The XE-Line:
Hygienic design for food- and pharmaceutical industries

Customer desire EMFs which are cost effective and have a versatile design that can be used in many different applications. This demand formed the basis for the development of the XE-Line.

The design variations available provide you with the ability to select the ideal flowmeter for your application. And only to pay what you really require.

The concept

The basic flowmeter primary body can be adapted to the existing connection types using threaded adapters

Adapters are available for connection types:

- Weld stubs
- Pipe couplings per DIN 11851 or DIN 11864-1B
- Tri-Clamp per DIN 32676
- APV-flanges per DIN 11864-2B
- Female and male threaded
- PVC-solvent weld couplings, hose connectors
- SMS couplings

Also available in wafer and flanged designs per DIN, ANSI or JIS standards.

Your advantages:

Variable connection concept with a common basic flowmeter body
This simplifies inventory stock

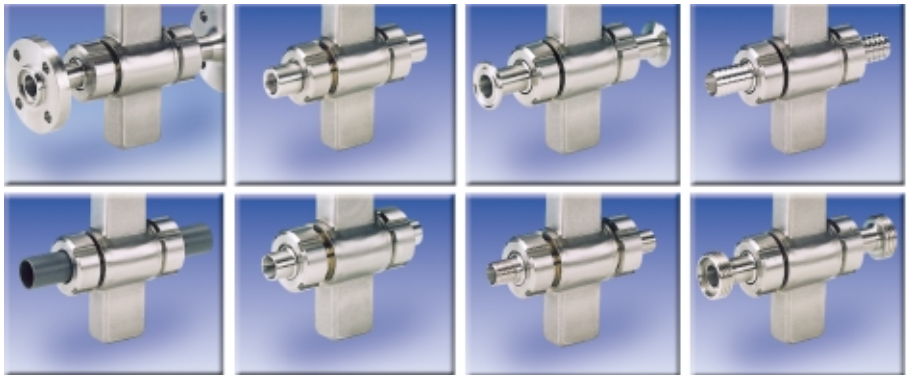
Vacuum resistant and form stable PFA-liner

Adapter with metallic stop
This assures precise seating of the adapter seal ring and provides a gap free transition from process connection to meter body.

Threaded adapters for flowmeter size range DN3 to DN100 [1/8“ to 4“]
Guarantees easy meter installation. The instrument can be quickly interchanged should service ever be required. This minimizes your system down time.

Meter suitable for in-line cleaning CIP/SIP capable to max. 150°C

Option: converter housing made of stainless steel

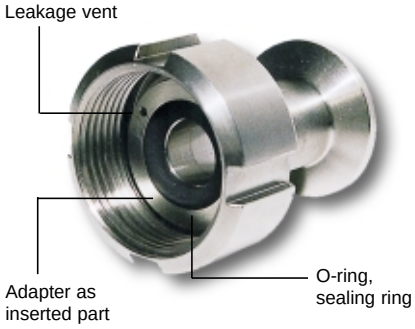


Approvals

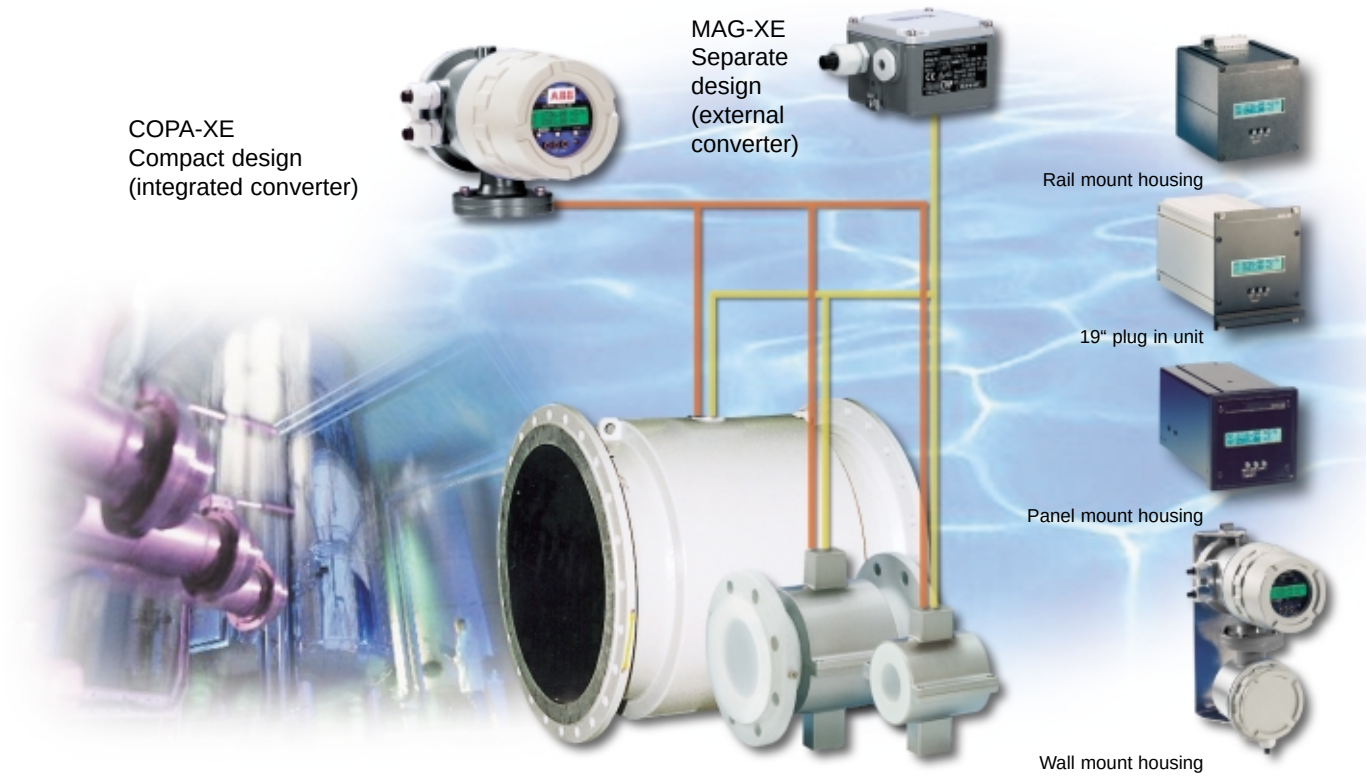
- 3A Certificate
- FDA approval
- EHEDG cleaning test
- Ex-Certificate

Process Assurance

The leakage vent in the adapter assures the integrity of the seal ring, otherwise the fluid will be visible exiting the vent.



The XE-Line: Cost-effective flowmeter system for water and waste water service



The concept

The modular design of the flowmeter provides you with an instrument for your applications. You only pay for what you actually require - a tailor made solution.

The available connections are:

- Flanges per DIN/ANSI for sizes DN3 - 1000 [1/8“-40“]
- Wafer Design for sizes DN3 - 100 [1/8“-4“]

And the advantages for you are:

Variable flowmeter primary concept with a single converter module

This reduces your spare part costs.

A variety of converter housings

You receive for each installation a suitable solution - the field mount housing for meter vault installation, the rail mount housing for control cabinet installation, the panel mount housing for mounting in the control room and a 19“ plug-in unit.

The compact design

The installation costs are minimized with this design. Converter and flowmeter primary constitute a single entity.

Safety in the process

Protection class IP68

In the event that your meter vault is not ground water tight or may flood, we offer a flowmeter primary in a submersible design per EN 60259.

The empty pipe detector eliminates erroneous measurements

The pipeline may drain if the pump or check valves do not shut tight. The Empty Pipe Detector monitors the system status and initiates a signal when required. This eliminates erroneous measurements.

Separate totalization

A separate flow totalizer is available for the forward and the reverse flow directions. It is possible in elevated water tanks which use a single line for in- and outflow to separately totalize each function.

Totalizer values are stored when a power outage occurs

This provides assurance that your totalizer values are correct.

Plug-in EEPROM

A converter can be quickly interchanged without the need for reconfiguration.

Approvals

- **Liner**
  We offer for potable water service a flowmeter with a liner which satisfies the KTW-Recommendations of the National Institute of Health.
- **DVGW test certificate**
  Our flowmeters have been tested by a nationally approved instrument test facility -WHG- for water. They comply with the requirements of the DVGW Working Paper W420.
- **Ex-design**
  For these applications the Compact Design flowmeter is available with a separate converter in an explosion proof design.
- **Certified design for cold- and waste water**
  This provides a flowmeter for flow measurements for billing purposes.
- **Flame proof**
- **FM approval**

The XE-Line:
Explosion proof design for the chemical industry

The concept

Three design variations are available to satisfy a wide spectrum of requirements:

- The compact design flowmeter (COPA-XE)
- The flowmeter with a separate converter, which is installed outside of the Ex-Zone (MAG-XE)
- The flowmeter with a separate converter, which can be installed in the Ex-Zone (COPA-XE remote)

The available connections are:

- Flanges per DIN/ANSI for sizes DN3 - 1000 [1/8"-40"]
- Wafer design for sizes DN3 - 100 [1/8"-4"]
- Stainless steel design with a variety of process connections

In the size range DN3 - 100 [1/8"-4"] it is possible to install the hygienic design flowmeter line in hazardous areas.

The advantages for you are:

Configuration with a closed housing
Using a „Magnetic Stick" it is possible to change the process parameters for process optimization in the hazardous area without opening the housing.

HART-protocol or profibus-communication
As an alternative to local configuration the converter can be configured from the control room using the SmartVision® software.

Recognition of a line break or short circuit
The pulse and contact outputs satisfy the NAMUR specifications. Therefore you can monitor the signal transmission.

Compact design flowmeter
There are no additional wiring costs for cabling between the flowmeter primary and the converter.

Safety in the process

Pressure tight housing
The converter module can be interchanged after the power is turned off – (no encapsulating potting).

Current output, pulse output and contact output in increased safety„e" or intrinsically safe „i"
The flowmeter line is suitable for the large variety of Ex-Requirements.

Approvals

- **Ex-Design according to ATEX**
  1. Compact design:
     II 2 G EEx emd [ib] IIC T3...T6
  2. Instrument with a separate converter which is mounted outside of the Ex-Zone
     Flowmeter primary:
     II 2 G EEx em [ib] IIC T3...T6
  3. Flowmeter with a separate converter which can be mounted in the Ex-Zone
     Flowmeter primary:
     II 2 G EEx em [ib] IIC T3...T6
     Converter:
     II 2 G EEx ed [ib] IIC T6
- **Certified approval for liquids other than water with a minimum conductivity of 5 µS/cm**

The XE-Line:
The converter – versatile and efficient

Your advantages

Comfortable and simple configuration with clear text displays
For fastest start-up minimizing your costs.

Quick converter exchange without reconfiguration
The data entered in the instrument are stored in a plug-in EEPROM. In the event of a failure a quick exchange can be made. This reduces your system downtime.

The illuminated 2-line display can do more!
You can view up to six different parameters in multiplex operation mode – almost simultaneously (e.g. the instantaneous flowrate in l/s, the totalizer value in m3, the tag number the pre-set flow direction, min./max. alarms and a bar graph display). Therefore you always have a handle on your system.

The suitable signal for your flow signal processing
Whether a mechanical counter or SPC - with the locally selectable pulse output (passive optocoupler or active 24 V dc pulses) you always have the appropriate signal for your flow signal processing.

HART-Protocol or Profibus DP
With these communication possibilities you can monitor the meter location with an automatic diagnosis in the event an error occurs.

Infinite rotation
The flowmeter can be mounted in a variety of orientations. The converter housing and the display can be rotated. This assures trouble free readability.

The XE-Line Overview

- **Flowmeter primary with the cast aluminum housing**
  Flanged design DN3 - 1000 [1/8“-40“]
  Wafer design DN3 - 100 [1/8“-4“]
- **Flowmeter primary in a stainless steel design**
  Wafer design DN3 - 100 [1/8“-4“]
  Variable process connection DN3 - 100 [1/8“-4“]
- **Protection class**
  COPA-XE IP67
  MAG-XE IP67 or IP68
- **Ex-design, FM approval**
- **Certified design f. custody transfer**
- **Various certificates** for the food and pharmaceutical industries
- **Max. measurement value deviations:** 0.5% of rate
- **Supply power**
  85 - 253 Vac 16,8 - 31,2 Vac/dc
- **Signal in-/outputs**
  Current output 0/4-20mA
  Pulse output, passive or active, switchable
  Configurable contact output
  Configurable contact input
- **Communication**
  HART-Protocol
  Profibus DP
  ASCII-Protocol (RS485)

XE-Line:

Flowmeter for all applications

- High accuracy
- Broad range of applications
- Proven technology
- Easy to operate
- Designed to match your application

instrumentation

understanding measurement analysis control integration **optimization**

ABB

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