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IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

IA CERTIFICATE (IMPORT)

Page 1 of 5

Date Issued: **29 Jul 2025**Certificate Validity: **29 Jul 2028**

IA Certificate Validity: In accordance with ARP 0108 and the National Code of Practice, import IA certificates has a validity period of three (3) years from the date of issue. The IA certificate's validity period depends on the validity of the international document that it is based upon, and it is invalidated should the international certificate be cancelled or the product quality assurance or notification becomes invalid. Equipment imported under a valid IA certificate and handed over to the end user, the IA Certificate validity falls away and the Ex equipment remains compliant with the relevant standards for its lifetime, provided the equipment is maintained in its original certified configuration. No modifications are allowed. Imported apparatus not sold by the IA certificate expiry date is deemed to not be covered by this IA Certificate and this IA Certificate shall undergo a renewal process. Renewal of this IA certificate is the responsibility of the IA Certificate Holder. The IA Certificate Holder must provide and maintain records to the end-user, of date of sale for traceability purposes.

Certificate Number:

S-XPL/22.1289 XIssue Number: **2**

Equipment:

Intelligent Valve Controllers and ON/OFF Valve Controllers

Model / Type:

ND7100, SD7100, ND9100, SD9100, ND7200, SD7200, ND9200, SD9200, ND7300, SD7300, ND9300, SD9300, ND7400, SD7400, ND9400, SD9400, SG9200 and SG9300 series

IA Certificate Holder:

Valmet South Africa (Pty) Ltd

IA Certificate Holder Location:

237 Albert Amon Road, Meadowdale, Germiston

Manufacturer:

Valmet Flow Control Oy

Manufacturer Location:

Vanha Porvoontie 229, Vantaa FI-01301, Finland

Serial No:

All serial numbers, imported between issued- and validity date and all serial numbers covered by either valid QAN or QAR.

Identified by Inspection Authority Number

S-XPL/22.1289 X

And as described in the Explolabs file number **XPL/23012/22.1289 Issue 2** is hereby certified "Explosion Protected (Refer to clause 1, for Ex Rating)", having been examined and inspected in accordance with the relevant requirements of the South African National Standards.

SANS 60079-0: 2019 Ed 6**IEC 60079-0: 2017 Ed 7**

Explosive atmospheres Part 0: Equipment — General requirements

SANS 60079-11: 2012 Ed 4**IEC 60079-11: 2011 Ed 6**

Explosive atmospheres Part 11: Equipment protection by intrinsic safety "i"

SANS 60079-15: 2010 Ed 4**IEC 60079-15: 2010 Ed 4**

Explosive atmospheres Part 15: Equipment protection by type of protection "n"

SANS 60079-31: 2014 Ed 2**IEC 60079-31: 2013 Ed 2**

Explosive atmospheres Part 31: Equipment dust ignition protection by enclosure "t"

DOCUMENT No: XPL0213

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REV: 9

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Risk of ignition provided:

Protection afforded	Equipment Protection Level (EPL)	Performance of protection	Conditions of operation	T class or Max Surface Temp (°C)
	Group			
Very high	Ga Group II	Two independent means of protection or safe even when two faults occur independently of each other	Equipment remains functioning in zones 0, 1 and 2	T6 (85°C) ... T4 (135°C)
Very high	Da Group III		Equipment remains functioning in zones 20, 21 and 22	T90 °C ... T120 °C
High	Gb Group II	Suitable for normal operation and frequently occurring disturbances or equipment where faults are normally taken into account	Equipment remains functioning in zones 1 and 2	T6 (85°C) ... T4 (135°C)
High	Db Group III		Equipment remains functioning in zones 21 and 22	T90 °C ... T120 °C
Enhanced	Gc Group II	Suitable for normal operation	Equipment remains functioning in zone 2	T6 (85°C) ... T4 (135°C)
Enhanced	Dc Group III		Equipment remains functioning in zone 22	T90 °C ... T120 °C

1. GENERAL

The marking of the Intelligent Valve Controllers and ON/OFF Valve Controllers shall include the following:

ND7100, SD7100, ND9100, SD9100, ND7200, SD7200, ND9200, SD9200, ND7300, SD7300, ND9300, SD9300, SG9200 and SG9300:

Ex ia IIC T6...T4 Ga and Ex ia IIIC T90 °C...T120 °C Da / Ex ta IIIC T90 °C...T120 °C Da, or Ex ib IIC T6...T4 Gb and Ex ib IIIC T90 °C...T120 °C Db / Ex tb IIIC T90 °C...T120 °C Db. or Ex ic IIC T6...T4 Gc and Ex ic IIIC T90 °C...T120 °C Dc / Ex tc IIIC T90 °C...T120 °C Dc, or Ex nA IIC T6...T4 Gc and Ex ic IIIC T90 °C...T120 °C Dc / Ex tc IIIC T90 °C...T120 °C Dc

ND7400, SD7400, ND9400, SD9400: Ex ia IIC T6...T4 Ga, or Ex ib IIC T6...T4 Gb, Ex ic IIC T6...T4 Gc or Ex nA IIC T6...T4 Gc

ND7100, SD7100, ND9100, SD9100, ND7200, SD7200, ND9200, SD9200, ND7300, SD7300, ND9300, SD9300, ND7400, SD7400, ND9400 and SD9400 series Intelligent Valve Controllers and SG9200 and SG9300 series ON/OFF Valve Controllers are used for valve positioning. Product coding indicates the communication protocol and equipment category. Letter H, F or P indicates communication protocol used in the controller e.g. type ND9_H is equipped with HART communication protocol, type ND9_F has Foundation Fieldbus and type ND9_P has Profibus PA communication protocol. With Ex ia IIC Ga versions natural gas can be used as pneumatic fluid. Valve controllers may be equipped with optional ATEX/IECEx certified limit switches. Configuration and calibration of the device can be done remotely or by using Local User Interface (LUI). The HART protocol uses 4 – 20 mA dc loop current with overlaid digital signal. An optional position transmitter position for versions HXT and uses 4-20 mA dc current output signal. The position transmitter needs an external power supply. The intrinsically safe supply and input circuit and the intrinsically safe position output circuit have an infallible galvanic isolation up to maximum voltage of 60 V.

The maximum input values of the supply and input circuit (terminals + and -) for “nA” device of the HART versions are:

U ≤ 30 Vdc; I = 152 mA

The maximum input values of the supply and input circuit (terminals PT+ and -) of the position transmitter for “nA” device in HART versions are:

U ≤ 30 Vdc; I = 152 mA

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The maximum input values of the limit switches (terminals 11- and 13+ or terminals 14- and 16+) for "nA" device in HART versions are:

$U \leq 25 \text{ V}$

The maximum input values of the supply and input circuit (terminals + and -) for "ic" device of the HART versions are:

$U_i = 30 \text{ V}$; $I_i = 152 \text{ mA}$; $C_i = 13.5 \text{ nF}$; $L_i = 53 \text{ }\mu\text{H}$

The maximum input values of the supply and input circuit (terminals PT+ and -) of the position transmitter for "ic" device in HART versions are:

$U_i = 30$; $I_i = 152 \text{ mA}$; $C_i = 13.5 \text{ nF}$; $L_i = 53 \text{ }\mu\text{H}$

The maximum input values of the Foundation Fieldbus version and Profibus PA version circuit input (terminals 1 and 2) for "nA" device are:

$U \leq 24 \text{ Vdc}$

The maximum input values of the Foundation Fieldbus version and Profibus PA version circuit input (terminals 1 and 2) for "ic" device are:

$U_i = 32 \text{ V}$; $I_i = 380 \text{ mA}$; $P_i = 5.32 \text{ W}$; $C_i = 5 \text{ nF}$; $L_i = 10 \text{ }\mu\text{H}$

The maximum input values of the supply and input circuit (terminals + and -) for "ia" and "ib" HART versions are:

$U_i = 28 \text{ V}$; $I_i = 120 \text{ mA}$; $P_i = 1 \text{ W}$; $C_i = 13.5 \text{ nF}$; $L_i = 53 \text{ }\mu\text{H}$

The maximum input values of the supply and input circuit (terminals PT+ and -) for "ia" and "ib" position transmitter in HART versions are:

$U_i = 28 \text{ V}$; $I_i = 120 \text{ mA}$; $P_i = 1 \text{ W}$; $C_i = 13.5 \text{ nF}$; $L_i = 53 \text{ }\mu\text{H}$

The maximum input values of the limit switches (terminals 11- and 13+ or respectively 14- and 16+) for "ia" and "ib" are:

$U_i = 16 \text{ V}$; $I_i = 52 \text{ mA}$; $P_i = 169 \text{ mW}$; $C_i = 90 \text{ nF}$; $L_i = 150 \text{ }\mu\text{H}$

The maximum input values of the Foundation Fieldbus version and Profibus PA version circuit input (terminals 1 and 2) for "ia" and "ib" are:

$U_i = 24 \text{ V}$; $I_i = 380 \text{ mA}$; $P_i = 5.32 \text{ W}$; $C_i = 5 \text{ nF}$; $L_i = 10 \text{ }\mu\text{H}$

These parameters comply with the requirements for FISCO Field devices in accordance with standard SANS/IEC 60079-11 (2012).

Based on the following documentation: IECEx EESF 19.0019X Issue 3

2. INSTALLATION INSTRUCTIONS

It is the IA Certificate Holder's responsibility to supply OEM installation instructions with each unit offered for sale as required by IEC/SANS 60079-0, clause 30.

The equipment shall be installed, operated, and maintained in accordance with the manufacturer's instructions and the applicable South African standards and regulations.

3. SPECIAL CONDITIONS FOR SAFE USE *(denoted by "X" after certificate number)*

For EPL's Ga, Da, Gb and Db, the maximum allowed ambient temperature ranges according to different Temperature Classes are:

$T_{amb} -40 \text{ }^{\circ}\text{C} \dots +50 \text{ }^{\circ}\text{C}$ for temperature class T6 or $T90 \text{ }^{\circ}\text{C}$ for dust

$T_{amb} -40 \text{ }^{\circ}\text{C} \dots +65 \text{ }^{\circ}\text{C}$ for temperature class T5 or $T105 \text{ }^{\circ}\text{C}$ for dust

$T_{amb} -40 \text{ }^{\circ}\text{C} \dots +80 \text{ }^{\circ}\text{C}$ for temperature class T4 or $T120 \text{ }^{\circ}\text{C}$ for dust

For EPL's Gc and Dc, the maximum allowed ambient temperature ranges according to different Temperature Classes are:

Tamb -40 °C ... +60 °C for temperature class T6 or T90 °C for dust

Tamb -40 °C ... +75 °C for temperature class T5 or T105 °C for dust

Tamb -40 °C ... +85 °C for temperature class T4 or T120 °C for dust

For EPL's Ga, Da, Gb and Db, the maximum allowed ambient temperature ranges for 'Cold Version (Option C)' applicable solely to ND9200, ND 9300, SD9200 and SD9300 series equipment are:

Tamb -55 °C ... +50 °C for temperature class T6 or T90 °C for dust

Tamb -55 °C ... +65 °C for temperature class T5 or T105 °C for dust

Tamb -55 °C ... +80 °C for temperature class T4 or T120 °C for dust

For EPL's Gc and Dc, the maximum allowed ambient temperature ranges for 'Cold Version (Option C)' applicable solely to ND9200, ND 9300, SD9200 and SD9300 series equipment are:

Tamb -55 °C ... +60 °C for temperature class T6 or T90 °C for dust

Tamb -55 °C ... +75 °C for temperature class T5 or T105 °C for dust

Tamb -55 °C ... +85 °C for temperature class T4 or T120 °C for dust

Temperature Classes for dust are based on measurement w.r.t. total immersion to dust required for EPL Da equipment.

The permissible ambient temperature range depends on the used configuration. The ambient temperature range is marked on the identification plate.

At an ambient temperature $\geq +70$ °C, a connection cable shall have a temperature rating in accordance with the maximum ambient temperature range.

When the apparatus is used in a potentially explosive atmosphere requiring EPL Ga apparatus, to avoid ignition caused by electrostatic discharge, the plastic enclosure may only be cleaned with damp or wet cloth.

To avoid hazardous sparking, the aluminium enclosures or enclosure parts made of aluminium shall not be subjected to friction or impacts, when they are used in potentially explosive atmospheres where EPL Ga equipment are required.

The valve controller shall be connected according to the manufacturer's instructions.

Selected cable gland shall not invalidate the type of protection.

The valve controller shall not be installed in a place where it can be subject to prolific charge generating mechanism by dust.

For type of protection "nA", provision shall be made to provide the transient protection at a level not exceeding 40% of the rated voltage of the supply and the position output circuit.

4. CONDITIONS OF CERTIFICATION

This approval is granted based on the submitted documentation.

Any modifications or alterations to the equipment will invalidate this IA Certificate.

The Certificate Holder is responsible for maintaining accurate records of the equipment and this IA Certificate.

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All production units must be covered by either a QAN (Quality Assurance Notification) or QAR (Quality Assurance Report).

Renewal: This IA certificate may be renewed under a valid Quality Assurance Notification (QAN) or Quality Assurance Report (QAR). Imported apparatus not sold by the IA certificate expiry date must undergo this renewal process. This condition remains the responsibility of the IA Certificate Holder. Renewal of this IA certificate is the responsibility of the IA Certificate Holder.

Renewal involves a document review, including:

- Verification of the latest ATEX/IECEx certificate.
- Confirmation of a valid QAN/QAR.

Certificate holders are responsible for submitting these documents.

5. MARKING

The equipment shall bear the manufacturer's original marking plate containing all relevant Ex-certification details (applicable under the ATEX Directive). The following (or similar) information shall be clearly and permanently marked on all units:

IA Certificate Holder : Valmet South Africa (Pty) Ltd
Ex Rating : Refer to General, clause 1.
IA Certificate No : S-XPL/22.1289 X

This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 9(2) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:

- SANS 10086 and IEC/SANS 61241-14 requirements as applicable;
 - Any conditions mentioned in the above report;
 - Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act; and
 - Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.
- v) A revision certificate replaces all previous versions of the certificate.
vi) * - Only covers equipment Imported between the "Issued" and "Expire" dates.
vii) If and when your QAN (Quality Assurance Notification) or QAR (Quality Assurance Report) Certificate for your equipment manufacturer expires during the valid period of the IA Certification (issued for your equipment) and a new certificate is not submitted, the existing IA Certification will then be cancelled. It is thus the Certificate Holder's responsibility to always submit the updated and valid QAN/QAR certificate(s) to Explolabs (Pty) Ltd

Reviewed by:



CC Lourens

Technical Specialist

EXPLOLABS EXPLOSION PREVENTION SERVICES

This report/certificate shall not be reproduced except in full without the written approval of the company Explolabs (Pty) Ltd shall not be liable for any losses or damages sustained on account of any failure or omission to properly perform our duties in terms of any contract undertaken by us. This disclaimer is immutable and automatically incorporated in any contract undertaken by us; notwithstanding anything to the contrary, save for the express written waiver of our managing director. By marking the equipment in accordance with the documentation/standard, the manufacturer attests on his own responsibility that the equipment has been constructed in accordance with the applicable requirements of the relevant standards and that the routine verifications and tests have been successfully completed and that the product complies with the documentation and standard(s). The contents of electronic reports/certificates cannot be guaranteed. Original certification documents will be kept on file at Explolabs (Pty) Ltd

Product type marking nomenclature:

Brands 1	Diagnostic variants: 2	Enclosures: 3	Spool valve sizes: 4	Communication: 5	Approval 6	Options: 7	Limit switch type: 8
ND -> Neles SD -> StoneL SG -> Neles SwitchGuard	7 -> Digital Valve controller 9 -> Intelligent Valve controller	1 -> PC/ Die cast Aluminum 2 -> Flameproof aluminium 3 -> Stainless steel 4 -> PC/ Stainless steel	(ND or SD:) 02 -> low 03 -> medium 06 -> high (SG:) 12 -> Restricted capacity 15 -> Standard capacity. 35 -> High capacity. 37 -> Extended capacity.	H -> Hart F -> Foundation Fieldbus P -> Profibus PA	X -> IECEx / ATEX cert. (X1...4 refer to old marking methods used in prior issues)	J -> External Junction box (Table 1.) C -> Cold version (ND9200, ND9300, SD9200 and SD9300 only). R -> Remote mounting (Note! Only applicable for Option 5. HART) position sensor solely for "ia" / "ib" added (Table 3.) T -> Internal Position Transmitter L1 -> Extension housing P -> Partial Stroke Test device Vxx V01...V99 (branded model) for OEM distributors" G-> Exhaust adapter Y-> Special feature – shall not affect Ex approvals	Ref. Table 2.

Table 1. Option J Junction Box types by International Metal Engineering Pte

IME 7080AM-03-22 or IME 7080TM-03-22 (IECEX SIR 07.0111U Issue 3.)
Ex d IIC Gb Ex tb IIIC Db IP68 Ta = -40°C to +85°

Table 2. Optional Inductive Limit Switch types for the certified types:

Note! Limit switch's temperature range and electrical data must be verified from its certificate

Neles type code	Manufacturer of switch	Type of switch	ATEX and IECEx certifications of switch		Classification	Electrical data				
						Ui (V)	Ii (mA)	Pi (mW)	Li (µH)	Ci (nF)
I02	Pepperl+Fuchs	NJ2-12GK-SN (2 pcs)	PTB 00 ATEX 2049X	IECEx PTB 11.0092X	Ex ia IIC T6...T1 Ga	16	25	64	150	50
					Ex ia IIC T6...T1 Gb	16	52	169	150	50
I09	Pepperl+Fuchs	NCB2-12GM35-N0 (2 pcs)	PTB 00 ATEX 2048X	IECEx PTB 11.0037X	Ex ia IIC T6...T1 Ga	16	25	64	100	90
					Ex ia IIC T6...T1 Gb	16	52	169	100	90
I41	Pepperl+Fuchs	NJ4-12GK-SN (2 pcs)	PTB 00 ATEX 2049X	IECEx PTB 11.0092X	Ex ia IIC T6...T1 Ga	16	25	64	150	70
					Ex ia IIC T6...T1 Gb	16	52	169	150	70
I45	Pepperl+Fuchs	NJ3-18GK-S1N (2 pcs)	PTB 00 ATEX 2049X	IECEx PTB 11.0092X	Ex ia IIC T6...T1 Ga	16	25	64	200	70
					Ex ia IIC T6...T1 Gb	16	52	169	200	70
I57	Pepperl+Fuchs	NJ2-V3-N (2 pcs)	PTB 00 ATEX 2032X	IECEx PTB 11.0021X	Ex ia IIC T6...T1 Ga	16	25	64	50	40
					Ex ia IIC T6...T1 Gb	16	52	169	50	40
I58	Pepperl+Fuchs	NJ2-V3-N (4 pcs)	PTB 00 ATEX 2032X	IECEx PTB 11.0021X	Ex ia IIC T6...T1 Ga	16	25	64	50	40
					Ex ia IIC T6...T1 Gb	16	52	169	50	40
I60	Pepperl+Fuchs	NCB2-12GM40-E2-3G-3D (2 pcs)	PF 15CERT3754 X	n/a	Ex nA IIC T6...T1 Gc	30	50	n/a	n/a	n/a
R02 ¹⁾	StoneL	Maxx-Guard M, SPDT (2 pcs)	n/a	n/a	n/a	30	100	2000	800	66
T01 ¹⁾	Neles	Position transmitter	n/a	n/a	n/a	30	120	1000	100	66
Y	Turck	BI2-P12-Y1X/S97 (2 pcs)	KEMA 02 ATEX 1090X	IECEx KEM 06.0036X	Ex ia IIC T4...T6 Gb	20	20	200	150	150

¹⁾ StoneL Maxx-Guard M reed switch proximity sensors (R02) and External position transmitter (T01) have been assessed for the certified valve controller types in the related ExTR.

²⁾ -50 Cold version, only available with ND and SD

Table 3. Output values for the "ia" / "ib" Option R, Remote position sensor interface are: **Uo ≤ 3.53 V; Io ≤ 12.6 mA; Po ≤ 11.1 mW; Co < 10 nF; Lo < 10 μH**

Tamb			
Tmin (C)	T6 (C)	T5 (C)	T4 (C)
-40	50	64	80
-40	50	65	80
-25	50	65	80
-25	50	65	80
-50/-40 ⁽²⁾	50	64	80
-50/-40 ⁽²⁾	50	65	80
-25	50	64	80
-25	50	65	80
-25	49	61	80
-25	45	60	80
-25	49	61	80
-25	45	60	80
-20	53	53	53
-40	50	65	80
-40	45	60	80
-40	50	65	80