[1] EU-TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protected System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **Nemko 03ATEX217X** **Issue 9**

[4] Product: **Loop driver and detectors**

[5] Manufacturer: **Autronica Fire and Security AS**

[6] Address: **Bromstadvegen 59**
7047 Trondheim
Norway

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] Nemko Group AS, notified body number 0470, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential report no. **SC253456**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0: 2018 and EN 60079-11: 2012

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the technical design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate

[12] The marking of the product shall include the following:

II (3)G	**[Ex ic Gc] IIB**
II 3G	**Ex ic IIB T4 Gc**

2023-11-30

Bernt Jonny Orderud
Certifier name

[13] Schedule

[14] EU-TYPE EXAMINATION CERTIFICATE No Nemko 03ATEX217X Issue 9

[15] Description of Product:

This certificate cover a detector system that comprises a loop driver unit and detector units for smoke, heat and manual calls.
Up to 127 detector units may be connected to one detector loop. The loop driver module is intended for mounting in the AutroSafe Fire Alarm Control panel and connected to the power supply BSS-310A.

Type Designations

Ex ic IIB T4 Gc

Manual Call Points:
BF-500V2/N (-30°C ≤ Ta ≤ +70°C)
BF-501/N, BF-503/N/0100, BF-503/N/0300, BF-503/N/0400, BF-503/N/0500 and BNB-300 (-20°C ≤ Ta ≤ +70°C)
BF-502/N (-25°C ≤ Ta ≤ +70°C)

Heat Detectors:
BDH-500/N and BD-501/N (-20°C ≤ Ta ≤ +70°C)
Optical Smoke Detectosr:
BHH-500/N and BHH-500/S/N (-20°C ≤ Ta ≤ +70°C)
Multisensor Smoke Detector:
BHH-520/N (-20°C ≤ Ta ≤ +70°C)

Input unit:
BN-500/N (-20°C ≤ Ta ≤ +70°C)

[Ex ic Gc] IIB

Loop driver:
BSD-310/N (-20°C ≤ Ta ≤ +70°C)

Intrinsic Safety Data

Loop driver:
The ratio L/R for the loop cable shall not exceed the stated value: Lo/Ro:30μH/Ω

Manual Call Points, Heat Detectors, Optical Smoke Detector, Multisensor Smoke Detector and Input unit:

Maximum input voltage	Ui: 15,75V
Maximum input current	Ii: 63,5mA
Maximum input power	Pi: 0,44W
Maximum internal capacitance	Ci: 21,6nF
Maximum internal inductance	Li: 0mH

Degrees of protection (IP Code)

BF-500V2/N IP65 according to IEC 60529.

Ambient temperature:
See Type Designations above.

Routine tests
None.

[16] Report No. SC253456

Descriptive Documents:

Drawing No.	Rev.	Date	Name/Title	Sheets
BDH-500/N:				
116-9212-328.0001	10	2009-12-23	BDA-300/EX KRETSKORT GRV.	3
Doc-1004552	3	31-08-2023	*Control Drawing	3
BD-084	D	2009-04-21	BDA-300/EX Heat detector with SV function.	1
7212-328.107	2	2005-08-22	BDA-300/EX	1
7212-328.007	2	2005-08-22	BDA-300/EX	1
BH-097	C	2010-02-16	Assembly drawing Heat detector Autrosafe	1
Doc-1001171	3	09-06-2022	*Ex-labels laser engraved AutroSafe Detectors in Zone 2 (Tillegg til standard marking)	1
Doc-1002311	5	27.09.2022	*BDH-500/N, BDH-500/EX TYPE LABEL	1
BD-091	B	2011-07-11	Coating of BDA-300/EX	1
116-7212-328.9007	7	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BD-501/N:				
116-9212-328.0001	10	2009-12-23	BDA-300/EX KRETSKORT GRV.	3
Doc-1004552	3	31-08-2023	*Control Drawing	3
BD-084	D	2009-04-21	BDA-300/EX Heat detector with SV function.	1
7212-328.107	2	2005-08-22	BDA-300/EX	1
7212-328.007	2	2005-08-22	BDA-300/EX	1
BD-083	A	2005-04-04	Assembly drawing BD-501, BD-501/Ex, BD-501/N	1
Doc-1002044	3	09-06-2022	*BD-501/N TYPE LABEL ZONE 2	1
Doc-1002310	3	29.11.2021	*BD-501/N, BD-501/EX TEXT LABEL	1
BD-091	B	2011-07-11	Coating of BDA-300/EX	1
116-7212-328.9007	7	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BHH-500/N:				
116-9212-329.0001	13	2011-01-07	BHA-300/EX KRETSKORT GRV.	4
Doc-1004552	3	31-08-2023	*Control Drawing	3
BH-105	D	2009-04-21	BHA-300/EX BHA-320/EX Optical / heat detector with SV function	1
7212-329.107	2	2006-05-08	BHA-300(320)/EX	1
7212-329.007	2	2006-05-08	BHA-300(320)/EX	1
BH-098	C	2007-09-06	Assembly drawing Optical detector Autrosafe	1
Doc-1001171	3	09-06-2022	*Ex-labels laser engraved AutroSafe Detectors in Zone 2 (Tillegg til standard marking)	1
Doc-1004166	3	2021-06-01	BHH-500/N TYPE LABEL	1
BH-117	B	2011-07-11	Coating of BHA-300(320)/EX	1
7212-329.9008	8	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BHH-500/S/N:				
116-9212-	13	2011-01-07	BHA-300/EX KRETSKORT GRV.	4

329.0001				
Doc-1004552	3	31-08-2023	*Control Drawing	3
BH-105	D	2009-04-21	BHA-300/EX BHA-320/EX Optical / heat detector with SV function	1
7212-329.107	2	2006-05-08	BHA-300(320)/EX	1
7212-329.007	2	2006-05-08	BHA-300(320)/EX	1
BH-098	C	2007-09-06	Assembly drawing Optical detector Autrosafe	1
Doc-1001171	3	09-06-2022	*Ex-labels laser engraved AutroSafe Detectors in Zone 2 (Tillegg til standard marking)	1
Doc-1004161	2	2021-06-01	BHH-500/S/N TYPE LABEL	1
BH-117	B	2011-07-11	Coating of BHA-300(320)/EX	1
7212-329.9008	8	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BHH-520/N:				
116-9212-329.0002	12	2011-01-07	BHA-320/EX KRETSKORT GRV.	4
Doc-1004552	3	31-08-2023	*Control Drawing	3
BH-105	D	2009-04-21	BHA-300/EX BHA-320/EX Optical / heat detector with SV function	1
7212-329.107	2	2006-05-08	BHA-300(320)/EX	1
7212-329.007	2	2006-05-08	BHA-300(320)/EX	1
BH-099	C	2010-02-16	Assembly drawing Combi detector Autrosafe	1
Doc-1001171	3	09-06-2022	*Ex-labels laser engraved AutroSafe Detectors in Zone 2 (Tillegg til standard marking)	1
Doc-1002312	5	29.11.2021	*BHH-520/N, BHH-520/EX TYPE LABEL	1
BH-117	B	2011-07-11	Coating of BHA-300(320)/EX	1
7212-329.9008	8	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BSD-310/N:				
116-9212-294.0001	9	2012-04-23	BSD-310 KRETSK. GRUNNV.	4
Doc-1004552	3	31-08-2023	*Control Drawing	3
BS-1051	B	2011-09-23	AL_COM LOOP DRIVER BSD-310	1
7212-294.107	1	2011-09-23	BSD-310/311	1
7212-294.007	1	2011-09-23	BSD-310/311	1
BA-169	B	2012-02-06	I/O modul Sammenstilling hus	1
BS-1362	A	2011-09-23	Lakktegning BSD-310/N	1
7212-294.9001	1	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
Doc-1001980	2	2021-02-04	BSD-310/N TYPE LABEL	1
BF-501/N:				
116-9212-338.0002	3	2008-03-25	BNA-303/02 KRETSK. GRUNNV.	3
Doc-1004552	3	31-08-2023	*Control Drawing	3
BN-100	C	2001-10-05	BNA-303 Interface unit with SV function	1
BF-200	C	2016-02-11	Manual call point diagram	1
7212-338.107	0	1999-12-20	BNA-303	1
7212-338.007	0	1999-12-20	BNA-303	1
BN-087	D	2016-03-08	Sammenstilling og dimensjoner Assembly and dimensions BNA-303	1
BF-201	D	2011-07-01	Manual call-point BF-501, BF-501/Ex and BF-501/N	1
Doc-1001138	5	2022.11.09	*BF-501/N TYPE LABEL	1

7212-338.9001	1	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BN-157	A	2011-07-04	BNA-303 Lakkeringstegning	1
E-2987	A	2016-02-13	BNB-300/02/N Typeskilt, arbeidstegning	1
BF-502/N:				
116-9212-338.0002	3	2008-03-25	BNA-303/02 KRETSK. GRUNNV.	3
Doc-1004552	3	31-08-2023	*Control Drawing	3
BN-100	C	2001-10-05	BNA-303 Interface unit with SV function	1
BF-200	C	2016-02-11	Manual call point diagram	1
7212-338.107	0	1999-12-20	BNA-303	1
7212-338.007	0	1999-12-20	BNA-303	1
BN-087	D	2016-03-08	Sammenstilling og dimensjoner Assembly and dimensions BNA-303	1
BF-223	C	2011-09-28	Manual Call Point BF-502 and BF-502/N Assembly Drawing Dimensional Sketch	1
Doc-1001820	4	2022.11.09	*BF-502/N TYPE LABEL	1
7212-338.9001	1	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BN-157	A	2011-07-04	BNA-303 Lakkeringstegning	1
E-2987	A	2016-02-13	BNB-300/02/N Typeskilt, arbeidstegning	1
BF-503/N/0100:				
116-9212-338.0002	3	2008-03-25	BNA-303/02 KRETSK. GRUNNV.	3
Doc-1004552	3	31-08-2023	*Control Drawing	3
BN-100	C	2001-10-05	BNA-303 Interface unit with SV function	1
BF-200	C	2016-02-11	Manual call point diagram	1
7212-338.107	0	1999-12-20	BNA-303	1
7212-338.007	0	1999-12-20	BNA-303	1
BN-087	D	2016-03-08	Sammenstilling og dimensjoner Assembly and dimensions BNA-303	1
BF-217	A	2011-09-28	Manual call-point BF-503/N/0100 Dimensional sketch	1
Doc-1001750	3	10.06.2022	*BF-503/N/0100 TYPE LABEL	1
7212-338.9001	1	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BN-157	A	2011-07-04	BNA-303 Lakkeringstegning	1
E-2987	A	2016-02-13	BNB-300/02/N Typeskilt, arbeidstegning	1
BF-503/N/0300:				
116-9212-338.0002	3	2008-03-25	BNA-303/02 KRETSK. GRUNNV.	3
Doc-1004552	3	31-08-2023	*Control Drawing	3
BN-100	C	2001-10-05	BNA-303 Interface unit with SV function	1
BF-200	C	2016-02-11	Manual call point diagram	1
7212-338.107	0	1999-12-20	BNA-303	1
7212-338.007	0	1999-12-20	BNA-303	1
BN-087	D	2016-03-08	Sammenstilling og dimensjoner Assembly and dimensions BNA-303	1
BF-219	A	2011-09-28	Manual call-point BF-503/N/0300 Dimensional sketch	1
Doc-1001748	3	13.06.2022	*BF-503/N/0300 TYPE LABEL	1
7212-338.9001	1	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BN-157	A	2011-07-04	BNA-303 Lakkeringstegning	1
E-2987	A	2016-02-13	BNB-300/02/N Typeskilt, arbeidstegning	1

BF-503/N/0400:				
116-9212-338.0002	3	2008-03-25	BNA-303/02 KRETSK. GRUNNV.	3
Doc-1004552	3	31-08-2023	*Control Drawing	3
BN-100	C	2001-10-05	BNA-303 Interface unit with SV function	1
BF-200	C	2016-02-11	Manual call point diagram	1
7212-338.107	0	1999-12-20	BNA-303	1
7212-338.007	0	1999-12-20	BNA-303	1
BN-087	D	2016-03-08	Sammenstilling og dimensjoner Assembly and dimensions BNA-303	1
BF-220	A	2011-09-28	Manual call-point BF-503/N/0400 and BF-503/N/0500 Dimensional sketch	1
Doc-1001753	3	10.06.2022	*BF-503/N/0400 TYPE LABEL	1
7212-338.9001	1	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BN-157	A	2011-07-04	BNA-303 Lakkeringstegning	1
E-2987	A	2016-02-13	BNB-300/02/N Typeskilt, arbeidstegning	1
BF-503/N/0500:				
116-9212-338.0002	3	2008-03-25	BNA-303/02 KRETSK. GRUNNV.	3
Doc-1004552	3	31-08-2023	*Control Drawing	3
BN-100	C	2001-10-05	BNA-303 Interface unit with SV function	1
BF-200	C	2016-02-11	Manual call point diagram	1
7212-338.107	0	1999-12-20	BNA-303	1
7212-338.007	0	1999-12-20	BNA-303	1
BN-087	D	2016-03-08	Sammenstilling og dimensjoner Assembly and dimensions BNA-303	1
BF-220	A	2011-09-28	Manual call-point BF-503/N/0400 and BF-503/N/0500 Dimensional sketch	1
Doc-1001752	3	10.06.2022	*BF-503/N/0500 TYPE LABEL	1
7212-338.9001	1	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BN-157	A	2011-07-04	BNA-303 Lakkeringstegning	1
E-2987	A	2016-02-13	BNB-300/02/N Typeskilt, arbeidstegning	1
BN-500/N:				
116-9212-338.0001	3	2008-03-28	BNA-303/01 KRETSK. GRUNNV.	3
Doc-1004552	3	31-08-2023	*Control Drawing	3
BN-100	C	2001-10-05	BNA-303 Interface unit with SV function	1
7212-338.107	0	1999-12-20	BNA-303	1
7212-338.007	0	1999-12-20	BNA-303	1
BN-087	D	2016-03-08	Sammenstilling og dimensjoner Assembly and dimensions BNA-303	1
BN-088	B	2011-07-01	Connection and dimension sketch for input unit BN-300, BN-500/EX, BN-500/N Tilkobling og måleskisse for inngangsenhet BN-300, BN-500/EX, BN-500/N	1
E-2925	A	2011-06-06	BNB-300/32/N Typeskilt, arbeidstegning	1
Doc-1001951	3	13.06.2022	*BN-500/N TYPE LABEL	1
7212-338.9001	1	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
BN-157	A	2011-07-04	BNA-303 Lakkeringstegning	1
BSS-310A:				
7212-301.9002	2	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING	1

			AV MØNSTERKORT	
116-9212-301.1001	4	2015-09-28	BSS-310A KRETSKORT GRUNNV.	2
Doc-1000184	3	2021-05-27	BSS-310A TYPE LABEL	1
BA-169	B	2012-02-06	I/O modul Sammenstilling hus	1
7212-301.007	1	2005-02-04	Autrosafe I/O-module BSS-310A DC-DC converter COMPONENT REFERENCE DRAWING, COMPONENT SIDE (SIDE B)	1
BS-1243	B	2011-09-23	DC-DC CONVERTER TYPE BSS-310A	1
Doc-1004552	3	31-08-2023	*Control Drawing	3
BF-500V2/N:				
116-9212-338.0002	3	2008-03-25	BNA-303/02 KRETSK. GRUNNV.	3
Doc-1004552	3	31-08-2023	*Control Drawing	3
BN-100	C	2001-10-05	BNA-303 Interface unit with SV function	1
BF-197	G	2016-03-07	Manuelle meldere Skjema Manual callpoints Diagram	1
7212-338.107	0	1999-12-20	BNA-303	1
7212-338.007	0	1999-12-20	BNA-303	1
BN-087	D	2016-03-08	Sammenstilling og dimensjoner Assembly and dimensions BNA-303	1
Doc-1002536	2	2023-08-28	* BF-500V2N assembly/dimensions	1
7212-338.9001	1	2014-04-03	SPESIFIKASJONSSKJEMA FOR BESTILLING AV MØNSTERKORT	1
Doc-1003903	3	2023-08-25	*BF-500V2N TYPE LABEL	1
BN-157	A	2011-07-04	BNA-303 Lakkeringstegning	1
Doc-1002364	4	16.10.2023	*Manuelle meldere Skjema, Manual callpoints diagram	1

*Note: * An is included before the title of documents that are new or revised.*

Certificate History and Associated Reports:

Issue	Date	Report No.	Description
0	2003-08-28	Nemko 10187	Prime Certificate released
1	2004-05-20	Nemko 10186	The reports are extended to include a new type, BD-501/N.
2	2004-08-20	Nemko 27763	Includes the option for the manufacturer to deliver the hardware circuit unit type, BNB-300, without enclosure.
3	2005-06-29	Nemko 47631	The reports are extended to cover minor changes in the design.
4	2008-09-15	Nemko 113192	Confirm compliance with the equivalent standard IEC 60079-15: 1987.
5	2012-02-10	Nemko 187109	Update to new standards and update of the descriptive documents.
6	2014-09-16	D0001377/00 / Nemko 260246	Minor changes in the descriptive documents. New minimum ambient temperature for BF-502/N.
-	2015-02-10	D0001377/01	Confirmation letter issued.
7	2016-06-08	D0001377/02	Update to new standards. BF-300M/N is removed from certification. BF-500V2/N is added.
8	2021-06-22	PRJN-253456-2021-PA-NOR/0	Update to latest EN IEC 60079-0 standard, remove the models BF-500/N and BF-503/N/0200 from the certificate, new address, and minor changes to descriptive documents.
9	2023-11-21	SC253456	Update the document, new enclosure with IP65 code. Add new breaking element glass and plastic. Extend the

			ambient temperature to -30°C ≤ Ta ≤ +70°C.

[17] Specific Conditions of Use:

1) The loop driver module is intended for mounting in the AutroSafe Fire Alarm Control panel and connected to the power supply BSS-310A.
2) The loop driver module may only be used in locations sheltered from dust and water. The degree of protection is IP30D
3) The ambient temperature differs from the normal range and is specified in the certificate.
4) The hardware circuit unit type BNB-300 must be mounted in an enclosure that complies to EN IEC 60079-0, EN 60079-7 or EN 60079-11.

[18] Essential Health and Safety Requirements:
Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9

[19] Remarks and additional Information:
None