

Autronica Fire and Security



PRODUCTS 2017

Fire and gas safety

Division Petrochemical, Oil & Gas



AUTRONICA
United Technologies



Autronica Fire and Security is a leading innovator, manufacturer and supplier of fire and gas safety worldwide. Our products ensure safety in applications on land, sea and in the petrochemical, oil and gas sectors.

Owned by United Technologies Corporation (UTC), we employ more than 450 people handling the complete value chain, from idea, development and manufacturing to the marketing, sales and servicing of our products. We are an international company with worldwide offices and our HQ is located in Trondheim, Norway's technology hotspot.

Protecting life, environment, and property

Autronica Fire and Security AS

Division Petrochemical, Oil & Gas
Lagerveien 24
NO-4033 Stavanger
Norway

+47 90 90 55 00
oil.gas@autronicafire.no
www.autronicafire.com

WORLDWIDE SERVICE ASSISTANCE

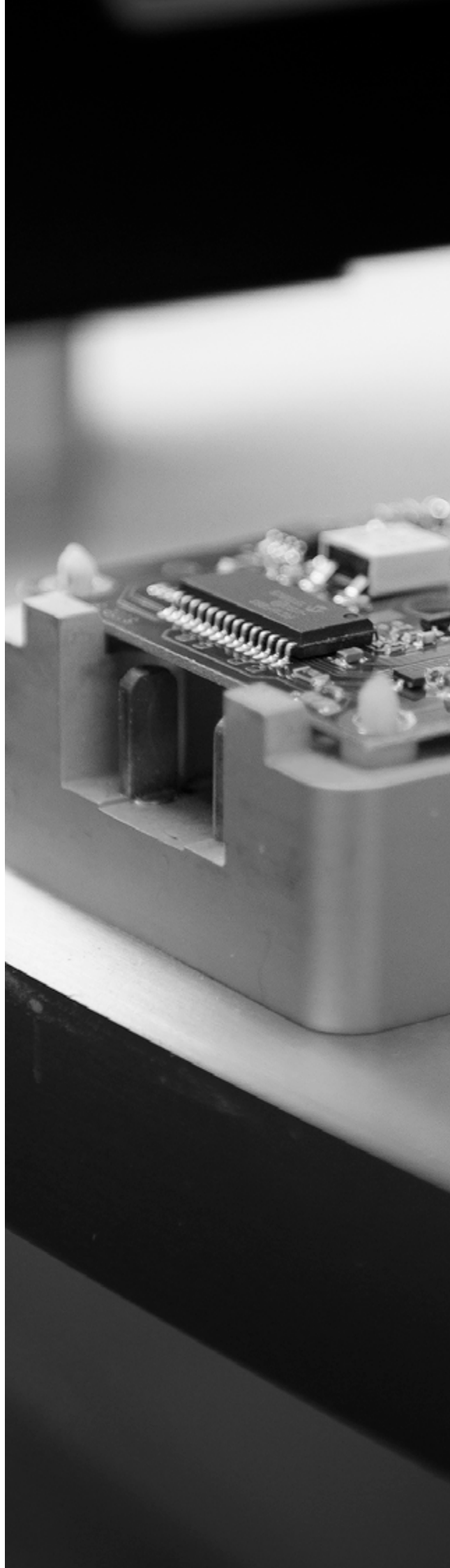
Phone: +47 915 09753
E-mail: service.oilgas@autronicafire.no

SPARE PARTS

Phone: +47 90 90 55 00
E-mail: spareoil.gas@autronicafire.no

24 HOUR SUPPORT – END USERS ONLY

Phone: +47 48 25 80 00



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Stringent control throughout Autronica Fire and Security AS assures the excellence of our products and services.
For a complete overview of our approvals, go to www.autronicafire.com.

AutoSafe IFG
– a complete solution
for fire and gas detection



AutoSafe integrated fire and gas

More than ten years with SIL 2 certification

Our task was demanding, yet simple: Take the best fire and gas (F&G) safety system around and make it even better. The AutoSafe Integrated Fire and Gas (IFG) 4 is designed for the toughest requirements and expands the possibilities of a F&G detection system even further. From offshore platforms to LNG plants to refineries, AutoSafe IFG delivers the most rigorous F&G safety yet.

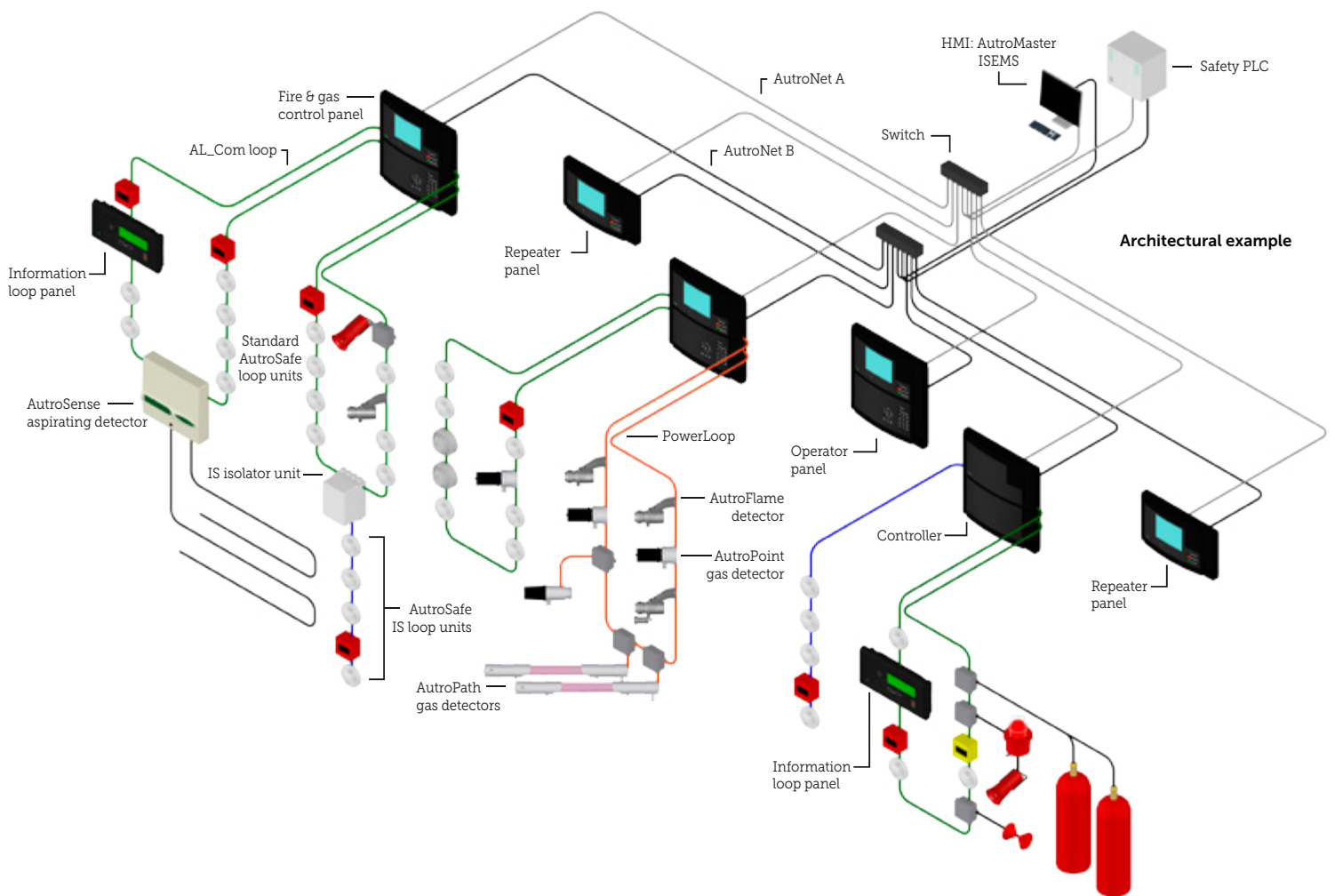
Autronica Fire and Security launched AutoSafe, our high-end fire detection system, in 1999. From day one, AutoSafe has proven its unique stability and reliability in more than 15 000 of installations worldwide, both on- and offshore. AutoSafe IFG 4 provides advanced functionality for a wide range of applications. The system is designed to meet all requirements in the high-end segment of the offshore market. It is certified according to European directives (CPD) requiring EN 54 compliance, and is approved by Factory Mutual (FM) according to NFPA 72. Additionally, the F&G system is approved according to SIL2 requirements by TÜV Nord.

Reliable communication is paramount to your safety. That's why we're adding AutoNet to the AutoSafe IFG system, an innovative network solution safeguarding communication between panels. AutoNet ensures a redundant and high-speed network, expanding the reach of the AutoSafe IFG system even further. The system can be set up either in a star or ring network, depending on your needs.

History proves you can rely on AutoSafe IFG. All existing functionality has stood up to the toughest tests worldwide for more than 10 years. With AutoSafe IFG 4, Autronica has once again taken fire safety to a higher level.



Autronica Fire and Security AS
has once again taken fire safety
to a higher level



Panels

The AutoSafe family consists of four different panel types. These are:

- **Fire alarm control panel, BS-420.** BS-420 is the main panel in the AutoSafe family. It can be used as a stand-alone panel as well as part of a network system. All operations, alarm management, indications and other functions within an operation zone are controlled and handled by the panel. The panel is equipped with a display, light indicators, a numeric keypad, a navigation wheel and special function buttons (e.g. Silence Alarms). Loop driver, input and output modules can be connected. An integrated AutoFieldBus interface makes it possible to connect AutoFieldBus equipment to the panel. All AutoSafe systems must include at least one BS-420 panel.
- **Operator panel, BS-430.** As for the BS-420 panel, all operations, alarm management, indications and other functions within an operation zone are controlled and handled by the BS-430 panel. The panel is equipped with a display, light indicators, a numeric keypad, a navigation wheel and special function buttons (e.g. Silence Alarms). No loop driver, input or output modules can be connected to this panel.
- **Controller, BC-420.** The BC-420 serves as a connection unit for loop driver modules as well as input and output modules. It is equipped with two light indicators for System Fault and Power. The panel has neither display nor operator buttons. An integrated AutoFieldBus interface makes it possible to connect AutoFieldBus equipment to the panel.
- **Controller rack unit BC-440.** Serves as a connection unit for the detection loop, alarm sounders, controls and inputs. It is a variant of the BC-420 prepared for rack installations. Together with the I/O modules the unit will have the full functionality of the BC-420. Equipped with 2 Ethernet ports, one AutoFieldBus port and one serial port.
- **Repeater panel, BU-BV-420.** Physical dip-switches on the panel control the BU-BV-420 panel function. As an alarm operation panel it can operate alarms within one or more operation zones. As an information panel no operation of alarms are available. The information panel provides information from one or more operation zones.

In addition to the panels the power cabinet BP-405 is a part of the AutoSafe 4 family. The cabinet includes a 5 A power pack (BPS-405) which provides six 24 VDC / 2 A outputs. The input voltage is 115 / 230 VAC and the total maximum power available is 24 VDC / 5 A. An integrated AutoFieldBus interface makes it possible for the power pack to communicate (send fault messages) with the BS-420 or BC-420 panel. The cabinet provides space for two 12 V / 18 Ah batteries (not included).



Panel kits

An AL_Com+ stack can contain up to six loop driver modules (BSD-3xx). By using AutoFieldBus, an additional AL_Com+ stack (with up to six additional loop driver modules) can be added to the system.


NOTE! The AutoSafe panels are certified with the AL_Com+ modules mounted inside the panel cabinet.

Image	Part number	Description	Including	Options
	116-KIT-BS-420G	Fire alarm control panel kit	Panel front BSV-420G Cabinet UEA-400 Power supply module BSS-310A Communication module BSL-310 Text foils E-2879/GB-G	Loop driver module BSD-310 Loop driver module H.P. BSD-311 BS-100 loop driver module BSD-330 Output module BSB-310A Output module BSJ-310 Input module BSE-310 Input module BSE-320 Dual power mon. module BSS-311 Dual serial communication ports
	116-KIT-BS-420G2	Fire alarm control panel kit approved acc. to IEC 61508 SIL2		
	116-KIT-BS-420ASAP	Fire alarm control panel		
	116-KIT-BC-420	Controller kit	Panel front BCV-420 Cabinet UEA-400 Power supply module BSS-310A Communication module BSL-310 Text foils E-2880/GB-G*	Loop driver module BSD-310 Loop driver module H.P. BSD-311 BS-100 loop driver module BSD-330 Output module BSB-310A Output module BSJ-310 Input module BSE-310 Input module BSE-320
	116-KIT-BC-420G2	Controller kit approved acc. to IEC 61508 SIL2		
	116-BC-440	Controller rack unit	-	-
	116-BC-440G2	Controller rack unit approved acc. to IEC 61508 SIL2		
	116-KIT-BS-430	Operator panel kit	Panel front BSV-420 Cabinet UE-1488 Text foils E-2879/GB-G*	-
	116-KIT-BS-430G2	Operator panel kit approved acc. to IEC 61508 SIL2		
	116-KIT-BU-BV-420	Repeater panel kit	Panel front BUV-420 Cabinet UE-1489 Text foils E-2880/GB-G*	-
	116-KIT-BU-BV-420G2	Repeater panel kit approved acc. to IEC 61508 SIL2		
	116-BP-405	Power cabinet	Cabinet UEA-410 5 A / 24 V power unit BPS-405	Available space for 2 x 12 V / 18 Ah batteries

*: Please specify language GB-G when ordering

Loop panels

We have now included loop-powered panels in our portfolio, providing our customers a number of advantages: Quicker installation, reduced cabling and cost, and lowered system complexity. A detection loop can accommodate up to eight loop panels.

Image	Part number	Description	Dimensions H x W x D (mm)	Current consumption	Notes
	116-KIT-BU-110	Fire brigade loop panel kit*	310 x 154 x 45	<1 mA (idle) 6 mA (max)	Enables silencing the panel's internal buzzer, silencing alarms, and resetting the system. Alarms only are shown in the display.
	116-KIT-BV-110	Information loop panel kit*	310 x 154 x 45	<1 mA (idle) 6 mA (max)	Indication device only. Provides information related to the defined operation zone(s).

* Please specify language when ordering

GB = English

E = Spanish

F = French

H = Hungarian

I = Italian

IS = Icelandic

BR = Portuguese

PL = Polish

RK = Russian

SF = Finnish

NL = Dutch

DK = Danish

S = Swedish

N = Norwegian

Switches and converters

A network solution (AutoNet) with more than two panels demands the use of switches. Fibre converters are utilized to extend your network where fibre is available. VDSL converters are utilized to make use of existing copper wiring when upgrading old systems. Only the listed Ethernet switches and converters are approved and supported by Autronica Fire and Security AS. The type and number of switches/converters depend on the installation/network construction (no. of panels and distance between panels and switches/converters).






Image	Part number	Description*	Current consumption (max.) @ 24 VDC	RJ45 ports	Fibre optic ports**	Operating temperature
	116-5151-030.2127	FL switch SFNT 5TX	120 mA	5	–	-40 - 75°C
	116-5151-030.2128	FL switch SFNT 4TX/FX	160 mA	4	1 MM (SC)	-40 - 75°C

Image	Part number	Description*	Current consumption (max.) @ 24 VDC	RJ45 ports	Fibre optic ports**	Operating temperature
	116-5151-030.2129	FL switch SFNT 8TX	153 mA	8	–	-40 - 75°C
	116-5151-030.2130	FL switch SFNT 7TX/FX	175 mA	7	1 MM (SC)	-40 - 70°C
	116-5151-030.2131	FL switch LM 5TX	150 mA	5		-40 - 70°C
	116-5151-030.2132	FL switch LM 4TX/FX	380 mA	4	1 MM (SC)	-40 - 70°C
	116-5151-030.2133	FL switch LM 4TX/2FX	400 mA	4	2 MM (SC)	-40 - 70°C
	116-5151-030.2134	FL switch LM 4TX/FX SM	380 mA	4	1 SM (SC)	-40 - 70°C
	116-5151-030.2135	FL switch LM 4TX/2FX SM	400 mA	4	2 SM (SC)	-40 - 70°C
	116-5151-030.2142	FL switch SFNB 4TX/FX SM 20	185 mA	4	1 SM (SC)	0 - 60°C

* SFNT = Standard Function, Narrow housing, high Temperature range
 LM = Lean Managed
 SFNB = Standard Function, Narrow housing, Basic entry level
 SFN = Standard Function, Narrow housing
 ** MM = Multi Mode

SM = Single Mode
 SC = Square Connector
 (Set and Click, Stab and Click, Standard Connector)

Image	Part number	Description*	Current consumption (max.) @ 24 VDC	RJ45 ports	Fibre optic ports**	Operating temperature
	116-5151-030.3001	Jetcon 1301-S single mode fibre converter	150 mA	1	1 SM (SC)	-40 - 70°C
	116-5151-030.3002	Jetcon 1301-M multi mode fibre converter	150 mA	1	1 MM (SC)	-40 - 70°C
	116-5151-030.3003	Jetcon 2502 ethernet/VDSL 2 converter	210 mA	2	–	-40 - 70°C

* SFNT = Standard Function, Narrow housing, high Temperature range

LM = Lean Managed

SFNB = Standard Function, Narrow housing, Basic entry level

SFN = Standard Function, Narrow housing


** MM = Multi Mode

SM = Single Mode

SC = Square Connector

(Set and Click, Stab and Click, Standard Connector)

Printer

Image	Part number	Description
	116-BUP-400	Log printer unit for AutoSafe 4
–	116-1712-012.0001	Printer paper 57 x 46 x 13 mm / 25 m

I/O modules

AutoSafe IFG features input and output modules for different applications (monitored alarm loops, servicing relays and LEDs, control inputs, etc.). The modules have the same format, mount onto the panels' DIN-mounting rail and plug into one another.

Important note on module capacity.

Each fire alarm panel/controller contains a power supply module BSS-310A and a communication module BSL-310.

The BS-420 and BC-420 panels have space for up to 12 modules totally inside the cabinet.

An AL_Com+ stack can contain up to six loop driver modules (BSD-3xx)

By using AutoFieldBus, an additional AL_Com+ stack (with up to six additional loop driver modules) can be added to the system.

NOTE! The AutoSafe panels are certified with the AL_Com+ modules mounted inside the panel cabinet.

















Image	Part number	Description	Monitored inputs	Monitored outputs	Total inputs	Total outputs	Monitors short circuits	Ensures loop communication	For use in EX zone 2 only	Amplified power output	Maximum per panel	Notes
	116-BSB-310A	Output module	•	0	4	•						Requires external 24V
	116-BSD-310	Loop driver module			–	–	•	•			6/12	Max. 127 loop units
	116-BSD-310/N	Loop driver module			–	–	•	•	•		6/12	Max. 127 loop units
	116-BSD-311	Loop driver module H.P.			–	–	•	•		•	6/12	
	116-BSD-330	BS-100 loop driver module			–	–	•	•			8	

Image	Part number	Description	Monitored inputs	Monitored outputs	Total inputs	Total outputs	Monitors short circuits	Ensures loop communication	For use in EX zone 2 only	Amplified power output	Maximum per panel	Notes
	116-BSE-310	Input module	•		4	0						
	116-BSE-320	Input module			8	0						Galvanically insulated inputs
	116-BSJ-310	Output module			0	8						Open transistor outputs
	116-BSS-310A	Power supply module									3	
	116-BSS-311	Dual power monitoring module									2	

Communication

Image	Part number	Description
	116-BSD-321/1	<p>AutoFieldBus protocol converter Interface between AutoFieldBus and AL_Com+. Enables communication between all AL_Com+ modules in an AL_Com+ stack connected to AutoFieldBus. The module enables AutoSafe DualSafety configuration, with both ordinary AL_Com communication and AutoFieldBus.</p>
	116-BSL-310	<p>AutoSafe communication module, serves as an interface for the common internal communication line between all the different I/O modules. Part of the fire alarm control panel.</p>
	116-BSL-321	<p>Multi mode fibre optic converter Amplifier for AUTROLON/AutoFieldBus networks, which acts as a fibre optic modem. The converter ensures reliable communication for distances of up to 3000 m. Uses multi-mode (62.5/125 µm or 50/125 µm) fibre-optic cable. Ingress Protection level: IP20</p>
	116-BSL-322	<p>Single mode fibre optic converter Amplifier for AUTROLON/AutoFieldBus networks, which acts as a fibre-optic modem. The converter ensures reliable communication for distances of up to 15000 m. Uses single-mode (9/125 µm) fibre-optic cable. Ingress Protection level: IP20</p>
	116-BSL-325	<p>AUTROLON/AutoFieldBus communication amplifier Amplifier for communication signals on networks. The amplifier ensures reliable communication in systems where there is great distance between the system panels, and in applications where there are many panels. The amplifier increases maximum cable length from 1000 m to 2800 m. Ingress Protection level: IP20</p>
	116-BSL-337	<p>AutoSafe BU-70 interface module Enables the connection of BU-70/BU-100/BU-101 to AutoSafe. This is a simple, cost effective way to upgrade BS-100 systems to AutoSafe. The RS232/20 mA current loop converter BSL-12/2 must be used to convert RS232 to 20 mA current loop communication. Ingress Protection level: IP20</p>

OPC server

Part number	Description
116-AS-OPC-SERVER/CD1	AutoSafe OPC server CD V1.2 incl. access code for access level 1. Includes read access to all status information for detectors, output and alarm devices. This level of license will also make it possible to send (write) Silence, Reset and SetTime commands to the AutoSafe system. Within this level you can also Disable/Enable detectors.
116-AS-OPC-SERVER/CD2	AutoSafe OPC server CD V1.2 incl. access code for access level 2. Includes all functionality in level 1, plus the possibility to Activate/Deactivate and Enable/Disable outputs and alarm devices via OPC write commands.
116-AS-OPC-SERVER/CD3	AutoSafe OPC server CD V1.2 incl. access code for access level 3. Includes all functionality in level 1 and 2. This level also provides additional information for points, for example AMEAS, Temp, Smoke, Alarm limits and Engineering values.

Integrated fire and gas (IFG) modules




Image	Part number	Description
	116-BN-342/1	PowerLoop 4-20 mA input unit, rack mounted A general-purpose PowerLoop interface designed for third-party detectors connected to the AutoSafe IFG system. The unit has a 4-20 mA input galvanically isolated from the PowerLoop. 19" 3U rack version, bare PCB with 19" rack front panel, no DC/DC. Ingress Protection level: IP20
	116-BN-342/2	PowerLoop 4-20 mA input unit, DIN rail mounted A general-purpose PowerLoop interface designed for third party detectors connected to the AutoSafe IFG system. The unit has a 4-20 mA input galvanically isolated from the PowerLoop. DIN rail version, bare PCB in an open DIN rail box, no DC/DC. Ingress Protection level: IP20
	116-BN-342/EX	PowerLoop 4-20 mA input unit, field mounted A general-purpose PowerLoop interface designed for third party detectors connected to the AutoSafe IFG system. The unit has a 24 VDC/400 mA supply output providing power to the connected detectors, plus a 4-20 mA input galvanically isolated from the PowerLoop. EEX me version including 9,5 W 24 VDC/DC for external detector power supply. Cable entry, PowerLoop: 2 x M25. Cable entry, 4-20 mA input: 1 x M25 Ingress Protection level: IP66
	116-BSD-340/1	PowerLoop driver module, rack mounted The module has a capacity of up to 15 detectors connected directly with protocol interface or through interface unit (BN-342/XX). The number of detectors must be verified by means of a PowerLoop calculator. Up to 31 BSD-340 units can be connected to one alarm panel through the AutoFieldBus driver (EAU-341). Ingress Protection level: IP20

Image	Part number	Description
	116-BSD-340/2	PowerLoop driver module, DIN rail mounted The module has a capacity of up to 15 detectors connected directly with protocol interface or through interface unit (BN-342/XX). The number of detectors must be verified by means of a PowerLoop calculator. Up to 31 BSD-340 units can be connected to one alarm panel through the AutoFieldBus driver (EAU-341). Ingress Protection level: IP20
	116-BSD-340/EX	PowerLoop driver, for hazardous areas, zone 1 and 2, field mounted The module has a capacity of up to 15 detectors connected directly with protocol interface or through interface unit (BN-342/XX). The number of detectors must be verified by means of a PowerLoop calculator. Up to 31 BSD-340 units can be connected to one alarm panel through the AutoFieldBus driver (EAU-341). Dimensions of entries: 5 x M20, 1 x M25. Ingress Protection level: IP66

Cabinets and racks

Part number	Description	Dimensions H x W x D (mm)	Notes
116-UEA-323/1	Cabinet for flush mounting BS-410/-420/BC-420	320 x 320 x 140	

Mounting accessories for cabinets and racks

Module height unit = 44.5 mm. Width unless specified otherwise = 48.3 mm.

Rittal cabinets or equivalent are available on request.

Part number	Description	Dimensions (mm)	Height units	Notes
116-UB-383	19" subrack, Europe	w = 160	3	
116-UW-1454	Mounting kit for 19" cabinet/rack. Front panel.	h = 399	9	For BS-420 w/cabinet UEA-323/1
116-UW-1482	Mounting kit for 19" cabinet/rack. Front panel	h = 266	6	For BU-BV-420
116-UW-1454	Mounting plate for flush mounting panel front in 19" cabinet/rack	h = 399	9	For BS-420/-430 and BC-420
116-UW-1516/1	Dummy plate 19"	h x w = 128 x 60	3	For BC-440
116-UW-1518	Mounting plate	h x w = 622 x 455	-	For mounting AutoSafe 4 front panel on double BS-100 cabinet
116-UE-1662	Spacer (between 2 rack mounted panels)	h x w = 80 x 137.5	-	

Batteries

Autronica Fire and Security AS offers accumulator batteries for every Autronica fire alarm system. Generally, 24 VDC back-up is used, this requires two batteries per panel. All batteries are sealed and can be placed in cabinets.

Part number	Description	Voltage	Weight	Dimensions L x W x H
116-4160-001.	FIAMM FG20721	12 V / 7.2 Ah	2,4 kg	79 x 56 x 106 mm
116-4160-002.	FIAMM FG21803	12 V / 18 Ah	5,9 kg	181 x 76 x 167 mm
116-4160-003.	FIAMM FG22703	12 V / 27 Ah	8,7 kg	166 x 175 x 125 mm
116-4160-004.	FIAMM FG24204	12 V / 42 Ah	13,8 kg	196 x 163 x 174 mm
116-4160-005.0001	FIAMM FG21202	12 V / 12 Ah	4,0 kg	151 x 98 x 99 mm
116-4160-005.0003	FIAMM FG20341	12 V / 3 Ah	1,41 kg	134 x 67 x 60 mm
116-4160-006.	FIAMM FG27004	12 V / 70 Ah	22,7 kg	350 x 166 x 174 mm
116-4160-006.0001	Sonnenschein A512/115	12 V / 115 Ah	40,0 kg	286 x 269 x 230 mm
116-4160-006.0003	Sonnenschein A512/85	12 V / 80 Ah	31,0 kg	330 x 171 x 236 mm
116-4160-006.0004	Sonnenschein A115/200	12 V / 200 Ah	70,0 kg	518 x 274 x 242 mm

Power supply units

Part number	Description	Output voltage
116-BPS-405/BOXED	Power supply unit for AutoSafe 4	24 VDC / 5 A
116-BPS-410/BOXED	Power supply unit for AutoSafe 4	24 VDC / 10 A
116-BPS-410/115/BOXED	Power supply unit for AutoSafe 4, 115 VAC	24 VDC / 10 A
116-4550-012.2410	Power supply for AutoSafe, for additional power. Temperature compensated battery charging	27,3 VDC / 10 A
116-4660-009.0004	DC/DC converter	24 VDC / 3 A
116-4660-016.0001	DC/DC converter MINI-PS 12-24 DC / 24 DC1	24 VDC / 1 A
116-4660-055.0001	DC/DC converter	24 VDC / 6,3 A

Cables

Part number	Description
116-XJA-027	Connection cable for AS 2000; for connection between PC and fire alarm panel (AS-SYSUTILPAC includes this item)
116-XGE-1/10-XX	Ribbon cable. Optional lengths: 40 or 110 cm. Replace XX with length
116-XL-073	Conversion cable from AutoSafe 3 to AutoSafe 4

Relays

Part number	Description
116-7624-030.0001	Relay PLC RSC 24 DC/21, single change-over contact
116-7624-030.0002	Relay PLC RSC 24 DC/21-21, double change-over contact

Customer configuration

Part number	Description
116-PROG-AUTROSAFE	Customer specific software for AutoSafe
116-TXT-AUTROSAFE	Customer texts/controls



Easy to use,
provides full overview
and saves valuable time

AutroMaster presentation system

A fully integrated safety and emergency management system

The AutroMaster is an integrated safety and emergency management system combining the strengths of a powerful fire detection system with control and monitoring functions dedicated to make sure you are in control in case of an emergency.

Graphical user interface

The AutroMaster provides an intuitive control and monitoring interface built to save valuable time when every second counts. Status information is displayed in real-time with easy-to-understand graphical representation. Navigation is fast and instinctual and the powerful zoom functions allow you to monitor all areas in great detail.

AutroMaster displays values for smoke density and heat in dynamic colours, making it easy to perform the necessary actions during emergencies.

Interoperability

Control and monitoring of third party systems can easily be performed via serial protocols or network interfaces. They provide connection to basically any source – network time servers, telephone systems for text messaging, public address systems for automated voice messaging, emergency lights, access control systems, CCTV, automation systems and so on.

Logging and reporting

The AutroMaster keeps track of all events in the system and has a built-in report generator. This provides a cost-effective system log for maintenance and documentation purposes.

Decision-making tools

In high-risk environments around the world, a seemingly innocuous fire can quickly escalate into an emergency of large proportions. When disaster strikes and you only have seconds to make the proper decisions, the right safety and emergency management system is an invaluable asset. The AutroMaster includes a Decision Support System (DSS) that will help you make the right decisions at the right time.

AutoMaster editions

AutoMaster ISEMS is the complete AutoMaster edition, including all functionality. In addition, we offer a market specific edition with the modules most relevant for the oil and gas market

Modules/functions	AutoMaster POG edition	AutoMaster ISEMS
Basic functionality		
Fire management basic functions	•	•
MultiSensor control	•	•
Report generator	•	•
Control and monitoring of emergency lights/LLL	•	•
Extended functionality		
AutoSafe IFG unit support	•	•
Touch screen support	•	•
Decision support system/incident manager		•
Electronic plotting table		•
Training/simulation module		•
Event record and replay module		•
Video module (live video support CCTV)	•	•
Remote connect function		•
Message centre module		•
Interfaces		
Hernis CCTV interface		•
System-S interface		•
NMEA interface		•
VDR output		•
MODBUS interface		•
ESPA 4.4.4 interface		•

Software licences

Part number	Description
116-PROG-AUTROMASTER-POG	AutoMaster Oil & Gas Edition – For the Petrochemical, Oil and Gas market applications, support for the SIL2 approved AutoSafe IFG panel is mandatory. The AutoMaster Oil & Gas Edition is specially designed to use the AutoSafe IFG functionality to among other functions provide gas trending and LEL indication.
116-PROG-AUTROMASTERISEMS	AutoMaster ISEMS – Provides the full range of functionality – every possible add-on module is included in this package, making it the perfect choice for demanding applications and professional customers.
116-PROG-AM-UPGRADE	Upgrade of AutoMaster to most recent version – Existing AutoMaster customers can upgrade their license to the most recent version of AutoMaster. Requires change of AutoMaster configuration data.

Software modules

Part number	Description
116-PROG-AM-MOD-DSS	Decision Support System (DSS) – An interactive incident management system for AutoMaster. The DSS gives operators access to customer-specified checklists. The checklists are organized as checkpoints with one or more action items that can be used to manage operations, and these can be marked off as actions are completed.
116-PROG-AM-MOD-EPTABLE	Electronic fire control plotting table – gives you a dynamic plotting table to keep track of actors events during an emergency or drill. All EPT activity is logged in the Decision Support System and is available for later reviews.
116-PROG-AM-MOD-TSIM	Training/Simulation module – A tool to simulate pre-configured events. During a simulation it is possible to pause, stop/end, and continue the simulation. Running the simulation tool is similar to running a live event, alarms and faults are acknowledgeable and resettable. Every event is logged, and after a simulation (or a stop), a full log can be created and it is possible to replay the simulation using the Event record/replay module.
116-PROG-AM-MOD-EVENT	Event Record/Replay module – Offers a screenshot-based replay of incidents on AutoMaster and can be configured to start recording manually or on pre-configured events as pre-warning, alarm or simulation. Recordings are available for replay, and under replay the operator can start, stop, pause, fast-forward and fast backwards. It is possible to export stored events.
116-PROG-AM-MOD-VIDEO	Video interface module – Includes display of live video in AutoMaster from IP based video cameras.
116-PROG-AM-MOD-REMOTE	Remote Connect function – The Remote Connect Module enables a remote connection to AutoMaster from any location using a server/client technology.
116-PROG-AM-MOD-MC	Message Centre module – In the Message Centre the user can send text messages to telephone systems and other AutoMaster PCs. The user can also send pre-recorded voice messages to PA systems. Requires ESPA 4.4.4. interface.

Interface modules

Part number	Description
116-PROG-AM-MOD-HERNIS	Hernis CCTV interface – Interface enables use of AutoMaster together with video cameras and servers from Hernis.
116-PROG-AM-MOD-NMEA	NMEA interface – A protocol used for interface in between maritime electronic equipment, and AutoMaster has built-in support for this in the NMEA interface module. Interface towards GPS is the most common application.
116-PROG-AM-MOD-VDROUTPUT	VDR output – Used in maritime applications for giving output to the Voyage Data Recorder. Configuration of which data and status messages to send to the VDR is done by project engineering.
116-PROG-AM-MOD-MODBUS	MODBUS interface – With the MODBUS interface AutoMaster can be connected to almost any kind of electronic equipment for monitoring and control.
116-PROG-AM-MOD-ESPA444	ESPA 4.4.4 interface – Offers a serial protocol intended for the interconnection of paging equipment with telephone exchanges or computer systems. The protocol used is message-based and is built upon the ISO1745 transport specification. Required if Message Centre module is used.

Software hardcopies

Part number	Description
116-AUTROMASTER-POG-CD	AutoMaster POG back-up CD without licence
116-AUTROMASTERISEMS-CD	AutoMaster ISEMS back-up CD without licence

Engineering

Part number	Description
116-PROSJAMD	Adding of detectors to drawings
116-PROSJAMDF	Adding of color fill for analog values

Hardware

Part number	Description
116-AUTROMASTER-PC-12	PC , desktop version, convertible minitower. Model subject to change without prior notice.
116-AUTROMASTER-RACKPC	19" rack mounted PC
116-5151-020.0210	Industrial PC w/SSD
116-5151-020.1951	19" standard LCD monitor (1280 x 1024 resolution)
116-5151-020.2405	24" widescreen LCD monitor (1920 x 1200 resolution)
116-5151-200.0023	20" monitor, console mounted, JH20T17 MMD
116-5151-017.0004	Keyboard/mouse Nordic character set
116-5151-017.0002	Keyboard - UK/English character set
116-5151-020.0400	Mouse - USB - 3 buttons
116-5760-050.2003	Laser printer, colour, network and USB
116-5151-020.0732	Network card TG-3468 10/100/1000
116-5151-020.2029	Moxa 4-port serial PCIE





SelfVerify ensures optimal detection

Loop units

A wide range covering your basic fire detection needs

We provide a wide range of loop units for our fire detection systems. Our detectors, manual call points, I/O units, control units and alarm units are developed and approved according to European directives (CPD) requiring EN 54 compliance and other appropriate worldwide regulations.






The loop units are available both with and without SelfVerify function. SelfVerify solves all issues of manual maintenance, leaving time consuming and costly physical testing redundant. With AutoSafe SelfVerify®, the system checks all detectors, interfaces, connections and cables – from detector chamber to alarm output – every single day.

Not only does the system test whether a detector is capable of provoking an alarm, it even verifies the sensitivity of every detector with a calibrated signal. The SelfVerify system ensures that each detector always responds to the correct alarm level. In the event of irregularities, the display on the operating panel will accurately pinpoint the source of any problem.

SelfVerify ensures that you have the safest and most reliable fire safety system available – a system ensuring optimal detection.

Input and output units

AutoSafe offers a wide range of input and output units for many different applications. The system features Exn-, Exia- and Exd approved input and output units for high risk applications. All input and output units feature automatic addressing and short-circuit protection.

Image	Part number	Description	Configurable input	Monitored input	Monitored output	Inputs/outputs	Requires external PSU	SelfVerify	For use in EX areas	SIL2*	Ingress Protection level**	Notes
	116-BN-180	AutoKeeper							•	•	IP30	Use two units to access one loop from two loop controllers. DIN rail mounting in cabinet.
	116-BN-201	Monitoring unit	•	•		1/0					IP54 IP67	For external units
	116-BN-221/01	Extinguishing control unit		•	•	2/1	•				IP67	
	116-BN-221/02	Output unit with 7 A relay			•	0/1	•				IP67	Loop controlled FAD unit
	116-BN-300	Input unit	•	•		1/0		•			IP54 IP67	For interfacing external units, clean contacts, alarm relays, etc.



*: SIL 2 certified as part of AutoSafe system SIL 2 certificate.

** : When two degrees of protection is given, the lowest is relevant when using the included glands. To achieve the highest, special IP67 glands must be ordered (see page 41)

Image	Part number	Description	Configurable input	Monitored input	Monitored output	Inputs/outputs	Requires external PSU	SelfVerify	For use in EX areas	SIL2*	Ingress Protection level**	Notes
	116-BN-300M	Modular input unit	•	•		1/0		•		•		Mounting on TS-35 rail
	116-BN-303	Single monitored input unit	•	•		1/0		•			IP54 IP67	Function selectable via dip switch Limited approvals (Not SIL2/FM/USCG)
	116-BN-304	Input/output unit	•	•		1/1		•			IP54 IP67	Function selectable via dip switch Limited approvals (Not SIL2/FM/USCG)
	116-BN-305	Dual monitored input/output unit	•	•		2/2		•			IP54 IP67	Function selectable via dip switch Limited approvals (Not SIL2/FM/USCG)
	116-BN-307	Monitored Fire Alarm Device Control Unit				0/1	•	•			IP54 IP67	Limited approvals (Not SIL2/FM/USCG)
	116-BN-310	Relay output unit				0/1		•		•	IP54 IP67	




*: SIL 2 certified as part of AutoSafe system SIL 2 certificate.

** : When two degrees of protection is given, the lowest is relevant when using the included glands. To achieve the highest, special IP67 glands must be ordered (see page 41)

Image	Part number	Description	Configurable input	Monitored input	Monitored output	Inputs/outputs	Requires external PSU	SelfVerify	For use in EX areas	SIL2*	Ingress Protection level**	Notes
	116-BN-320	Interface unit	•	•		2/1		•			IP54 IP67	
	116-BN-320/2	Door control unit		•		2/1		•			IP54 IP67	
	116-BN-320/4	Standard control unit		•		2/1		•			IP54 IP67	Control of external equipment
	116-BN-320/5	Sprinkler monitoring unit		•		1/0		•			IP54 IP67	
	116-BNB-330A	Loop adapter unit for conventional loops		•		1/1	•	•			IP20	Replacement unit for BNB-330 in existing AutoSafe 3 systems
	116-BNB-331	Loop adapter unit for conventional loops		•		1/1	•	•			IP20	AutoSafe ver. 4.4.1 →

*: SIL 2 certified as part of AutoSafe system SIL 2 certificate.

** : When two degrees of protection is given, the lowest is relevant when using the included glands. To achieve the highest, special IP67 glands must be ordered (see page 41)






Image	Part number	Description	Configurable input	Monitored input	Monitored output	Inputs/outputs	Requires external PSU	SelfVerify	For use in EX areas	SIL2*	Ingress Protection level**	Notes
	116-BN-500/EX	Input unit	•	•		1/0		•	•	•	IP54 IP67	For interfacing external units, clean contacts, alarm relays, etc. Zones 0, 1 & 2
	116-BN-500/N	Input unit	•	•		1/0		•	•		IP54 IP67	For interfacing external units, clean contacts, alarm relays, etc. Zone 2
	116-BN-505/EXD	Input unit with BNB-300	•	•		1/0		•	•		IP66	Zones 1 & 2 only

*: SIL 2 certified as part of AutoSafe system SIL 2 certificate.

** : When two degrees of protection is given, the lowest is relevant when using the included glands. To achieve the highest, special IP67 glands must be ordered (see page 41)

Control units

AutoSafe offers control units for enabling and disabling of detectors, as well as daytime/nighttime units. Available in several language versions. Replace XX with country code.





Image	Part number	Description	Number of buttons	For external control	Configurable delay	For AutoSafe only	Ingress Protection level	Notes
	116-BW-200/XX	Disabling unit	2			•	IP66	Available in Swedish, English and Russian
	116-BW-201/XX	Disabling unit	0			•	IP66	Available in Swedish and English
	116-BW-202/XX	Daytime/Nighttime unit	2			•	IP66	Up to two units can be powered from detector loop. To connect more units, external 24 VDC power is required. Available in English only.
	116-BW-203/XX	Daytime/Nighttime unit	0			•	IP66	Up to two units can be powered from detector loop. To connect more units, external 24 VDC power is required. Available in English only.
	116-BU-200	Alarm controller unit	2			•	IP66	

Detectors

AutoSafe offers a wide range of detectors for many different applications, with or without SelfVerify. The following series are available:

- 200 series, standard interactive addressable detectors
- 300 series with SelfVerify, interactive addressable detectors
- 500 series with SelfVerify, interactive addressable detectors for use in hazardous areas

The system also offers Exn- and Exia approved versions of detectors designed for use in high risk applications. S series smoke detectors are specially designed for applications where high sensitivity is required.

Image	Part number	Heat	Smoke	MultiSensor	SelfVerify	Including base	Environmentally protected	For use in EX areas	For use in EX zone 2 only	High sensitivity	Sealed unit	SIL 2 certified	Ingress Protection level	Notes
	116-BD-200M	•				•	•				•		IP56	For galleys/cold areas (-30 °C)
	116-BD-501	•			•	•	•				•	•	IP56	
	116-BD-501/EX	•			•	•	•	•			•	•	IP56	
	116-BD-501/N	•			•	•	•		•		•	•	IP56	
	116-BD-55/XXXEXD	•				•	•	•					IP66/67	* Conventional
	116-BD-55/XXXEXDN	•				•	•		•				IP66/67	** Conventional
	116-BD-505/140EXD	•			•	•		•			•		IP66	60 °C, non-configurable class, explosion proof
	116-BD-505/160EXD	•			•	•		•			•		IP66	70 °C, non-configurable class, explosion proof
	116-BD-505/190EXD	•			•	•		•			•		IP66	90 °C, non-configurable class, explosion proof
	116-BDH-300	•			•							•	IP44D	
	116-BDH-500	•			•		•					•	IP44D	
	116-BDH-500/EX	•			•		•	•				•	IP44D	
	116-BDH-500/N	•			•				•			•	IP44D	

*: Available with the following alarm temperatures (replace XXX with °F): 140 °F (60 °C), 160 °F (70 °C), 190 °F (90 °C), 225 °F (110 °C), 325 °F (165 °C), 360 °F (180 °C), and 450 °F (230 °C)

** : Available with the following alarm temperatures (replace XXX with °F): 225 °F (110 °C), 275 °F (135 °C), 325 °F (165 °C), 360 °F (180 °C), and 450 °F (230 °C)






Image	Part number	Heat	Smoke	Multisensor	SelfVerify	Including base	Environmentally protected	For use in EX areas	For use in EX zone 2 only	High sensitivity	Sealed unit	SIL 2 certified	Ingress Protection level	Notes
	116-BHH-300		•		•							•	IP44D	
	116-BHH-500		•		•		•					•	IP44D	
	116-BHH-500/EX		•		•		•	•				•	IP44D	
	116-BHH-500/N		•		•		•	•				•	IP44D	
	116-BHH-500/S		•		•		•			•		•	IP44D	
	116-BHH-500/S/EX		•		•		•	•		•		•	IP44D	
	116-BHH-500/S/N		•		•		•	•		•		•	IP44D	
	116-BHH-320			•	•							•	IP44D	
	116-BHH-520			•	•		•					•	IP44D	
	116-BHH-520/EX			•	•		•	•				•	IP44D	
	116-BHH-520/N			•	•		•	•				•	IP44D	
	116-5815-021.0001	•				•		•					IP54	Thermostat ATHF-SE-2, 20-150°C For use in Safe Area or Ex zone 2 Suitable for use in sauna
	116-5861-033.0150	•				•	•				•		IP65	SWM-1KL 140°C

Manual call points and release stations

AutoSafe offers a wide range of manual call points for different applications, every unit features SelfVerify. Two main series are available:





- 300 series with SelfVerify, interactive addressable manual call points.
- 500 series with SelfVerify, interactive addressable manual call points for use in special environments.

The system features Exn- and Exia approved versions for high risk applications. All our manual call points can be delivered with a double-action cover.

Image	Part number	Description	For use in EX areas	For use in EX zone 2 only	Watertight / outdoor model	Extreme environments	LED Indicator	Metal connection box	Glass NOT included	Optional duty label*	Ingress Protection level
	116-BF-300V2	Manual call point					•				IP42D**
	116-BF-510WP-H	Manual call point			•	•	•				IP52**
	116-BF-500V2/EX	Manual call point	•								IP44D**
	116-BF-500V2/N	Manual call point		•					•		IP44D**
	116-BF-501	Manual call point			•	•					IP66
	116-BF-501/EX	Manual call point	•		•	•					IP66
	116-BF-501/N	Manual call point		•	•	•					IP66

*: See "Duty labels" on page 34

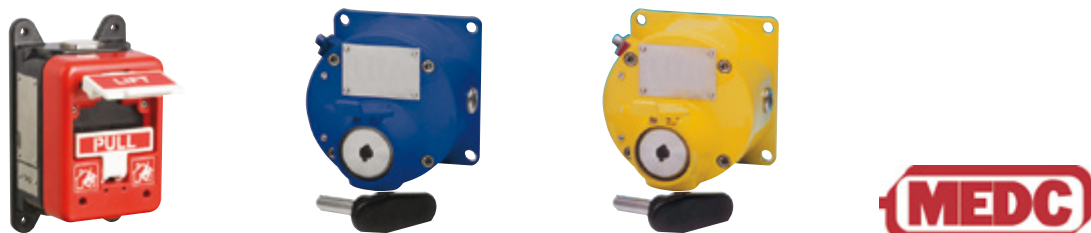
** : Ingress Protection level inner housing

Image	Part number	Description	For use in EX areas	For use in EX zone 2 only	Watertight / outdoor model	Extreme environments	LED indicator	Metal connection box	Glass NOT included	Optional duty label*	Ingress Protection level
	116-BF-502	Manual call point			•	•					IP66
	116-BF-502/EX	Manual call point	•		•	•					IP66
	116-BF-502/N	Manual call point		•	•	•					IP66
	116-BF-503/100	Manual call point			•	•			N/A		IP66
	116-BF-503/EX/0100	Manual call point	•		•	•			N/A		IP66
	116-BF-503/N/0100	Manual call point		•	•	•			N/A		IP66
	116-KIT-BF-503/EX/0300	Release station	•		•	•			N/A	•	IP66
	116-KIT-BF-503/N/0300	Release station		•	•	•			N/A	•	IP66
	116-KIT-BF-503/0400	Release station			•	•			N/A	•	IP66
	116-KIT-BF-503/EX/0400	Release station	•		•	•			N/A	•	IP66
	116-KIT-BF-503/N/0400	Release station		•	•	•			N/A	•	IP66
	116-KIT-BF-503/0500	Release station			•	•			N/A	•	IP66
	116-KIT-BF-503/EX/0500	Release station	•		•	•			N/A	•	IP66
	116-KIT-BF-503/N/0500	Release station		•	•	•			N/A	•	IP66
	116-BFG-3/XX	Glass for call point, available in several languages. Replace XX with country code. No ending = No text GB = English GB/AR = English and Arabic N/GB = Norwegian and English SU = Russian									

Duty tables

Part number	Text	Part number	Text
116-E-2327/1	Inergen utløsning Inergen Release	116-E-2327/26	CO2 Release station
116-E-2327/2	Brannmelder Fire alarm	116-E-2327/27	CO2 Inhibit station
116-E-2327/3	Water release	116-E-2773/1	Abandon ship
116-E-2327/4	Fire Brann	116-E-2773/2	Abandon
116-E-2327/5	Vannutløsning Water release	116-E-2773/3	Gass Gas
116-E-2327/6	Inergen press. Release	116-E-2773/4	Vanntåke
116-E-2327/7	Vannutløser Water release	116-E-2773/5	ESD 2
116-E-2327/8	Fire Monitor Water release	116-E-2773/6	CO2 release & inhibit station
116-E-2327/9	Deluge Water release	116-E-2773/7	VEEUUDU KÄIVITAMINE
116-E-2327/10	Deluge release	116-E-2773/8	Argonite
116-E-2327/11	Vanntåke Water mist	116-E-2773/9	General emergency alarm
116-E-2327/12	Alarm	116-E-2773/10	Argonite Release
116-E-2327/13	Overrissing Deluge	116-E-2773/11	ESD
116-E-2327/14	Start fire pumps Старт пожарный насос	116-E-2773/12	Electrical isolation
116-E-2327/15	Vanntåke Utløsning	116-E-2773/13	MCP Ручной извещатель
116-E-2327/16	Overrissing	116-E-2773/14	ESD AB. OCT.
116-E-2327/17	Fire Push button	116-E-2773/15	CO2 Manual station abort
116-E-2327/18	General Alarm	116-E-2773/16	CO2 Manual station release
116-E-2327/19	FM200 release	116-E-2773/17	Manual alarm call point
116-E-2327/20	FM200 inhibit	116-E-2773/18	Exstinguishant release pushbutton
116-E-2327/21	Fire	116-E-2773/19	East monitor actuation
116-E-2327/22	Water mist release	116-E-2773/20	West monitor actuation
116-E-2327/23	Start Firewater pump	116-E-2773/21	Foam system release
116-E-2327/24	Start Foam skid	116-E-2773/22	Vannutløser Deluge release
116-E-2327/25	Clean Agent release		






MEDC manual call points and release stations



Autronica Fire and Security AS distribute MEDC equipment. Please contact us with your request. These products are produced according to customer specifications.

Alarm units

AutoSafe offers a wide range of alarm units for connection to detection loops or dedicated alarm outputs.

Image	Part number	Description	Loop mounted/addressable	Alarm output mounted	Electronic	Signal presets	Configurable	Watertight	Sound	Light	Sound output (dBA/1 m)	Light output Candela (c), Joule (j)	Ingress Protection level	Notes
	116-BBL-100	Alarm indicator	•							•	-	2 c	IP32C	Supported only by AutoSafe version 4.3 or later
	116-BBL-100/IP	Alarm indicator	•					•		•	-	2 c	IP66	Supported only by AutoSafe version 4.3 or later
	116-BBR-7M	Alarm bell 6"		•					•		93	-	IP55	
	116-BBR-130	Combined detector base and addressable sounder.		•	•		•				90	-	IP32C	Supported only by AutoSafe version 4.3 or later
	116-BBR-230	Sounder	•				•		•		100	-	IP32C	Supported only by AutoSafe version 4.3 or later

*: If loop driver BSD-311 is used, max. no. of units per loop is 40
 If loop driver BSD-310 is used, max. no. of units per loop is 21



Image	Part number	Description	Loop mounted/addressable	Alarm output mounted	Electronic	Signal presets	Configurable	Watertight	Sound	Light	Sound output (dBA/1 m)	Light output Candela (c), Joule (j)	Ingress Protection level	Notes
	116-BBR-230/IP	Sounder	•				•	•	•		100	-	IP65	Supported only by AutoSafe version 4.3 or later
	116-BBQ-130	Base sounder w/ alarm indicator	•				•		•	•	90	2 c	IP21C	Supported only by AutoSafe version 4.3 or later
	116-BBQ-230	Sounder/alarm indicator	•				•		•	•	100	2 c	IP32C	Supported only by AutoSafe version 4.3 or later
	116-BBQ-230/IP	Sounder/alarm indicator	•				•	•	•	•	100	2 c	IP65	Supported only by AutoSafe version 4.3 or later
	116-BU-47	Conventional alarm indicator	•							•	-	-	IP30	
	116-7770-009.0002	Roshni LP, shallow base		•	•	•		•	•		10- 112	-	IP54	







Image	Part number	Description	Loop mounted/addressable	Alarm output mounted	Electronic	Signal presets	Configurable	Watertight	Sound	Light	Sound output (dBA/1 m)	Light output Candela (c), Joule (j)	Ingress Protection level	Notes
	116-7770-009.0004	Roshni LP, shallow base		•	•	•		•	•		102	–	IP54	
	116-7770-009.0005	Roshni, deep base		•	•	•		•	•		102	–	IP65	
	116-7780-004.0001	Flashni, shallow base		•		•		•	•	•	101	0,7 j	IP54	
	116-7780-004.0002	Flashni, deep base		•		•		•	•	•	101	0,7 j	IP65	
	116-7782-001.0003	Sounder		•					•		110	–	IP66 /67	48 VDC ATEX approval Ex II 2GD EExd IIC T5
	116-4340-006.0201	Xenon beacon		•						•	–	5 j		










Image	Part number	Description	Loop mounted/addressable	Alarm output mounted	Electronic	Signal presets	Configurable	Watertight	Sound	Light	Sound output (dBA/1 m)	Light output Candela (c), Joule (j)	Ingress Protection level	Notes
	116-4340-006.0924	Solex beacon, shallow base		•	•					•	-	2,5 c	IP54	
	116-4340-006.0925	Solex beacon, deep base		•	•					•	-	2,5 c	IP65	
	116-4340-006.0926	Solex beacon, shallow base		•		•			•	•	-	2,5 c	IP54	
	116-4340-007.0001	Solista LX beacon, wall mounted, deep base	•		•	•		•		•	-	W-2.4-7.5	IP65	Red flash
	116-4340-007.0002	Solista LX beacon, ceiling mounted, shallow base	•		•	•	•			•	-	C-3-7.5	IP33C	Red flash
	116-4340-007.0005	Symphoni LX WP conventional base beacon, wall mounted	•		•	•	•	•		•	-	W-2.4-7.5	IP66	Red flash
	116-7770-009.0040	Symphoni IP66							•		100	-	IP66	For use with 116-4340-007.0005



Image	Part number	Description	Loop mounted/addressable	Alarm output mounted	Electronic	Signal presets	Configurable	Watertight	Sound	Light	Sound output (dBA/1 m)	Light output Candela (c), Joule (j)	Ingress Protection level	Notes
	116-4340-007.0007	Solista LX wall, shallow base	•		•	•	•			•	-	C-3-7.5	IP33C	Red flash
	116-4340-007.0008	Symphony G1 LX, wall	•		•	•	•			•	100	W-2.4-7.5	IP21C	Red flash
	116-4340-007.0009	Symphony G1 LX, wall	•		•	•	•			•	100	W-2.4-7.5	IP21C	Red flash

MEDC beacons, sounders, and combination units



Autronica Fire and Security AS distribute MEDC equipment. Please contact us with your request. These products are produced according to customer specifications.

Door magnet

Image	Part number	Description
	116-6731-017.0002	Door magnet armature. Type AG w/adjustable socket. For use with part no: 116-6731-017.0005
	116-6731-017.0005	Door holding magnet. GPT, holdpower 650 N, 1 W, 40 mA. Manual release push button. DNV approved. For use with part no: 116-6731-017.0002


Accessories for loop units

Image	Part number	Description	Suitable for EX installations
	116-BWA-100	Base for interactive detector heads, mandatory	•
	116-BWB-110	Base adapter for analogue addressable detectors mounted on interactive loops	
	116-BWP-100/20	Drip proof conduit box with M20 glands	•
	116-BWP-100/25	Drip proof conduit box with holes for M25 glands	•
	116-BWP-143A	Ventilation duct adapter for smoke detectors, for interactive systems	•

Image	Part number	Description	Suitable for EX installations
	116-BWP-143A-SS	Ventilation duct adapter for smoke detectors, for interactive systems. Stainless steel version for use in harsh environmental conditions, offshore and onshore.	•
–	116-BJ-358/100	Pipe kit, L=100 mm	•
–	116-BJ-358/150	Pipe kit, L=150 mm	•
–	116-BJ-358/300	Pipe kit, L=300 mm	•
–	116-BJ-358/550	Pipe kit, L=550 mm	•
–	116-BJ-358/800	Pipe kit, L=800 mm	•
–	116-BJ-358/1000	Pipe kit, L=1000 mm	•
	116-BWP-145	Heated detector base	
–	116-8142-983.5115	Transformer 230/48 V for up to 10 BWP-45/BWP-145	
–	116-WBW-100	Bypass unit for BWA-100	•
–	116-WBW-101	Mounting plate for false ceilings	•
	116-BZ-500	Galvanic barrier for Exia approved detectors, for field mounting	
–	116-BZ-500/01	Galvanic barrier for Exia approved detectors, for cabinet mounting	
	116-UL-050	Robust bracket for manual call points	•
–	116-4860-011.0100	Polycarbonate cover for manual call point BF-300V2	
–	116-4890-021.0001	Lift flap in polycarbonate for manual call point 116-BF-502, all versions	•
–	116-4890-021.0010	Lift flap in stainless steel for manual call point 116-BF-502, all versions	•
–	116-4890-022.0001	Lift flap in polycarbonate for manual call point 116-BF-501, all versions	•
–	116-4890-022.0010	Lift flap in stainless steel for manual call point 116-BF-501, all versions	•
–	116-6571-011.1920	Cable gland M20-1.5 for Ingress Protection level IP67 for I/O units. NB! Order with 116-6531-006.1920	
–	116-6531-006.1920	Backnut for cable gland IP67. NB! Order with 116-6571-011.1920	
–	116-7770-009.0008	Power base 230 V for Roshni alarm unit	
–	116-4890-022.0010	Lift flap in stainless steel for manual call point 116-BF-501, all versions	•

Service tools for detection loops

Image	Part number	Description	Suitable for EX installations
	116-WAS-2000	AS2000, loop diagnostic tool in casing, including PC cable	
	116-WBJ-5/01	Test gas dispenser for smoke detectors, excluding pole	•
	116-WBJ-5/02	Telescopic pole, 1,26 m to 4,5 m, 1,8 kg	•
	116-WBJ-5/03	Expansion pole, 1,13 m, 0,5 kg	•
	116-WBJ-5/04	Test gas for smoke detectors	•
	116-WBJ-6/01	Heat detector test kit, battery operated, 2 x batteries and charger included (for WBJ-5/02)	
-	116-WBJ-10	Testfire smoke/heat detector test kit (head unit 2 x battery baton and fast charger)	
	116-WBJ-10/01	Testfire smoke/heat head unit	
	116-WBJ-10/02	Smoke capsule for WBJ-10 (6 pack)	
	116-WBJ-10/03	Solo 760 battery baton	

Image	Part number	Description	Suitable for EX installations
	116-WBJ-10/04	Solo 725 universal fast battery charger	
	116-WBJ-140	Installation/extraction tool for AutoSafe detectors	•
	116-7870-004.0012	Timer for use with disablement unit BW-201, 2POL/16A 12 hours	

Protecting life, environment and property, by any means necessary



Flame detection

Keeping a close watch






Autronica's flame detectors are solutions for applications in which risk to personnel is high and where fire might result in a large loss of equipment. Beyond critical life-safety concerns, our products have proven to minimize total cost of ownership while minimizing false alarms.

Our industrial and commercial applications include oil and gas pipelines, turbine enclosures, offshore platforms, and Floating Production Storage and Offloading (FPSO) vessels.

Bottom line – no other company offers more flame-detection technologies with wider area coverage, higher false-alarm immunity, reduced response times, and the appropriate global approvals. And to improve ease of use, all X-Series flame detectors have HART-protocol options.

Flame detectors

All flame detectors have 4 x M25 cable entries, unless otherwise specified. Swivel mount, glands and blind plugs are not included.
 All detectors have an ambient temperature range of -55°C to +60°C for T6 and -55°C to +75°C for T5, unless otherwise specified.
 Ingress Protection level all detectors and cameras: IP66

Image	Part number	Description	Stainless steel housing	Aluminium housing	Addressable (built-in BNB-300)	Combination unit with camera av.	For PowerLoop	Cert. -55 °C to +125 °C for T4	With HART protocol	SIL 2 approved	Notes
	116-5861-011.4310	AutroFlame X33AF multisp. IR	•			•				•	
	116-5861-011.4320	AutroFlame X33AF multisp. IR		•		•				•	
	116-5861-011.4341	AutroFlame X33AF multisp. IR	•		•			•			
	116-5861-011.4360	AutroFlame X33AF multisp. IR		•				•		•	
	116-5861-011.4361	AutroFlame X33AF multisp. IR		•	•						
	116-5861-011.4373	AutroFlame X33AF multisp. IR	•						•	•	
	116-5861-011.4385	AutroFlame X33AF multisp. IR	•					•	•	•	
	116-5861-011.4392	AutroFlame X33AF multisp. IR	•						•	•	UL Brazil approved 3/4" NPT
	116-5861-011.4393	AutroFlame X33AF multisp. IR	•						•	•	
	116-5861-011.4410	AutroFlame X33AF PL multisp. IR	•				•				
	116-5861-011.4411	AutroFlame X33AF PL multisp. IR	•				•				3/4" NPT
	116-5861-011.4420	AutroFlame X33AF PL multisp. IR		•			•				
	116-5861-011.4440	AutroFlame X33AF PL multisp. IR	•				•	•			
	116-009009-002	AutroFlame X32AF multisp. IR		•							Hydrogen flame detection
	116-009011-002	AutroFlame X32AF multisp. IR	•								Hydrogen flame detection
	116-5861-011.3980	AutroFlame X98 single IR	•			•					
	116-5861-011.3981	AutroFlame X98 single IR		•		•					
	116-009585-001	xWatch surveillance camera		•							For use with any flame detector above. M20 PAL video output. For use in EX areas FM/CSA approved 768 x 484 px 90° optical lens*
	116-009587-001	xWatch surveillance camera	•								

*Other lenses available

Cable glands/Blind plugs

Part number	Description
116-6332-032.1925	Blind plug M25, polyamid, Eexe, Ingress Protection level: IP67
116-6530-030.0020	SPMH/NP/M20 blind plug nickle plated brass
116-6530-030.0025	SPMH/NP/M25 blind plug nickle plated brass
116-6571-016.2520	Cable gland adapter M20/M25
116-6571-018.2025	EEXDE adapter M25-20 nickle plated brass
116-6571-070.2025	Cable gland A2LBFM25NP, Brass - nickel plated, Exd/Exe, Ingress Protection level: IP66/68
116-6571-071.2500	Cable gland M25, polyamid, Eexe, Ingress Protection level: IP67
116-6571-080.0001	501/453/UNIV/B M25 nickle plated brass
116-6571-080.0002	501/421/B M25 EEXE nickle plated brass
116-6571-080.0005	501/453/UNIV/O-M20 nickle plated brass
116-6571-080.0006	501/453/UNIV/A-M20 nickle plated brass
116-6571-080.0007	501/421/Os M20 EEXE nickle plated brass
116-6571-080.0009	501/421/A M20 EEXE nickle plated brass

Accessories

Part number	Description
116-001680-001	K1003A1006 Window cleaner for flame detectors (6 pcs.)
116-004404-002	Q9001H8001 swivel for xWatch camera SS
116-002099-003	Q9001B1175 swivel for xWatch camera alu.
116-5861-011.9050	Q9033B Swivel mount for AutoFlame detectors, stainless steel
116-5861-011.9051	Q9033A Swivel mount for AutoFlame detectors, aluminium
116-007338-010	Q2033A10R 10 degree field-of-view limiter
116-007338-020	Q2033A20R 20 degree field-of-view limiter
116-007338-030	Q2033A30R 30 degree field-of-view limiter/Weather shield (maintains standard field-of-view)
116-007240-001	Q1116A air shield assembly
116-009199-001	Q1198A dual air shield/flange mount assembly
116-102740-002	Calibration magnet for X series flame detectors

Test equipment

Part number	Description
116-006439-004	W8067S Long range test lamp IR/UVIR, (non-EX). 110VAC charger included.
116-004000-006	W867C Portable test lamp 220 V, UV, UV/IR & Single IR
116-007255-001	Q1201C Laser holder for AutoFlame X33AF, UV/IR and UV flame detectors
116-006097-001	Laser aimer (non-EX) for AutoFlame detectors incl. battery
116-009997-001	Universal Battery Charger for W867 and W8067, 110/220 VAC
116-007819-001	W6300B Inspector connector for connection to PC utilizing an integral RS485 to RS232 converter for communication
116-009207-001	Inspector monitor software. To be used together with inspector connector
116-009208-001	O/I replacement kit for AutoFlame X33AF with black reflector plate*
116-010831-001	O/I replacement kit for AutoFlame X33AF with stainless steel reflector plate*
116-009208-002	O/I replacement kit for AutoFlame X22, X52 and X98
116-007739-001	Test magnet and extension pole

*: Please note: AutoFlame X33AF models are supplied with either a black or a stainless steel reflector plate. These plates are not interchangeable. Order the replacement that matches the reflector plate on your AutoFlame X33AF detector.



Gas detection

When every second counts

When it comes to detecting toxic gas would you rather be alerted in 30 seconds... or 5 seconds?

In the demanding environments of the petrochemical oil and gas industry, fire and gas detection has to deliver optimal results at all times. Autronica offers traditional detectors with 4-20 mA and/or relay output, but we have also taken the IR point gas detection a step further. By introducing the two wire intelligent communication on our IFG PowerLoop we allow for centralized control of all diagnostic data. Analogue readings and detector self testing features are available from our AutoPoint IR gas detectors.

The line-of-sight IR gas sensing technology surpasses other alternatives, both with respect to the life cycle cost as well as operational tangibles of a more technical nature. Our AutoPath HC800 open path infrared beam system delivers reliable, combustible gas monitoring for all types of applications.


The AutoSonic Acoustic Gas Leak Detector hears gas leaks that others don't – the instant they occur. It is the first non-contact gas leak detector of its kind that recognizes unique sound "fingerprints," analyzing 24 discrete ultrasonic bands, while ignoring nuisance ultrasonic sources. A high-fidelity microphone continuously monitors for the distinct ultrasound emitted by pressurized gas leaks across the widest spectrum of frequencies.

With our AutoTox toxic gas detector family, you get a gas detector that continuously monitors the atmosphere for potentially hazardous gas leaks and oxygen depletion. An array of sensor models detect a variety of gases in various concentration ranges.



Autronica delivers the performance, quality, and reliability you can depend on to keep you safe and satisfied.

Infrared hydrocarbon gas detectors

All units have 4-20 mA with HART protocol and are delivered in stainless steel housing.
Other detectors are available on request


Image	Part number	Description	SIL 2 approved	HART connector	Hydrophobic filter*†	Relay output	Cable entries	EX approval	Notes
	116-010195-232	AutroPoint HC200	•				2 x M25	Ex d e	
	116-5861-011.5100		•	•			2 x M25	Ex d e	
	116-010195-233		•			•	2 x M25	Ex d	
	116-007168-233		•	•		•	2 x M25	Ex d	
	116-010195-234		•		•		2 x M25	Ex d e	
	116-007168-234		•	•	•		2 x M25	Ex d e	
	116-010195-235		•		•	•	2 x M25	Ex d	
	116-007168-235		•	•	•	•	2 x M25	Ex d	
	116-010195-236		•				2 x 3/4" NPT	Ex d	Inmetro
	116-010195-237		•		•		2 x 3/4" NPT	Ex d	Inmetro
	116-007168-252		•	•			2 x 3/4" NPT	Ex d e	
	116-5861-011.5300	AutroPoint HC300PL		•			2 x M25	Ex d e	Addressable, PowerLoop version
	116-010195-030				•		2 x M25		
	116-010195-036						2 x M25		
	116-010195-031				•		2 x 3/4" NPT		
	116-010195-037						2 x 3/4" NPT		
	116-5861-011.5310			•			2 x 3/4" NPT		
	116-013800-503	AutroPath HC800	•				M25	Ex d e	5-60 m range Atex/IECEX
	116-013800-553		•			30-120 m range Atex/IECEX			
	116-013801-503		•			Transmitter spare Atex/IECEX			
	116-013802-503		•			Receiver spare 5-60 m Atex/IECEX			
	116-013802-553		•			Receiver spare 30-120 m Atex/IECEX			
	116-013803-503		•			Transmitter front module ATEX/IECEX			
	116-013804-503		•			Receiver front module 5-60 m ATEX/IECEX			
	116-013804-553		•			Receiver front module 30-120 m ATEX/IECEX			

*: Recommended for areas with high levels of airborne particulates or humidity.

Image	Part number	Description	SIL 2 approved	HART connector	Hydrophobic filter*	Relay output	Cable entries	EX approval	Notes
	116-GD10-P00-17DG-0XH-00	GD-10P	•	•			2xM20	Ex d e	1 sec. response
	116-Z-02104N4011	Searchline Excel IR gas detector							
	116-Z-02104NXSSA								With SNX universal transmitter


Acoustic gas detectors

All units have 4-20 ma with HART protocol and are delivered in stainless steel housing.


Image	Part number	Description	SIL 2 approved	HART connector	Cable entries	EX approval	Notes
	116-012152-001	AutroSonic acoustic gas detector kit	•	•	3/4" NPT	Ex d	FM/CSA/ATEX/IECEX approved.
	116-012153-001				M25		Kit includes individually packaged sensor and transmitter.

Toxic gas detectors

Autronica provides toxic gas detectors for a wide range of gases. These detectors must be combined with a toxic gas sensor module, listed below. All display units are Ex d approved, having 4-20 mA output with HART and RS-485 in addition to relay outputs.

Image	Part number	Description	Electrochemical	Stainless steel housing	Aluminium housing	Notes
	116-5861-011.6601	AutroTox ATD w/AutroVu AV10 display unit	•		•	SIL 2 approved
	116-5861-011.6603		•	•		


Toxic gas sensor modules

Image	Part number	Description	Range	Used with Omicron point gas detection system OGS 2.1 (Used with Omicron gas sampling system OGS 3.1 (page 69)	SIL 2 capable
	116-009471-001	GTS H ₂ S 20P	0 – 20 ppm			•
	116-009471-002	GTS H ₂ S 50P	0 – 50 ppm			•
	116-009471-003	GTS H ₂ S 100P	0 – 100 ppm			•
	116-009471-004	GTS Cl ₂ 10P	0 – 10 ppm			
	116-009471-006	GTS NH ₃ 500P	0 – 500 ppm			
	116-009471-008	GTS H ₂ 1000P	0 – 1000 ppm	•		
	116-009471-009	GTS O ₂ 25V	0 – 25 % by volume	•	•	•
	116-009471-010	GTS CO 100P	0 – 100 ppm	•		
	116-009471-011	GTS CO 500P	0 – 500 ppm			
	116-009471-503	GTS H ₂ S 100PTD, DNV approved	0 – 100 ppm			•
	116-009471-509	GTS O ₂ 25VTD, DNV approved	0 – 25 % by volume			•
	116-009471-510	GTS CO 100PWD, DNV approved	0 – 100 ppm			
	116-009471-511	GTS CO 500PWD, DNV approved	0 – 500 ppm			
	116-009471-532	GTS H ₂ S 50P, DNV approved	0 – 50 ppm		•	•



INMETRO approved versions available

Display units

All display units are Ex d approved, with 4-20 mA output with HART and RS-485 in addition to relay outputs.

Image	Part number	Description	Electrochemical	Catalytic combustible	Stainless steel housing	Aluminium housing	SIL 2 approval	Cable entries	Notes
	116-011780-001	AutroVu AV10	•			•	•	5xM25	
	116-011780-002	AutroVu AV10	•		•		•	5xM25	
	116-011780-006	AutroVu AV10	•		•		•	3/4 NPT	
	116-011780-081	AutroVu AV10	•			•	•	3/4 NPT	INMETRO (Brazil)
	116-011780-082	AutroVu AV10	•		•		•	3/4 NPT	INMETRO (Brazil)
	116-011780-003	AutroVu AV10 CGS		•		•		5xM25	
	116-011780-004	AutroVu AV10 CGS		•	•			5xM25	

Toxic gas transmitters and termination boxes

Image	Part number	Description	Electrochemical	Stainless steel housing	Aluminium housing	Ex d certified	Notes
	116-009480-004	GTX Transmitter	•	•		•	Used with Omicron point gas detection system OGS 2.1 (page 67) and OGS 3.1 (page 69)
	116-226365-603	STB Termination Box	•		•	•	For GT3000, M25, SS, 5 ports

Accessories

Part number	Description
116-007525-003	Direct duct mount kit for point gas detectors AutoPoint HC200 and HC300PL
116-009700-001	Magnetic tool for AutoSonic acoustic detector and AutoVu display
116-012513-001	Q912 Duct mount M25 with 1 ft. inlet
116-012513-003	Q912 Duct mount M25 with 3 ft. inlet
116-012513-006	Q912 Duct mount M25 with 3 ft. inlet
116-012513-010	Q912 Duct mount M25 with 10 ft. inlet
116-012513-013	Q912 Duct mount M25 with 13 ft. inlet
116-012673-001	System test film for AutoPath HC800, set of 5 films
116-012287-002	Alignment telescope for AutoPath HC800
116-226365-127	Toxic sensor termination box and separation kit. JBOX, SEP, AL, M25 CENELEC Infinity
116-US-843	Rain and sun shield for point gas detectors AutoPoint HC200 and HC300PL
116-Z-475HP1EKL9GMT	Emerson 475 HART communicator. Instrument for calibration of AutoPoint HC200 and AutoPath HC600 gas detectors. Certified intrinsically safe by CENELEC/ATEX, FM, CSA, FISCO and IECEx
116-Z-GD10-ADAPT1	Duct adapter for point gas detector GD-10P
116-Z-499815712	Sunshade, GD10/PGD10PE

For cable glands and blind plugs, see flame detector section, page 45.

Calibration kits

Part number	Gas type	Concentration	Notes
116-006468-001	Methane CH ₄	50 % LEL	AutoPoint HC200/-300
116-007098-005	Hydrogen Sulphide H ₂ S	50 ppm	12 x ampoules, NTMOS detectors
116-010274-001	Hydrogen Sulphide H ₂ S	10 ppm	GT3000 series
116-010274-002	Hydrogen Sulphide H ₂ S	25 ppm	GT3000 series
116-010274-004	Chlorine Cl ₂	5 ppm	GT3000 series
116-010274-005	Ammonia NH ₃	50 ppm	GT3000 series
116-010274-006	Ammonia NH ₃	250 ppm	GT3000 series
116-010274-008	Hydrogen H ₂	500 ppm	GT3000 series
116-010274-009	Oxygen O ₂	20,90 %	GT3000 series
116-010274-010	Carbon Monoxide CO	50 ppm	GT3000 series
116-010274-011	Carbon Monoxide CO	250 ppm	GT3000 series
116-010274-013	Sulfur Dioxide SO ₂	10 ppm	GT3000 series
116-010274-014	Sulfur Dioxide SO ₂	50 ppm	GT3000 series
116-225130-005	Hydrogen H ₂	50 % LEL	AutoPoint H ₂
116-225130-009	Without gas	-	AutoPoint H ₂

Accessories for calibration kits

Part number	Description
116-004976-001	Calibration cup for catalytic detectors, stainless steel
116-005964-001	Calibration cup for point gas detectors AutoPoint H ₂ S, O ₂ and TX50
116-225741-001	Extra ampoules for 116-007098-005 NTMOS Calibration Kit H ₂ S Ampoule, 50 ppm
116-227117-001	GT3000 replacement cylinder H ₂ S 50 ppm
116-227117-006	GT3000 replacement cylinder O ₂ 20,90%
116-227117-012	GT3000 replacement cylinder H ₂ S 25 ppm
116-227117-018	GT3000 replacement cylinder H ₂ 500 ppm
116-Z-00670	Step regulator with 0,5 L constant flow
116-Z-00671	Step regulator with 1 L constant flow
116-Z-00678	Carrying case for 2 bottles
116-Z-1200674	2.5 LPM constant flow regulator
116-Z-1711020	Test gas, 65 % LEL methane in N ₂ . 110 L
116-Z-1501020	Test gas, 50 ppm H ₂ S. 110 L
116-Z-1404010	Test gas, 50 % LEL H ₂ . 110 L
116-Z-499810874.8	Sample Flow Housing for point gas detector GD-10P
116-Z-1200673	Reg. valve 0.3-3.0 L/min

Other concentrations and test gases available on request.





Other detectors

– completing the fire detection system

Alarmline linear heat detection (LHD) is a cable-based system providing economical temperature monitoring at the precise point of risk. The system is reliable, flexible and has the ability to detect abnormal temperature variances before fire breaks out. The comprehensive LHD product portfolio allows a vast range of commercial and industrial fire and overheat risks to be protected, in ambient temperatures of 68°C to 185°C. Other options/alarm temperatures available on request.

Aspirating detectors function by sampling air via a network of pipes, sampled air is passed through a dust filter and into a detector chamber where the air is analyzed for traces of smoke. Typical applications include laboratories, large open spaces, corrosive environments, archives/historical buildings and industrial areas. Every detector is “trainable” for the specific environment in which it is installed.

Common to all AutoSense detectors is that they are capable of detecting the small amounts of smoke that are generated in the initial phases of a smouldering fire, ensuring the earliest possible warning of a potential fire. At the same time, AutoSense detectors distinguish real smoke from dust and pollutants, reducing unwanted alarms to a minimum.

AutoSense 200, AutoSense Micra 25 and Micra 100 are stand-alone aspirating detectors, that can also be connected to fire alarm systems. These units feature built-in intelligence that ensures optimal detection capability.

Beam detectors are used in large open areas instead of a quantity of point smoke detectors. The detector protects a given area by sending signals (infrared light beam) between a transmitter and receiver, and detect dimmer or changes in frequency by heat or smoke. Beam detectors are suited to applications in open spaces where costs associated with point smoke detectors would be prohibitive.

Alarmline linear heat detectors




Image	Part number	Description
	116-AD68N-0001	Digital cable, 68 °C nylon
	116-AD88N-0001	Digital cable, 88 °C nylon
	116-AD105N-0001	Digital cable, 105 °C nylon
	116-AD185SS-0001	Digital cable, 185°C stainless steel and nylon
	116-AAN-0001	Analogue LHD cable, nylon
	116-AACUSP	Analogue LHD control unit, self programmable

Recommended interface unit for Alarmline linear heat detectors is BN-303 (see page 26)

Accessories

Part number	Description
116-5843-005.9002	Alarmline L-bracket
116-5843-005.9003	Alarmline edge clip
116-5843-005.9004	Alarmline T-clip
116-5843-005.9005	Alarmline pipe clip
116-5843-006.0010	Termination kit K82023
116-5843-007.0003	Neoprene sleeve B6782-08
116-5843-007.0004	Cable ties B6782-121

Aspirating detectors

Image	Part number	Description	Sensitivity (obsc./m)	Max. length piping	Max. coverage (FG)	Max. coverage BS6266 (Hot Wire Test)	Sampling pipe inlets	Max. sampling holes	Alarm levels	Relays
	116-5861-018.2000	AutroSense 200	0,003–25%	200 m	2000 m ²	500 m ²	4	100	4	5
	116-5861-018.1007	AutroSense Micra 25	0,0015–25%	25 m	450 m ²	450 m ²	1	10	1	2
	116-5861-018.1107	AutroSense Micra 100	0,0015–25%	100 m	1600 m ²	500 m ²	2	50	1	2

Recommended interface unit for aspirating detectors is BN-303, see "Input and output units" on page 26)

Accessories

Part number	Description
116-5861-018.2110	AutoSense command module w/o PSU
116-5861-018.4110	AutoSense Micra relay card w/inputs
116-5861-018.9027	AutoSense 200 dust filter
116-5861-018.9028	AutoSense Micra 25 and 100 dust filter
116-5861-018.3051	Wire burn unit
116-5861-018.9999	Cable for "hot wire" test (roll @ 100 m)
116-5861-018.3422	AutoSense air heater
116-XJA-030	Programming cable for AutoSense Micra
116-BW-75/04	Condensation bottle
116-BW-75/06	Filter
116-BWP-144	AutoSense, detector housing for sampling pipes with detector base BWA-100
116-5861-966.0009	Smoke pellets
116-5861-966.0010	Smoke matches

Piping – halogen free

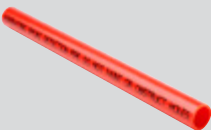

Image	Part number	Description	Thickness	Colour
-	116-5862-001.0025	Water hose in coil, 25 mm PE50 NT10. Please specify desired length: 50 or 300 meters	25 mm	
	116-5861-910.0027	Straight pipe L = 3 m	27 mm / 3/4"	Red
	116-5861-999.0027		27 mm / 3/4"	Grey
	116-5861-999.0025		25 mm	Red
	116-5861-999.0025W		25 mm	White
	116-5861-999.0025G		25 mm	Grey
	116-5861-914.1027	Joining socket	27 mm / 3/4"	Red
	116-5861-998.027G		27 mm / 3/4"	Grey
	116-5861-998.0025		25 mm	Red
	116-5861-998.0025W		25 mm	White
	116-5861-998.0025G		25 mm	Grey







Image	Part number	Description	Thickness	Colour
	116-5861-964.0001	T-piece	27 mm / 3/4"	Red
	116-5861-997.0027G		27 mm / 3/4"	Grey
	116-5861-997.0025		25 mm	Red
	116-5861-997.0025W		25 mm	White
	116-5861-997.0025G		25 mm	Grey
	116-5861-915.1027	Socket union	27 mm / 3/4"	Red
	116-5861-996.0027G		27 mm / 3/4"	Grey
	116-5861-996.0025		25 mm	Red
	116-5861-996.0025W		25 mm	White
	116-5861-996.0025G		25 mm	Grey
	116-5861-962.0001	Normal bend 45°	27 mm / 3/4"	Red
	116-5861-995.0027		27 mm / 3/4"	Grey
	116-5861-995.0025		25 mm	Red
	116-5861-995.0025W		25 mm	White
	116-5861-995.0025G		25 mm	Grey
	116-5861-912.0027	Normal bend 90°	27 mm / 3/4"	Red
	116-5861-994.0027G		27 mm / 3/4"	Grey
	116-5861-994.0025		25 mm	Red
	116-5861-994.0025W		25 mm	White
	116-5861-994.0025G		25 mm	Grey
	116-5861-993.0027G	90° elbow	27 mm / 3/4"	Grey
	116-5861-993.0025		25 mm	Red
	116-5861-993.0025W		25 mm	White
	116-5861-993.0025G		25 mm	Grey
	116-5861-964.0002	End cap	27 mm / 3/4"	Red
	116-5861-992.0027G		27 mm / 3/4"	Grey
	116-5861-992.0025		25 mm	Red
	116-5861-992.0025W		25 mm	White
	116-5861-992.0025G		25 mm	Grey
	116-5861-991.2725	Adapter 27 mm - 25 mm, female/female	-	Red
	116-5861-991.2725W			White
	116-5861-991.2725G			Grey








Image	Part number	Description	Thickness	Colour
	116-5861-965.0001	Adapter 27 mm - 25 mm, female/male	-	Red
	116-5861-964.0008	Adapter 25 mm -27 mm, female/male	-	Red
	116-5861-922.0004	T piece for capillary	27 mm / 3/4"	Red
	116-5861-989.2510		25 mm	Red
	116-5861-989.2510W		25 mm	White
	116-5861-964.0004	Plane test point with 10 mm adapter, 90°	10 mm	White
	116-5861-922.0007	Discreet capillary sampling point	10 mm	Transparent
	116-5861-910.0078	Capillary tube	10 mm	Red
	116-5861-988.0010N		10 mm	Transparent
	116-5861-018.9021	Capillary sampling point kit flush	27 mm / 3/4" / 10 mm	Red
	116-5861-987.0025		25 mm / 10 mm	Red
	116-5861-987.0025N		25 mm / 10 mm	Transparent
















Image	Part number	Description	Thickness	Colour
	116-5861-935.0002	Solvent cement 250 ml w/brush	-	-
	116-5861-922.0001	Test point, plane shape	-	-
	116-5861-922.0010	Sampling hole warning labels, 100 psc	-	Red
	116-5861-964.0006	Pipe clip	-	Red
	116-5861-986.2527W			White
	116-5861-986.2527G			Grey
	116-5861-966.0011	M6-mutter til klips (for å feste klips på M6 «Stand off»)	-	Transparent
	116-5861-966.0001	Compression adapter	27 mm / 3/4" / 10 mm	Red
	116-5861-985.2510		25 mm / 10 mm	Red
	116-5861-966.0002	Compression adapter T	27 mm / 3/4" / 10 mm	Red
	116-5861-984.2510		25 mm / 10 mm	Red

Image	Part number	Description	Thickness	Colour
	116-5861-966.0003	ABS test point	27 mm / 3/4"	Red
	116-5861-983.0025		25 mm	Red
	116-5861-983.0025W		25 mm	White
	116-5861-966.0004	Glass condensation trap	27 mm / 3/4"	Red
	116-5861-982.0025		25 mm	Red
	116-5861-982.0025W		25 mm	White
	116-5861-966.0005	Flexible connector 30 cm	27 mm / 3/4"	Red
	116-5861-981.2530		25 mm	Red
	116-5861-981.2530W		25 mm	White
	116-5861-966.0006	Flexible connector 100 cm	27 mm / 3/4"	Red
	116-5861-981.25100		25 mm	Red
	116-5861-981.25100W		25 mm	White
	116-5861-966.0007	Condensation trap with valve	27 mm / 3/4"	Red
	116-5861-966.0008	Self bilging condensation trap	27 mm / 3/4"	Red

Beam detectors

Image	Part number	Description	Detection distance	Ingress Protection level	Notes
	116-5861-023.5101	FireRay 5000-101 Auto aligning infrared optical beam smoke detector. Transmitter/receiver in the same housing, plus reflector.	5 – 50 m	IP54	
	116-5861-023.5102	FireRay 5000-102 Auto aligning infrared optical beam smoke detector. Transmitter/receiver in the same housing, plus reflector.	50 – 100 m	IP54	
	116-5861-023.3000	FireRay 3000-101 End to end infrared optical beam smoke detector system. Transmitter, receiver and compact low-level controller.	5 – 120 m	IP54	

Recommended interface units for FireRay detectors are BN-305 (see page 26)

Accessories





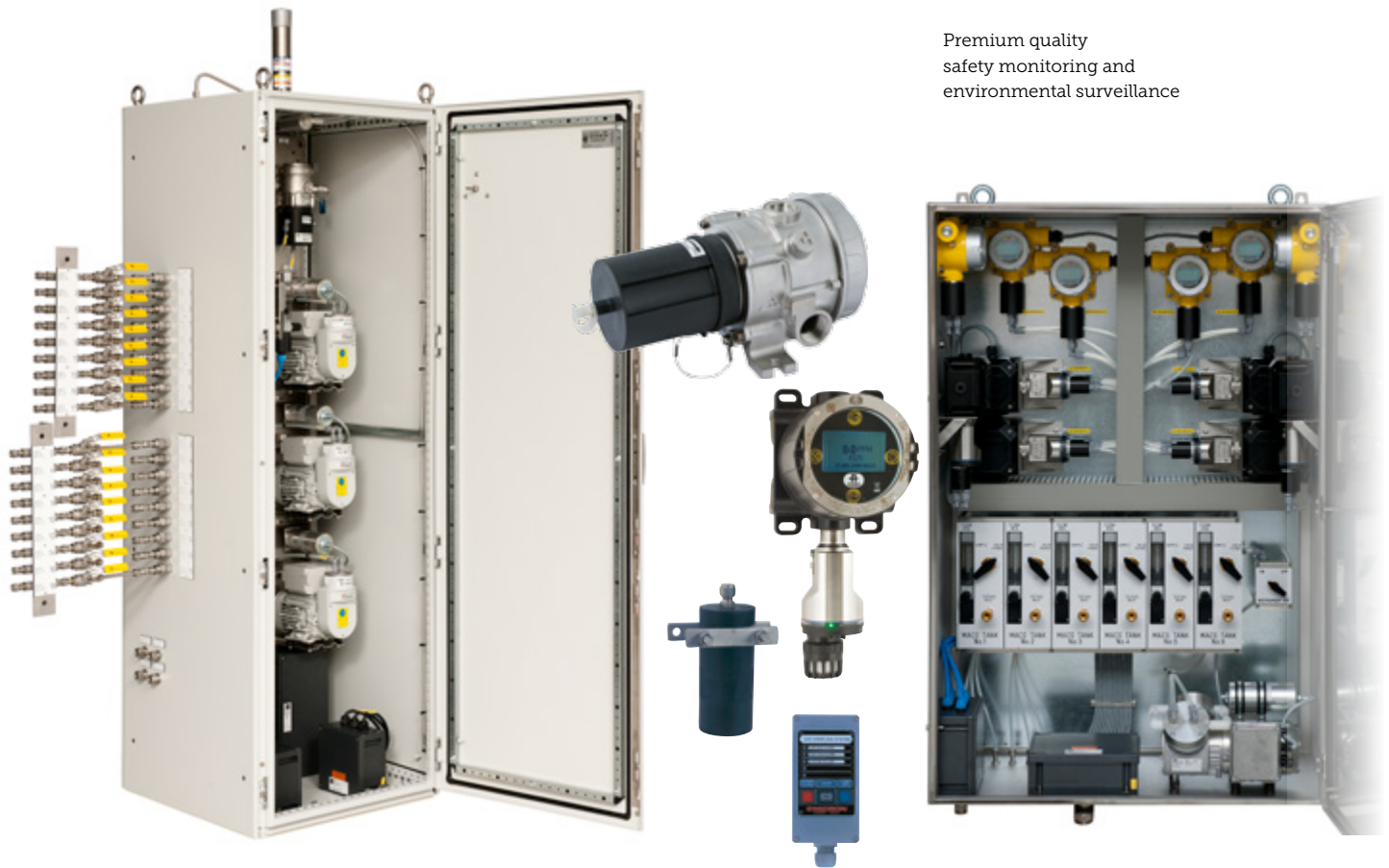
Image	Part number	Description
	116-5861-023.5002	FireRay 5000-002: For 50 m – detector head and 1 x reflector
	116-5861-023.5039	FireRay 5000-03: For 100 m – detector head and 4 x reflector
	116-5861-023.5003	FireRay 5000-003: System controller
	116-5861-023.5005	FireRay 5000-005 Universal bracket for use with FireRay 5000 detector head or reflector mounting plate

Image	Part number	Description
	116-5861-023.5006	FireRay 5000-006: Surface mounting plate for 1 or 4 reflectors
	116-5861-023.5007	FireRay 5000-007: Mounting plate for 4 reflectors for use with bracket FireRay 5000-005 Image shows plate mounted on bracket, with reflector
	116-5861-023.5009	FireRay 5000-008: Mounting plate for 1 reflector for use with bracket FireRay 5000-005 Image shows plate mounted on bracket, with reflector
	116-5861-023.5008	Obscuration test filter
	116-5861-023.5004	50-100 m kit for FireRay 5000, consisting of 3 reflectors. Included in FireRay 5000-102
	116-5861-023.1018	Protection cage for FireRay 5000
	116-5861-023.3001	FireRay 3000-015: Pair of detectors (transmitter and receiver) for use with FireRay 3000 system
	116-5861-023.3002	FireRay 3000-201: Adjustment bracket for use with FireRay detectors



Premium quality
safety monitoring and
environmental surveillance

Omicron systems

Solutions you can trust

Every day, thousands of vessels and offshore production facilities navigate the world's oceans, containing valuable and often high-risk products. We are dedicated to the crew onboard, always doing our best to ensure that they have the safest working conditions possible.

Each application is unique in design or task, and it is our mission to provide each one with an optimal safety system. Autronica's Omicron product range is designed to meet the most demanding requirements within the offshore industry. For more than 25 years we have designed gas detection systems to meet and exceed the individual demands of each installation. The entire value chain, from project engineering via production to after sales and administration, is bundled in our Special Detection Competence Center in Norway, ensuring fast, efficient and high quality project

realization. Based on the experience of approximately 200 projects per year and our thorough application know-how our team of dedicated and highly specialized employees will always find the ideal solution for your needs.

Since 1989 we have developed and optimized a range of high end systems that require minimal maintenance, are extremely robust and reliable as well as easy to operate. Our service-friendly systems fulfill all regulatory and class societies' regulations and enable economically viable operations. Omicron system can be used in various applications like e.g. FPSO, FSRU, platforms or drilling rigs.

Point gas detection system – OGS 2.1

For all high risk areas that require fast and continuous gas detection

Our point gas detection system OGS 2.1 is the ideal solution for environments that require continuous monitoring for hazardous gases.

Typical higher risk areas that require fixed point gas detection are e.g. pump rooms and engine rooms. The system can be equipped with an infinite number of sensors and supports various detection methods such as e.g. electrochemical, catalytical and infrared technology.

The OGS 2.1 system operates on the same platform as our gas sampling family OGS 3, making it easy combinable and the ideal extension to the OGS sampling systems whenever both solutions need to be pooled to one economically sound system. The platform flexibility enables us to meet the individual customer's needs.

The OGS 2.1 meets the requirement set out by IMO and the different classification societies.

Features

- Individual readings and alarm LEDs for each individual sensor
- Up to 4 adjustable independent alarm set points
- Detection of Oxygen, Hydrocarbons and toxic gases
- Infrared, catalytical and electrochemical sensors
- Continuous system verification
- Intuitive operation
- Remote alarm unit to display alarms on a second location e.g. ship's bridge (optional)
- Integrated temperature alarm for cargo pump bearings (optional)
- Cargo pump emergency shutdown (option)
- RS 485/422 Modbus RTU serial line communication (option)
- Separated alarm and detector cabinet (optional)



Part number	Name	Description
116-KIT-K2001	Gas alarm system OGS 2.1	Control cabinet with integrated alarm panel for a fixed gas detection system with a set number of sensors. Cabinet to be operated in indoor safe area. Standard Autronica project documentation included. Number of sensors must be specified when ordering.

OGS 2.1 Gas Sensors & Accessories

Part number	Name	Description
116-010195-058	AutroPoint HC200	IR Sensor 0 - 100% LEL, 2 x M25 cable entries
116-75777	GT3000 Junction box	
116-14382	Cable gland M20 for GT3000 Junction box	
116-M2050	Modbus OGS 2.1	

For GT3000 toxic gas sensors, see

- "Accessories" on page 53
- "Toxic gas sensor modules" on page 51

OGS 2.1 classification

Part number	Name
116-Classification	Classification by class society

OGS 2.1 spare part kit

Part number	Name
116-M6170	OGS 2.1 standard spare part kit
116-M6171	OGS 2.1 3 years spare part kit

Gas sampling system – OGS 3.1

For total solutions in gas sampling

The OGS 3 family is our 4th generation gas sampling systems, relied on by major operators around the world. Built to withstand the harshest conditions, the Omicron Gas Sampling Systems are the ideal solution for gas detection in areas where normal installation of gas sensors is impossible.

The OGS 3.1 is our top of the range gas sampling system and typically used in the oil and gas offshore industry. The system contains a monitoring cabinet and a detector cabinet, that both can be installed in EX areas. The system's scalability enables us to design the ideal solution for the individual operational challenges on e.g. FPSOs, FLNG or drilling rigs. OGS 3.1 meets the requirement set out by IMO and the different classification societies.



Intuitive and efficient

Within standard operation the OGS system runs a fully automated sampling sequence from the various defined sampling points. The cycle time is minimized by using 2 independent vacuum pumps; one main pump that continuously draws air from all sample points and one smaller pump taking samples from the actual point according to the sample sequence. This ensures fresh samples and a quick response in case gas is detected. The system continuously self verifies all pneumatic components to ensure proper operation at all times. All alarms, gas as well as potential malfunctions, are shown on the standardized Omicron operator panel in plain text, making the operation extremely intuitive and limiting training requirements, especially for combined systems.

Scalability

The wide range of optional features in conjunction with the overall system flexibility allow Omicron Gas Sampling Systems to cover a broad range of applications, ranging from a system with only a few sample points to a tailor made OGS 3.1 system with a centralized monitoring cabinet and several detector cabinets, making it the ideal solution for large and demanding applications. The system utilizes the common Omicron product line platform, which makes it easily combinable with the Omicron fixed gas detection system OGS 2.1 creating an overall cost effective gas detection solution for an entire vessel.

Features

Standard

- Infrared hydrocarbon sensor(s) with range 0 - 100% LEL
- Low and high gas alarms
- Flame arrestor and shut off valves for each sampling tube
- Automatic and sequential purging of each sampling tube
- Two vacuum pumps for reliable detection (main and sample)
- Non-return valves to avoid liquid entering into the system
- Continuous system verification
- Adjustable purge and sample time on every sampling point
- Semi-automatic test functionality for span and zero calibration
- Manual disconnecting of sampling points that are not in use.

Optional

- Multiple gas analysis. Up to 3 different gas sensors simultaneously
- Dilute functionality for detection of non IR detectable combustible gases (e.g. NH3)
- Repeater display units with control transfer (max. 5)
- Remote alarm units with alarm LEDs and sounder (e.g. for bridge)
- Bulkhead penetrations
- RS 485/422 Modbus RTU serial line communication
- Up to 32 freely configurable aux. relay outputs
- Dual purge supply (i.e. nitrogen and instrument air)
- Standby pump with manual switch over
- Eex, Zone 1 design
- Special design materials for extreme gases

Part number	Name	Description
116-KIT-K3001	OGS 3.1 Alarm & control cabinet	IP66 Control cabinet with integrated alarm panel for a set number of sample points. Cabinet to be operated in safe area. Standard Autronica project documentation included. Number sampling points must be specified when ordering.
116-KIT-K3010	OGS 3.1 Detector cabinet	IP66 detector cabinet for safe area incl. 1 AutoPoint HC200 0-100% LEL IR sensor, flame arrestors and manifolds for a set number of sample points. Cabinet to be operated in safe area. Standard Autronica project documentation included. Number sampling points must be specified when ordering.

Customer specific configuration and documentation and/or other sensor types on request

OGS 3.1 sensors and system options

Part number	Name	Description
116-M3252	GT3000 flow cap	
116-M3035	Modbus OGS 3	
116-M3050	Flamescreen OFS1/10MMOD	Flamescreen for exhaust air
116-M3051	FLAMESCREEN OFS1/12mmOD	Flamescreen for exhaust air
116-M3078	Shut-off valve 1X6MMOD EX HEX	
116-M3079	SShut-off valve 1X6MMOD W/HEX	
116-M3080	Shut-off valve 2X8MMOD	
116-M3081	Shut-off valve 1X8MMOD	
116-M3082	Shut-off valve 2X10MMOD	
116-M3083	Shut-off valve 1X10MMOD	
116-M3084	Shut-off valve 2X12MMOD	
116-M3085	Shut-off valve 1X12MMOD	
116-M3140	Filter regulator 12MMOD-12MMTX	
116-M3141	Filter regulator 10MMOD-12MMTX	
116-M3142	Filter regulator 8MMOD-12MMTX	
116-M3060	Bulkhead pen 150/32/ 2X8MM OD	
116-M3061	Bulkhead pen 150/32/ 1X8MM OD	
116-M3062	Bulkhead pen 150/32/ 2X10MM OD	
116-M3063	Bulkhead pen 150/32/ 1X10MM OD	
116-M3064	Bulkhead pen 150/32/2X12MMOD	
116-M3065	Bulkhead pen 150/32/1X12MMOD	
116-M3066	Bulkhead pen 150/22/2X8MMOD	
116-M3067	Bulkhead pen 150/22/ 1X8MM OD	
116-M3068	Bulkhead pen 150/22/2X10MMOD	
116-M3069	Bulkhead pen 150/22/1X10MMOD	
116-M3070	Bulkhead pen 150/22/2X12MMOD	
116-M3071	Bulkhead pen 150/22/1X12MMOD	
116-M3122	Non-return valve 8MM OD SS	
116-M3123	Non-return valve 10MM OD SS	
116-M3105	Inline filter 90MICRON/8MMOD	
116-M3106	Inline filter 90MICRON/10MMOD	
116-M3110	Endline filter 8MM OD	
116-M3111	Endline filter 10MM OD	
116-75321	Water trap	

For GT3000 toxic gas sensors, see

- "Accessories" on page 53
- "Toxic gas sensor modules" on page 51

OGS 3.1 spare part kits

Part number	Name
116-M6180	OGS3.1 standard spare part kit
116-M6181	OGS3.1 3 years spare part kit
116-M6182	OGS3.1 5 year spare part kit
116-M6183	OGS3.1 standard spare part kit for LPG
116-M6184	OGS3.1 3 years spare part kit for LPG
116-M6185	OGS3.1 5 years spare part kit for LPG

OGS shale shaker

Gas detection in harsh areas

The OGS Shale Shaker is the newest member of the OGS product family and specially designed to enable reliable gas detection in the harshest oil and gas environments such as shale shaker ventilation channels or similar areas where traditional gas detectors are quickly contaminated by dirt.

The OGS Shale Shaker is a direct gas sampling system consisting of a zone 1 approved detector cabinet including operation panel and a high end sample probe. The sample probe provides each sampling point with two sampling tubes. While one tube draws the gas to the sensor, the other one is being cleaned and vice versa. This provides continuous and reliable detection in the monitored area.

Features

- Specially designed for gas detection in shale shaker ventilation
- Dual sampling channels enabling reliable detection
- Automatic self cleaning routine
- IR sensor technology
- Continuous system verification
- Limited installation costs
- High end sample probe competible with standard flange
- Sample gas flow alarm
- Sample gas inlet temperature up to 70°C
- Up to 50m sampling tube
- Zone 1 approved

Part number	Name	Description
116-KIT-K3200	OGS shale shaker standard	Gas sampling system for Shale Shaker applications containing 1 AutoPoint HC 200 IR sensor and standard gas sampling probe. For use in zone 1, EX d IIB T4. Standard Autronica project documentation included.

OGS direct sampling

Direct gas sampling system for applications where continuous gas monitoring is required but no sensors can be installed due to the harsh environmental conditions. The system contains 3 AutoPoint HC 200 IR sensors to sample from 3 different locations in parallel and is suitable for use in zone 1, EX 2G IIB T4 Gb.

Standard Autronica project documentation included.



Part number	Name	Description
116-KIT-K3300	OGS direct sampling system, standard	Pressure based 3 point direct sampling system, 0 - 100% LEL Tamb 5 - 50°C
116-KIT-K3301	OGS direct sampling system, cold weather	Pressure based 3 point direct sampling system, 0 - 100% LEL Tamb -25 - 50°C

Standard accessories

Alarm lights and horns

Part number	Name	EX approval	Alarm sound frequency	Alarm colour	Sound output	Ingress Protection level	Voltage
116-M6018	Ex d Xenon alarm light BEXBG05	II 2G Ex d IIC T4	–	Red	–	IP66/67	24 V DC
116-M6019	Ex d Xenon alarm light BEXBG05	II 2G Ex d IIC T4	–	Amber	–	IP66/67	24 V DC
116-M6020	Ex d Xenon alarm light BEXBG05	II 2G Ex d IIC T4	–	Blue	–	IP66/67	24 V DC
116-M6021	Ex d Xenon alarm light BEXBG05	II 2G Ex d IIC T4	–	Red	–	IP66/67	230 V AC
116-M6022	Ex d Xenon alarm light BEXBG05	II 2G Ex d IIC T4	–	Amber	–	IP66/67	230 V AC
116-M6023	Ex d Xenon alarm light BEXBG05	II 2G Ex d IIC T4	–	Blue	–	IP66/67	230 V AC
116-M6030	Alarm horn KT75 M20	–	Air driven 400 Hz	–	136 dB(A)	IP65	24 V DC
116-M6031	Alarm horn KT75 M20	–	Air driven 800 Hz	–	136 dB(A)	IP65	24 V DC
116-M6034	Alarm horn A121 WR M20	–	Electrical 1000 Hz	–	126 dB(A)	IP66	24 V DC
116-M6035	Alarm horn A105 WR M20	–	Electrical 1000 Hz	–	112 dB(A)	IP66	24 V DC
116-M6036	Alarm horn A105 WR M20	–	Electrical 1000 Hz	–	112 dB(A)	IP66	230 V AC
116-M6037	Alarm horn MA121 WR M20	–	Electrical 1000 Hz	–	126 dB(A)	IP66/67	24 V DC
116-M6038	EX d Alarm horn	II 2G Ex d IIC T4	–	–	117 bB(A)	IP66/67	24 V DC
116-M6039	EX d Alarm horn	II 2G Ex d IIC T4	–	–	117 bB(A)	IP66/67	230 V AC
116-M6040	EX d Combination Alarm	II 2G Ex d IIB T4	–	Red	117 bB(A)	IP66/67	24 V DC
116-M6041	EX d Combination Alarm	II 2G Ex d IIB T4	–	Amber	117 bB(A)	IP66/67	24V DC
116-M6042	EX d Combination Alarm	II 2G Ex d IIB T4	–	Red	117 bB(A)	IP66/67	230V AC

Test gas

Part number	Name	Description
116-93019	Hose 6mm PA	
116-93626	Quickc male 6mm open/open brass	
116-94008	Reduction valve	AGA Pressure reducer for test gas w/flowmeter (0-800 ml/min)
116-81029	Methane 50% LEL air 1l/12bar	
116-81028	Propane 50% LEL air 1l/12bar	
116-96630	N-Butane 50% LEL air 1l/12bar	
116-81031	H2S 25 ppm N2 1l/12bar	
116-96635	Nitrogen 1l/12bar	
116-81024	Test gas. N-Butane 50% L.E.L. in air 10L	
116-94009	Flow regulator for AGA 5L 10/l fixicontrol cylinder	



Contact information

HEAD OFFICE

Stavanger

Phone: +47 90 90 55 00

UNITED KINGDOM

London

Phone: +44 (0) 1753 825 800

MIDDLE EAST/SAUDI ARABIA

Dubai

Phone: +971 0 491 99000

EUROPE & RUSSIA

Nøtterøy

Phone: +47 90 90 55 00

Aberdeen

Phone: +44 7495 591 117

SOUTH KOREA

Busan

Phone: +82 70 71229170

ASIA PACIFIC

Kuala Lumpur

Phone: +47 90 90 55 00

THE AMERICAS & WEST AFRICA

Houston

Phone: +1 713-290-8624

WORLDWIDE SERVICE ASSISTANCE

Phone: +47 915 09753

E-mail: service.oilgas@autronicafire.no

SPARE PARTS

Phone: +47 90 90 55 00

E-mail: spareoil.gas@autronicafire.no

24 HOUR SUPPORT - END USERS ONLY

Phone: +47 48 25 80 00

E-mail: afs.support@autronicafire.no

For general sales conditions, go to www.autronicafire.com.



Our mission is clear,
to make the world a safer place to live in. We know how important this task is, and this drives us to constantly develop
smarter solutions.

Our pride and driving force are anchored in saving as many lives as possible, in protecting the environment and in securing property
around us. In many cases, the consequences of a fire are enormous, and we have undertaken to understand how they occur, develop
and can be fought. Our solutions must discover potential hazards in our surroundings as early as possible, without causing false alarms
and uncertainty. This is a delicate balance, and our technology must be equally optimised in large cruise ships, in nuclear power
stations and on oil platforms, as in kindergartens.

A masterly exercise in which we place all our honour.
And in this way, we create the safest and most reliable fire and gas safety products in the world.

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Autronica Fire and Security AS
Division Petrochemical, Oil & Gas | Lagerveien 24, NO-4033 Stavanger, Norway
+47 90 90 55 00 | oil.gas@autronicafire.no | www.autronicafire.com

Org.no.: NO 979 975 503 (MVA/VAT)