

## 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<sup>3D</sup> technology

AutroGuard® utilizes *DYFI<sup>3D</sup>* 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® (optional)

The SelfVerify® system function (optional) 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.

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\* Autroprime systems support only Heat Response Category A1S.

## Cover Detection (optional)

AutroGuard® V-430 provides Cover Detection (optional). Infrared light is used 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 (optional)

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. Protector variants with integrated sounders are not certified according to UL-268, UL-464 and ULC-525.

## Integrated Visual Alarm Device (VAD) - (optional)

AutroGuard® can be delivered with a high efficiency EN 54-23 compliant integrated Visual Alarm Device (VAD) (optional). The VAD is available in white or red color, and is configurable to 4 different intensities. The flash rate is also configurable (1 or 2 sec.). Protector variants with integrated VADs are not certified according to UL-1638 and ULC-526.

## 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 (Heat Response Categories EN 54-5 apply) |
| Heat only       | Thermal detection only (Heat Response Categories EN 54-5 apply)     |
| 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. |

## EN54 Heat response categories

AutroGuard® can be set to six different heat response categories (certified according to 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                                    |

## UL Temperature Ratings

AutroGuard® Heat Response Category A1 is certified according to iht. UL521, fixed alarm temperature 57 °C/135 °F.

\* Autroprime systems support only Heat Response Category A1S.

\*\* For category C, smoke detection is not possible.

## Technical specifications

|                                                              |                               |                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions                                                   |                               | See "Dimensions and outlines"                                                                                                                                                                                                                                      |
| Weight                                                       |                               | 127 g (172 g including base)                                                                                                                                                                                                                                       |
| Housing material                                             |                               | PC ABS, flammability classification UL94 V-0                                                                                                                                                                                                                       |
| Color                                                        |                               | White: RAL9010<br>Black: RAL9005<br>Customized colors 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                                                                                                                                                                                                                                                             |
| Quiescent Current Sounder                                    |                               | 160 µA (+ 120 µA for protector and base)                                                                                                                                                                                                                           |
| Quiescent Current VAD                                        |                               | 320 µA (+ 120 µA for protector and base)                                                                                                                                                                                                                           |
| Quiescent Current Sounder + VAD                              |                               | 360 µA (+ 120 µA for protector and base)                                                                                                                                                                                                                           |
| Minimum and maximum rated operating voltage                  |                               | 10.0 V - 26.0 V for protector base<br>18.0 V - 26.0 V for protector base when add-on boards (VAD/Sounder) are mounted on protector                                                                                                                                 |
| Average current consumption alarm                            |                               | 1.9 mA (the alarm current is the quiescent current + LED indicator current)                                                                                                                                                                                        |
| Protector base                                               | With AutoSafe                 | • V-100 standard base                                                                                                                                                                                                                                              |
|                                                              | With Autoprime                | • V-100/AP standard base                                                                                                                                                                                                                                           |
| System compatibility                                         | With AutoSafe                 | • AutoSafe system version 4.11 or newer<br>• For variants with integrated alarm devices: AutoSafe System version 4.11.3 or newer<br>• AutoSafe loop panels BU-110, BV-110, BU-111 version 1.6 or newer<br>• Loop Driver Module BSD-310/BSD-311 revision 7 or newer |
|                                                              | With Autoprime                | • Autoprime system version 2.1.7 or newer                                                                                                                                                                                                                          |
| Operating temperature                                        |                               | -30 to +70 °C (+80 °C when configured to heat detection only)                                                                                                                                                                                                      |
| Operating temperature for V-530/EXIA                         |                               | -30 to +70 °C                                                                                                                                                                                                                                                      |
| Storage temperature                                          |                               | Maximum 85 °C                                                                                                                                                                                                                                                      |
| Operating humidity                                           |                               | 10 % - 95 % RH (non-condensing)                                                                                                                                                                                                                                    |
| Cable requirements                                           |                               | Minimum 0.14 mm <sup>2</sup> / AWG26<br>Maximum 2.5 mm <sup>2</sup> / 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                                                  |                               | Smoke and Multi: UL 268, ULCS529<br>Heat (only Heat Response Category A1 is UL approved): UL 521, ULC S530                                                                                                                                                         |
| UL certified operating temperature                           |                               | 0 to +38 °C                                                                                                                                                                                                                                                        |
| UL rated operating voltage                                   |                               | 24.0 V for protector                                                                                                                                                                                                                                               |
| UL certified sensitivity range                               |                               | 2.16% ± 0.54% /ft obscuration, 6.91% ± 1.76 %/m obscuration                                                                                                                                                                                                        |
| UL heat detector spacing                                     |                               | 30 x 30 ft / 9 x 9 m                                                                                                                                                                                                                                               |
| For details on certifications, see Autronica's product web.  |                               |                                                                                                                                                                                                                                                                    |

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

### With AutoSafe

| VAD color | VAD intensity                                         | Current consumption VAD only 0.5 Hz * | Current consumption VAD only 1 Hz * | Current consumption VAD + sounder 0.5 Hz * |         | Current consumption VAD + sounder 1 Hz * |         |
|-----------|-------------------------------------------------------|---------------------------------------|-------------------------------------|--------------------------------------------|---------|------------------------------------------|---------|
|           |                                                       |                                       |                                     | Sound pressure level                       |         | Sound pressure level                     |         |
|           |                                                       |                                       |                                     | Low                                        | High    | Low                                      | High    |
| White     | High Intensity: <b>C-3-12</b>                         | 21.0 mA                               | -                                   | 23.3 mA                                    | 26.9 mA | -                                        | -       |
|           | Medium Intensity: <b>C-3-9</b>                        | 13.8 mA                               | -                                   | 16.1 mA                                    | 19.7 mA | -                                        | -       |
|           | Low Intensity: <b>C-3-6</b>                           | 10.6 mA                               | 20.8 mA                             | 12.9 mA                                    | 16.4 mA | 23.1 mA                                  | 26.7 mA |
|           | Open Class <b>O-2.5-4</b> (specified at 2.5 m height) | 4.8 mA                                | 8.9 mA                              | 7.1 mA                                     | 10.6 mA | 11.2 mA                                  | 14.8 mA |
| Red       | High Intensity: <b>C-3-8</b>                          | 19.7 mA                               | -                                   | 22.0 mA                                    | 25.5 mA | -                                        | -       |
|           | Low Intensity: <b>C-3-5</b>                           | 12.8 mA                               | -                                   | 15.1 mA                                    | 18.6 mA | -                                        | -       |
|           | Open Class <b>O-2.5-4</b> (specified at 2.5 m height) | 8.5 mA                                | 16.6 mA                             | 10.8 mA                                    | 14.3 mA | 18.9 mA                                  | 22.4 mA |

- At a given mounting height, the *Coverage Volume* of a VAD is defined by the diameter of the coverage, given in meters. For example: 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.
- The sound pressure level can be configured separately for each sounder.

### With Autoprime

| VAD color | VAD intensity                                         | Current consumption VAD only 0.5 Hz * | Current consumption VAD + sounder 0.5 Hz * |         |
|-----------|-------------------------------------------------------|---------------------------------------|--------------------------------------------|---------|
|           |                                                       |                                       | Sound pressure level                       |         |
|           |                                                       |                                       | Low                                        | High    |
| White     | Open Class <b>O-2.5-4</b> (specified at 2.5 m height) | 4.8 mA                                | 7.1 mA                                     | 10.6 mA |
| Red       | Open Class <b>O-2.5-4</b> (specified at 2.5 m height) | 8.5 mA                                | 10.8 mA                                    | 14.3 mA |

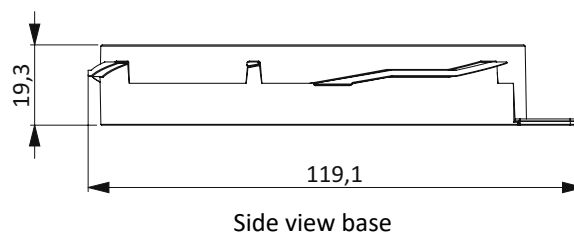
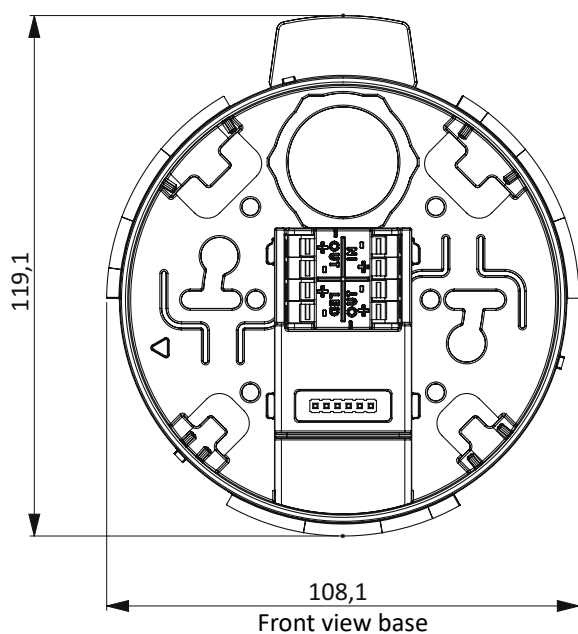
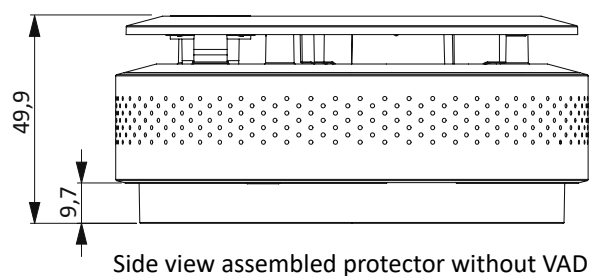
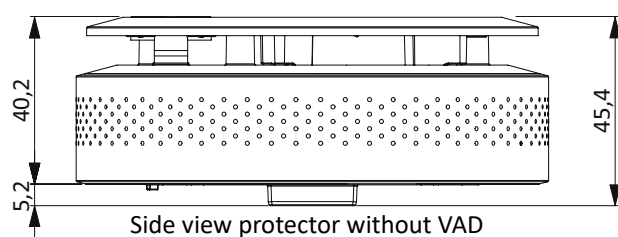
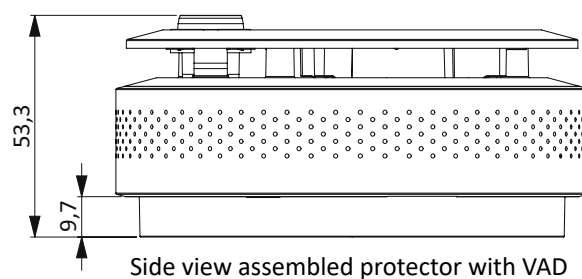
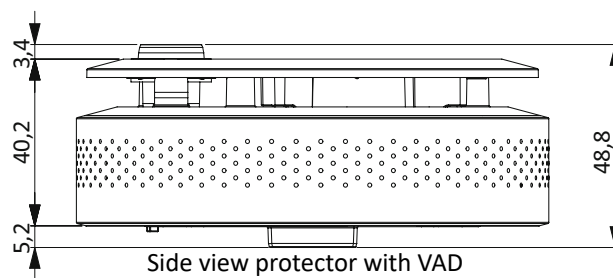
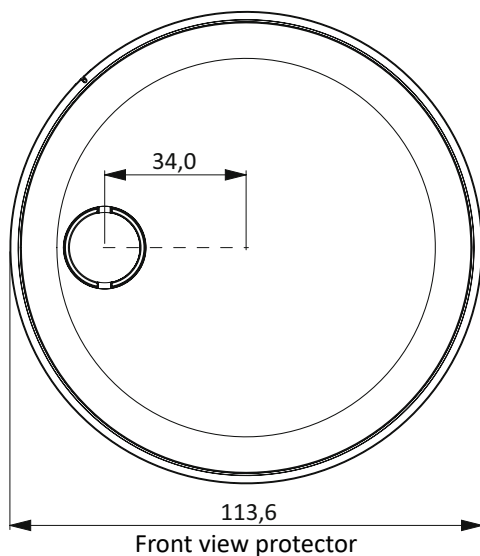
- The configured sound pressure level applies to all sounders.

## Technical specifications, integrated sounder

|                              |                                                                                                                                                                                                                                           |                                               |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Sound pressure (dB @ 1m)     | High volume - maximum: 93 dBA @ 1 m range                                                                                                                                                                                                 |                                               |
| Current consumption, sounder | High volume                                                                                                                                                                                                                               | 6.25 mA (incl. 120 µA for protector and base) |
|                              | Low volume                                                                                                                                                                                                                                | 2.63 mA (incl. 120 µA for protector and base) |
| Quiescent Current            | 160 µA (+ 120 µA for protector and base)                                                                                                                                                                                                  |                                               |
| Sound patterns               | 16 (AutroSafe) / 3 (Autoprime) 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. |                                               |

\* The LED indicator is not included in the specified current consumption.

## 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.

| Model | Description                         |                                                                            |
|-------|-------------------------------------|----------------------------------------------------------------------------|
| V-430 | AutroGuard® Multicriteria protector |                                                                            |
|       | <b>Type</b>                         | <b>Extra feature/alarm method</b>                                          |
|       | 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) *   |
|       | <b>Type</b>                         | <b>Color</b>                                                               |
|       | Blank                               | White RAL9010                                                              |
|       | BK                                  | Black RAL9005                                                              |
|       | CC                                  | Custom (not available with Cover Detection)                                |
|       | <b>Type</b>                         | <b>Extra features</b>                                                      |
|       | Blank                               | No extra features                                                          |
|       | CD                                  | Cover Detection and SelfVerify 2.0                                         |
|       | <b>Type</b>                         | <b>Certification</b>                                                       |
|       | Blank                               | EN54                                                                       |
|       | M                                   | EN54 and MED (Marine certification)                                        |

|       |   |        |   |  |   |    |   |   |
|-------|---|--------|---|--|---|----|---|---|
| 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        | AutroGuard removal tool                       |
| 116-WBJ-5/07       | Test gas                                      |
| 116-WBJ-20         | Testfire XTR2 smoke and heat sensor test tool |

\* Sounder is not UL certified.