

PRODUCT DATASHEET

AutroGuard® V-530 multicriteria protector series

Features

- Certification according to IEC61508 SIL2 (pending)
- Available in EX ia and EX ic versions
- 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 integrated dual color LED indicator
- 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-530 is SIL2-certified (pending) multicriteria protector series. Specific Ex ia or Ex ic versions are available for use in intrinsically safe areas EX zone 0, 1 and 2. It 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.

Cover Detection

AutroGuard® V-530 provides Cover Detection as a standard feature. 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

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

Integrated Visual Alarm Device (VAD)

AutroGuard® can be delivered with a high efficiency EN 54-23 compliant integrated Visual Alarm Device (VAD) (optional). The VAD is available in white color, and is configurable to 4 different intensities. The flash rate is 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 (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, with a fourth, extra high class for specific variants.

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.
Extra high (Not EN 54 compliant)	Electrical installations, cabinets, server rooms etc. (Available in specific variants)

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 next page for details	
Weight	127 g (172 g including base)	
Housing material	PC ABS	
Colour	White: RAL9010	
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)	2.1 mA	
Current consumption - fault indicator (Yellow LED indicator ON)	2.8 mA	
Protector base	V-110 standard base with SIL2 approval (pending), with remote LED output V-120 EX base with SIL2 approval (pending), without remote LED output	
System compatibility	AutroSafe IFG system version 4.12 and higher Autroprime loop panel version 1.6 and higher	
Operating temperature	-30 to +70 °C (+80 °C when configured as heat detection only)	
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 approved	Heat	EN 54-5:2017
	Optical smoke	EN 54-7:2018
	Multisensor	EN 54-29:2015
	Short circuit isolator (Base)	EN 54-17:2005

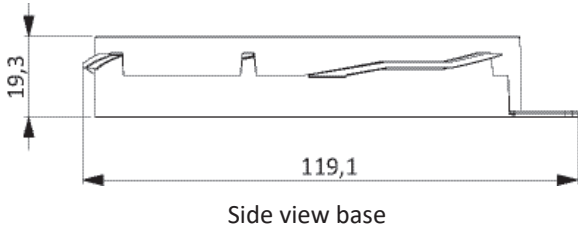
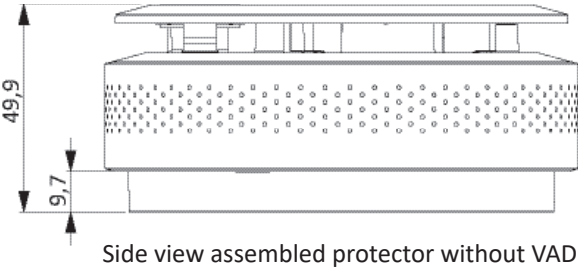
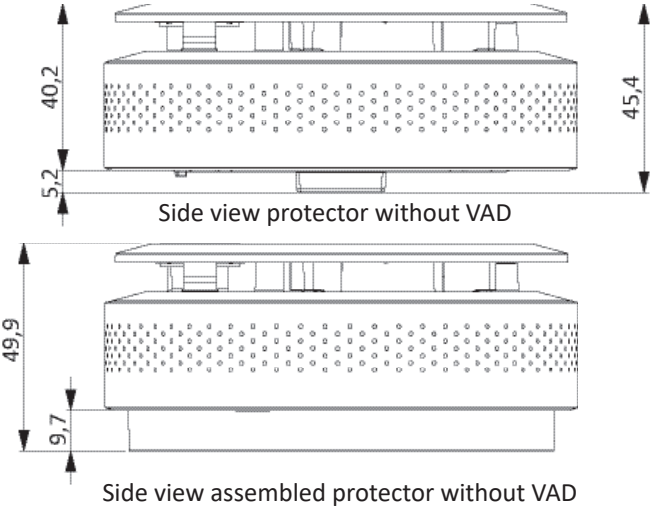
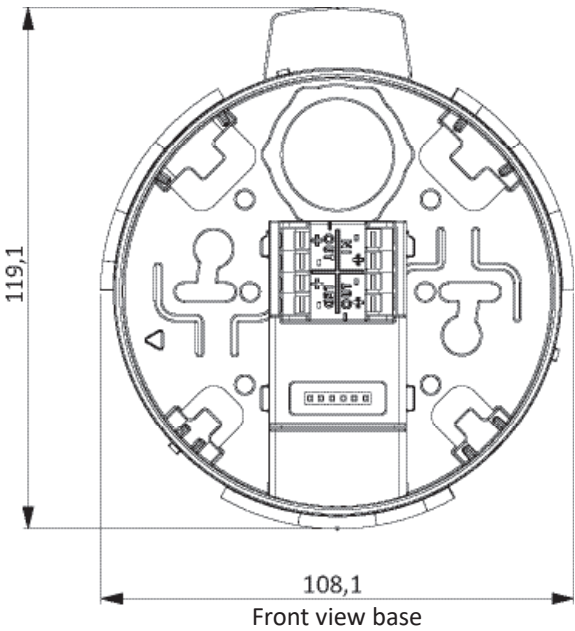
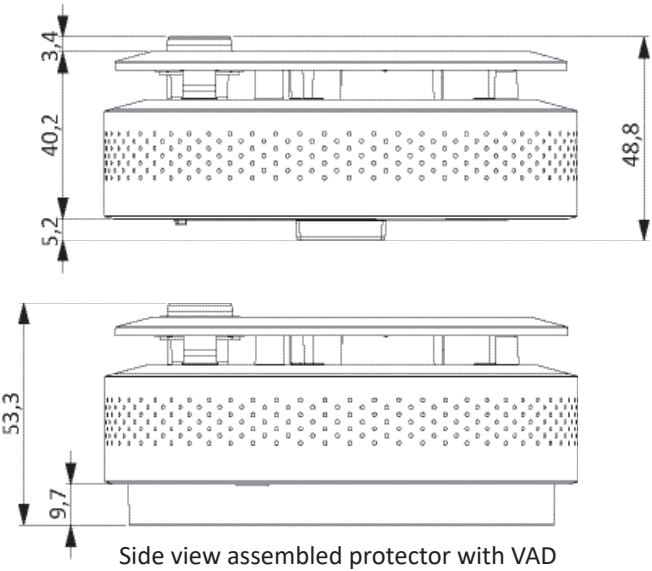
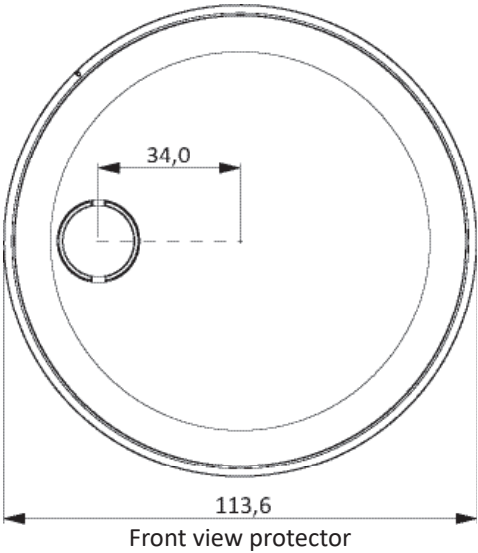
Technical specifications, integrated white visual alarm device (VAD)

VAD intensity	Current consumption (mA) (LED indicator not included)	Current consumption alarm indicator	Description
High Intensity: C-3-12	20 mA	2.1 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.
Medium Intensity: C-3-9	12.7 mA	2.1 mA	
Low Intensity: C-3-6	9.5 mA	2.1 mA	
Open Class O-2.5-4 (specified at 2.5 m height)	3.8 mA	2.1 mA	<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.

Technical specifications, integrated sounder (FAD)

Sound pressure (dB @ 1m)	High volume - maximum: 93 dBA @ 1 m range
Current consumption, sounder	High volume: 5.8 mA
	Low volume: 2.2 mA
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 matrix to find the correct part number. The example below shows the type key for an intrinsically safe V-530 for zones 0, 1 and 2.

Model	Description		
V-530	AutroGuard® multicriteria protector with SIL2 approval (pending)		
	Type	Additional functions/alarm types	
	Blank	No additional functions/output	
	EXIA	Intrinsically safe for zone 0, 1 and 2. ATEX / IECEx / CSA / INMETRO must be specified.	
	EXIC	Intrinsically safe for zone 2. ATEX / IECEx / CSA / INMETRO must be specified.	
	S-VADW	Sounder and white VAD*	
	Type	Colour	
	Blank	White RAL9010	
		Type	Extra features
		Blank	No extra features
		HS	Extra high sensitivity**

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V-530

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EXIA

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Example

Part number: 116-V-530-EXIA

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-10	Testfire smoke and heat sensor test tool

*SIL2 certification (pending) is not available for sounder and white VAD functions. For detection only.

** Extra high sensitivity is available with EXIA and EXIC variants only.