

1. **TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially explosive atmospheres
Directive 2014/34/EU**
3. Type Examination Certificate Number: **EESF 24 ATEX 034X**
4. Product: **Valve Positioner**
Certified types: **NDX Fieldbus**
5. Manufacturer: **Valmet Flow Control Oy**
6. Address: **Vanha Porvoontie 229, FI-01380 Vantaa, Finland**
7. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
8. Eurofins Electric & Electronics Finland Oy, Certification Body No. S063 accredited by the Finnish Accreditation Service (FINAS), 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 2014/34/EU of February 2014.

The examination and test results are recorded in confidential report No. EUFI29-24003149-T1.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-11:2012 / IEC 60079-11:2023 EN IEC 60079-7:2015/A1:2018
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 Type Examination Certificate relates only to the design and construction of the specified product. 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 3G
II 3D****Ex ic IIC T6...T4 Gc
Ex ic IIIC T85 °C...T115 °C Dc
FISCO field device****II 3G****Ex ec IIC T6...T4 Gc
IP66**

Espoo, 11.12.2024
Eurofins Electric & Electronics Finland Oy

Jenni Hirvelä
Senior Expert

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Senior Expert

This document is digitally signed.



13. **Schedule**14. **Type Examination Certificate EESF 24 ATEX 034X**15. **Description of Product**

NDX Fieldbus is an intelligent valve positioner targeted for use in high-end control valves with either linear or rotary travel. The valve positioner monitors the valve position and controls the actuator which provides the force to control the valve itself.

NDX Fieldbus is connected to FISCO power supply. NDX Fieldbus communicates via Fieldbus (Foundation Fieldbus or PA) that can be used for indicating the valve position towards the control system.

The device is available in variants with Fieldbus and Profibus interface options. Profibus variant has in general different communication protocol and change in electronics is only one pull down resistor assembled or not assembled.

Electrical Ratings:

FISCO "ic":

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

Increased safety "ec":

$U_N \leq 24 \text{ V}$ $I_N \leq 23 \text{ mA}$

16. **Report Number**

EUFI29-24003149-T1

17. **Specific Conditions of Use**

1. The maximum allowed ambient temperature ranges according to different T Classes are:
 - Tamb -40 °C ... +50 °C for temperature classes T6 (Gas) or T85 °C (Dust)
 - Tamb -40 °C ... +65 °C for temperature classes T5 (Gas) or T100 °C (Dust)
 - Tamb -40 °C ... +85 °C for temperature classes T4 (Gas) or T115 °C (Dust)
2. The permissible ambient temperature range depends on the used configuration. The ambient temperature range is marked on the identification plate.
3. At an ambient temperature $\geq +70^\circ\text{C}$, the temperature rating of the connection cable shall be in accordance with maximum ambient temperature range.
4. The safety valve controller shall be connected according to the manufacturer's instructions.
5. 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.
6. Selected cable gland shall not invalidate the type of protection.
7. The marking label is isolated from earth and may present 56 pF capacitance.
8. The plastic cover of the enclosure shall be wiped with damp cloth only due to risk of electrostatic charging.
9. Temperature Classes for dust are based on measurement w.r.t. total immersion to dust required for category 1 D (EPL Da) equipment.

18. Essential Health and Safety Requirements

The Essential Health and Safety Requirements are covered by the standards listed at item 9.

19. Drawings and Documents

Drawings and documents are listed in the confidential report.

20. Certificate History

Issue	Date	Report No.	Comment
EESF 24 ATEX 034X	11.12.2024	EUFI29-24003149-T1	Prime certificate

NDX Fieldbus Product Type Nomenclature:

PRODUCT GROUP																			
Neles Intelligent Valve Controller Series NDX																			
PNEUMATIC ACTION																			
Single Acting																			
Double Acting (Available with 5. sign 2., 5. sign 1)																			
PNEUMATIC CAPACITY																			
Normal Capacity (80 Nm ³ /h)																			
FAIL ACTION																			
Fail safe																			
ENCLOSURE																			
Standard - Aluminum with composite cover																			
Flameproof/Explosion Proof - Aluminum																			
COMMUNICATION / INPUT SIGNAL RANGE																			
FOUNDATION fieldbus, physical layer according to IEC 61158-2. (Available with 5. sign 2., 5. sign 1)																			
Profibus PA, physical layer according to IEC 61158-2. (Available with 5. sign 2., 5. sign 1)																			
TEMPERATURE RANGE																			
General: -40..+85 °C																			
Standard; Ex i & I/O extension capable																			
APPROVALS FOR HAZARDOUS AREAS (1/2)																			
No approval																			
ATEX / IECEX Ex i certification																			
APPROVALS FOR HAZARDOUS AREAS (2/2)																			
No approval																			
ATEX / IECEX Ex i certification																			
PNEUMATIC CONNECTIONS & GAUGES																			
1/4 NPT without gauges (no block, no gauges)																			
1/4 NPT with gauges (block with 1/4 NPT threads+ gauges)																			
G1/4 without gauges (block with G1/4 threads)																			
G1/4 with gauges (block with G1/4 threads + gauges)																			
VARIANT																			
Neles																			
DIAGNOSTICS																			
Advanced diagnostics																			
Premium diagnostics																			
SPECIAL VERSION																			
None																			
RESERVED (I/O EXTENSION)																			
None																			
RESERVED																			
None																			
Characters 18-20 received for partner identification																			
* * *																			
Partner's identification – shall not affect hazardous area approvals.																			
Special feature – shall not affect hazardous area approvals																			
SAMPLE MODEL CODE (Char = 21)																			