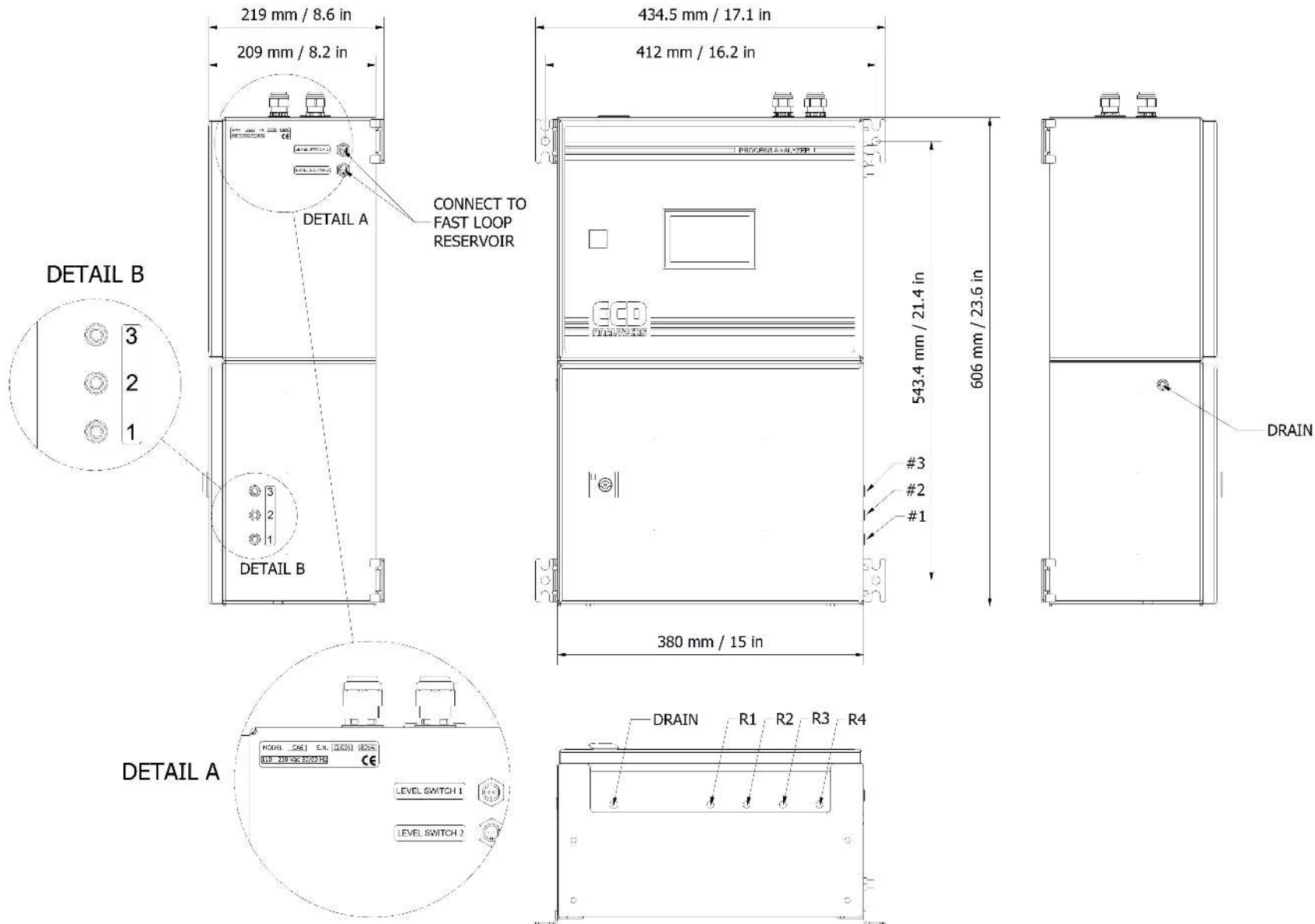


CA6 – INSTALLATION

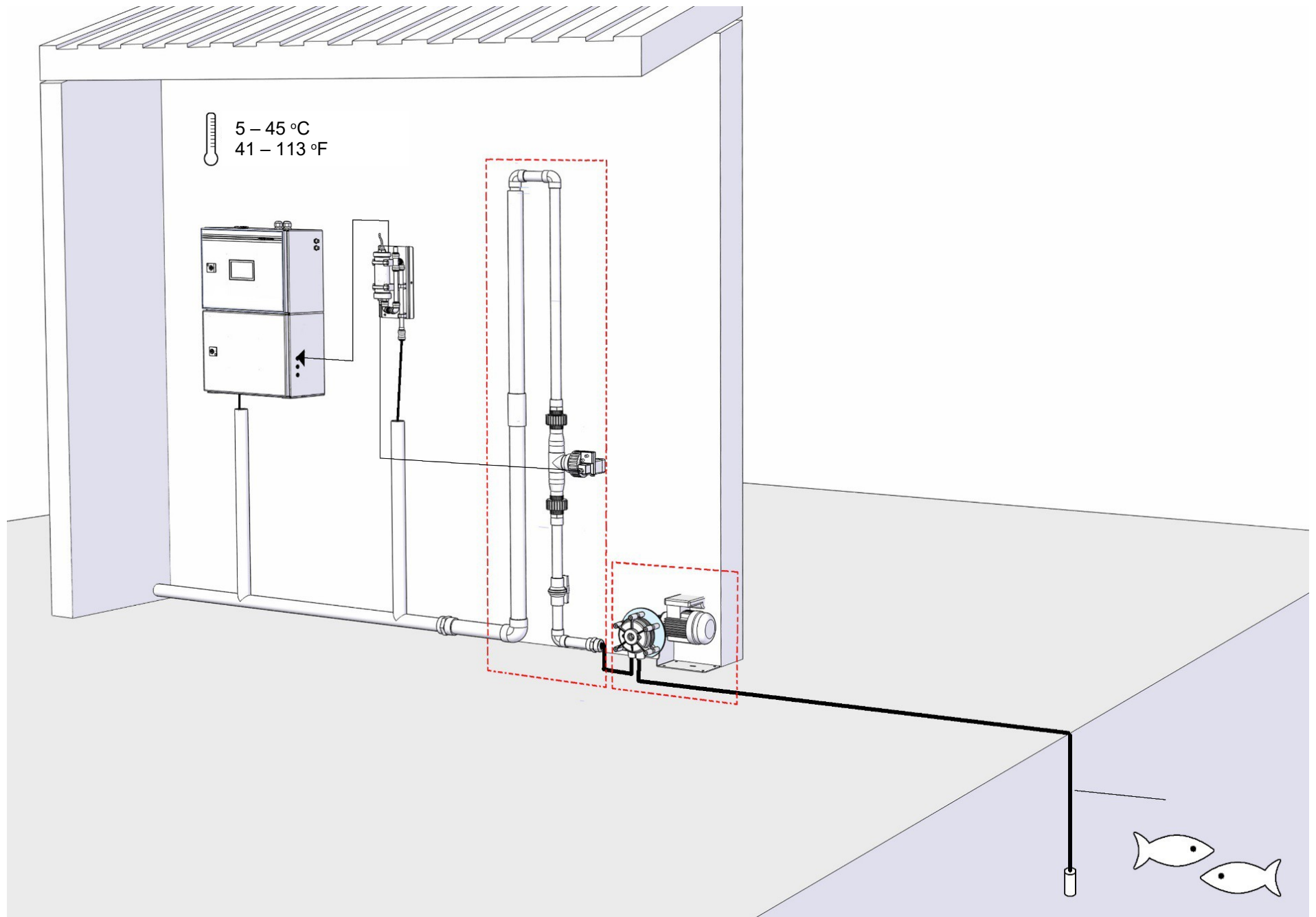


Installation

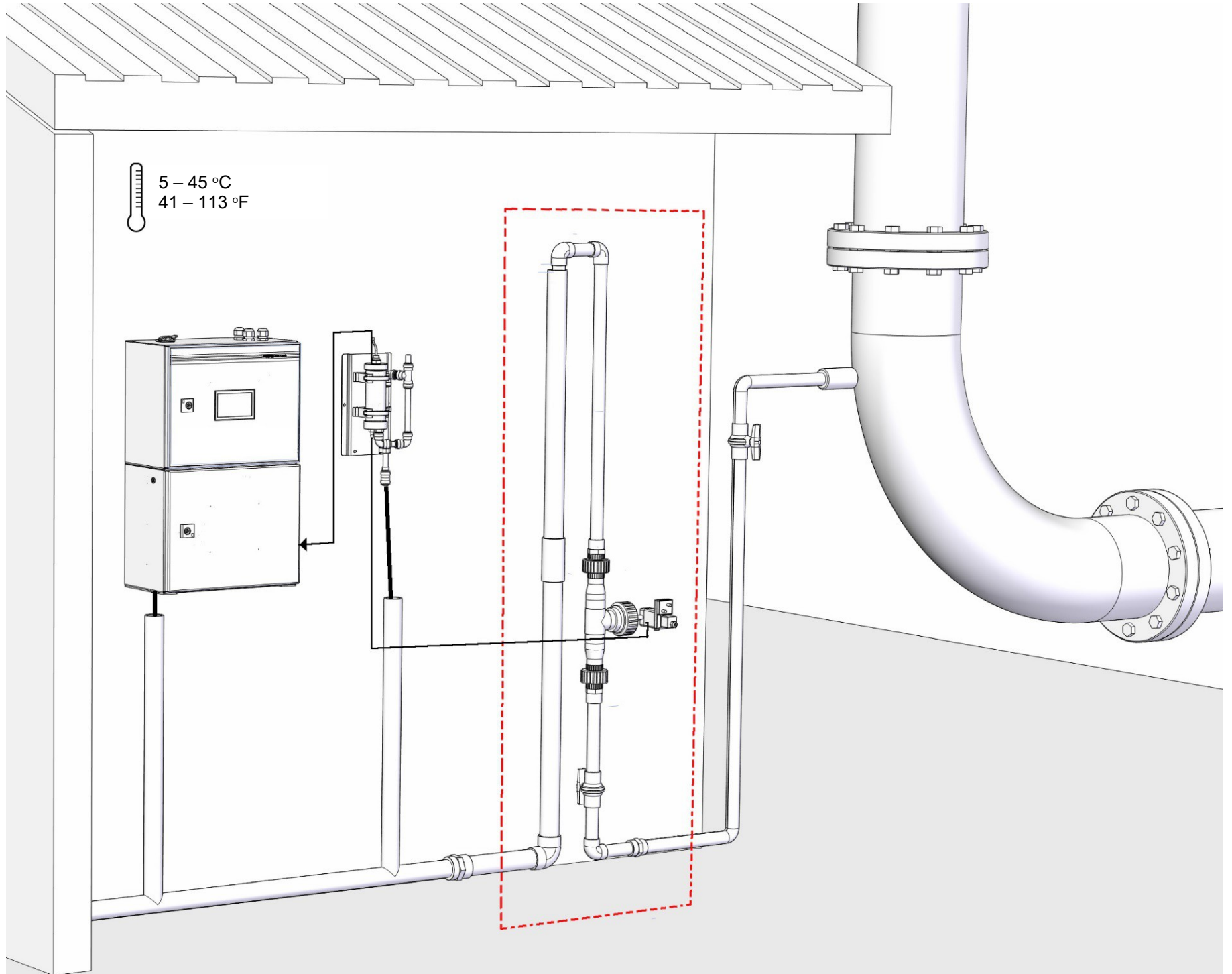
CA6 analyzer is supplied with four mounting brackets for wall or stainless steel support rack installation. Use (4) M6 or M8 screws or (4) 1/4-20 bolts to affix the analyzer. The analyzer should be mounted with the display at eye level for easier operation and access.



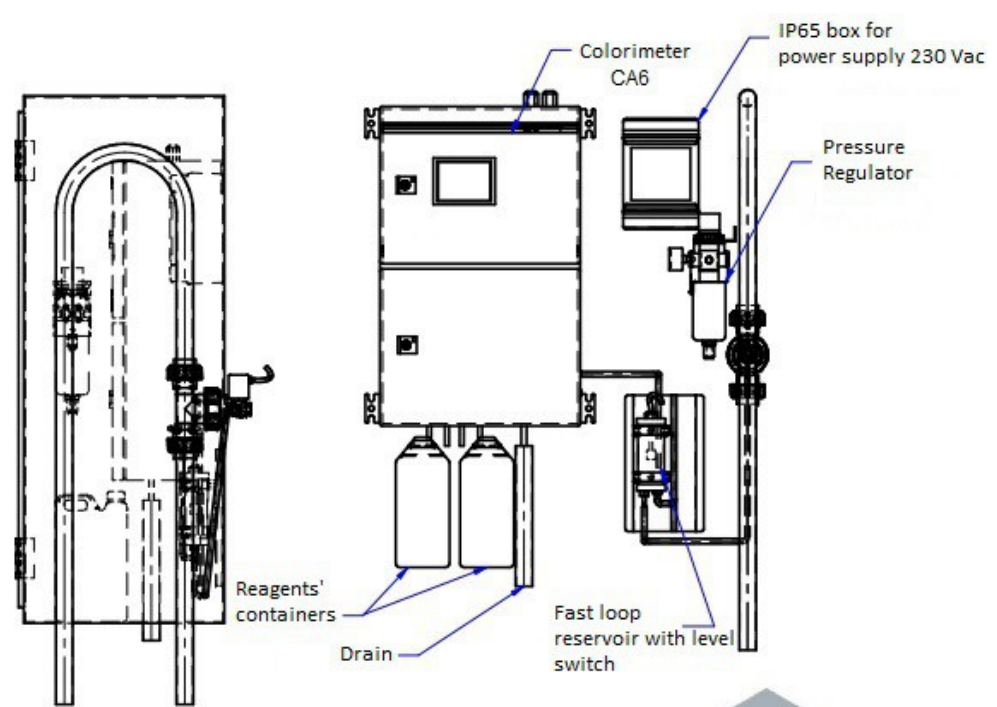
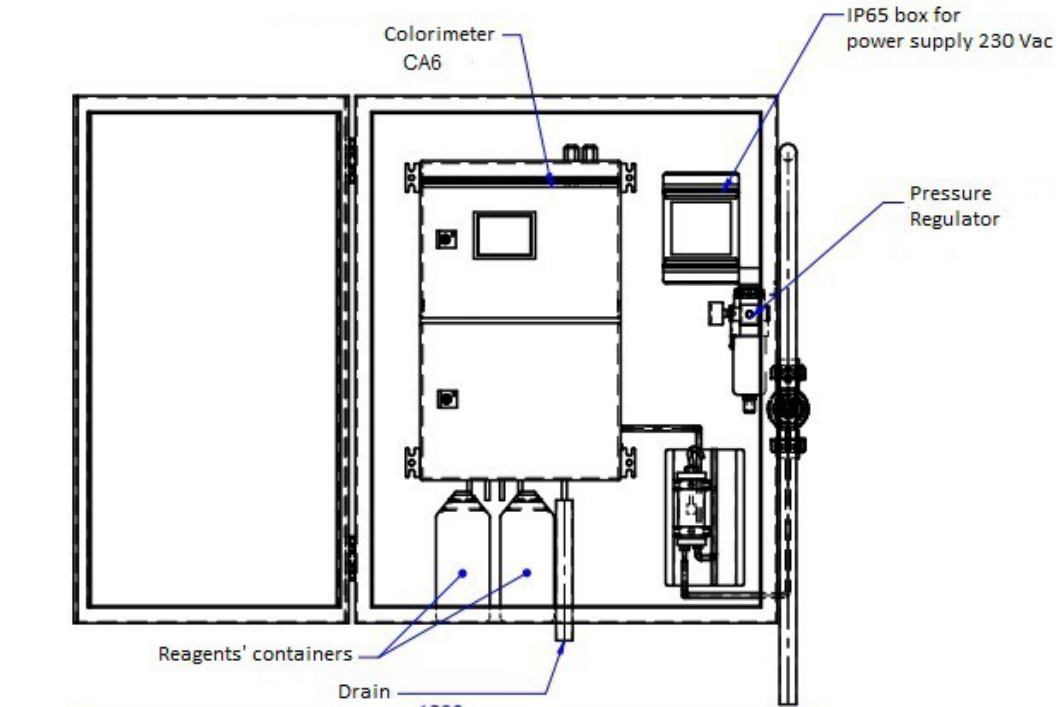
Installation



Installation



Installation



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Quote senza indicazione di tolleranza/Dimensions without tolerance indication: UNI EN 22768/1m; UNI EN 22768/2K;

Lunghezze/Lengths	0÷6	6÷30	30÷120	120÷400	400÷1000	>1000	Maschio/Male 6g	Femmina/Female 7H	Angoli/Angle	± 1°
	±0,1	±0,2	±0,3	±0,5	±0,8	±1,0	Filettature Metriche/ Metric Threads ISO		Fori/Holes	± 0,1

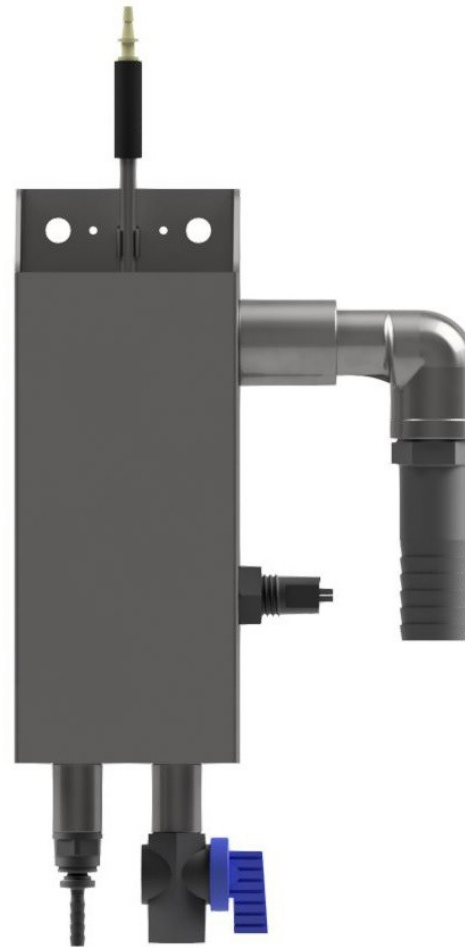
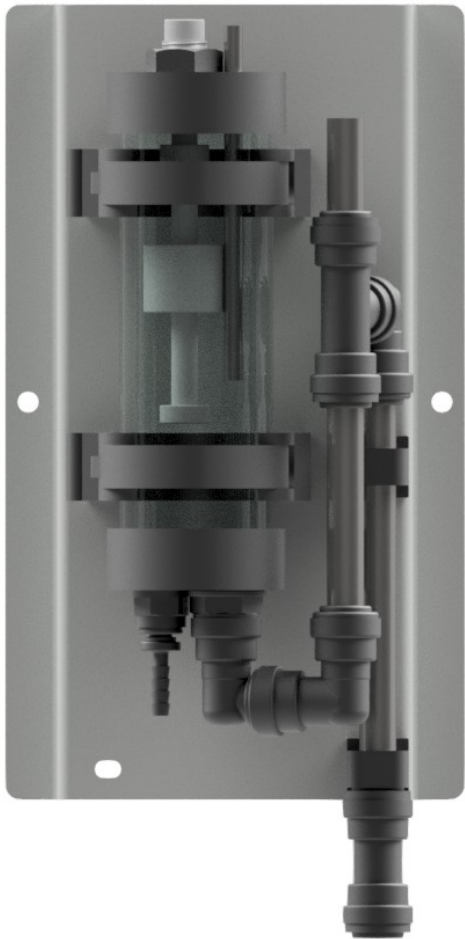
Ref. 0	Quantity --	Material / Description -- --	Weight 0,000 kg
DRAWER EDP		CHECKED by	APPROVED by DATE 13/02/2017
PROJECT 2017-1015		TITLE CA6 CABINET	
DRAWING No. A17-1015-00		REV 0	SCALE 1:10
		A3	

Installation of optional equipments – Sample Reservoirs

Fast loop reservoirs:

- Polycarbonate
- SS

Right side of the analyzer



Installation of optional equipments – Dilution Water Reservoirs

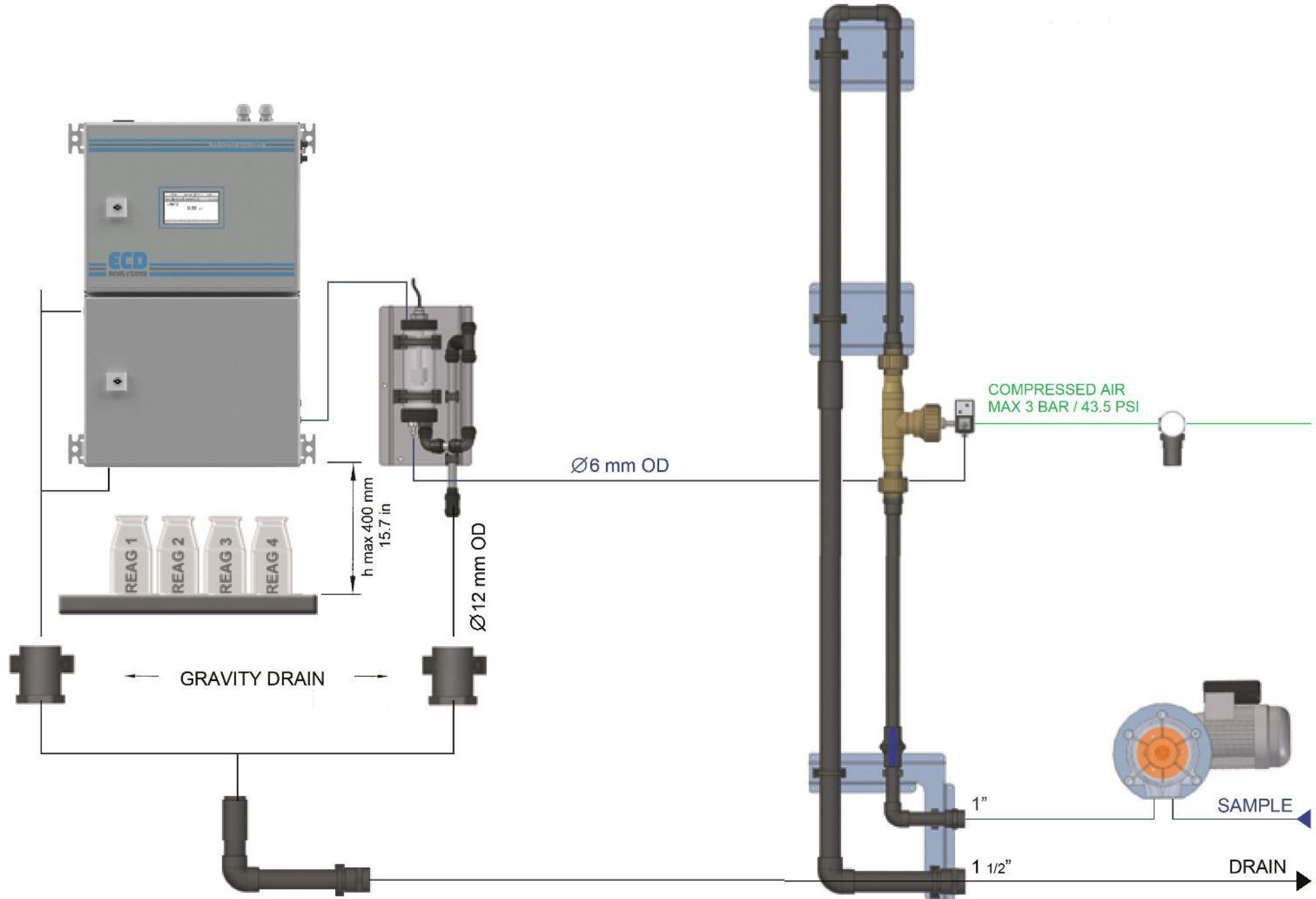
Fast loop reservoirs:

- Dilution water reservoir
- Tank for dilution water (30L, 50L, 100L)

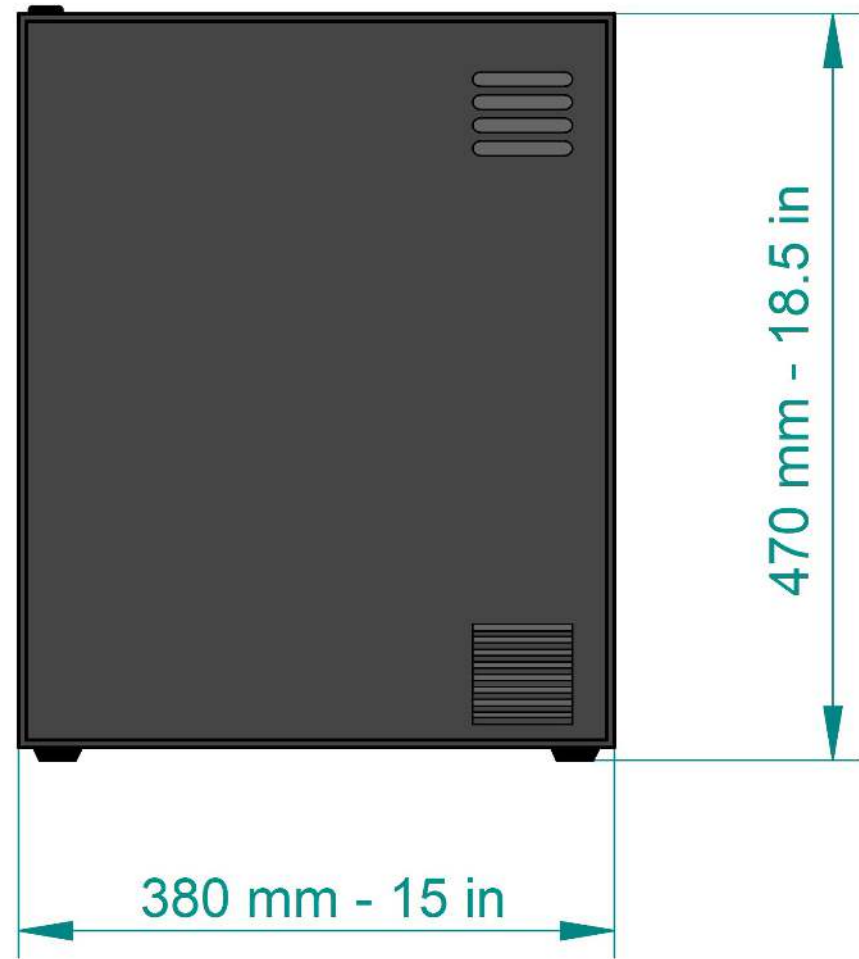
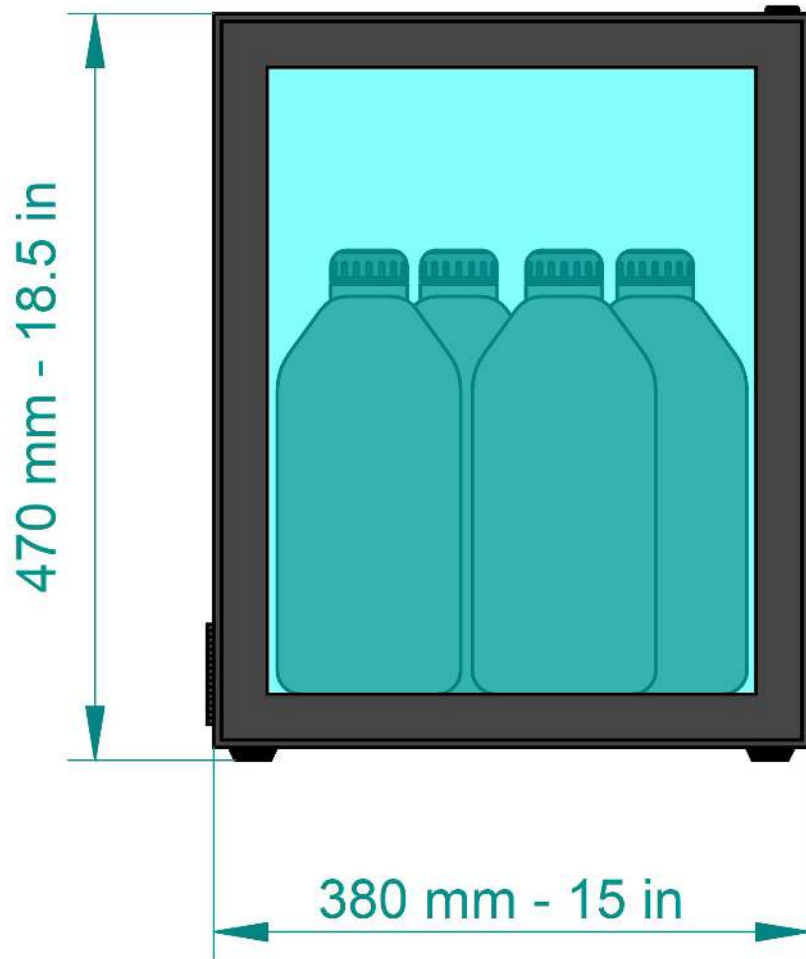
Right side of the analyzer



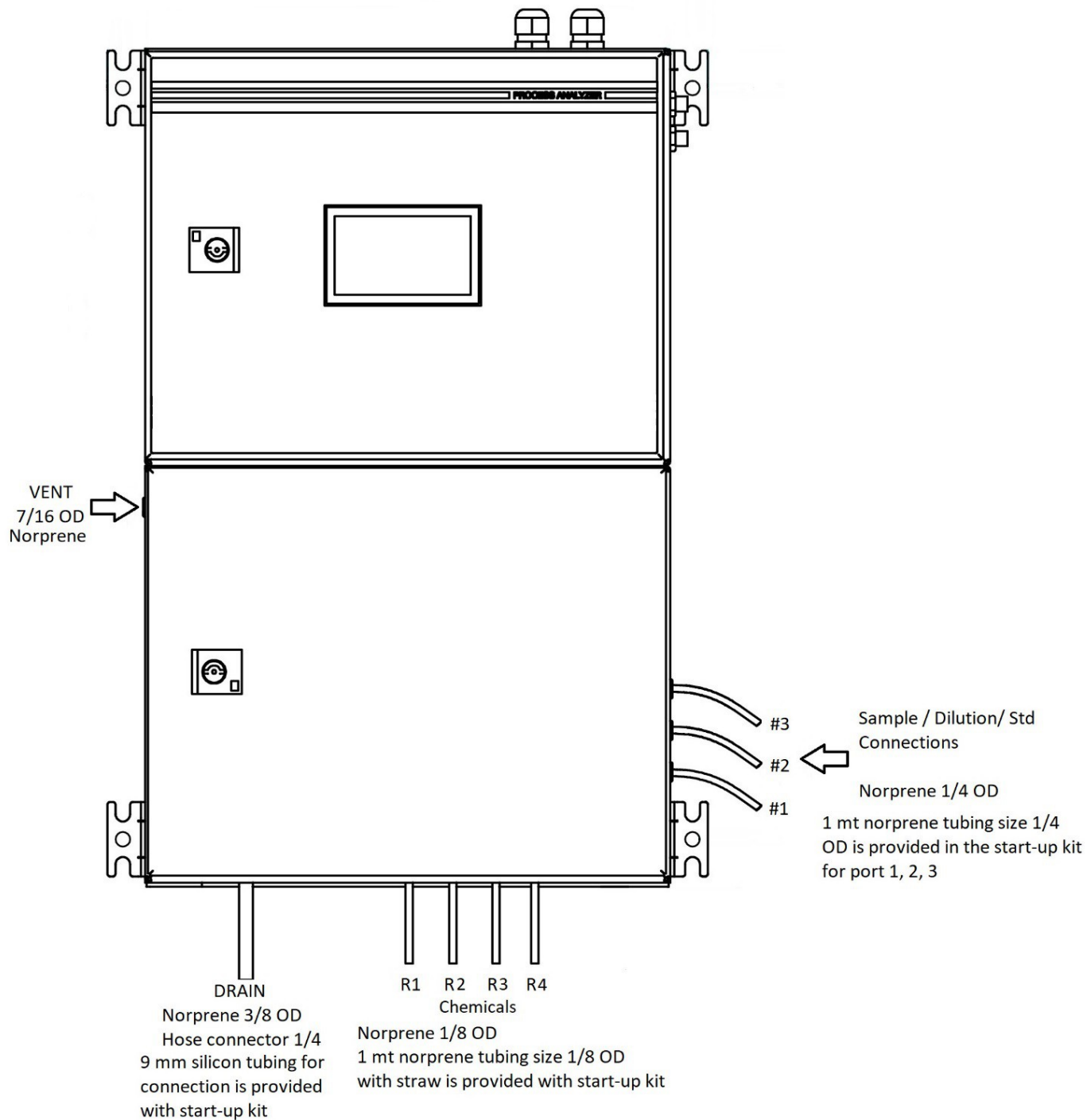
Installation of optional equipments – Sampling pump and Filtration unit



Installation of optional equipments – Fridge for chemicals



Hydraulics connections - overview

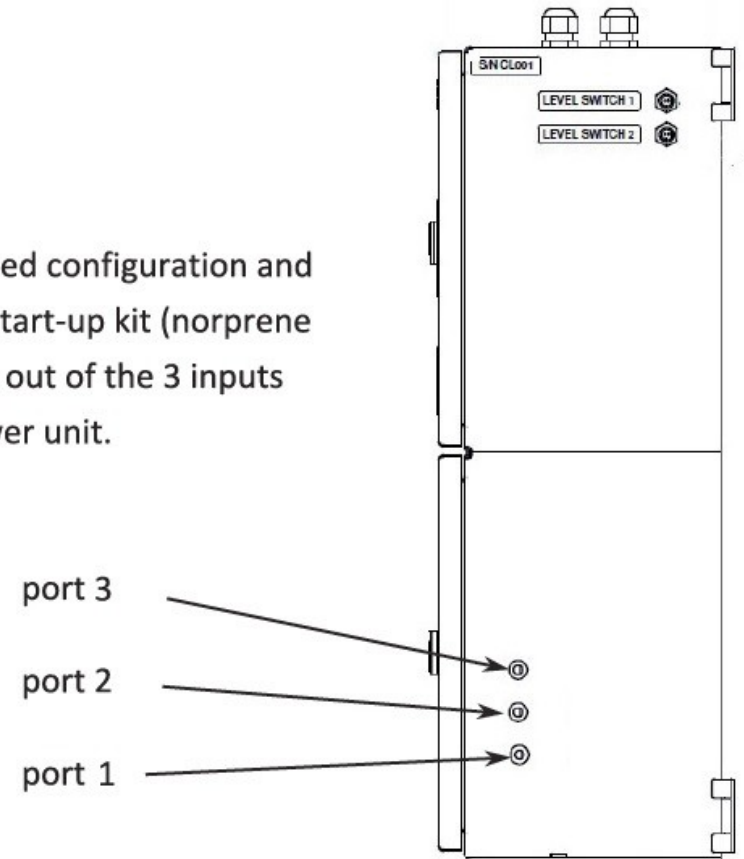


Hydraulics connections – port # 1, 2, 3

The analyzer takes samples or standard solutions through a peristaltic pump.

The same pump can pick up to 3 different liquids through the selection block.

For the connection, identify the defined configuration and connect the pipes supplied with the start-up kit (norprene 1/4 OD) to its straight fittings coming out of the 3 inputs on the right side of the hydraulic power unit.

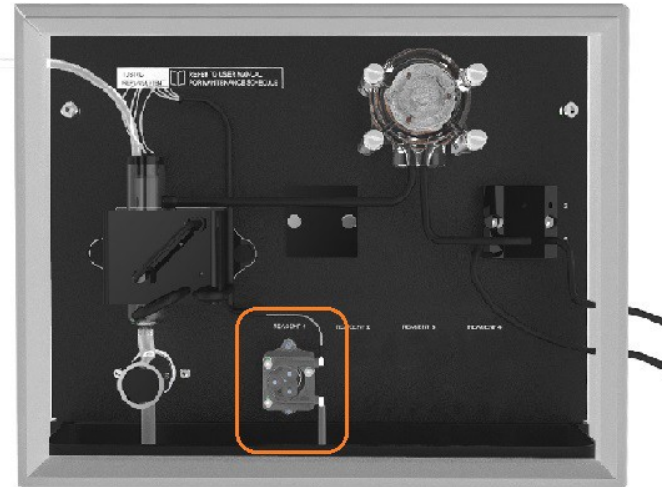
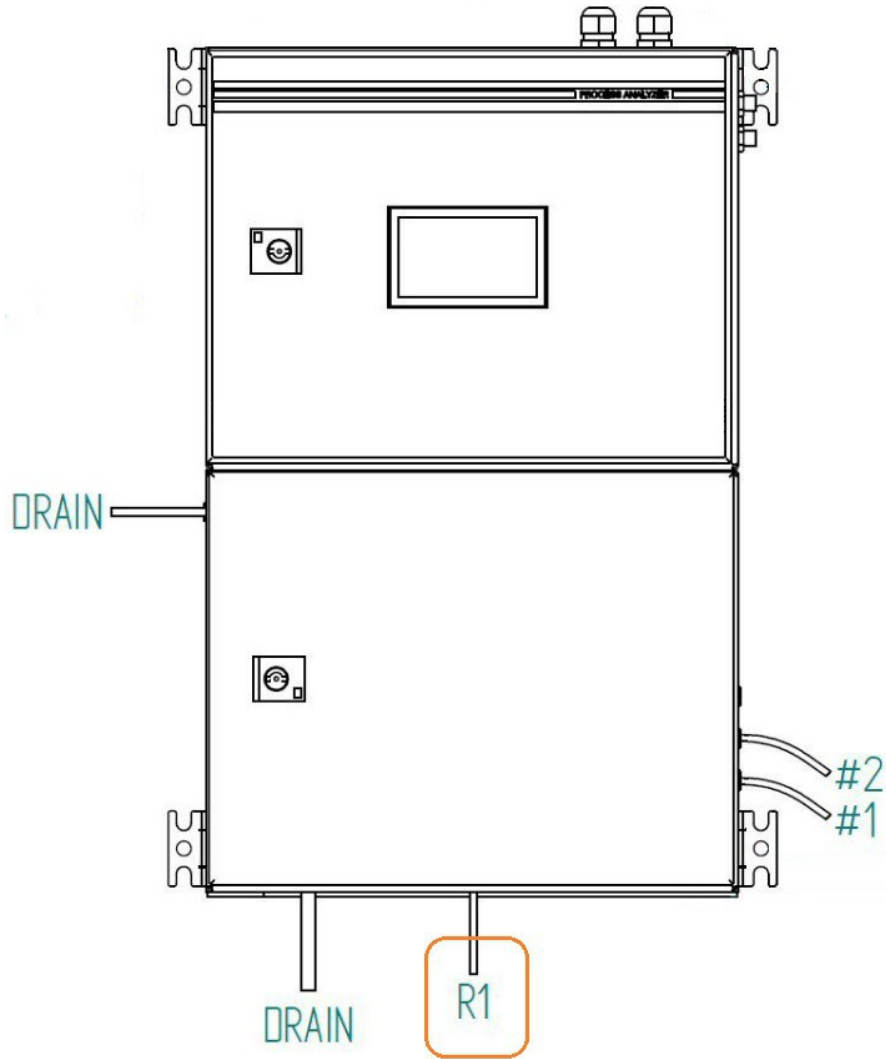


Hydraulics connections – port # 1, 2, 3 – selection block

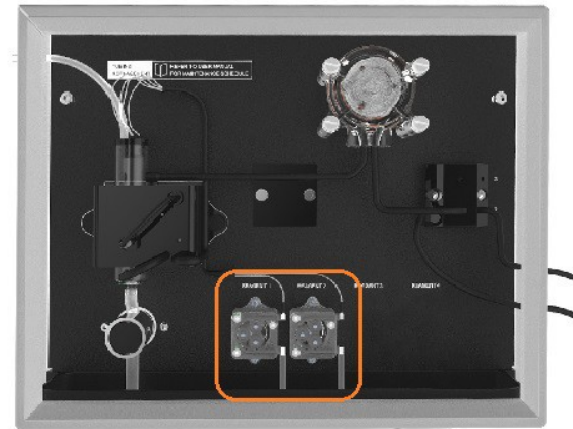
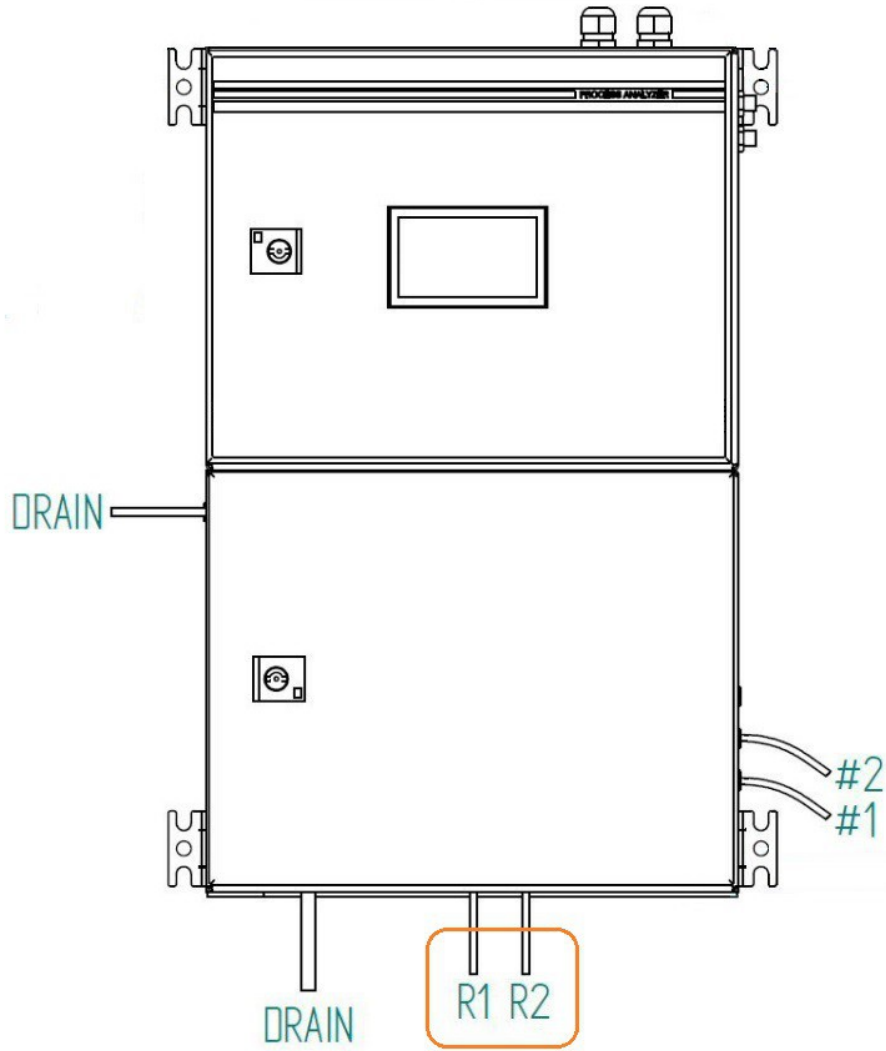


<u>CONFIGURATION</u>	<u>PORT #</u>	<u>CONNECTIONS</u>
<u>Single channel without autocalibration or dilution</u>	0	<u>From external fast loop reservoir – direct connection to the sampling pump</u>
<u>Single channel with autocalibration / validation or autozero or internal dilution</u>	1-2	<u>Follow instructions delivered along with the analyzer; examples:</u> <u>#1 sample</u> <u>#2 standard solution (autocal / autoval)</u> <u>#1 sample</u> <u>#2 DI water (autozero Blank)</u> <u>#1 DI water (internal dilution / autozero Blank)</u> <u>#2 sample</u>
<u>Dual channel without automatic calibration / validation / zero or internal dilution</u>	1-2	<u>#1 sample 1</u> <u># 2 sample 2</u>
<u>Dual channel with automatic zero or internal dilution</u>	1-2-3	<u>#1 sample 1</u> <u># 2 sample 2</u> <u>#3 DI water (internal dilution / autozero Blank)</u>
<u>Dual channel with automatic calibration / validation</u>	1-2-3	<u>#1 sample 1</u> <u># 2 sample 2</u> <u>#3 standard solution (autocal / autoval)</u>

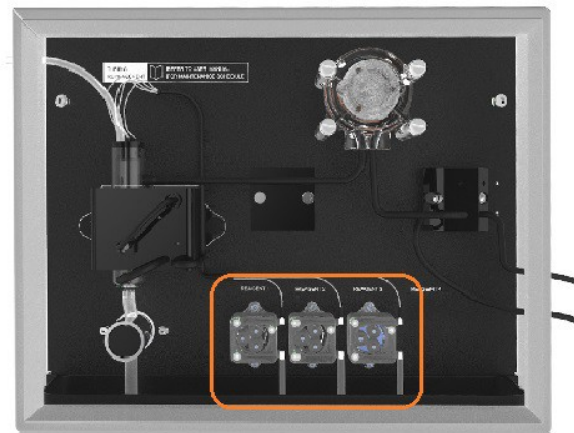
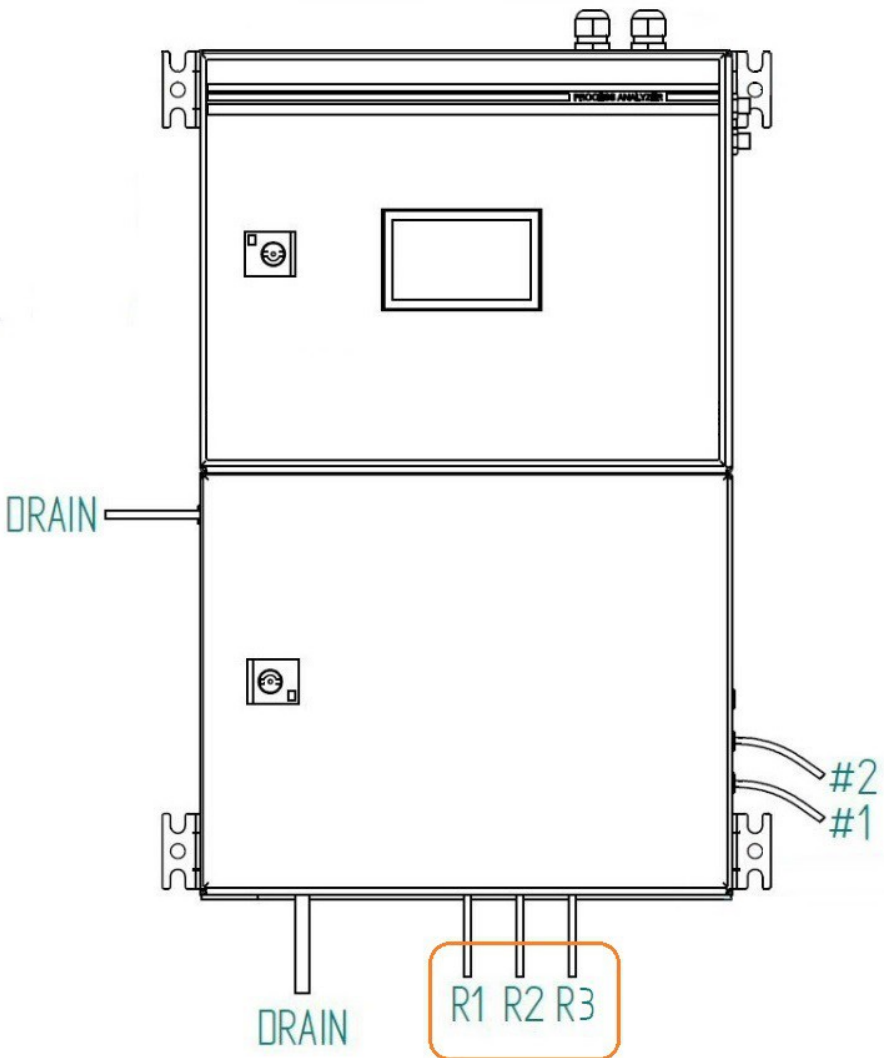
Hydraulics connections – Reagents – 1 reagent configuration



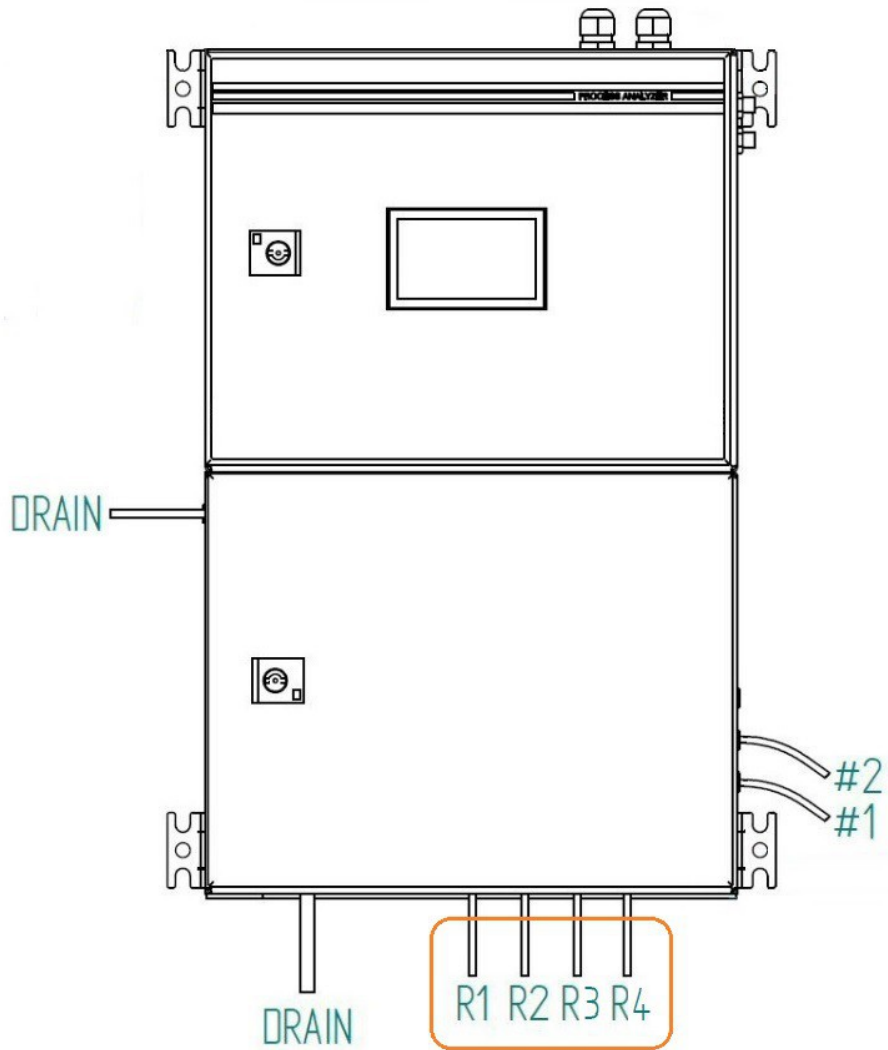
Hydraulics connections – Reagents – 2 reagents configuration



Hydraulics connections – Reagents – 3 reagents configuration

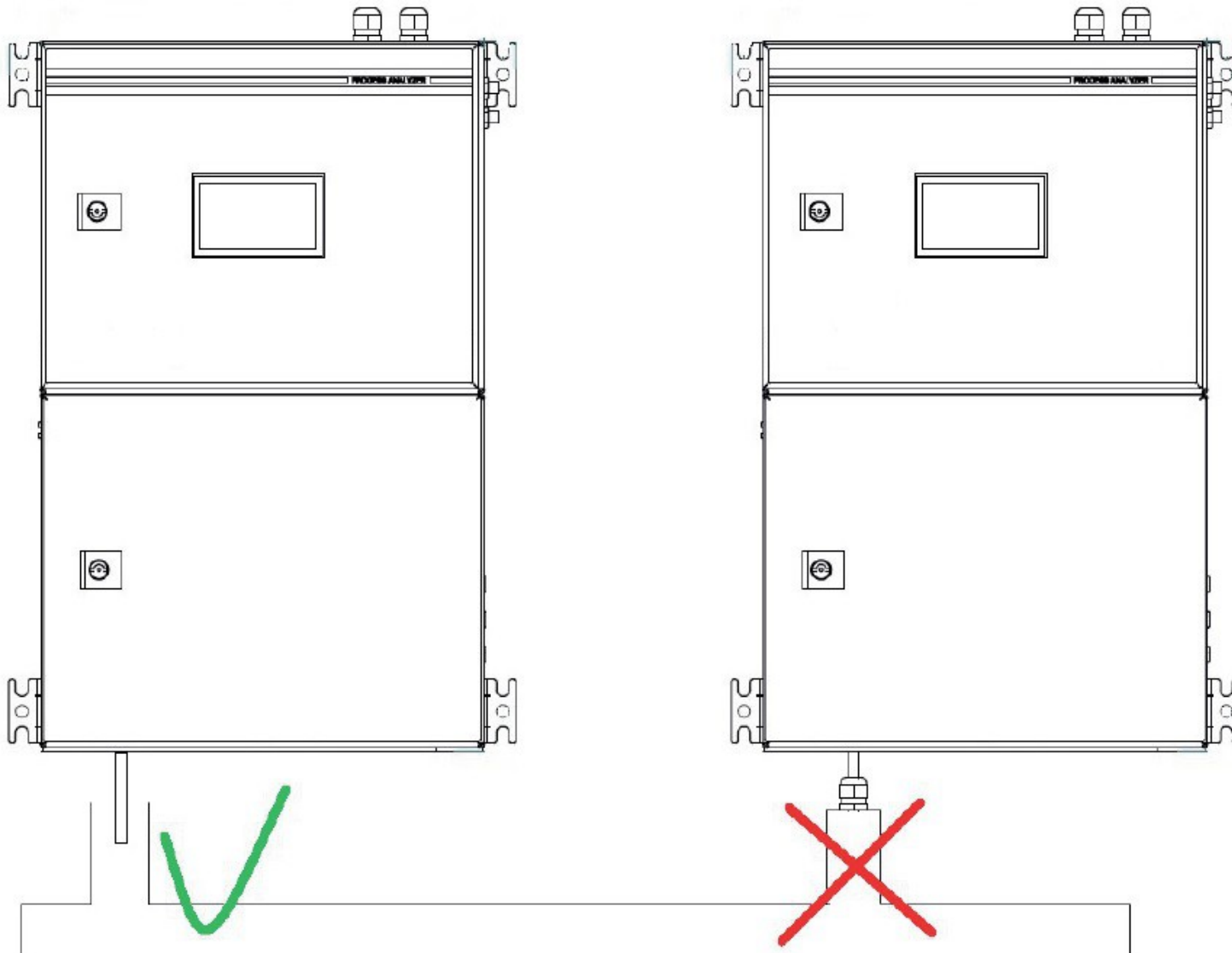


Hydraulics connections – Reagents – 4 reagents configuration



Hydraulics connections – drain

Free draining waste with no restriction. The drain tube must not be submerged and the outlet sample must be carried out by gravity.



External Terminal Block connections - overview

EXTERNAL TERMINAL BLOCK											
-	INPUT										
+	INPUT										
-	SIGNAL 2										
+	SIGNAL 2										
-	SIGNAL 1										
+	SIGNAL 1										
	COM 1/2										
	OUT RELAY 1										
	OUT RELAY 2										
	OUT RELAY 3										
	OUT RELAY 4										
	COM 3/4										

TERMINAL	CONNECTION	NOTE
1	- remote input	connect to a SPDT contact
2	+ remote input	
3	- 4-20 mA analogic signal channel 2	max impedance 500 ohm protected by 50mA Fuse
4	+ 4-20 mA analogic signal channel 2	
5	- 4-20 mA analogic signal channel 1	
6	+ 4-20 mA analogic signal channel 1	
7	COMMON relay 1 and 2	load max 5 A 250Vac configurable as NC o NO SPDT or powered 24 Vdc (jumpers setting)
8	relay 1	
9	relay 2	
10	relay 3	
11	relay 4	
12	COMMON relay 3 and 4	

External Terminal Block connections - input

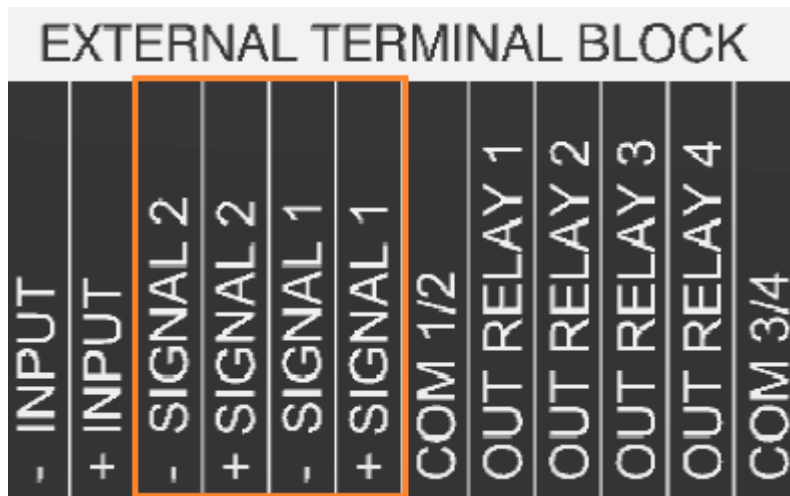
EXTERNAL TERMINAL BLOCK											
- INPUT	+ INPUT	- SIGNAL 2	+ SIGNAL 2	- SIGNAL 1	+ SIGNAL 1	COM 1/2	OUT RELAY 1	OUT RELAY 2	OUT RELAY 3	OUT RELAY 4	COM 3/4

Service #1				version 150415		X	
Unit	ppm	Method	N/NO2			Ext. Input On line	
Sensor av.	200	F.Scale ch1	500			Relay #1 Result Alarm	
Cal. factor min	0.0	F.Scale ch2	0			Relay #2 Result Alarm	
Cal. factor max	0.0	Ref. min	0.00	Bottle ml	1000	Relay #3 Result Alarm	
Blank	-0.0005	output	0 %	Cycle sec.	10	Relay #4 Cycle Command	

Online or None

If Online is selected, the analyzer can be started / stopped from remote

External Terminal Block connections – analog outputs



Service #1		version 150415		X
Unit	ppm	Method	N/NO2	
Ext. Input		On line		
Sensor av.	200	F. Scale ch1	500	Relay #1 Result Alarm
Cal. factor min	0.0	F. Scale ch2	0	Relay #2 Result Alarm
Cal. factor max	0.0	Ref. min	0.00	Bottle ml
			1000	Relay #3 Result Alarm
Blank	-0.0005	output	0 %	Cycle sec.
				10
				Relay #4 Cycle Command

F. Scale ch1 – set full scale of Analog Output channel 1

F. Scale ch2 – set full scale of Analog Output channel 2 (if available)

Output Simulation

Setting Page – Output Signal Disable

Service Page output + connect a multimeter

Set 0% = 4 mA

Set 50% = 12 mA

Set 100% = 20 mA

Nitrite		admin.	****	wait
RU	Setting page X			
N/	CYCLES RATIO	Analysis	200	date 17:04:2015 time 09:42
	Extra cycles	0		Result alarm 1 80.0 % Result alarm 2 80.0 %
	Cycle wait	0 sec.		OUTPUT SIGNAL ENABLE DATALOG ENABLE
				SAMPLE ALARM ENABLE
REAG.1	100%	REAG.2	100%	REAG.3 100% REAG.4 100%

External Terminal Block connections - relays

EXTERNAL TERMINAL BLOCK											
- INPUT	+ INPUT	- SIGNAL 2	+ SIGNAL 2	- SIGNAL 1	+ SIGNAL 1	COM 1/2	OUT RELAY 1	OUT RELAY 2	OUT RELAY 3	OUT RELAY 4	COM 3/4

4 programmable relays, potential free.

Each contact relay can be independently set as normally open or normally closed

Service #1		version 150415		x			
Unit	ppm	Method	N/NO2	Ext. Input	On line		
Sensor av.	200	F.Scale ch1	500	Relay #1	Result Alarm		
Cal. factor min	0.0	F.Scale ch2	0	Relay #2	Result Alarm		
Cal. factor max	0.0	Ref. min	0.00	Bottle ml	1000	Relay #3	Result Alarm
Blank	-0.0005	output	0 %	Cycle sec.	10	Relay #4	Cycle Command

External Terminal Block connections – relays functions

EXTERNAL TERMINAL BLOCK

- INPUT	+ INPUT	- SIGNAL 2	+ SIGNAL 2	- SIGNAL 1	+ SIGNAL 1	COM 1/2	OUT RELAY 1	OUT RELAY 2	OUT RELAY 3	OUT RELAY 4	COM 3/4
---------	---------	------------	------------	------------	------------	---------	-------------	-------------	-------------	-------------	---------

Relay 1	Scrolling	The user can choose one among the below list: <ul style="list-style-type: none"> - Result Alarm - Loss of Sample 1 - Loss of Sample 2 - Fault Alarm - Cycle Command - Latch / Unlatch - Power On - Calibr Alarm - Low reag
Relay 2		
Relay 3	Scrolling	The user can choose one among the below list: <ul style="list-style-type: none"> - Result Alarm - Loss of Sample 1 - Loss of Sample 2 - Fault Alarm - Cycle Command
Relay 4		

Result alarm settings
Expressed in full scale %

Setting page

Analysis 200

Extra cycles 0

Cycle wait 0 sec.

Result alarm 1 80.0 %

Result alarm 2 80.0 %

OUTPUT SIGNAL ENABLE

DATALOG ENABLE

SAMPLE ALARM ENABLE

REAG.1 100% REAG.2 100% REAG.3 100% REAG.4 100%

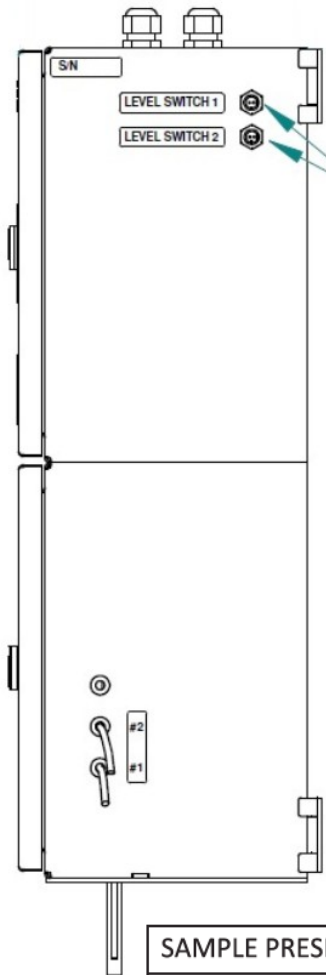
External Terminal Block connections – relays functions

EXTERNAL TERMINAL BLOCK

- INPUT	+ INPUT	- SIGNAL 2	+ SIGNAL 2	- SIGNAL 1	+ SIGNAL 1	COM 1/2	OUT RELAY 1	OUT RELAY 2	OUT RELAY 3	OUT RELAY 4	COM 3/4
---------	---------	------------	------------	------------	------------	---------	-------------	-------------	-------------	-------------	---------

<u>RESULT ALARM</u>	The <u>relay is activated when the last measured value exceeds the set limits.</u> Once the <u>value is within the limits, the alarm is reset.</u>
<u>LOSS OF SAMPLE 1,2</u>	The <u>relay is activated when the contact of the recirculating tank indicates the absence of sample / dilution water.</u>
<u>FAULT ALARM</u>	The <u>relay is activated in case of forced stop of the analyser as a result of an emergency stop or for a general fault of the analyzer.</u>
<u>CYCLE COMMAND</u>	The <u>relay is activated by a command in the cycle programming and can be used for external components and accessories (e.g. external sampling pump, end/start of an analysis contact,...).</u>
<u>LATCH/UNLATCH</u>	The <u>relay changes its status according to the cycle programming (for example it is activated at a point in the cycle and is deactivated at another point).</u>
<u>POWER ON</u>	The <u>relay is always active when the analyser is electrically powered.</u>
<u>LOW REAG</u>	The <u>relay is activated when reagent level drops below 5%.</u>
<u>CALIBR ALARM</u>	The <u>relay is activated when there is an out-of-limits calibration alarm.</u>

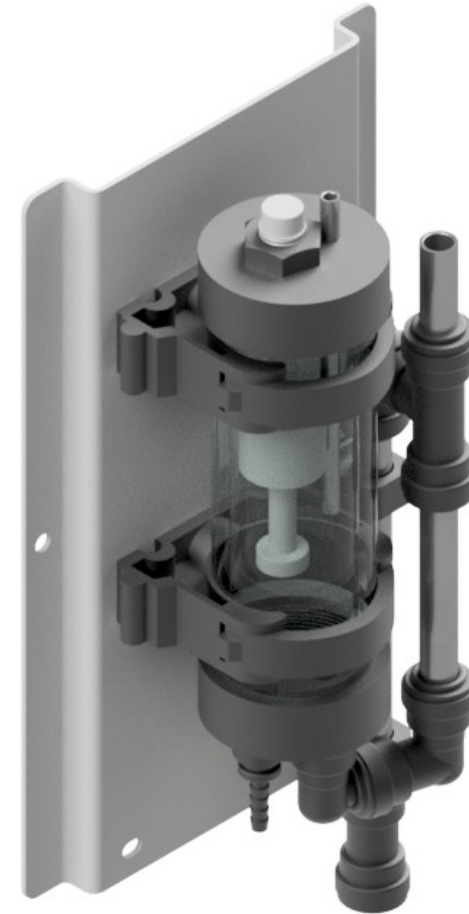
Level switch connections



CONNECT TO
FAST LOOP
RESERVOIRS



SAMPLE PRESENT	floating element UP	Contact OPEN
SAMPLE NOT PRESENT	floating element DOWN	Contact CLOSED



Relays 1,2,3,4
Loss of sample 1
Loss of sample 2

RS485 connections

Using this connection a modbus RTU connection can be made.

MODBUS RTU CONNECTION COLORIMETERS

RS 485 – 2W SETTINGS

Baud Rate	9600
Data bits	8
Parity	E
Stop bit	1
Analyser I.D. (slave , node number)	Last 2 number of the analyzer's serial number (example: s/n CL345 = I.D. no. 45)

ANALYSER'S VALUES

Address	format	alias
900	32-bits float (CD-AB)	result CH1
902	32-bits float (CD-AB)	result CH2
904	32-bits float (CD-AB)	Validation %
906	32-bits float (CD-AB)	Calibration factor
908	32-bits float (CD-AB)	Reagent 1 level %
910	32-bits float (CD-AB)	Reagent 2 level %
912	32-bits float (CD-AB)	Reagent 3 level %
914	32-bits float (CD-AB)	Reagent 4 level %

ANALYSER'S STATUS

800	bit	"online" condition
801	bit	single cycle running
802	bit	"stopped" condition
803	bit	extra cycle running
804	bit	Sample 1 running (dual streams only)
805	bit	Sample 2 running (dual streams only)
806	bit	loss of sample 1
807	bit	loss of sample 2
808	bit	reference low alarm
809	bit	calibration alarm

Service #2 X

Dual Streams No	Sequencer No	00000 000,0	English
Back light delay min. 30	Level Seq delay 0	0,00 0,000	Deutsch
Linear factor 1.000	factor 1.0	Average range (Abs) +/- 0.0080	Francais
Logout min 5	Modbus slave i.d. 1	Averaged Abs	Chinese
Program update enable YES	No Level jumping NO	Jumping from step	Result average No
		to step	Real Abs

Modbus slave i.d.	keyboard	RS485 modbus node number
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