

Special Documentation

Hygienic applications

Liquid analysis equipment
EHEDG EL Class I-certified equipment
3-A-certified equipment



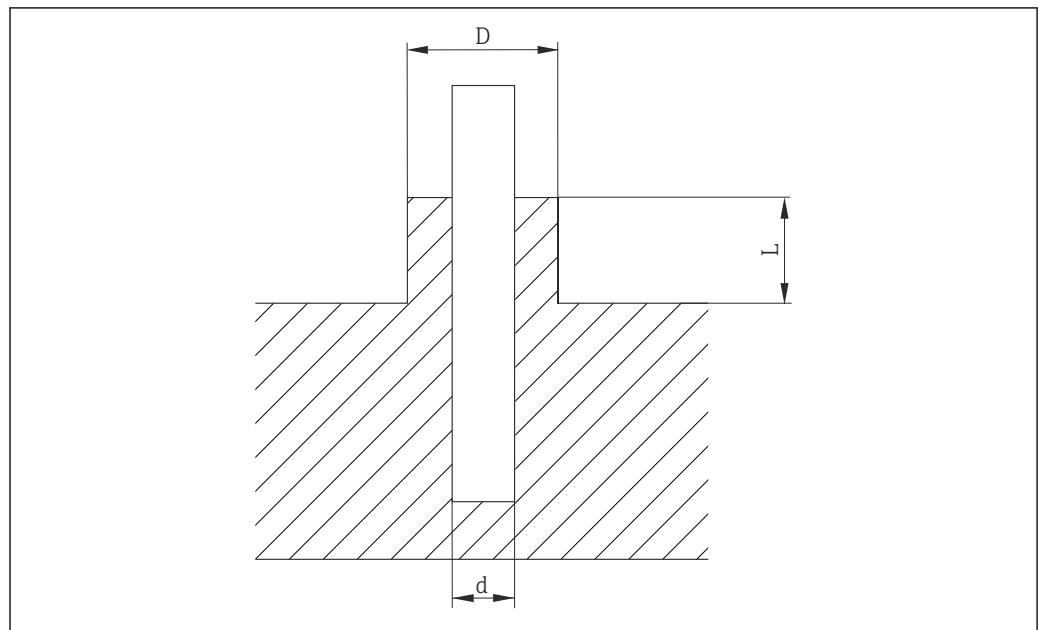
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1 Installation instructions

The following installation instructions only cover hygiene-conformant installation. To ensure optimal performance of your device, refer to the relevant Operating instructions or Technical Information.

- Install the device in accordance with generally recognized and applied industry standards. These standards include, for example, the latest applicable versions of EHEDG documents 8, 10 and 37 or 3-A Sanitary Standards 00, 46 or 74.
- Install devices and pipelines such that they are self-draining and thus retain neither product nor process media. EHEDG recommends using an angle of at least 3° for this purpose.
- For installation, use suitable process connections, pipe connections or process assemblies recognized by 3-A and/or EHEDG as hygienic. This may require the use of special, hygienic seals. For more details, see the latest applicable version of the 3-A Sanitary Standards or the EHEDG position paper “Easy Cleanable Pipe Couplings and Process Connections”.
- A suitable process assembly, (e.g. CPA842), is required for 12 mm sensors to ensure hygienic installation and operation.
- Devices that contain a leakage detection hole must be installed so that the hole is at the lowest possible point after installation.
- The seals used must be suitable for contact with foodstuffs and must comply with applicable law.
- The process adapter used should be flush-mounted. If a dead leg is unavoidable, it should be kept as short as possible. The following conditions must be met (see also Figure 1):
 - For EHEDG-conformant installation: $L \leq D - d$
 - For 3-A-conformant installation: $L \leq 2 \times (D - d)$



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 1 Relevant dimensions for installations with dead legs

- L* Length of dead leg
D Inner diameter of dead leg
d Enveloping diameter of device

- To avoid glass breakage in 3-A-conformant applications, glass sensors, such as pH- or ORP electrodes, must be installed in process assemblies with a protective cage.
- Tank installations must be installed so they are flush-mounted. In addition, the cleaning device must be fitted in such a way that both the process connection and the device can be rinsed out directly.
- The hygienic integrity of the installation must be guaranteed. This may require additional inspection measures.
- Replace defective devices to reduce the risk of process contamination.
- Check seals in hygienic applications regularly. Replace defective seals. Tools that are used to service the seals must not damage the seals and sealing surfaces.
- Endress+Hauser recommends cleaning the equipment immediately before or after installation.

2 Cleaning instructions

- The device is suitable for CIP (Cleaning in Place) and SIP cleaning (Sterilization in Place) (EHEDG Class I equipment). Dismantling the equipment is not necessary.
- Do not exceed the maximum permitted pressures and process temperatures. For detailed information, see the Operating Instructions or Technical Information for the equipment.
- To ensure the equipment's hygienic integrity and durability, it is recommended to avoid excessive chemical stress to the equipment's materials of construction and the process seals used. Consult your cleaning agent supplier for information on critical chemicals.

3 Certified devices

 Note that the following list only contains standard products. Modifications to the "technical special products" programme (TSP) are usually not covered by either the EHEDG or 3-A certificates. These must be evaluated separately, if necessary.

Explanation of table headers:

- A: Product structure option
- B: Description of the option

3.1 Assemblies

3.1.1 Unifit CPA842

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order options in optional order option 590 "Additional approval":

- LB: "3-A" and/or
- LC: "EHEDG EL Class I"

3.1.2 Cleanfit CPA875

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order options in optional order option 590 "Additional approval":

- LB: "3-A" and/or
- LC: "EHEDG EL Class I"

In 3-A applications, modifications to the sensor required in accordance with the Operating Instructions.

3.2 Conductivity sensors

3.2.1 Smartec CLD134

Smartec CLD134, order code for 020 "Process connection"

A	B	EHEDG	3-A
AA5	Aseptic DIN11864-1 A DN50	-	✓
BC5	NEUMO BioControl D50, DN40, 2"	-	✓
CS1	Clamp ISO2852 2"	-	✓
MV5	Dairy fitting DIN11851 DN50	-	✓
SMS	SMS 2"	-	✓
VA4	Varivent N DN40-125	✓	✓

3.2.2 Smartec CLD18

Smartec CLD18, order code for 020 "Process connection"

A	B	EHEDG	3-A
MDK	Aseptic DIN11864-1 A DN50	✓	✓
MEK	Aseptic DIN11864-1 A DN40	-	✓

A	B	EHEDG	3-A
MOK	Dairy fitting DIN11851 DN50	✓ ¹⁾	✓
MQK	Dairy fitting DIN11851 DN40	-	✓
MYK	Dairy fitting DIN11853-2 DN50	✓	✓
TDK	Tri-Clamp ISO2852 2"	✓ ¹⁾	✓
TSK	Varivent N DN40-125	✓	✓

1) Only with suitable seal: see EHEDG position paper "Easy Cleanable Pipe Couplings and Process Connections"

3.2.3 Condumax CLS16B

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order options in optional order option 590 "Additional approval":

- LB: "3-A" and/or
- LC: "EHEDG EL Class I"

3.2.4 Memosens CLS16E

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order options in optional order option 590 "Additional approval":

- LB: "3-A" and/or
- LC: "EHEDG EL Class I"

3.2.5 Indumax CLS54

Indumax CLS54, order code for 020 "Process connection"

A	B	EHEDG	3-A
AA5	Aseptic DIN11864-1 A DN50	-	✓
BC5	NEUMO BioControl D50, DN40, 2"	-	✓
CS1	Clamp ISO2852 2"	-	✓
MV5	Dairy fitting DIN11851 DN50	-	✓
SMS	SMS 2"	-	✓
VA4	Varivent N DN40-125	✓	✓

3.2.6 Indumax CLS54D

Indumax CLS54D, order code for 020 "Process connection"

A	B	EHEDG	3-A
AA5	Aseptic DIN11864-1 A DN50	-	✓
BC5	NEUMO BioControl D50, DN40, 2"	-	✓
CS1	Clamp ISO2852 2"	-	✓
MV5	Dairy fitting DIN11851 DN50	-	✓
SMS	SMS 2"	-	✓
VA4	Varivent N DN40-125	✓	✓

3.2.7 Memosens CLS82E

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order options in optional order option 590 “Additional approval”:

- LB: "3-A" and/or
- LC: "EHEDG EL Class I"

3.3 pH sensors

3.3.1 Ceramax CPS341D

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order option in optional order option 590 “Additional approval”:

LC: "EHEDG EL Class I"

3.3.2 Memosens CPS47E

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order options in optional order option 590 “Additional approval”:

- LB: "3-A" and/or
- LC: "EHEDG EL Class I"

3.3.3 Memosens CPS61E

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order options in optional order option 590 “Additional approval”:

- LB: "3-A" and/or
- LC: "EHEDG EL Class I"

3.3.4 Memosens CPS77E

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order options in optional order option 590 “Additional approval”:

- LB: "3-A" and/or
- LC: "EHEDG EL Class I"

3.4 Oxygen sensors

3.4.1 Memosens COS22E

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order options in optional order option 590 “Additional approval”:

- LB: "3-A" and/or
- LC: "EHEDG EL Class I"

3.4.2 Memosens COS81E

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order options in optional order option 590 "Additional approval":

- LB: "3-A" and/or
- LC: "EHEDG EL Class I"

3.5 Photometers and turbidity devices

3.5.1 Absorption sensor OUSAF11

A 3-A-authorized version is available for the product depending on the selected configuration. For this version, select the following order option in optional order option 590 "Additional approval":

LB: "3-A"

3.5.2 CUD33 compact turbidity device

3-A-authorized and EHEDG-certified versions are available for this product, depending on the selected configuration. For these versions, select the following order options in optional order option 590 "Additional approval":

- LB: "3-A" and/or
- LC: "EHEDG EL Class I"



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