VAD (requires AutoSafe system version 4.11.2 or later) | | | | | | | | | | | | | | |
| VADR | Red VAD (requires AutoSafe system version 4.11.2 or later) | | | | | | | | | | | | | | |
| S-VADW | Sounder and white VAD (requires AutoSafe system version 4.11.2 or later)* | | | | | | | | | | | | | | |
| S-VADR | Sounder and red VAD (requires AutoSafe system version 4.11.2 or later)* | | | | | | | | | | | | | | |
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| Blank | White RAL9010 | | | | | | | | | | | | | | |
| BK | Black RAL9005 (not available with Cover Detection) | | | | | | | | | | | | | | |
| CC | Custom (not available with Cover Detection) | | | | | | | | | | | | | | |
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| | | | | | | | | |
|-------|---|--------|---|--|---|----|---|---|
| V-430 | — | S-VADW | — | | / | CD | / | M |
|-------|---|--------|---|--|---|----|---|---|

Example

Part number; 116-V-430-S-VADW/CD/M

Accessories

| Part number | Description |
|--------------------|-------------------------------------------|
| 116-WAS-2000 | AS2000 loop diagnostic tool |
| 116-BWP-143A/AG | Air duct sampling unit |
| 116-BWP-143A-SS/AG | Air duct sampling unit in stainless steel |
| 116-BWP-100/20/AG | Conduit box 20 mm |
| 116-BWP-100/25/AG | Conduit box 25 mm |
| 116-WBJ-220 | AutoGuard removal tool |
| 116-WBJ-5/07 | Test gas |
| 116-WBJ-10 | Testfire smoke and heat sensor test tool |