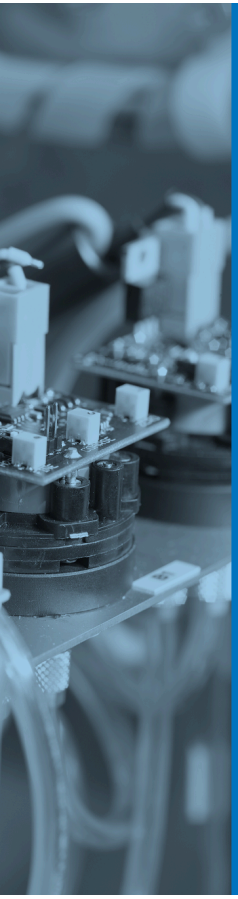
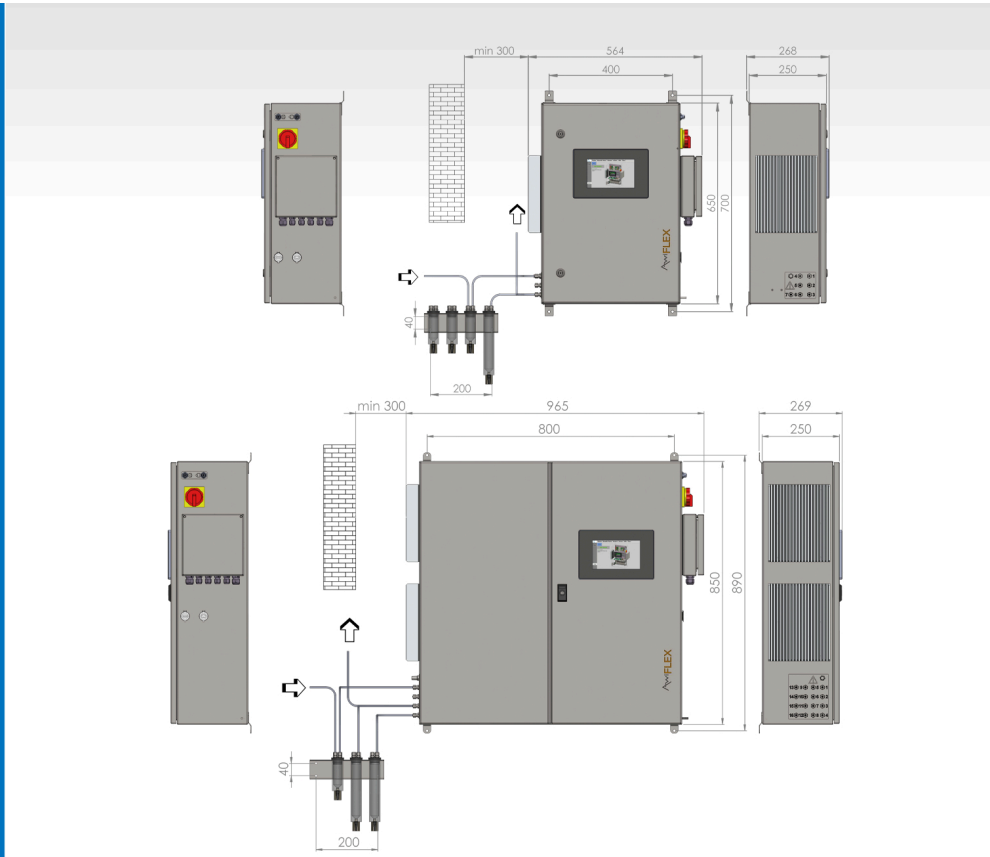


TECHNICAL DATA
AWIFLEX COOL / AWIFLEX COOL XL



Subject to technical changes (14.1)

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

GENERAL DATA	AWIFLEX	AWIFLEX XL
Installation dimensions (WxHxD in mm)	564x700x268	965x890x269
Weight	≤ 34 kg	≤ 72 kg

OPERATION CONDITIONS		
Ambient Conditions	5 – 35 °C / 0 – 80 % relative humidity	
Installation height	≤ 2000 m above NHN	
Protection type	IP 54	
Lengths of suction pipe	≤ 100 m	
Max. gas inlet pressure **Min. gas inlet pressure**	20 mbar rel. (optional 400 mbar or up to 16 bar) -20 mbar rel. (optional -350 mbar)	
Rel. 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[1]	≤ 80 W	≤ 160 W
Power supply unit	24 VDC / 5 A	24 VDC / 10 A
AwiProtect	Over and low voltage protection, overcurrent protection	

SENSOR SYSTEM

SENSOR[2]	MEASURING PRINCIPLE		MEASURING RANGE	REPEATABILITY[3]
Methane	infrared 2-beam sensor	thermostated, pressure compensation	0 – 100 Vol.-%	± 0,1 %
Carbon dioxide	infrared 2-beam sensor	thermostated, pressure compensation	0 – 100 Vol.-%	± 0,1 %
Carbon monoxide	infrared 2-beam sensor	thermostated, pressure compensation	0 – 100 Vol.-%	± 0,8 %
Carbon monoxide	electrochemical	pressure compensation	0 – 2000 ppm	± 1,0 %
Oxygen	electrochemical	pressure compensation	0 – 25 Vol.-%	± 0,25 %
Hydrogen sulfide	electrochemical	pressure compensation	0 – 20 ppm	± 2,5 %
			0 – 200 ppm / 0 – 500 ppm	± 1,3 %
			0 – 1.500 ppm / 0 – 3.000 ppm / 0 – 5.000 ppm / 0 – 10.000 ppm	± 1,0 %
			0 – 20.000 ppm[4] / 0 – 50.000 ppm[4]	± 1,0 %
Hydrogen	electrochemical	pressure compensation	0 – 2.000 ppm / 0 – 5.000 ppm / 0 – 10.000 ppm / 0 – 20.000 ppm / 0 – 50.000 ppm	± 1,0 %
Hydrogen	thermal conductivity	temp.- and pressure compensation	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	
Hose screw connection, stainl. steel 4/6 mm	standard
Pipe screw connection, stainl. steel 6 mm VA-pipe	optional
Hose screw connection, stainl. steel 1/8"/ 1/4"	optional
Pipe screw connection, stainl. steel 1/4" VA-pipe	optional
NUMBER OF MEASURING POINTS	
AwiFLEX	1-4
AwiFLEX XL	1-9
External measuring point switch-over **AwiSamplex** for additional measuring points	
Connection for discharge of exhaust air into the open or re-feeding of measuring gas into process pipe (relative pressure < 20 mbar)	
Connection for removal of condensate in provided condensate container	
MAXIMUM NUMBER OF DAILY MEASUREMENTS	
AwiFLEX	50, continuous
AwiFLEX XL	50, continuous
SAFETY MECHANISM	
Water sensor	
Pressure sensor	
Internal monitoring of leakages (CH_4) by concentration measurement (interior)[5]	
Automatic detection of overloads and temporary switch-off of involved measuring channels to preserve the sensors	
Temperature monitoring (interior)	
Gas warning sensor **AwiWarn** for interior of the device	optional
AwiFLEX XL	optional
GAS PROCESSING	
Gas filter	
Gas precision pressure regulator	optional
Condensate trap	
Gas cooler AwiCool	
Other pressure control systems	optional
PLC	
AwiCore elektronic module	extendable
GAS TRANSMISSION	
Encapsulated analytic valves	
Durable membrane pump	
DISPLAY AND OPERATION	
Panel-PC	7" TFT touch panel 1024x600

SOFTWARE FEATURES		
Display of measurement history	graphic / tabular	
Extensive data storage	4GB microSD card	
DATA INTERFACES		
Group fault	potential-free	1 x relay (Uout: max. 250V AC/DC @ 6A)
Alarm outputs (optional)	potential-free	n x relay (Uout: max. 250V AC/DC @ 6A)
Analogue outputs 4 – 20 mA (optional)	analog output	feed-through terminal
Ethernet (optional)	Ethernet/IP – I/O Adapter (slave) PROFINET – I/O Device (slave) Modbus TCP Slave ProcessView AwiView TCP Socket VNC	1 x RJ45 connector
RS232 / RS485 (optional)	Modbus RTU slave	1 x M12 connector
Profibus DP slave (optional)		2 x M12 connector
USB (optional)		1 x type A
More interfaces and transfer protocols on request		
CERTIFICATION		
NRTL TÜV SÜD Mark (UL / CSA 61010-1) Certificate No. U8 17 12 83160 002		
SIL 1 for O_2 measurement according IEC 61508-2 (optional)		
OPTIONS		
Combi package **AwiDESULF** for microbiological desulfurization incl. compressor, control valves and controller output		
FuzzyLogic control for controlling valves, fans etc.		
Integration of external sensors (analogue and digital), e.g. temperature, pressure, gas amount measurement, relative humidity		
Calculation of calorific value, energy flow, CH_4- and humidity compensation etc		
Automatic calibration feature		
Remote access to gas analysis		
Monitoring of measuring gas pump with switch mechanism to redundant pump		
Automatically known values for measuring ranges to increase accuracy		
Control of gas analysis from high-level controls		

5 range and kind of monitoring variable according to risk evaluation of the devices

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