

## Introduction

These operating instructions refer to installation, commissioning, servicing and adjustment. Statutory regulations, valid standards, additional technical details in the relevant data sheet, details of the type plate and any additional certificates are to be observed along with these operating instructions.



## Safety instructions

- The instrument may be executed by authorized personnel, only, using suitable equipment.
- Warning: If the instrument is used incorrectly it is possible that serious injuries or damage can occur.
- Electromagnetic switches that are mechanically defective can cause injuries or give rise to process faults. Suitable precautions should be taken to avoid this.



## CE marking

The CE marking on the instruments certifies compliance with valid EU directives for bringing products to market within the European Union.

The following directives are met:

EMC directives	EMC	2004/108/EG
Pressure Equipment Directive	PED	97/23/EG
Lower Voltage Directive	LVD	2006/95/EG



## Hygienic design

For use in aseptic processes in hygienic process environments in compliance with the recommendations of the EHEDG. Cleaning to be done by the CIP/SIP process. Surfaces of stainless steel, wetted parts of FDA-listed material.

## Mounting and operation

- For installation use only approved sleeve clamps and adapters. Installation in non-Labom systems can result in incorrect function and leakage.
- The threaded shank must be electrically connected with the threaded sleeve and the metallic container.
- Insulating seals of Teflon or paper are not suitable for correct, error-free operation.
- The tightening torque in the sleeve clamp is between 5 and 10 Nm.
- With non-metallic containers, a threaded sleeve with a diameter of at least 28 mm must be used.
- Conduct process installation before electrical installation.
- Wire up the instrument with power switched off.
- When the instrument is opened any contact with the electrical connections can affect the signals. This situation can be avoided by switching off the supply voltage or by disconnecting the signal circuit.
- Gaskets must be chosen that are suited to the process connection and resistant to the measured medium.

## Instructions for the operation

- Connect power supply to terminals 1 (+) and 2 (-)
- The casing is electrically connected to terminal 2.
- Set the signaling function via the configuration switch:  
0 => output triggered when covered with product  
1 => output triggered when not covered with product
- A bicolor LED indicates the system status:  
green: device ready  
red: output ON
- An ON output is available at terminal 3 (high signal). The output is 45 mA max. and cannot be short-circuited.
- You can change device sensitivity and delay via the configuration switch, or via the optional adapter.



 **Further information required? Hotline +49 (0) 4408 804-444**

BTA-No. 042 Rev. 1K1

## Techn. Data

### Case design

field housing, material 1.4305  
case protection type: IP 67 (EN 60529)  
screw-on cover

### Electrical connection

- M16 cable gland  
"WAGO" spring-loaded terminals for wire sizes 0.08 up to 2.5 mm<sup>2</sup>
- M12 plug socket (without connector)

### Wetted parts

PEEK, FDA compliant

### Measurement system

electromagnetic wave

### Auxiliary power supply

operating voltage: 18...32 V DC  
max. 50 mA without switching load  
The housing is connected to negative supply voltage.

### Output signal

active, max. 50 mA, short-circuit-proof,  
LED-display red when probe is covered,  
reversible output (inversion),  
response time < 0.2 s

### Switching function

electrical output, active high  
max. 50 mA, short-circuit-proof  
reversible: when probe tip is covered/uncovered, response time < 0,2 s or adjustable time delay

### Operating pressure

max. 10 bar

### Temperature range

short periods: up to 150 °C, 30 min.  
· ambient temperature -10...+70 °C  
· process temperature -0...100 °C  
short periods: (30 min) up to 150 °C  
· storage temperature -20...+70 °C

### Process connection

G 1/2 B, material stainless steel, elastomer-free sealing system, max. tightening torque 5...10 Nm

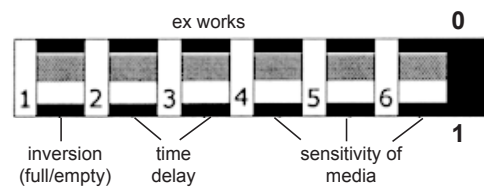
### Weight

approx. 0.6 kg

## Sensitivity adjustment of various media

switch			turn on/off values in %	
6	5	4	on	off
0	0	0	86	84
0	0	1	97	96
0	1	0	72	70
0	1	1	60	58
1	0	0	50	48
1	0	1	11	9
1	1	0	5	4
1	1	1	configurable via PC and programming interface (option)	

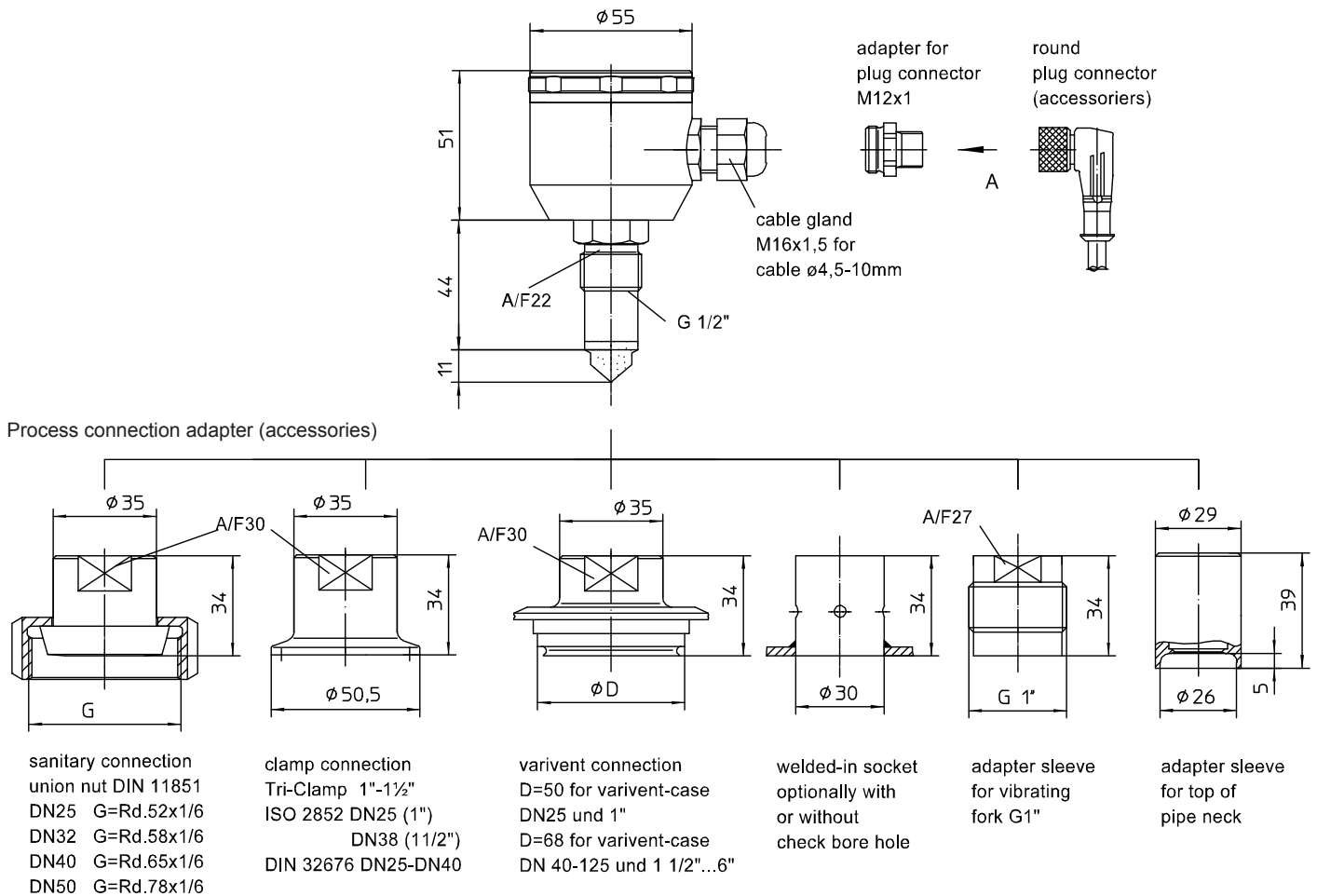
## Configuration switch



## Delay

switch		delay in sec
3	2	
0	0	0
0	1	2
1	0	4
1	1	8

## Dimensions



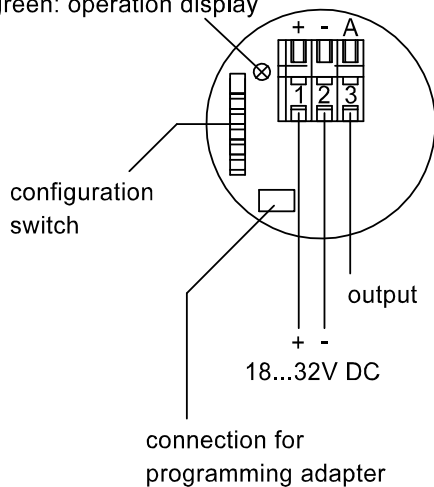
The process connection adapter allows easy mounting in existing process connections. This connection method permits flush-mounted, sanitary installation as per the EHEDG. We recommend a tightening torque of 10 to 13 Nm for the connection adapter.

## Electrical connection

LED:

red: probe covered

green: operation display



circular connector  
view A

