

## 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 Black: RAL9005 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 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 • For variants with integrated alarm devices: AutoSafe System version 4.11.3 or newer • AutoSafe loop panels BU-110, BV-110, BU-111 version 1.6 or newer • 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 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 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

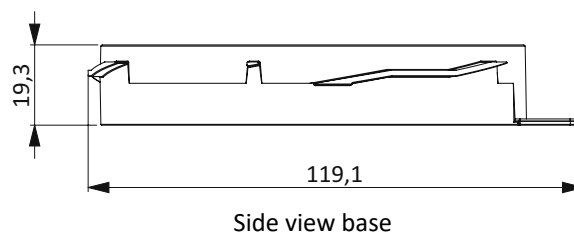
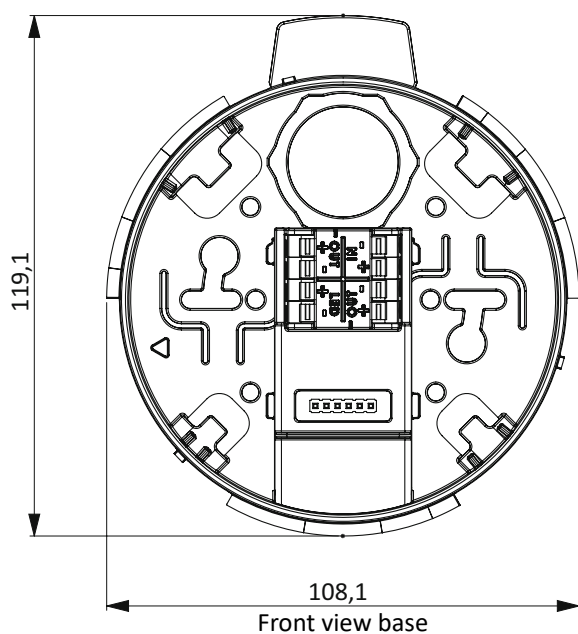
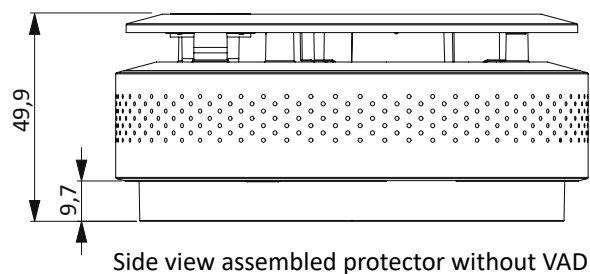
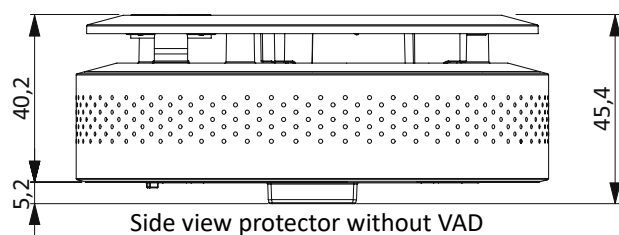
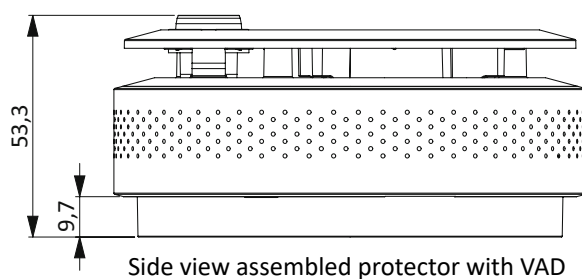
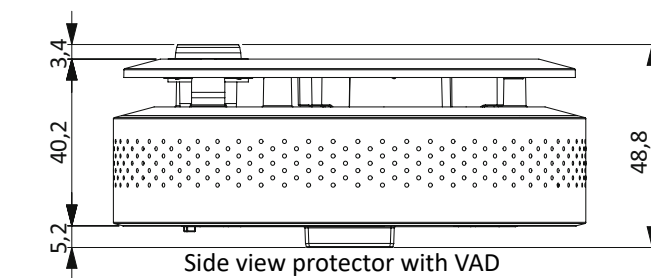
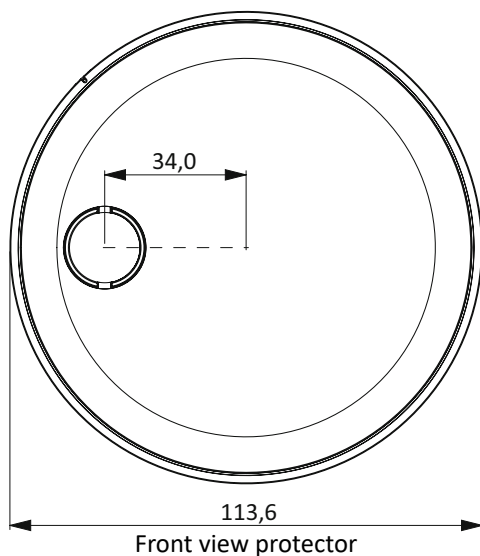
- The configured sound pressure level applies to all sounders.

## 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
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### 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.