

VS18/26 with PROFINET and EtherNet/IP Interface

ATEX Installation
Instructions

Engineering
GREAT Solutions



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USE IN AREAS WITH POTENTIALLY EXPLOSIVE ATMOSPHERE (2014/34/EU „ATEX“) – OPERATING MANUAL AND DECLARATION OF CONFORMITY

The information in this booklet is valid for all ATEX valve islands of VS18/26 series with PROFINET and EtherNet/IP Interface overrides any conflicting information in other documents.

1. INTENDED USAGE

Please review all ATEX data and notes in this instruction booklet and other relevant documents to eliminate any risks which would jeopardize the safe function of the valve island. Any use beyond the permissible limits, or the failure to comply with the instructions of this booklet, will cause the user to be liable for damages. In case of non-permissible intrusions or modifications of the valve island, as well as failing to comply with the instructions of this booklet, the claim for guarantee expires and our liability is excluded. The valve island must be used only with non-combustible mediums which do not corrode, chemically or mechanically, the materials used. Use only mediums approved by IMI Precision Engineering.

2. OPERATING MANUAL ATEX

2.1 General conditions

- Please consider the information of this document as well as the use conditions and permissible data, which are on the product labels.
- VS18/VS26 valve islands mentioned in this booklet must be used with permissible valves, plates and accessories from IMI Precision Engineering. In case of use with products of other manufacturers, IMI Precision Engineering assumes no liability. Moreover the EX approval as well as the claim of guarantee expires for items of equipment and accessories.
- The ATEX approval applies exclusive to the valve island with the original configuration shipped by IMI Precision Engineering.
- The valve island must be used with the original configuration only. If a modification of the configuration is needed, it must be taken by IMI Precision Engineering or by a body notified by IMI Precision Engineering only whereas the part number of the valve island will change.
- To achieve ATEX conformity, ATEX approved plugs as well as locking clips that prevent from accidental disconnection of plugs must be used, or the complete valve island has to be installed in a cabinet that meets the requirements of EN 60079-15. See also section 3.3. Otherwise there is a risk of explosion due to sparking.
- Take measures to avoid unintentional or improper activation.
- Prior to the first electrical operation, ensure no danger would result from the medium exhausting from any open ports.
- Consider in case of pressurised systems that lines, valves and other components should not be removed.
- ATTENTION: There is some risk of injury! The surface of pilot valves could become very warm in continuous operation.
- Leak and strength tests on open and closed valves are admissible until max. 1.5 times the max. operating pressure. It is not allowed to operate the valves during these tests.
- Do not use inlet air of an area with potentially explosive atmosphere.
- Never use the valve island as lever arm or a step for climbing.
- The protection cap at Port 2 may only be removed if Port 2 is used for cable connection. Never use the valve island when a Port is exposed.
- Before connecting either of the Ports 1 or 2, make sure the O-Ring is in place at the bottom of the connector.

2.2 Installation

Please consider following points before installing the valve island:

- *Check if classification of the valve island, the permissible application area and marking on the item of equipment are suitable for the application.*
- *Check technical data, such as operating pressure, voltage level, current type and temperature, on the product label or in the data sheets for compliance with the existing operating conditions.*
- *After removing the packaging, make sure that no contamination enters into the system.*
- *Check before the installation of the system that no contamination exists in the piping and valve island.*
- *Check during installation of the system that gaskets will not become damaged.*

Please consider following points during the installation of the valve island:

- *The installation must be taken by qualified personnel with consideration of relevant regulations.*
- *Any mounting position of the valve island is permissible but valves with indicating lights up is preferred.*
- *To avoid damaging the product, please make sure that the maximum torque values are not exceeded.*
- *Prevent connector cables and cords from sharp bends in order to avoid short circuits and interruptions.*
- *Damaged parts must be replaced with original spare parts from IMI Precision Engineering.*
- *Order spare parts with the part number indicated on the product labels. (See also other relevant documents).*
- *For equal potential bonding link all electro-conductive parts including accessories together.*
- *Ground the complete system.*
- *Important: Power must be removed from the system while assembling and disassembling electrical connectors, plugs and cables, or valves.*

2.3 Operating

- *Ensure before commissioning of the valve island, that the whole equipment/machine conform to the provisions of the machine, ATEX and EMC directives as well as other applicable standards and directives.*
- *The valve island must be used only with air, which does not corrode the system and the contained sealing materials (see also other relevant documents).*
- *Avoid contact with liquid and corrosive mediums.*
- *Please refer to section 3.1 for maximum permissible operating conditions for valve islands in an ATEX zone.*
- *Do not load the system by bending or torsion.*

2.4 Failures

- *In case of failure check the connection of pipes, the operating voltage as well as the operating pressure.*
- *Check the LED indicators and the PLC for error messages. Please refer to other relevant documents for the definition of LED indicators.*
- *Any service or repair work as well as replacement of components must be taken in unpressurized condition. Also, power must be removed from the system.*
- *Important: It is not allowed to detach a plug or to open a body in a zone with potentially explosive atmosphere when power is not removed.*

2.5 Maintenance and repair

Maintenance, inspection and assembly work must be taken by authorised and qualified personnel. Work on pilot valves in general must be taken in unpressurized and cooled off condition. Also, power must be removed from the system. It is recommended to make precautionary maintenance depending on the operating conditions and in case of significant changes in response times. The user is liable for adequate test and maintenance spacing dependent on the operating conditions of the valves. Precipitation, contamination, and aged or worn gaskets can cause failures. Gaskets must be included to ensure the protection class. Damaged parts must be replaced with original spare parts from IMI Precision Engineering. If connectors are removed, make sure no dust contamination can enter into the connectors.

3 ATEX CONFORMITY

3.1 Operating conditions

ATTENTION: Certain permissible operating conditions for ATEX applications can vary from normal applications.

Pilot pressure:	max. 10 bar	
Operating pressure:	max. 16 bar	(if permissible for valve type)
Ambient temperature:	-15°C to 50°C	
Medium temperature:	max. 50°C	
Medium:	Compressed air, filtered, lubricated	(see other relevant documents)
Temperature class:	T4	(see declaration of conformity 3.4)
ATEX category:	II3G / II3D	(see declaration of conformity 3.4)
Voltage:	24V DC	(+/-10%)
Wattage of pilot valves:	1,2W	(per pilot valve)
Maximal power consumption allowed:	20W	(only 16 pilot valves energized permanently)
Use conditions:	100% ED	

Note:

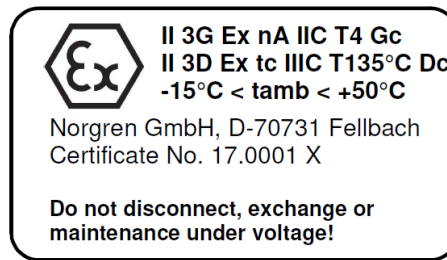
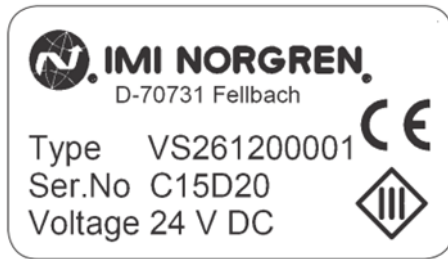
1. The valve islands VS18 and VS26 conform to the Directive 2014/34/EU „equipment of the equipment group II category 3G“, which are potentially explosive through inflammable material in range of temperature class T1 to T4 in zone 2 as well as in the explosions groups IIA, IIB and IIC according to Directive 99/92/EC (ATEX 137) and can be used correspondingly.

Follow the requirements in EN 60079-14 and EN 60079-17 for installing and maintaining the valve islands.

2. The valve islands VS18 and VS26 conform to the Directive 2014/34/EU „equipment of the equipment group II category 3D“, which can be used in zone 22 of inflammable dusts with explosion groups IIIA, IIIB and IIIC according to Directive 99/92/EC (ATEX 137).

Follow the requirements in EN 60079-14 and EN 60079-17 for installing and maintaining the valve islands.

3.2 Labels



3.3 Specific conditions

The X at the end of the Certificate No. 17.0001 X on the label refers to the following specific conditions:

- *The ambient temperature range is between -15°C to +50°C (see operating conditions in section 3.1).*
- *Important: The device must not be exposed to strong UV light (sunlight).*
- *The valve island must be used with plugs, which have a conformity evaluation according to Directive 2014/34/EU as well as protection class IP65 or the complete valve island has to be installed in a cabinet that meets the requirements of EN 60079-15.*
- *The valve island does not meet the impact requirements and therefore must be used in a cabinet or protective box or must be protected against impacts with a protective device (e.g. protective fence). This applies above all for the pilot valves and the plastic parts of the valve island as well as the M12 connectors.*
- *Stress peaks:
The voltage may shortly transcended for not more than 40%. This must be prevented through convenient provisions.
Attention: The permissible voltage range of the valve island is 24V DC +/-10%.*
- *Attention: There is a risk of electrostatic discharge concerning the labels. Do only clean with a damp cloth.*

3.4 Declaration of conformity

For the declaration of conformity please refer to next pages.

-TRANSLATION-

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**EU – Declaration of Conformity
in accordance with Directive: 2014/34/EU**

IMI
Precision Engineering

Equipment: Valve island of VS18 and VS26 valve series
Industrial Ethernet
Power supply 24V DC

Model series:




PROFINET IRT Interface: VS1872008-***0; VS2672508-***0

EtherNet/IP Interface: VS1872009-***0; VS2672509-***0

Valves: VS18****DF*13E;
VS26****DF*13E

Sub-bases: VS1872002-***0; VS1872010-***0;
VS1872261-***0; VS1872262-***0;
VS1872263-***0;
VS2672502-***0; VS2672510-***0
VS2672761-***0; VS2672762-***0
VS2672763-***0

Engineering
GREAT
Solutions

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USt.-IdNr.: DE191308280

Bankverbindung:
Bank of America N.A.
IBAN: DE68 5001 0900 0020 6340 26
SWIFT Code: BOFADEFX




Accessories: VS1872400-***0 to VS1872407-***0;
VS1872428-***0; VS1872429-***0;
VS2672900-***0 to VS2672906-***0;
VS2672928-***0; VS2672929-***0;
V10009-C00; V70522-K00;
V70523-K00; VS2672971-***0

Herewith the manufacturer declares that the named products are in conformity with all relevant provisions of the above mentioned directive to use in potentially explosive atmospheres.

Referenced normative standards:

EN 60079-0:2012+A11:2013	General requirements
EN 60079-15:2010	Type of protection "n"
EN 60079-31:2014	Protection by enclosures "t"

Equipment group, Categories, Types of protection:

 II 3G Ex nA IIC T4 Gc
II 3D Ex tc IIIC T135°C Dc

Certificate Number: 17.0001X

Fellbach, August 2017

Norgren GmbH


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