



## Sample gas pumps P1.3

Even in explosive systems in the chemical industry, petrochemistry or biochemistry, gas analysis is key for safe operation. Many of the analysis processes used in these fields require extracting and special conditioning of the sample gas. The P1.3 sample gas pump is the right solution for Atex Zone 2 gases and ambient as well as Class I, Division 2.

Sample gas pumps convey the sample gas from the sampling point to the conditioning system. The main item in these pumps designed specifically for the application is the PTFE single-piece bellows. Combined with the pump head, also single-piece, this solution provides high resistance against particularly aggressive sample gas. Turning the pump head allows gas with condensate to be conveyed without a problem.

Atex and IECEx Zone 2 Approval

FM C-US Approval for Class I, Division 2

Easy to replace valves

Single-piece bellows

Conveys sample gas with condensate

Proven pump technology

Attractive price

Requires little space

Mounting accessories and screw connections sold separately

IP20 housing version

Optionally with built-in bypass valve

12 V/24 V version available



### The following applies for all pump types with FM US/CANADA approval:

The apparatus is to be installed in a tool-secured enclosure in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.

### The following applies for all pump types with IECEx/ATEX approval:

The pump shall be mounted in an enclosure providing a minimum degree of protection of IP54 in accordance with IEC/EN 60079-15, and shall be installed within a tool-secured enclosure which meets the requirements of IEC/EN 60079-0 and IEC/EN 60079-15.

## Technical data

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|  |   |
|--|---|
| Nominal voltage/current consumption:                   | 230 V 50 Hz, 0,48 A<br>115 V 60 Hz, 0,84 A<br>12 V DC, 1,55 A<br>24 V DC, 0,8 A |
| Protection class OEM/housing & 12 V/24 V:              | IP 00/IP 20   |
| Weight (without accessories):                          | approx. 1,3 kg (12 V/24 V approx. 0,8 kg)                                       |
| Medium temperature:                                    | see "Temperature classes"   |
| Surrounding temperature:                               | 0 °C to 50 °C   |
| Nominal output:  | 280 l/h   |
| Materials in contact with media vary by configuration: | PTFE, PVDF, 1.4571, 1.4401, Viton   |

The gas lines are connected via screw-in connections (G1/4 thread). The respective screw-in connections as well as mounting bracket and vibration absorber are sold separately.

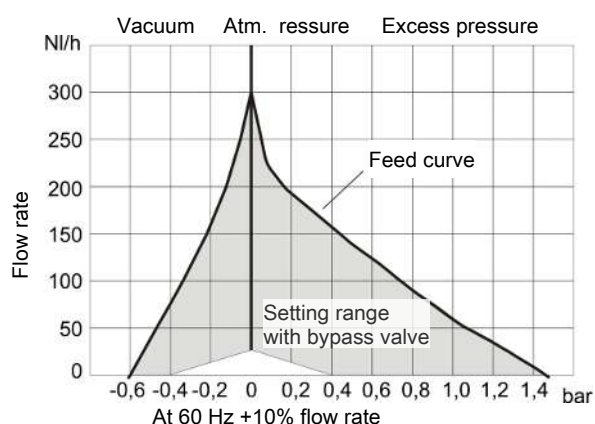
## Temperature classes

| Type of gas   | Maximum medium temperature | Temperature class    |             |
|---------------|----------------------------|----------------------|-------------|
|               |                            | at installation site | in gas path |
| non-flammable | 50 °C                      | T4                   | ---         |
|               | 70 °C                      | T3                   | ---         |
| flammable     | 50 °C                      | T4                   | T3          |

## Protection marking

|                       |   |  |
|-----------------------|---|--|
| <b>P1.3 Atex</b>      | FM16ATEX0018X                           | II 3G Ex nA nC IIC T4...T3 Gc                                |
|                       | ---                                     | II 3/3G c IIC T3/T4 X (Examined by Bühler Technologies GmbH) |
| <b>P1.3 IECEx</b>     | IECEx FMG 16.0012X                      | Ex nA nC IIC T4...T3 Gc                                      |
| <b>P1.3 US/Canada</b> | Cl. I, Div. 2, Gps. A, B, C, D, T4...T3 |  |

## Feed curve

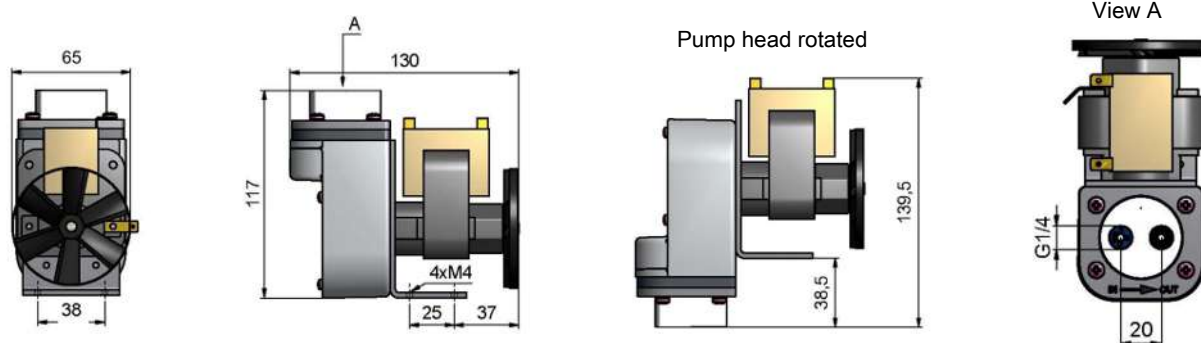


**Note:** The notices regarding the pressure and flow rates in chapter 5 of the operating instructions (no. 420023) must be observed!

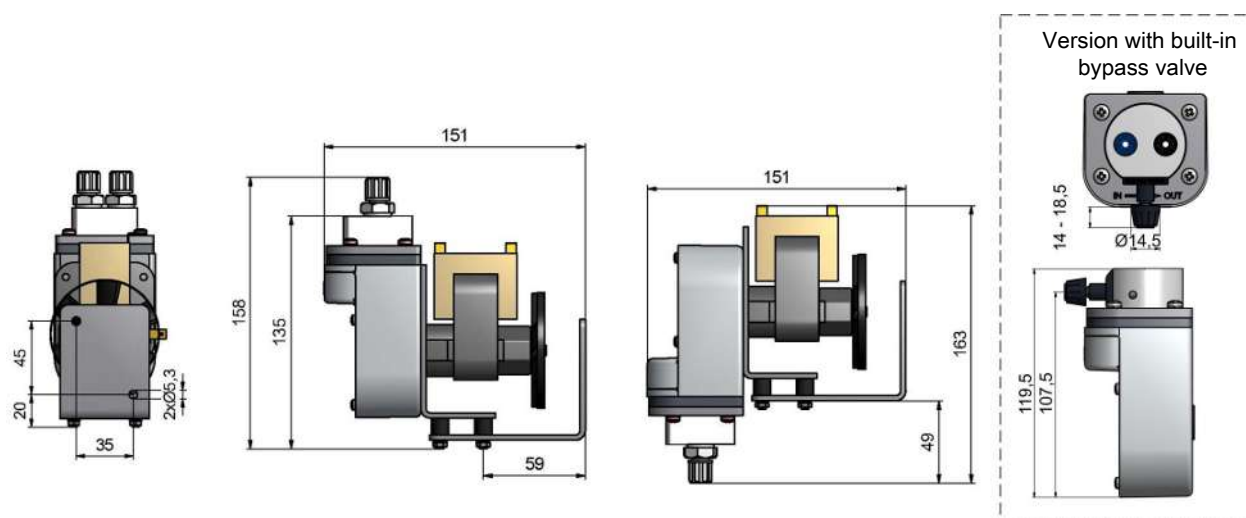
## Dimensions P1.3 (115 V / 230 V)

The P1.3 sample gas pump is connected to electricity via blade receptacles..

without accessories:

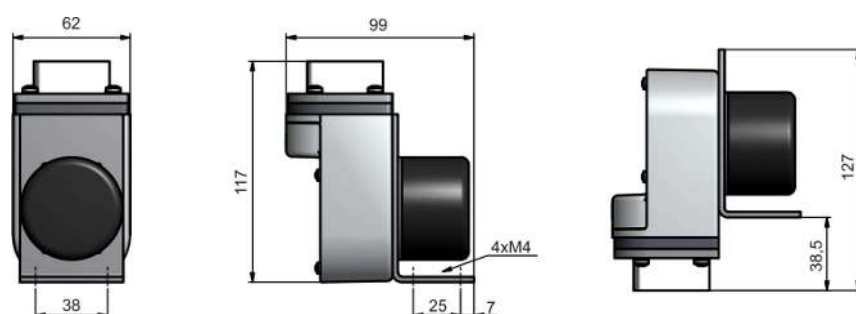


with accessories:



## Dimensions P1.3 (24 V DC / 12 V DC)

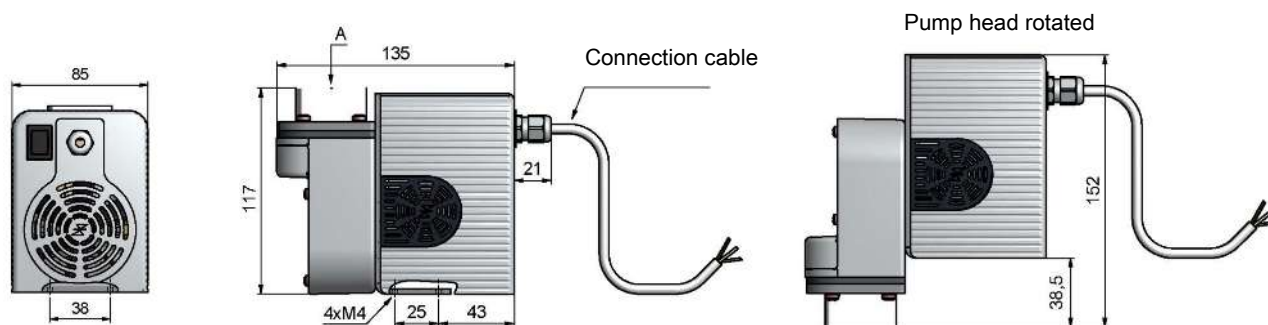
The P1.3 (24 V DC / 12 V DC) sample gas pump may be connected by standard 3 m connecting cable.



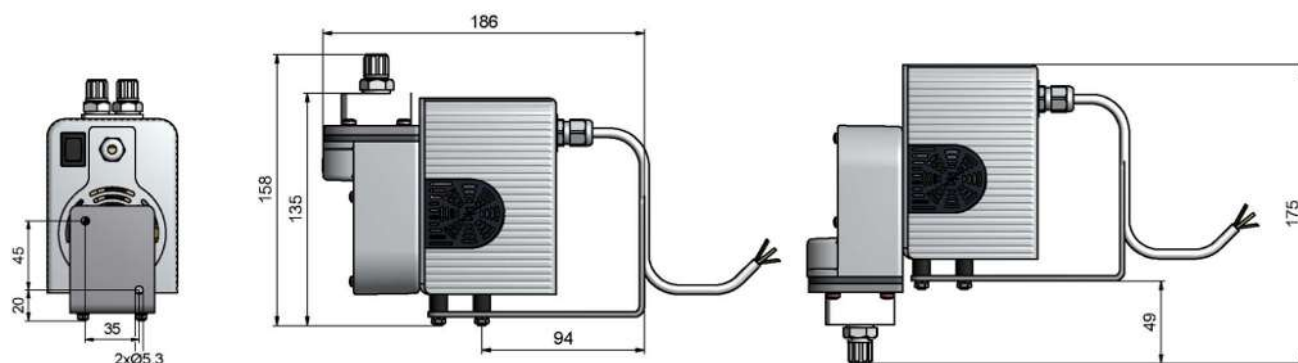
## Dimensions P1.3E (all voltages)

The P1.3E sample gas pump may be connected by standard 3 m connecting cable.

### without accessories:



### with accessories:



## Ordering instructions

|    |    |   |   |   |   |   |   |   |    |  |
|----|----|---|---|---|---|---|---|---|----|--|
| 42 | xx | x | x | x | 1 | x | x | x | 00 | Product feature                                      |
|    | 30 |   |   |   |   |   |   |   |    | <b>Basic model</b>                                   |
|    |    |   |   |   |   |   |   |   |    | P1.3 ATEX, IECEx, US/Canada                          |
|    |    |   |   |   |   |   |   |   |    | <b>Motor voltage</b>                                 |
|    |    | 1 |   |   |   |   |   |   |    | 230 V 50 Hz 0,48 A                                   |
|    |    | 2 |   |   |   |   |   |   |    | 115 V 60 Hz 0,84 A                                   |
|    |    | 3 |   |   |   |   |   |   |    | 12 V DC 1,55 A (on request)                          |
|    |    | 4 |   |   |   |   |   |   |    | 24 V DC 0,8 A  |
|    |    |   |   |   |   |   |   |   |    | <b>Pump head position</b>                            |
|    |    | 1 |   |   |   |   |   |   |    | Normal position vertical                             |
|    |    | 2 |   |   |   |   |   |   |    | Turned by 180°                                       |
|    |    |   |   |   |   |   |   |   |    | <b>Pump head material</b>                            |
|    |    | 1 |   |   |   |   |   |   |    | PTFE   |
|    |    | 2 |   |   |   |   |   |   |    | VA (1.4571)  |
|    |    | 3 |   |   |   |   |   |   |    | PVDF with bypass valve                               |
|    |    | 4 |   |   |   |   |   |   |    | PVDF   |
|    |    |   |   |   |   |   |   |   |    | <b>Valve material</b>                                |
|    |    | 1 |   |   |   |   |   |   |    | Up to 70 °C; PTFE/PVDF                               |
|    |    |   |   |   |   |   |   |   |    | <b>Screw in connections (depending on pump head)</b> |
|    |    | 0 |   |   |   |   |   |   |    | without  |
|    |    | 1 |   |   |   |   |   |   |    | PVDF DN 4/6 *  |
|    |    | 2 |   |   |   |   |   |   |    | PVDF 1/4"-1/6" *                                     |
|    |    | 3 |   |   |   |   |   |   |    | PVDF 1/4"-1/8" 4" *                                  |
|    |    | 5 |   |   |   |   |   |   |    | VA (1.4401) 6 mm **                                  |
|    |    | 6 |   |   |   |   |   |   |    | VA (1.4401) 1/4" **                                  |
|    |    |   |   |   |   |   |   |   |    | <b>Mounting accessories</b>                          |
|    |    | 0 |   |   |   |   |   |   |    | without  |
|    |    | 1 |   |   |   |   |   |   |    | Mounting bracket and set of vibration dampers        |
|    |    | 2 |   |   |   |   |   |   |    | Set of vibration dampers only                        |
|    |    |   |   |   |   |   |   |   |    | <b>Housing</b>                                       |
|    |    | 0 |   |   |   |   |   |   |    | without  |
|    |    | 1 |   |   |   |   |   |   |    | Housing incl. 3 m connection cable                   |

\* PTFE or PVDF pump body only.

\*\* VA pump body only.