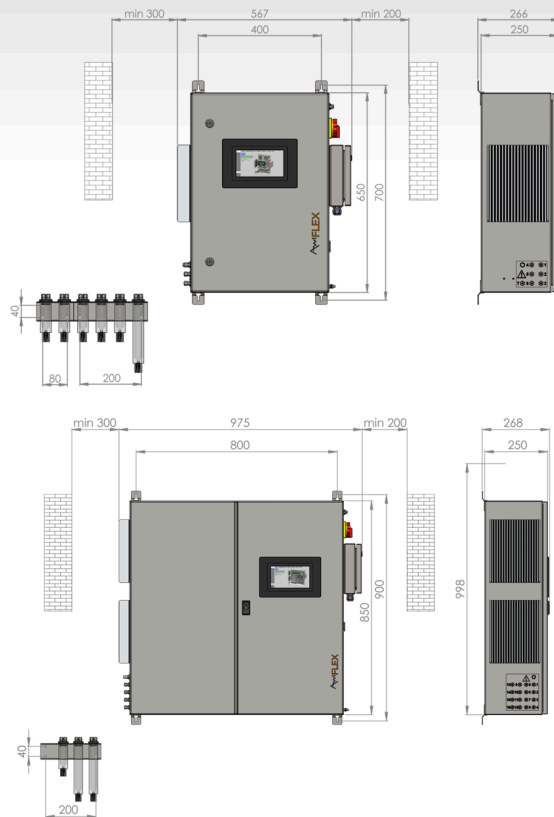




# TECHNICAL DATA AWIFLEX COOL / AWIFLEX COOL XL



Subject to technical changes (16.0)

AWITE BIOENERGIE GMBH | GRÜNSEIBOLDSDORFER WEG 5 | D - 85416 LANGENBACH  
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# AWITE GAS ANALYSIS SYSTEMS

| GENERAL INFORMATION                   | AWIFLEX         | AWIFLEX XL      |
|---------------------------------------|-----------------|-----------------|
| Installation dimensions (WxHxD in mm) | 567 x 700 x 266 | 975 x 900 x 268 |
| Weight                                | ≤ 34 kg         | ≤ 72 kg         |

| OPERATING CONDITIONS    |                                                    |  |
|-------------------------|----------------------------------------------------|--|
| Ambient conditions      | 5 - 35 °C / 0 - 80 % relative humidity             |  |
| Installation height     | ≤ 2000 m above standard elevation zero (sea level) |  |
| Protection type         | IP 54                                              |  |
| Length suction line     | ≤ 100 m                                            |  |
| Max. gas inlet pressure | 20 mbar rel. (optional 400 mbar or up to 50 bar)   |  |
| Min. gas inlet pressure | -20 mbar rel. (optional -350 mbar)                 |  |
| Relative gas humidity   | ≤ 100%                                             |  |

| POWER SUPPLY                   |                                                           |               |
|--------------------------------|-----------------------------------------------------------|---------------|
| Rated input voltage            | 100 - 240 VAC                                             |               |
| Input voltage range            | 85 - 265 VAC (Derating < 90 VAC: 2.5 % / Kelvin)          |               |
| Frequency range                | 50 - 60 Hz                                                |               |
| Power consumption <sup>1</sup> | ≤ 80 W                                                    | ≤ 160 W       |
| Power supply unit              | 24 VDC / 5 A                                              | 24 VDC / 10 A |
| AwiProtect                     | Over- and undervoltage protection, overcurrent protection |               |

## SENSOR SYSTEM

| SENSOR <sup>2</sup> | MEASURING PRINCIPLE  | MEASURING RANGE                                                                  | REPEATABILITY <sup>3</sup> |
|---------------------|----------------------|----------------------------------------------------------------------------------|----------------------------|
| Methane             | Infrared sensor      | 0 - 10,000 ppm                                                                   | ± 1.0 %                    |
|                     | Infrared sensor      | 0 - 100 Vol.-%                                                                   | ± 0.1 %                    |
| Carbon dioxide      | Infrared sensor      | 0 - 100 ppm / 0 - 500 ppm / 0 - 5,000 ppm                                        | ± 1.0 %                    |
|                     | Infrared sensor      | 0 - 100 Vol.-%                                                                   | ± 0.1 %                    |
| Carbon monoxide     | electrochemical      | 0 - 2,000 ppm                                                                    | ± 1.0 %                    |
|                     | Infrared sensor      | 0 - 100 Vol.-%                                                                   | ± 0.8 %                    |
| Oxygen              | electrochemical      | 0 - 25 Vol.-%                                                                    | ± 0.25 %                   |
| Hydrogen sulphide   | electrochemical      | 0 - 20 ppm                                                                       | ± 2.5 %                    |
|                     | electrochemical      | 0 - 200 ppm / 0 - 500 ppm                                                        | ± 1.3 %                    |
|                     | electrochemical      | 0 - 1,500 ppm / 0 - 3,000 ppm / 0 - 5,000 ppm / 0 - 10,000 ppm                   | ± 1.0 %                    |
|                     | electrochemical      | 0 - 20,000 ppm <sup>4</sup> / 0 - 50,000 ppm <sup>4</sup>                        | ± 1.0 %                    |
| Hydrogen            | electrochemical      | 0 - 2,000 ppm / 0 - 5,000 ppm / 0 - 10,000 ppm / 0 - 20,000 ppm / 0 - 50,000 ppm | ± 1.0 %                    |
|                     | Thermal conductivity | 0 - 100 Vol.-%                                                                   | ± 0.8 %                    |

1 values might differ, see type plate of analysis system  
2 configurable and extendable as required  
3 determined at the calibration point, given in % from upper measuring range value  
4 with dilution and only in conjunction with auto-calibration

| PROCESS CONNECTION                                                                                                                   |                                | SOFTWARE FEATURES                                                                                                             |                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Threaded hose screw connection made of stainless steel 4/6 mm                                                                        | standard                       | Display of the measured value progressions                                                                                    | graphical / tabular                                    |
| Threaded stainless steel pipe screw connection 6 mm VA pipe                                                                          | optional                       | Endless data storage                                                                                                          | 4GB microSD card                                       |
| NUMBER OF MEASURING POINTS                                                                                                           |                                | DATA INTERFACES                                                                                                               |                                                        |
| <b>AwifLEX</b>                                                                                                                       | 1-4                            | Group error                                                                                                                   | potential-free                                         |
| <b>AwifLEX XL</b>                                                                                                                    | 1-9                            | Alarm outputs (optional)                                                                                                      | potential-free                                         |
| External measuring point switch-over <b>Awisamplex</b> for further measuring points                                                  |                                | Analogue outputs (optional)                                                                                                   | Analogue output<br>4 x 4 – 20 mA                       |
| Connection for discharge of exhaust air into the open or re-feeding of measuring gas into process pipe (relative pressure < 20 mbar) |                                | Awiremote (optional)                                                                                                          | VNC<br>ProcessView                                     |
| Connection for removal of condensate in provided condensate container                                                                |                                | Ethernet (optional)                                                                                                           | Modbus TCP Slave<br>TCP Socket<br>Awiview<br>Awiremote |
| MAXIMUM NUMBER OF DAILY MEASUREMENTS                                                                                                 |                                | Ethernet/IP (optional)                                                                                                        | Ethernet/IP – I/O adapter (slave)                      |
| <b>AwifLEX</b>                                                                                                                       | 50, continuous                 | ProfiNet (optional)                                                                                                           | ProfiNet RT – I/O device (slave)                       |
| <b>AwifLEX XL</b>                                                                                                                    | 50, continuous                 | Profibus (optional)                                                                                                           | Profibus DP slave                                      |
| SAFETY DEVICES                                                                                                                       |                                | RS232 / RS485 (optional)                                                                                                      | Modbus RTU Slave                                       |
| Water sensor                                                                                                                         |                                | USB (optional)                                                                                                                | Awiview                                                |
| Pressure sensor                                                                                                                      |                                | Additional interfaces and transmission protocols on request                                                                   |                                                        |
| Internal monitoring of leakages (CH <sub>4</sub> ) by concentration measurement (interior) <sup>5</sup>                              |                                | CERTIFICATION                                                                                                                 |                                                        |
| Automatic overload detection and temporary shutdown of measuring channels for protecting the sensors                                 |                                | NRTL TÜV SÜD Mark (UL / CSA 61010-1)<br>Certificate No. U8 17 12 83160 002                                                    |                                                        |
| Temperature monitoring in the interior                                                                                               |                                | SIL 1 for O <sub>2</sub> measurement according IEC 61508-2 (optional)                                                         |                                                        |
| Gas warning sensor <b>AwiiWarn</b> for interior of the device                                                                        | optional                       | OPTIONS                                                                                                                       |                                                        |
| <b>AwifLEX XL</b>                                                                                                                    | optional                       | <b>Awidesulf</b> Combi package for microbiological desulphurisation incl. compressor, control valves and controller output    |                                                        |
| GAS PROCESSING                                                                                                                       |                                | Fuzzy controller for controlling valves, blowers among others                                                                 |                                                        |
| Gas filter                                                                                                                           |                                | Integration of external sensors (analogue and digital), e.g. temperature, pressure, gas amount measurement, relative humidity |                                                        |
| Gas precision pressure regulator                                                                                                     | optional                       | Calculation of calorific value, energy flow, CH <sub>4</sub> - and humidity compensation etc.                                 |                                                        |
| Condensate traps                                                                                                                     |                                | Automatic calibration function                                                                                                |                                                        |
| Awicool gas cooler                                                                                                                   |                                | Measuring gas pump monitoring with switchover to redundant pump                                                               |                                                        |
| Additional pressure control systems                                                                                                  | optional                       | Automatic measuring range detection to increase the measurement accuracy                                                      |                                                        |
| SPS                                                                                                                                  |                                | Control of the gas analysis by higher-level controllers                                                                       |                                                        |
| Awicore electronic module                                                                                                            | expandable                     |                                                                                                                               |                                                        |
| GAS TRANSMISSION                                                                                                                     |                                |                                                                                                                               |                                                        |
| Encapsulated analysis valves                                                                                                         |                                |                                                                                                                               |                                                        |
| Durable diaphragm pump                                                                                                               |                                |                                                                                                                               |                                                        |
| DISPLAY AND OPERATION                                                                                                                |                                |                                                                                                                               |                                                        |
| Panel PC                                                                                                                             | 7" TFT touch panel<br>1024x600 |                                                                                                                               |                                                        |



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