

Technical Information

Nivector FTI26

Capacitance



Point level switch for powdered and fine-grained solids

Application

Reliable minimum or maximum detection of powders or fine-grained bulk solids in silos.

- Typical application examples: plastic granules, detergent, grain, sugar, spices, milk powder, animal feed
- Easy installation thanks to compact design - even in tight conditions or where access is restricted.
- Also suitable for use in
 - Food industry
 - Hazardous atmospheres formed by combustible dust, zone 20
 - Process temperatures of -20 to $+80$ °C (-4 to $+176$ °F).

Your benefits

- Onsite function check via LED indication
- Robust stainless steel housing, optionally available with M12x1 connector with IP69 protection
- Easy and cost-effective commissioning: Precalibration in factory (plug and play)
- Hygienic design, 3-A and EHEDG certificates
- Meets the requirements of EU 1935/2004
- FDA-compliant
- DC-PNP Output and IO-Link communication





Table of contents

About this document	3	Materials	14
Document conventions	3	Surface roughness	15
Function and system design	4	Operability	15
Measuring principle	4	Operating concept for devices with IO-Link	15
Measuring system	4	IO-Link information	15
Input	5	IO-Link download	15
Measured variable	5	Light signals (LEDs)	16
Measuring range	5	Device search	16
Output	5	Sensor check	16
Switch output	5	Medium calibration	16
Power supply	6	Function test	16
Supply voltage	6	Certificates and approvals	17
Power consumption	6	CE mark	17
Current consumption	6	RoHS	17
Electrical connection	6	RCM-Tick marking	17
Cable specification	8	EAC conformity	17
Length of connecting cable	8	Pressure equipment with allowable pressure ≤ 200 bar (2 900 psi)	17
Overvoltage protection	8	Ex approval	17
Performance characteristics	8	Sanitary compatibility	18
Reference operating conditions	8	Manufacturer's Declaration	18
Switch-on behavior	8	Ordering information	18
Influence of ambient temperature	8	Accessories	19
Switch-on delay	8	Adapter	19
Switching delay	8	Protector G 1½", R 1½", NPT 1½"	20
Installation	9	Lock nut	20
Mounting location	9	Protection cover	20
Installation instructions	9	Test magnet	20
Environment	11	Plug-in jack, connection adapter	21
Ambient temperature range	11	Supplementary documentation	21
Storage temperature	11	Operating Instructions	21
Relative humidity	11	Supplementary documentation	21
Climate class	11	Certificates	21
Altitude	11	Registered trademarks	21
Degree of protection	11		
Shock resistance	11		
Vibration resistance	11		
Cleaning	11		
Electromagnetic compatibility	11		
Reverse polarity protection	11		
Short-circuit protection	12		
Process	12		
Process temperature range	12		
Process pressure range	12		
Process fluid	12		
Mechanical construction	13		
Connector	14		
Weight	14		

About this document

Document conventions

Symbols for certain types of information

Symbol	Meaning
	Permitted Indicates procedures, processes or actions that are allowed.
	Preferred Indicates procedures, processes or actions that are preferred.
	Tip Indicates additional information.
	Reference to page Refers to the corresponding page number.

Symbols in graphics

Symbol	Meaning
1, 2, 3 ...	Item numbers
A, B, C, ...	Views

Function and system design

Measuring principle

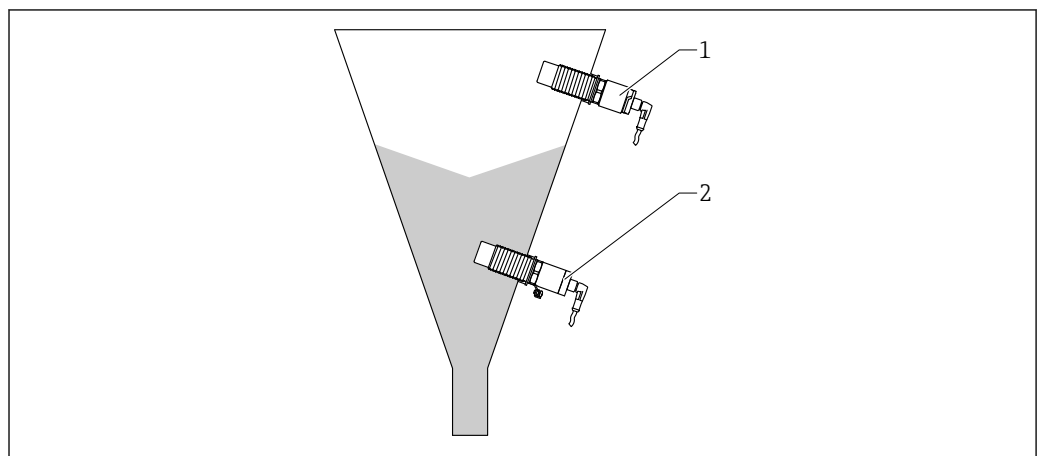
The sensor surface of the Nivector evaluates the different dielectric values of air and bulk solids. If the bulk solids come into contact with the sensor surface, the electronics change the switch status. The Nivector can be switched to either minimum or maximum fail-safe mode, ensuring quiescent current operation in all applications. The switch status is indicated by an LED. A guard electrode eliminates interference factors due to the vessel wall or possible buildup, for example.

Depending on the fail-safe mode selected and the level, the Nivector switches and signals in the following cases:

- When point level is reached
- In the event of a problem
- In the event of a power failure (electrical switch is locked)

Measuring system

The measuring system comprises a Nivector point level switch, e. g. for connecting to PLCs or an IO-Link master as per DIN EN 61131-9. A suitable miniature contactor or a solenoid valve can be connected directly to the point level switch.



A0035880

1 Application examples

- 1 Overfill protection or upper level detection (MAX)
- 2 Dry-running protection or lower level detection (MIN)

System integration

For devices with IO-Link, an IO-DD is available in the Downloads area of the Endress+Hauser website → [15](#).

Input

Measured variable	Level (point level switch) The change in medium capacitance is detected by the electrode in contact with the process.
Measuring range	Bulk solids, e. g. foodstuffs in powder form <ul style="list-style-type: none"> ▪ Dielectric constant (Dk) > 1.3 ▪ Grain size < 10 mm

Output

Switch output	Designation	Option ¹⁾
	<ul style="list-style-type: none"> ▪ 3-wire DC-PNP Positive voltage signal at the switch output of the electronics ▪ 2 DC-PNP outputs, switched using XOR operation ▪ 200 mA connectable load (short-circuit proof) 	4
	Devices with IO-Link <ul style="list-style-type: none"> ▪ 3- or 4-wire DC-PNP ▪ 2 DC-PNP outputs, freely configurable ▪ 1 switch output active: 200 mA ²⁾ connectable load (short-circuit proof) ▪ Both switch outputs active: Connectable load of 105 mA each (short-circuit proof) 	7

1) Product Configurator, order code for "Power supply; output"


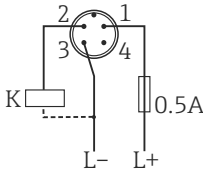
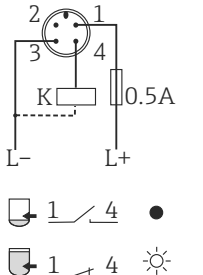
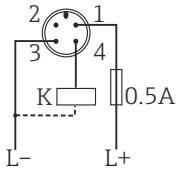
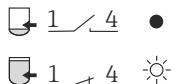

2) Unlike the IO-Link standard, the SIO mode supports 200 mA.

- Safety-related switching: MIN or MAX point level. The electrical switch opens if the point level is reached or if faults or a power outage occur.
 - Maximum point level detection (MAX): e. g. for overflow protection
The device keeps the electrical switch closed as long as the sensor is not yet covered by medium. This is also the case for devices with IO-Link if the measured value is inside the process window.
 - Minimum point level detection (MIN): e. g. for dry-running protection
The device keeps the electrical switch closed as long as the sensor is covered by medium. This is also the case for devices with IO-Link if the measured value is outside the process window.
- Residual voltage: < 3 V
- Residual current: < 100 µA



Power supply

Supply voltage	12 to 30 V DC IO-Link communication is guaranteed only if the supply voltage is at least 18 V.
Power consumption	< 1.2 W (at max. load:200 mA)
Current consumption	< 20 mA
Electrical connection	Voltage source: Non-hazardous contact voltage or Class 2 circuit (North America). The device must be operated with a fine-wire fuse 500 mA (slow-blow). Depending on the evaluation of the switch outputs, the device works in the MAX (maximum point level detection) or MIN (minimum point level detection) modes.


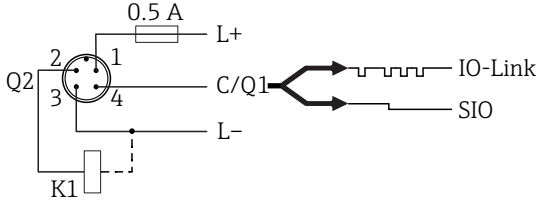
M12 plug

Electrical connection	Mode of operation	
M12 plug 	MAX 	MIN 
Symbols	Description	
	Yellow LED (ye) lit	
	Yellow LED (ye) not lit	
	External load	


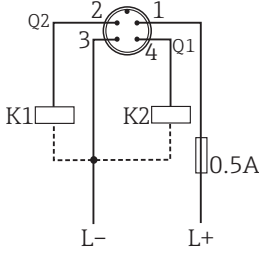
Devices with IO-Link

-  IO-Link: Communication on C/Q1; switch mode on Q2.
-  SIO mode: If there is no communication, the device switches to the SIO mode = standard IO mode.

The factory-set functions for the MAX and MIN modes can be changed via IO-Link.

Electrical connection	IO-Link with one switch output ¹⁾
M12 plug 	
	<p>1 Supply voltage +</p> <p>2 DC-PNP (Q2)</p> <p>3 Supply voltage -</p> <p>4 C/Q1 (IO-Link communication or SIO mode)</p>

1) Product Configurator, order code for "Power supply; output", option 7

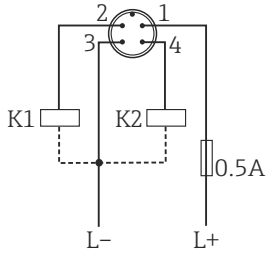
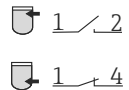


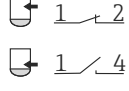


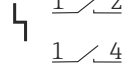


Electrical connection	Both switch outputs active simultaneously ^{1) 2)}
<p>M12 plug</p> 	 <p>1 Supply voltage + 2 DC-PNP (Q2) 3 Supply voltage - 4 DC-PNP (Q1)</p> <p style="text-align: right;">A0035998</p>

- 1) Depending on configuration
- 2) Current consumption with two outputs connected: < 25 mA

Function monitoring

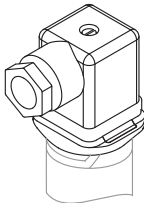
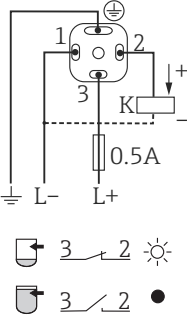
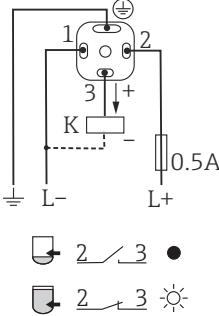


In the order configuration: With two-channel evaluation, functional monitoring of the sensor is also possible in addition to level monitoring, provided that no other monitoring option has been configured via IO-Link.

When both outputs are connected, the MIN and MAX outputs assume opposite states (XOR) when the device is operating fault-free. In the event of an alarm condition or a line break, both outputs are de-energized.

Connection for function monitoring using XOR operation		Yellow LED (ye)	Red LED (rd)										
 <p style="text-align: right;">A0022917</p>	<p>Sensor covered</p> 												
	<p>Sensor uncovered</p> 												
	<p>Fault</p> 												
<table border="0"> <tr> <td>Symbols</td> <td>Description</td> </tr> <tr> <td>☀</td> <td>LED lit</td> </tr> <tr> <td>●</td> <td>LED not lit</td> </tr> <tr> <td>⚡</td> <td>Fault or warning</td> </tr> <tr> <td>K1/K2</td> <td>External load</td> </tr> </table>	Symbols	Description	☀	LED lit	●	LED not lit	⚡	Fault or warning	K1/K2	External load			
Symbols	Description												
☀	LED lit												
●	LED not lit												
⚡	Fault or warning												
K1/K2	External load												

Valve plug

Depending on the assignment of the connector, the device works in either the MAX or MIN mode.

Electrical connection	Mode of operation	
 <p>A0022900</p>	MAX	MIN
		
Symbols  Yellow LED (ye) not lit  Yellow LED (ye) lit K External load		

Cable specification

- M12 plug: IEC 60947-5-2
- Valve plug
 - Cable cross-section: Max. 1.5 mm² (16 AWG)
 - Ø3.5 to 6.5 mm (0.14 to 0.26 in)

Length of connecting cable

- Max. 25 Ω/core, total capacity < 100 nF
- IO-Link communication: < 10 nF

Overvoltage protection

Overvoltage category II

Performance characteristics

Reference operating conditions

Accuracy in accordance with DIN EN 61298-1 based on 100% (factory adjustment)

- Non-repeatability: ± 1 %
- Uncertainty, absolute: ± 2.5 %
- Hysteresis: + 0.5 % ± 0.5 %

Horizontal orientation:

- Ambient temperature: 20 °C (68 °F) ± 5 °C
- Medium temperature: 20 °C (68 °F) ± 5 °C
- Process pressure: 1 bar abs. (14.5 psi)
- Medium: Sliding earthed metal plate in front of sensor.

Switch-on behavior

< 2 s

Influence of ambient temperature

Maximum 0.07 %/K

Switch-on delay

< 2 s until correct switch status is set. Prior to that, the switch outputs are in a blocked state.

Switching delay

- 0.5 s when sensor is covered
- 1.0 s when sensor is uncovered
- IO-Link communication: 0.3 to 60 s configurable
- Can be ordered as option: 0.3 s; 1.5 s or 5 s (when sensor is covered or uncovered)¹⁾

1) See Product Configurator, order code 570, option HS

Installation

Mounting location

Lateral mounting in bulk solids silos, indoors or outdoors, e.g. in silo

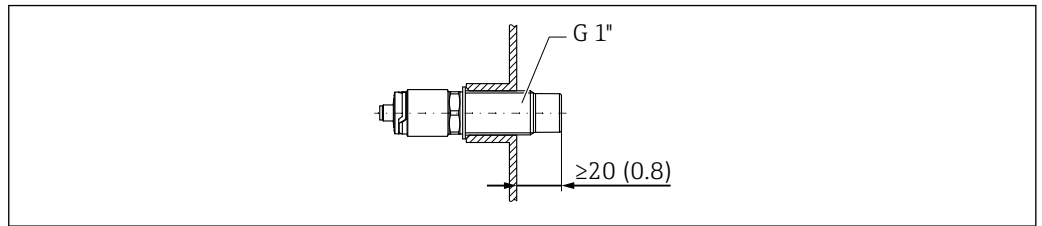


For installation in metallic or non-metallic bulk solids silos, follow the EMC guidelines → 11.

Installation instructions

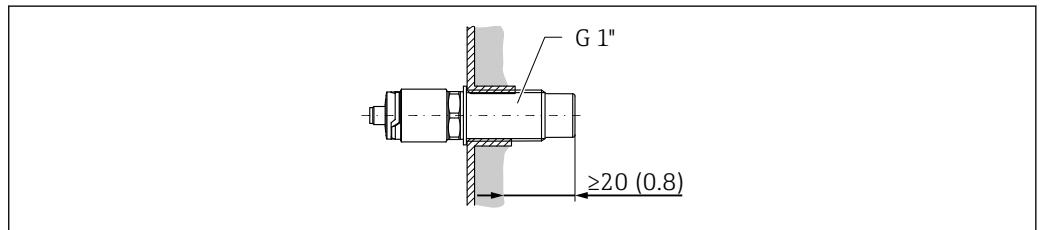
- Engineering unit mm (in)
- Sensor surface ≥ 20 mm (0.79 in) projecting into silo (when installing with weld-in adapter 20 mm (0.79 in))
- Silo wall thickness < 35 mm (1.38 in) or mounting connection G 1" < 50 mm (1.97)

Examples



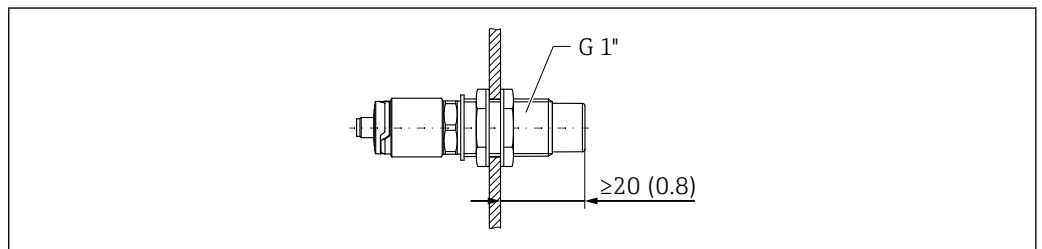
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2 Standard installation with external G 1" threaded adapter



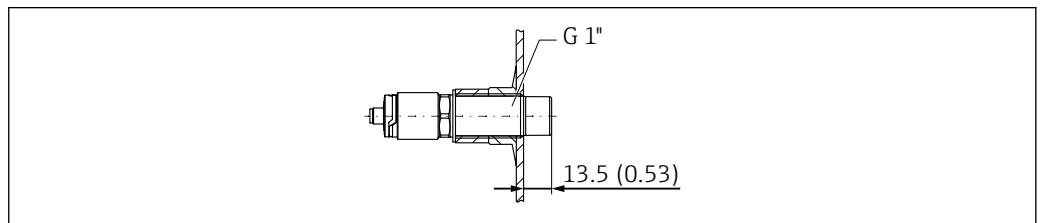
A0036360

3 Where buildup occurs on the silo wall with internal G 1" threaded adapter



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4 Bore hole in silo wall with lock nuts, can be ordered as an accessory → 19



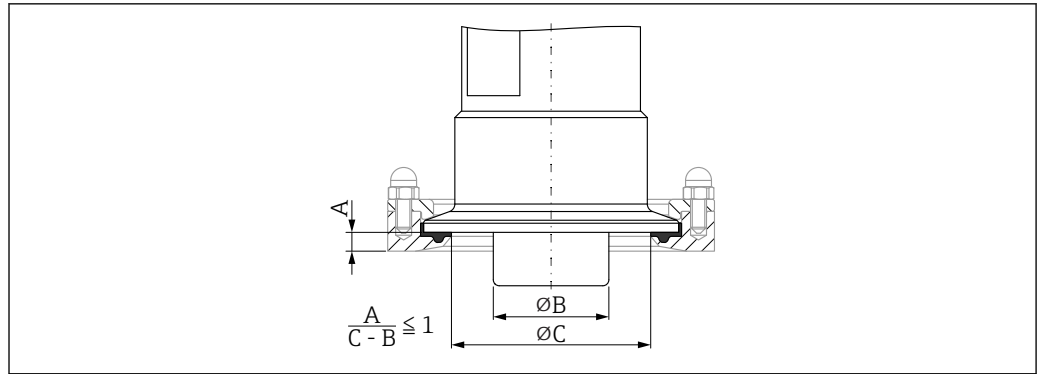
A0036362

5 Installation with weld-in adapter, can be ordered as an accessory → 19

NOTICE

Installation in a conventional T-section or in a metallic tank nozzle reduces the measuring performance of the sensor.

- ▶ Install Tri-Clamp version, e.g. NA Connect adapter for hygiene-compliant connection. This minimizes dead legs and increases cleanability.

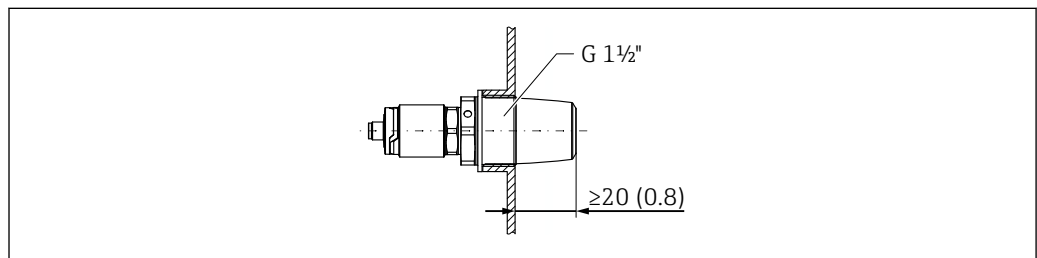


- 6 Installation with Tri-Clamp, which can be ordered as an accessory, → 19 and with NA Connect adapter provided by customer

A Distance between Tri-Clamp and NA Connect adapter
 B Diameter of Nivector
 C Diameter of NA Connect adapter

Installation with protector:

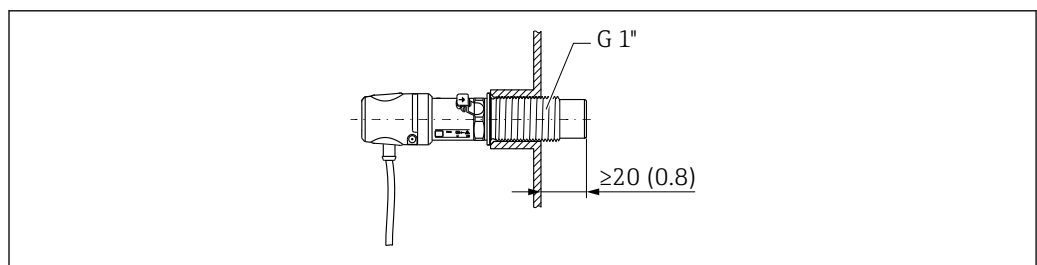
- Protection of point level switch against damage by particularly abrasive or coarse product
- Outflow protection in silo for functional testing when silo is full



- 7 Installation with protector, can be ordered as an accessory → 19

Installation with protection cover:

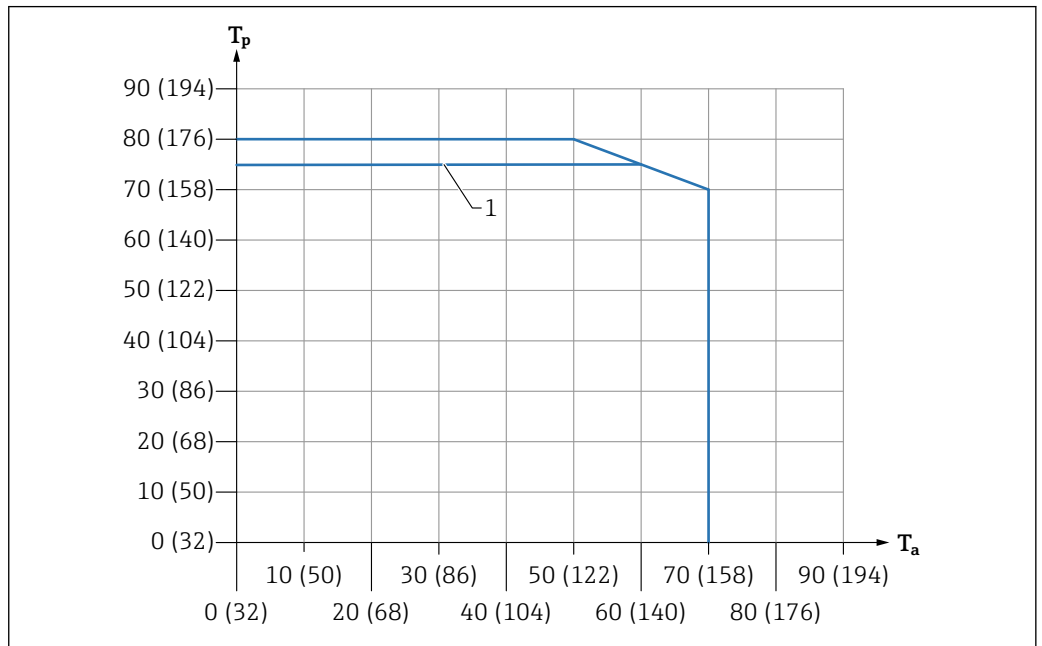
- Protection of point level switch against impact
- Protection of point level switch in hazardous area
 Please also ensure compliance with the corresponding national standards and regulations and the Safety Instructions or Installation or Control Drawings → 21
- Fit the protection cover before the device is put into operation



- 8 Installation with protection cover, included in scope of delivery for hazardous areas or can be ordered as an accessory → 19

Environment

Ambient temperature range



- 1) Ex devices
 Tp) Process temperature = °C (°F)
 Ta) Ambient temperature = °C (°F)

Storage temperature	-25 to +85 °C (-13 to +185 °F) Pressure: 1 bar abs. (14.5 psi)
Relative humidity	0 to 100 %
Climate class	DIN EN 60068-2-38/IEC 68-2-38: Test Z/AD
Altitude	Up to 2 000 m (6 600 ft) above sea level
Degree of protection	<ul style="list-style-type: none"> ■ IP65/67 NEMA Type 4X Enclosure (M12 plug for plastic housing cover) ■ IP66/68/69 NEMA Type 4X/6P Enclosure (M12 plug for metal housing cover) ■ IP65 NEMA Type 4x Enclosure (ISO4400 M16/NPT ½" valve plug for plastic housing cover)
Shock resistance	In accordance with EA inspection, prEN 60068-2-27:2007: a = 300 m/s ² = 30 g, 3 planes x 2 directions x 3 shocks x 18 ms
Vibration resistance	In accordance with Fh inspection, EN 60068-2-64:2008: a(RMS) = 50 m/s ² , f = 5 to 2 000 Hz, t = 3 planes x 8 h
Cleaning	Resistant to typical cleaning agents from the outside. Passed Ecolab test.
Electromagnetic compatibility	<p>The electromagnetic compatibility requirements outlined in the IEC/EN 61326 series for "industrial environments" are fulfilled when the device is installed in metallic vessel or metallic pipes. Emission requirements for class B equipment are met. For details, refer to the Declaration of Conformity.</p> <p>If the device is installed in plastic structures, its function may be influenced by strong electromagnetic fields. Emission requirements for class A equipment are met (only for use in "industrial environments").</p>
Reverse polarity protection	Integrated; no damage in the event of reverse polarity or short-circuit

Short-circuit protection

- Overload protection/short-circuit protection at $I > 200$ mA
- IO-Link communication: 105 mA each if both switch outputs are active

Intelligent monitoring: Testing for overload at intervals of approx. 1.5 s; normal operation resumes once the overload/short-circuit has been rectified.

Process

Process temperature range

-20 to +80 °C (-4 to +176 °F)

For Ex devices: -20 to +75 °C (-4 to +167 °F)

Process pressure range

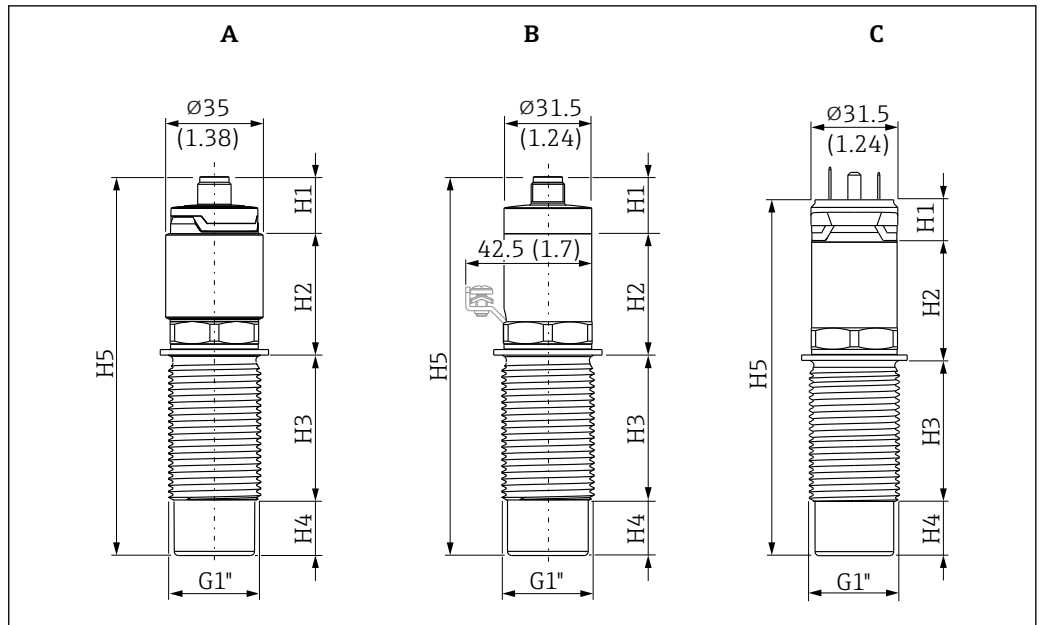
-1 to +6 bar (-14.5 to +87 psi)

Process fluid

Powdery and fine-grained bulk solids

- Grain size < 10 mm
- Dielectric constant 1.3
- Default values: $\epsilon_r > 1.6$ with protector, $\epsilon_r > 2.0$ without protector

Mechanical construction



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9 Dimensions of Nivector. Unit of measurement mm (in)

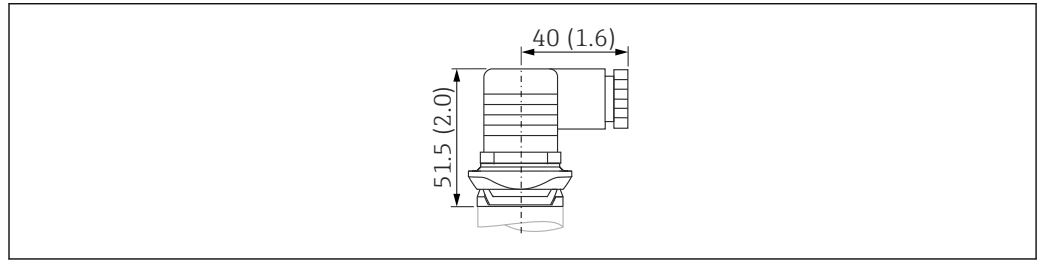
- A Nivector FTI26 plastic with M12 plug
- B Nivector FTI26 stainless steel with M12 plug (with ground terminal for hazardous area)
- C Nivector FTI26 stainless steel with valve plug

Height measurement	Identifier	A	B	C
H1	Housing cover	20.5 (0.81)		16 (0.36)
H2	Housing	43.6 (1.72)		
H3	Process connection	52 (2.05)		
H4	Sensor	20 (0.79)		
H5	Nivector FTI26 overall dimensions	136 (5.35)		131.2 (5.17)

i Additional accessories for hygiene sector and hazardous areas: weld-in adapter G 1", Tri-Clamp 2", protection cover from → 19

Connector

Connection plug with PPSU plastic housing cover



A0021859

10 Valve plug M16, NPT 1/2". Unit of measurement mm (in)

Weight

- Plastic with M12 plug: 118 g (4.162 oz)
- Plastic with valve plug: 120 g (4.232 oz)
- Stainless steel with M12 plug: 240 g (8.465 oz)
- Stainless steel with valve plug: 243 g (8.465 oz)
- Stainless steel with M12 plug and protection cover: 288 g (10.158 oz)

Materials*Wetted materials*

Component part	Material	Product Configurator
Sensor	316L (1.4404), ECTFE ¹⁾	Order code 110, option WDJ
	Polycarbonate	Order code 110, option WDG
Protector G 1 1/2"	Material PBT-GF ²⁾ O-ring EPDM	Order code 620, option PA
Protector R 1 1/2"		Order code 620, option PB
Protector NPT 1 1/2"		Order code 620, option PC

- 1) The material ECTFE meets the requirements of EU 1935/2004, 10/2011, 2023/2006 and FDA 21 CFR 177.1380
- 2) The material meets the requirements of EU 1935/2004, 10/2011, 2023/2006 and FDA 21 CFR 177.1660

Materials not in contact with process

Component part	Material	Product Configurator
Process connection	316L (1.4404/1.4435)	Order code 110, option WDJ
	Polycarbonate	Order code 110, option WDG
Lock nut	PA (black)	Order code 620, option R7
Housing cover, valve plug	PPSU Design ring: PBT/PC	Order code 40, option U, V
M12 housing covers	316L (1.4404/1.4435)	Order code 40, option N
	PPSU Design ring: PBT/PC	Order code 40, option M
Housing	316L (1.4404/1.4435)	Order code 110, option WDJ
	Polycarbonate	Order code 110, option WDG
Nameplate	Lasered onto housing	-
Ground terminal (optional)	304 (1.4301)	See Ex approval, order code 10 → 21
Protection cover (optional)	Polycarbonate	See Ex approval, order code 10 → 21

Endress+Hauser supplies DIN/EN process connections with threaded connection in stainless steel in accordance with AISI 316L (DIN/EN material number 1.4404 or 14435). In terms of their stability-temperature property, the materials 1.4404 and 1.4435 are grouped in EN 1092-1 table 18 under 13E0. The chemical composition of the two materials can be identical.

Surface roughness	Sensor surface in contact with process: $R_a \leq 0.76 \mu\text{m}$ (30 μin), ordering information: Product Configurator order code for "Process connection" option "WDJ"
--------------------------	---

Operability

Operating concept for devices with IO-Link

Operator-oriented menu structure for user-specific tasks

Quick and safe commissioning

Guided menus for applications

Reliable operation

Operation in the following languages:
Via IO-Link: English

Efficient diagnostic behavior increases measurement availability

- Remedial measures
- Simulation options

IO-Link information

IO-Link is a point-to-point connection for communication between the measuring device and an IO-Link master. The measuring device features an IO-Link communication interface type 2 with a second IO function on pin 4. This requires an IO-Link-compatible assembly (IO-Link master) for operation. The IO-Link communication interface enables direct access to the process and diagnostic data. It also provides the option of configuring the measuring device while in operation.

Physical layer, the measuring devices supports the following features:

- IO-Link specification: version 1.1
- IO-Link Smart Sensor Profile 2nd Edition
- SIO mode: yes
- Speed: COM2; 38.4 kBaud
- Minimum cycle time: 6 msec.
- Process data width: 16 bit
- IO-Link data storage: yes
- Block configuration: no

IO-Link download

<http://www.endress.com/download>

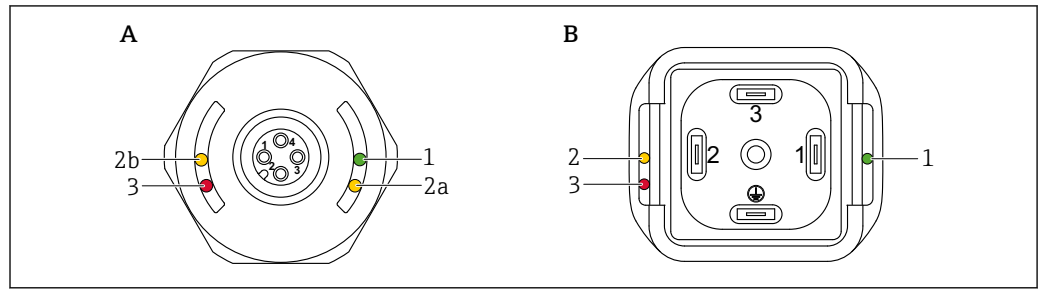
- Select "Software" as the media type.
- Select "Device Driver" as the software type.
Select IO-Link (IODD).
- In the "Text Search" field enter the device name.

<https://ioddfinder.io-link.com/>

Search by

- Manufacturer
- Article number
- Product type

Light signals (LEDs)





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11 Position of LEDs on housing cover

A Housing cover with M12 plug, plastic

B Housing cover with valve plug

i There is no external signaling via LEDs on the metal housing cover (IP69). A connecting cable with an M12 plug and LED display can be ordered as an accessory if necessary. This cable has no red LED. See "Accessories".

Position	LEDs	Description of function
1	Green LED (gn)	<p>Lit: Measuring device is operational</p> <p>In conjunction with IO-Link communication:</p> <ul style="list-style-type: none"> lit: SIO mode flashing: Active communication, flash frequency  flashes with increased luminosity: Device search (device identification), flash frequency 
2	Yellow LED (ye)	<p>M12 plug LED 2a Active only in conjunction with IO-Link communication.</p> <p>LED 2b display of sensor status Sensor is covered by medium.</p>
		<p>M12 plug in conjunction with IO-Link communication: LED 2a switch status/switch output 2 Following customer adjustment: Sensor is covered by medium 1. LED 2b switch status/switch output 1 Following customer adjustment: Sensor is covered by medium 2.</p>
		<p>Valve plug: Indicates switch status MAX mode (overflow protection): Sensor is not covered by medium MIN mode (dry-running protection): Sensor is covered by medium</p>
3	Red LED (rd)	<p>Warning/Maintenance required flashing: Error remediable, e. g. invalid calibration Fault/device failure lit: Error not remediable, e. g. Electronics error Diagnostics and troubleshooting</p>

Device search

IO-Link communication: The Device search parameter is used to uniquely identify the device during installation.

Sensor check

IO-Link communication: The Sensor check parameter checks if the sensor system is functioning correctly. The sensor must not be covered and must be free of residue.

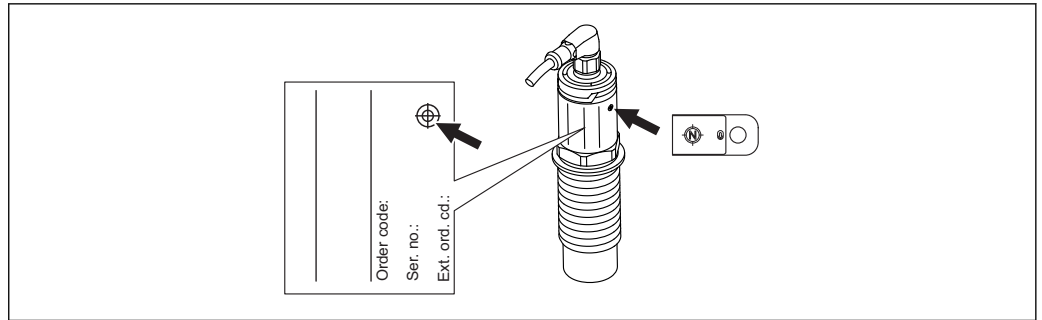
Medium calibration

Empty/full calibration are carried out with the test magnet or by means of IO-Link communication. The threshold is defined automatically following calibration. The thresholds can also be adjusted manually in the case of IO-Link.

Function test

The test magnet is used to invert the current switch status.


i The test magnet is included in the scope of delivery. It is also possible to cancel it .



A0035882

 12 Position for test magnet on housing nameplate

Certificates and approvals

 The certificates, approvals and other documentation currently available can be accessed as follows:
Endress+Hauser website: www.endress.com → Downloads.

CE mark

The measuring system meets the legal requirements of the applicable EU Directives. These are listed in the corresponding EU Declaration of Conformity along with the standards applied.

Endress+Hauser confirms successful testing of the device by affixing to it the CE mark.

RoHS

The measuring system complies with the substance restrictions of the Restriction on Hazardous Substances Directive 2011/65/EU (RoHS 2).

RCM-Tick marking

The supplied product or measuring system meets the ACMA (Australian Communications and Media Authority) requirements for network integrity, interoperability, performance characteristics as well as health and safety regulations. Here, especially the regulatory arrangements for electromagnetic compatibility are met. The products are labelled with the RCM-Tick marking on the name plate.



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EAC conformity

The measuring system meets the legal requirements of the applicable EAC guidelines. These are listed in the corresponding EAC Declaration of Conformity together with the standards applied.

Endress+Hauser confirms successful testing of the device by affixing to it the EAC mark.

Pressure equipment with allowable pressure ≤ 200 bar (2 900 psi)

Pressure instruments with a flange and threaded boss that do not have a pressurized housing do not fall within the scope of the Pressure Equipment Directive, irrespective of the maximum allowable pressure.

Reasons:

According to Article 2, point 5 of EU Directive 2014/68/EU, pressure accessories are defined as "devices with an operational function and having pressure-bearing housings".

If a pressure instrument does not have a pressure-bearing housing (no identifiable pressure chamber of its own), there is no pressure accessory present within the meaning of the Directive.

Ex approval

All explosion protection data is listed in separate documentation which is available from the download area. The Ex documentation is supplied as standard with all Ex-systems.

 You will find information on the available certificates in the supplementary documentation section →  21

Sanitary compatibility

The device has been developed for use in hygienic processes. The process-wetted materials meet the requirements stipulated in EU 1935/2004, 10/2011, 2023/2006 and FDA 21 CFR 177.2415 (only for order code for "Process connection", option "WDJ").

By affixing the 3-A symbol to the device, Endress+Hauser confirms compliance with the 3-A Sanitary Standard No. 74-xx and No. 50-xx.

The following certificate copies can be ordered with the device (optional): → 📄 18

3-A



EHEDG



- To avoid the risk of contamination, install the device in accordance with the design principles of EHEDG, Document 37 "Hygienic Design and Application for Sensors" and Document 16 "Hygienic Pipe Connections".
- Suitable connections and seals must be used in order to guarantee a hygienic design in accordance with the specifications of 3-A and EHEDG.
- Information on 3-A and EHEDG-approved weld-in adapters can be found in the "Weld-in adapter, process adapter and flanges" documentation, TI00426F/00/EN.

Hygiene approval

Process connections	Option ¹⁾	EHEDG	3-A
ISO228 G1" thread, 316L in conjunction with Tri-Clamp 2" process adapter	WDJ + RK	✓	✓
ISO228 G1" thread, 316L in conjunction with G1" weld-in adapter	WDJ + PK	✓	✓

1) See order code 620 in Product Configurator

Manufacturer's Declaration

The following documents can be ordered with the device (optional):


- FDA conformity
- Regulation (EC) No. 1935/2004 on materials and articles intended to come into contact with food

Ordering information

Detailed ordering information is available for your nearest sales organization www.addresses.endress.com or in the Product Configurator under www.endress.com :

1. Click Corporate
2. Select the country
3. Click Products
4. Select the product using the filters and search field
5. Open the product page

The Configuration button to the right of the product image opens the Product Configurator.

 Product Configurator - the tool for individual product configuration

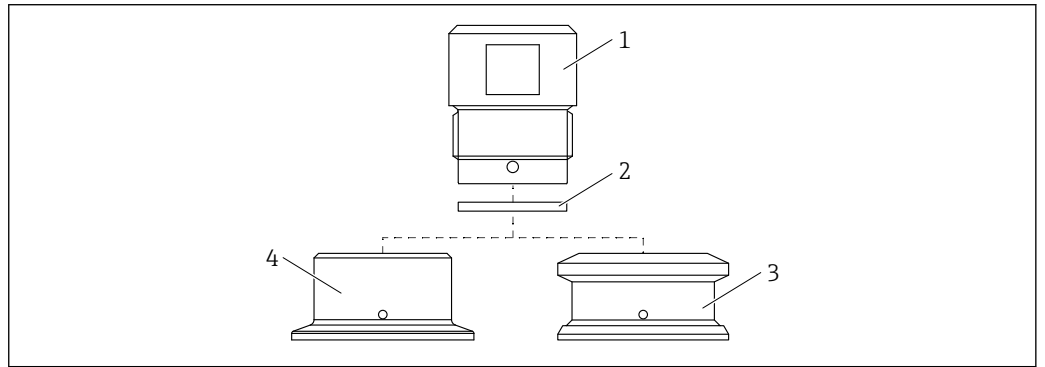
- Up-to-the-minute configuration data
- Depending on the device: Direct input of measuring point-specific information such as measuring range or operating language
- Automatic verification of exclusion criteria
- Automatic creation of the order code and its breakdown in PDF or Excel output format
- Ability to order directly in the Endress+Hauser Online Shop

Accessories

- Accessories can be ordered with the device (optional) or separately.
- The adapters are also available with inspection certificate 3.1 EN10204. For more information on process adapters and weld-in adapters, please refer to the supplementary documentation → 21.

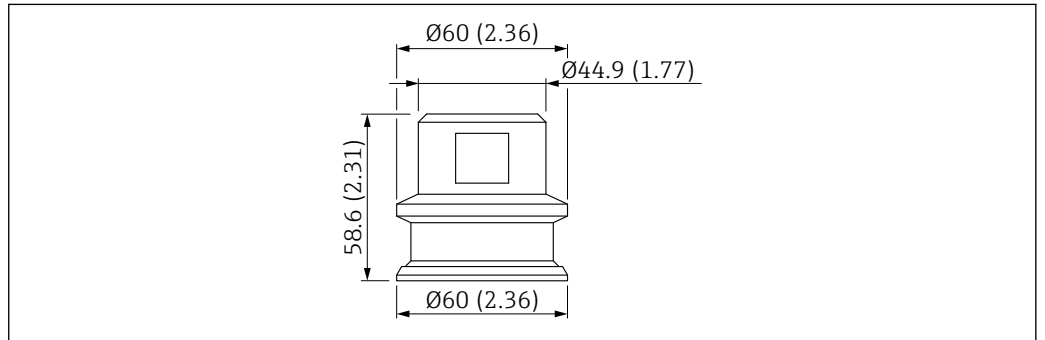
Adapter

- For hygiene sector and hazardous areas
- Material: 316L (1.4404), seal: VMQ
- Weight
 - Weld-in adapter with threaded sleeve: 466 g (16.44 oz)
 - Tri-Clamp 2" with threaded sleeve: 503 g (17.74 oz)
- Order number
 - Weld-in adapter G 1", threaded sleeve, molded seal: 71444432
 - Process adapter G 1" Tri-Clamp 2", threaded sleeve, molded seal: 71444431



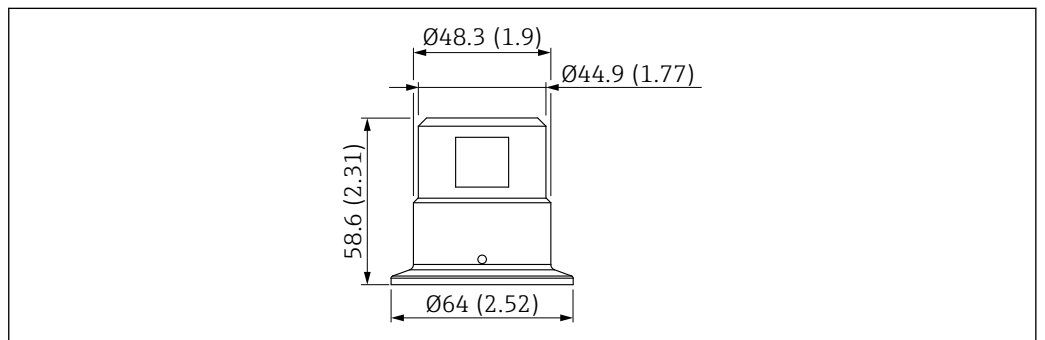
A0040366

- 1 Threaded sleeve
- 2 Molded seal
- 3 Weld-in adapter G 1", order code 620, option PK
- 4 Process adapter G 1" Tri-Clamp 2", order code 620, option RK



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13 Weld-in adapter G 1" with threaded sleeve. Unit of measurement mm (in)

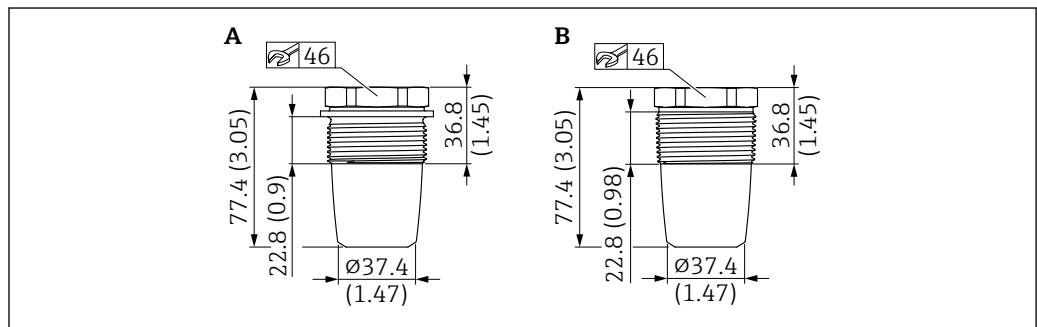


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14 Process adapter G 1" Tri-Clamp 2" with threaded sleeve. Unit of measurement mm (in)

**Protector G 1½", R 1½",
NPT 1½"**

- G 1½"
- Material: PBT-GF
 - Weight: 74 g (2.610 oz.)
 - Order number: 71395785
- R 1½"
- Material: PBT-GF
 - Weight: 71 g (2.504 oz.)
 - Order number: 71395862
- NPT 1½"
- Material: PBT-GF
 - Weight: 71 g (2.504 oz.)
 - Order number: 71416936

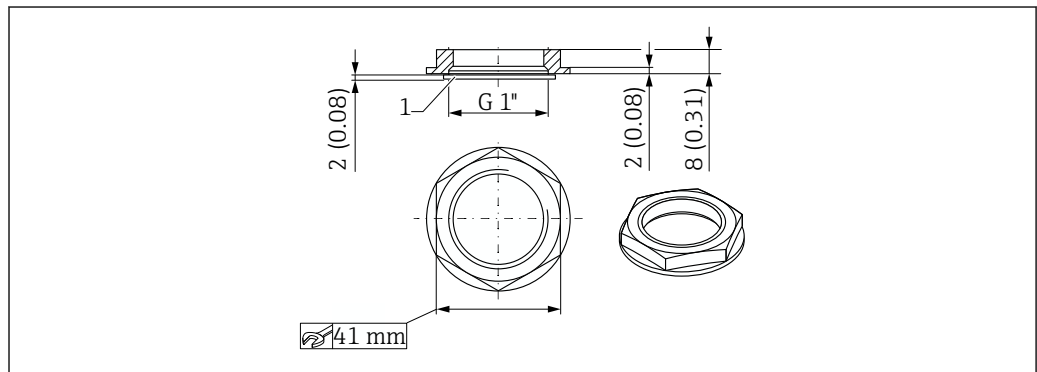


A0035938

A G 1½", order code 620, option PA
 B R 1½", order code 620, option PB; NPT 1½", order code 620, option PC

Lock nut

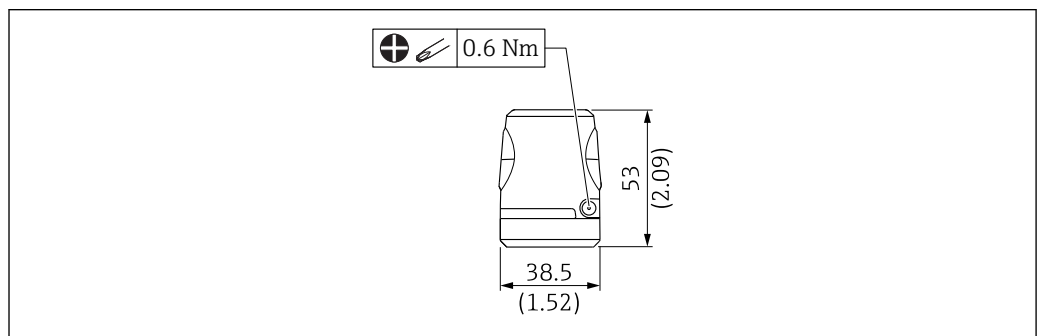
- Material: PA
- Order number: 71395801



A0036041

Protection cover

- Material: PC
- Order number: 71395803



A0036434

Test magnet

Order number: 71267011

Plug-in jack, connection adapter

Identifier	Order number	Option ¹⁾
<p>Cable, plug-in jack Engineering unit mm (in)</p> <p>Example: M12 with LED</p>	<p>M12 IP69 with LED</p> <ul style="list-style-type: none"> Elbowed 90°, terminated at one end 5 m (16 ft) PVC cable (orange) Body: PVC (transparent) Slotted nut 316L 	52018763 RX
	<p>M12 IP69 without LED</p> <ul style="list-style-type: none"> Elbowed 90°, terminated at one end 5 m (16 ft) PVC cable (orange) Body: PVC (orange) Slotted nut 316L (1.4435) 	52024216 RW
	<p>M12 IP67 without LED</p> <ul style="list-style-type: none"> Elbowed 90° 5 m (16 ft) PVC cable (gray) Slotted nut Cu Sn/Ni Body: PUR (blue) 	52010285 RZ
	<p>M12 IP67 without LED</p> <ul style="list-style-type: none"> Straight, self-terminated connection to M12 plug Slotted nut Cu Sn/Ni Body: PBT 	52006263 R1
<p>Wire colors for M12 plug: 1 = BN (brown), 2 = WT (white), 3 = BU (blue), 4 = BK (black)</p>		

1) See order code 620 in Product Configurator

Supplementary documentation

- For an overview of the scope of the associated Technical Documentation, refer to the following:
 - W@M Device Viewer** (www.endress.com/deviceviewer): Enter the serial number from nameplate
 - Endress+Hauser Operations App**: Enter the serial number from the nameplate or scan the 2D matrix code (QR code) on the nameplate

Operating Instructions

- BA01830F → Nivector FTI26
- BA01832F → Nivector FTI26, IO-Link

Supplementary documentation

- TI00426F/00 → Weld-in adapter, process adapter and flanges (overview)
- SD01622P/00 → Weld-in adapter (installation instructions)
- SD00356F/00 → Valve plug (installation instructions)
- SD02242F/00 → Protector (installation instructions)

Certificates

Depending on the option selected in the "Approval" order code, Safety Instructions are supplied with the device, e. g. XA. This documentation is an integral part of the Operating Instructions. The nameplate indicates the Safety Instructions (XA) that are relevant to the device.

Safety instructions

- XA01734F/00 → ATEX; IECEx
- XA01821F/00 → CSA Ex
- XA01943F/00 → EAC Ex

Registered trademarks

IO-Link

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