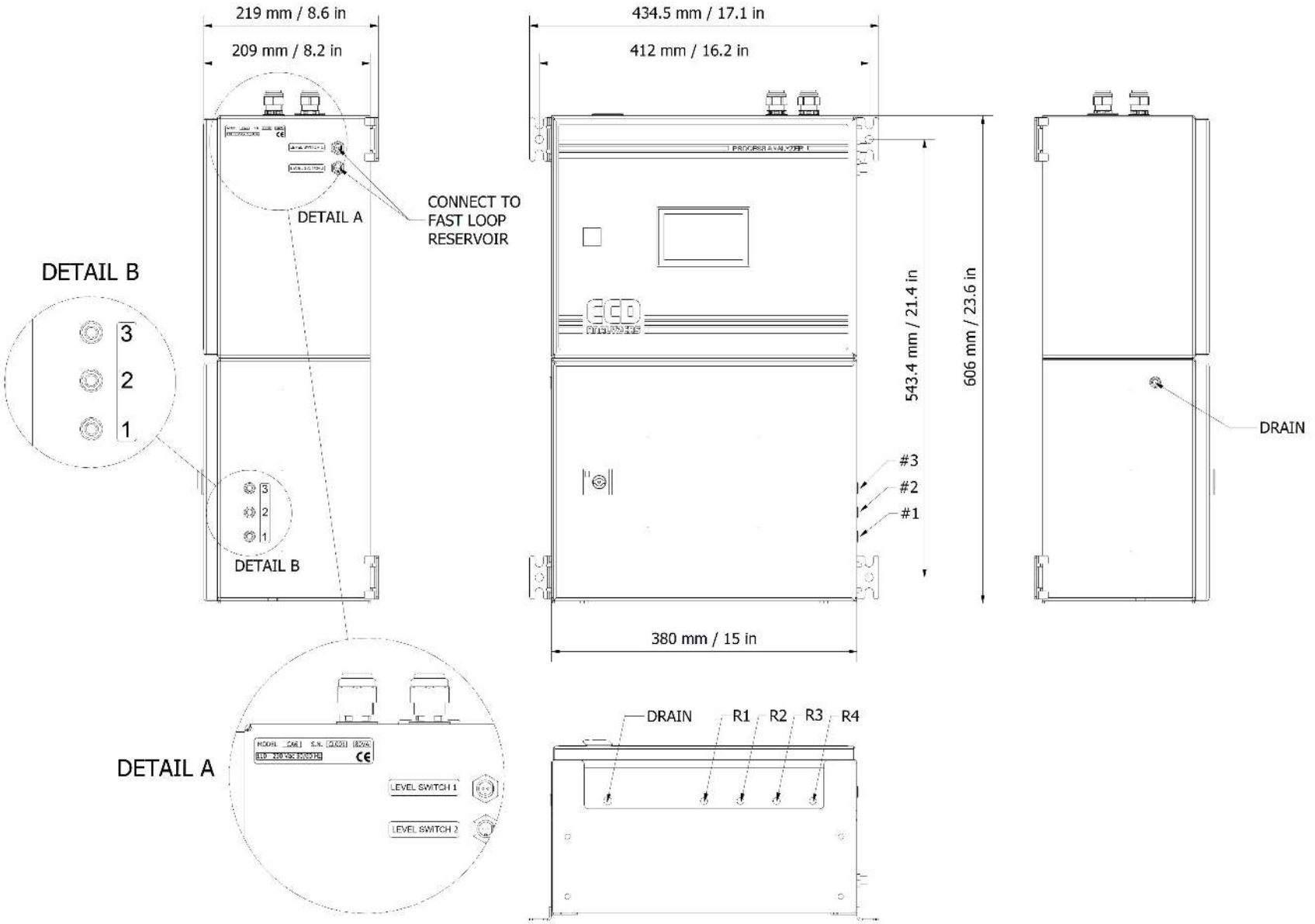
CA6 – INSTALLATION

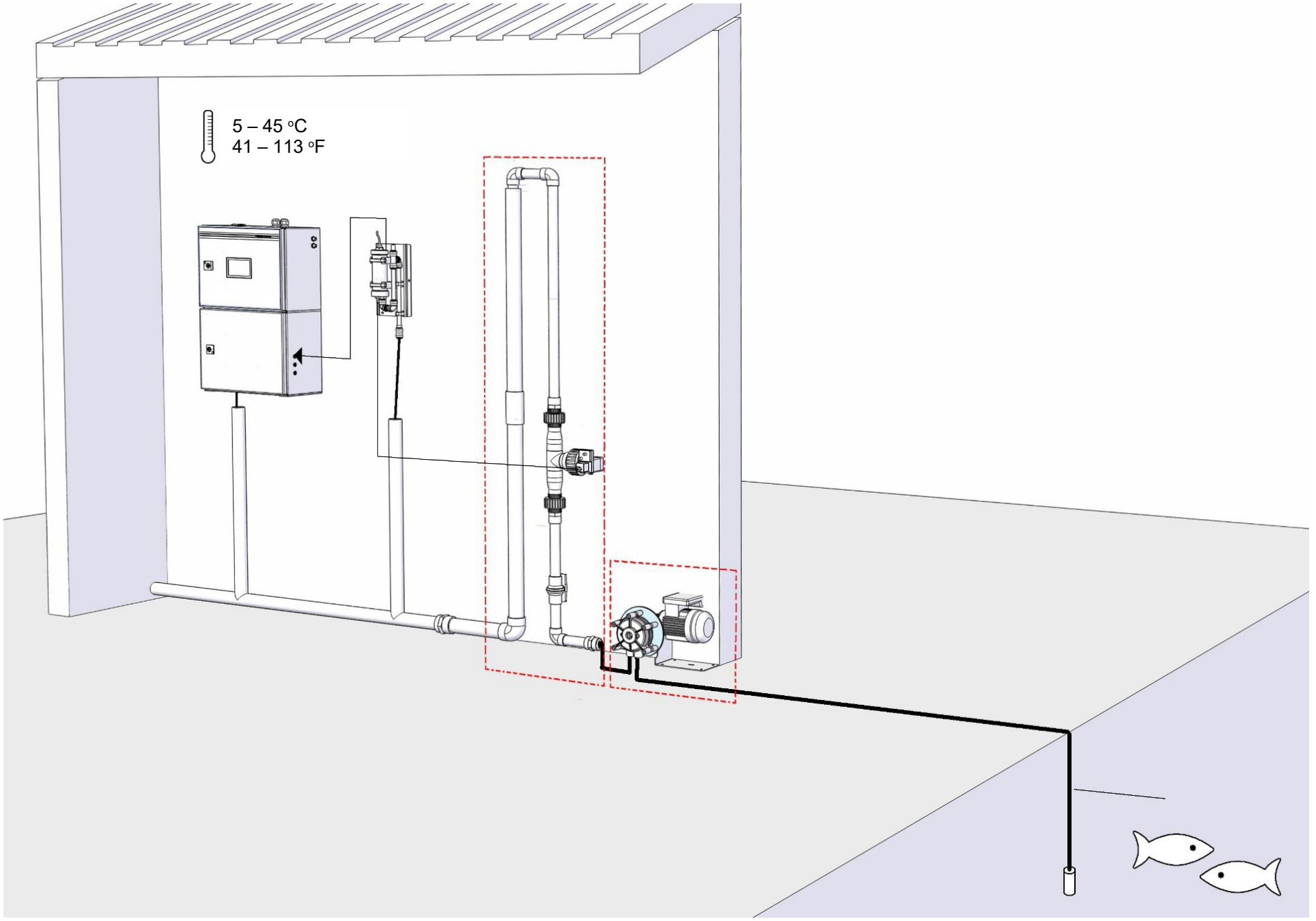
ECD
ANALYZERS

Installation

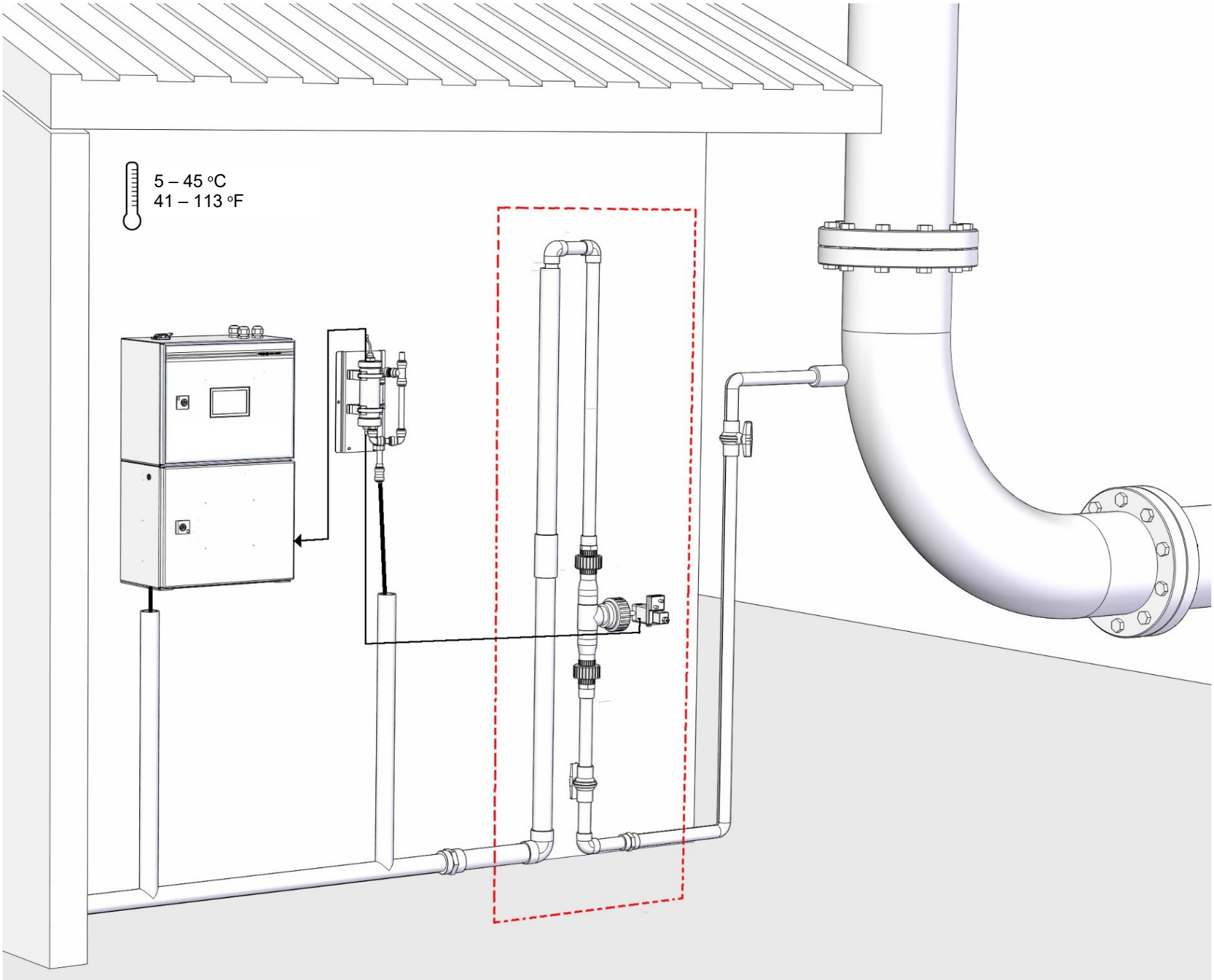
CA6 analyzer is supplied with four mounting brackets for wall or stainless steel support rack installation. Use (4) M6 or M8 screws or (4) ¼-20 bolts to affix the analyzer.
The analyzer should be mounted with the display at eye level for easier operation and access.



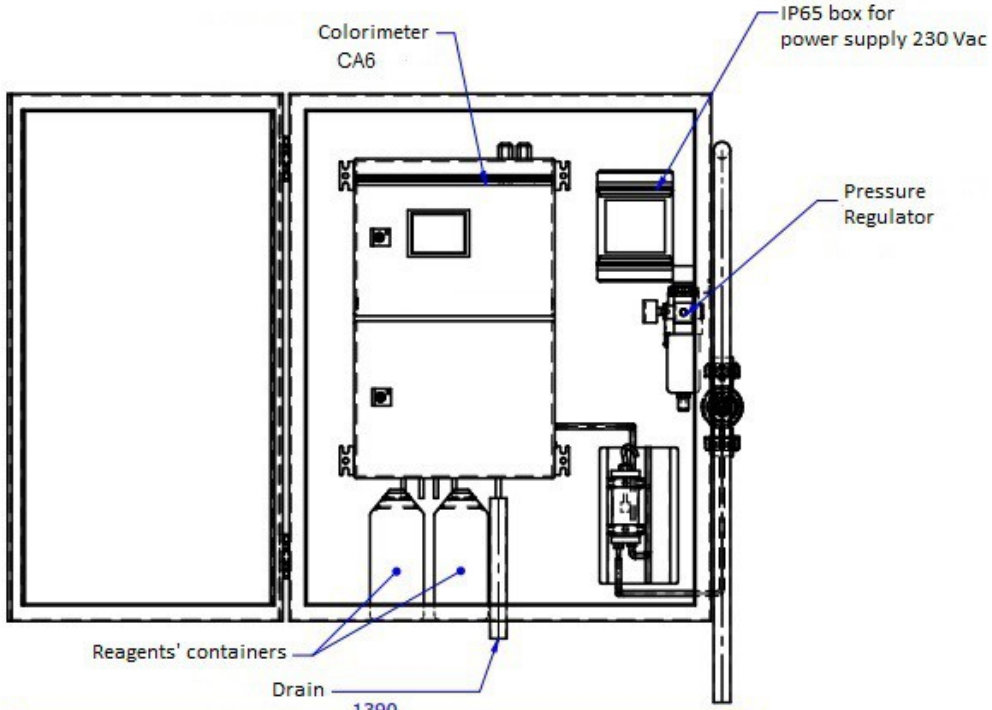
Installation

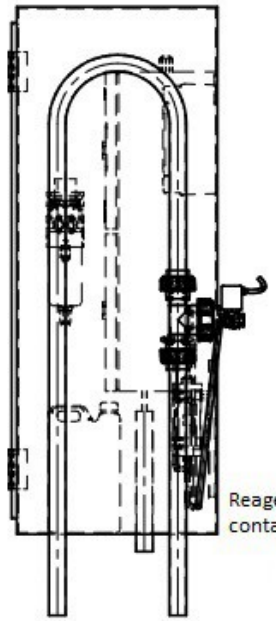


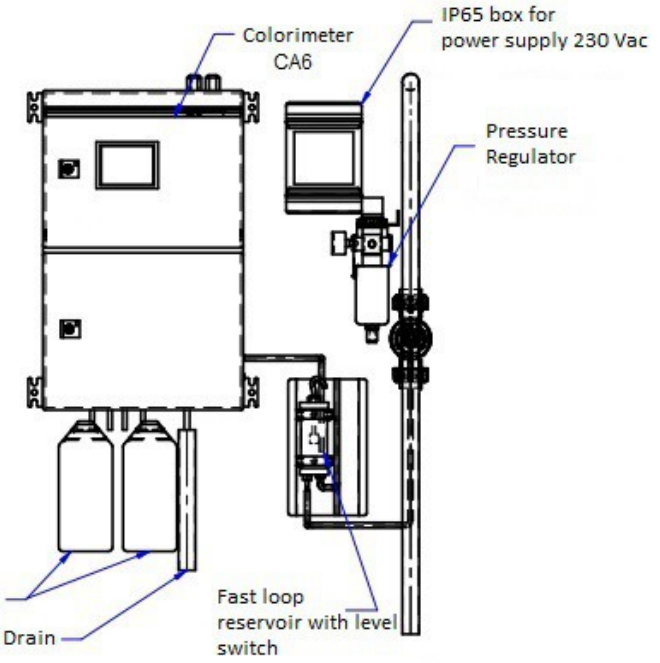
Installation

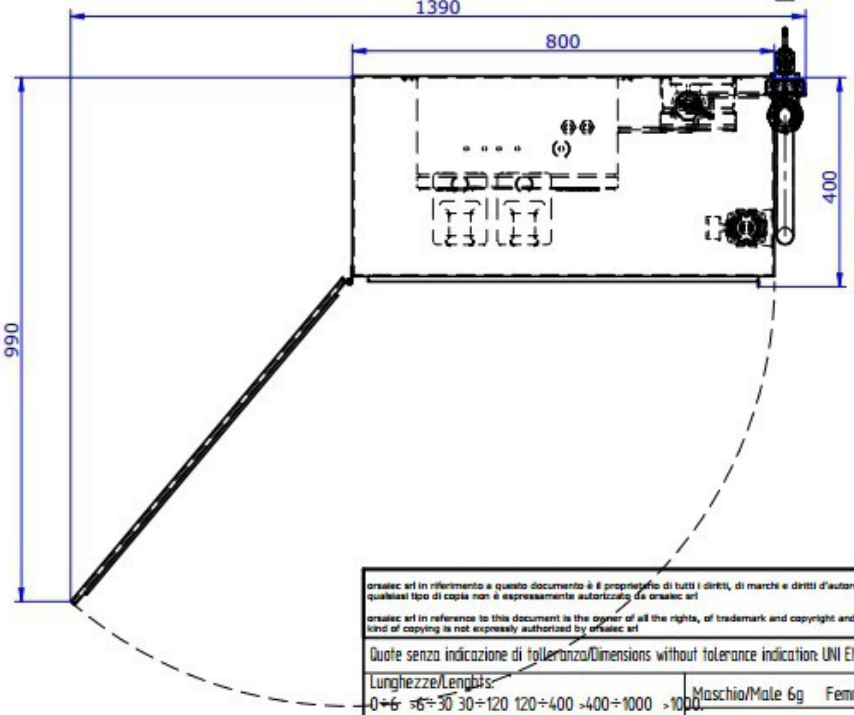


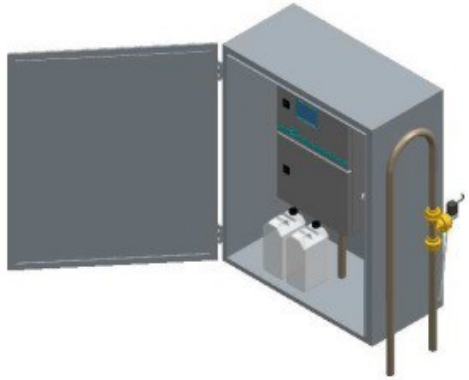
Installation











Ref.	Quantity	Material / Description	Weight
0	--	- --	0,000 kg

DRAWER	CHECKED by	APPROVED by	DATE
EDP			13/02/2017

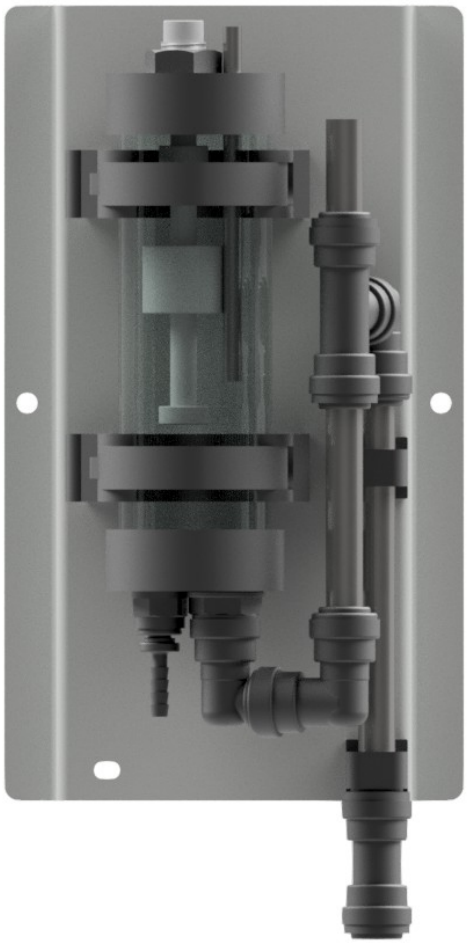
Quote senza indicazione di tolleranza/Dimensions without tolerance indication: UNI EN 22768/1m; UNI EN 22768/2K;

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

PROJECT	TITLE				
2017-1015	CA6 CABINET				
	DRAWING No.	REV	SCALE		
	A17-1015-00	0	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: Right side of the analyzer

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

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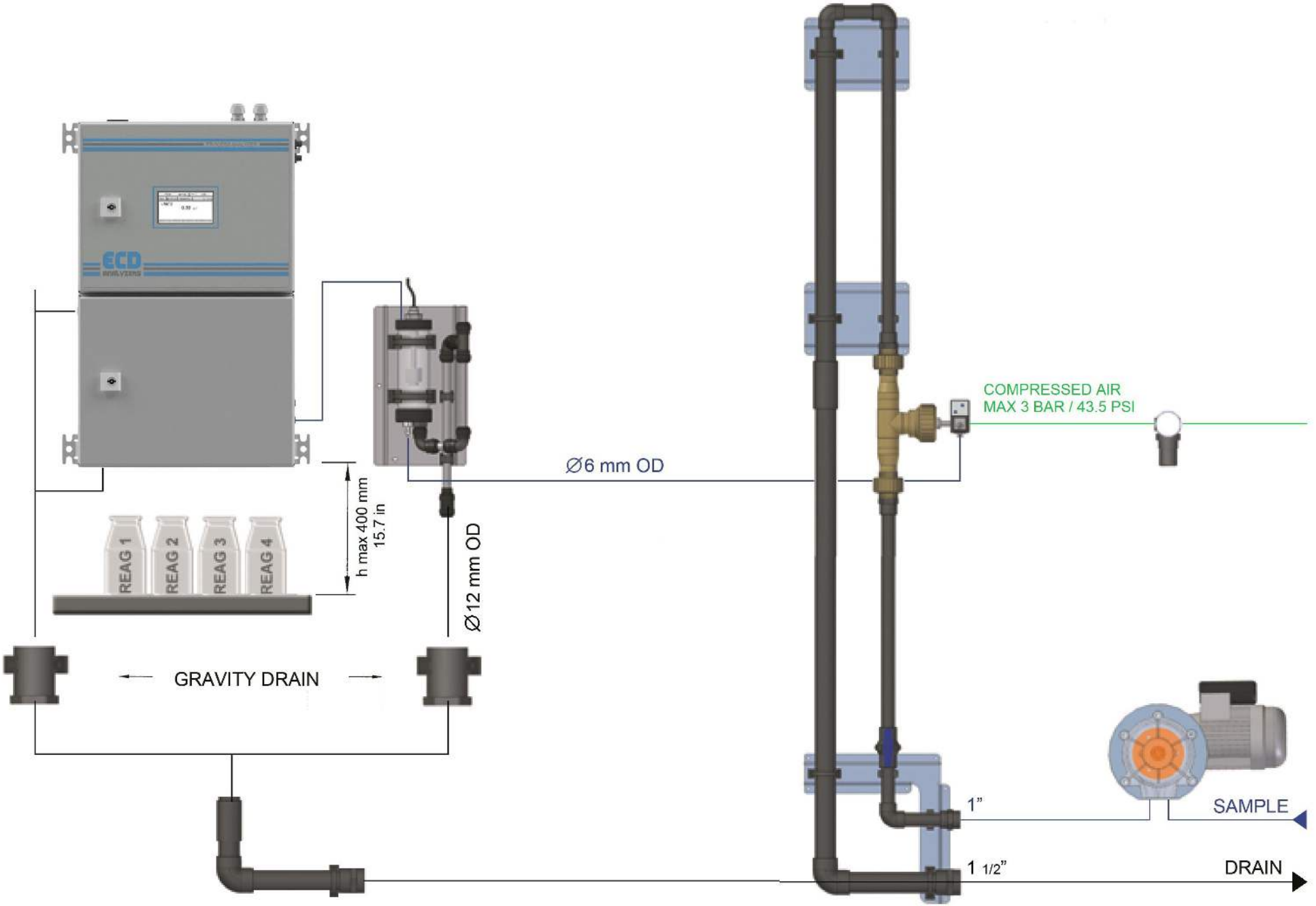
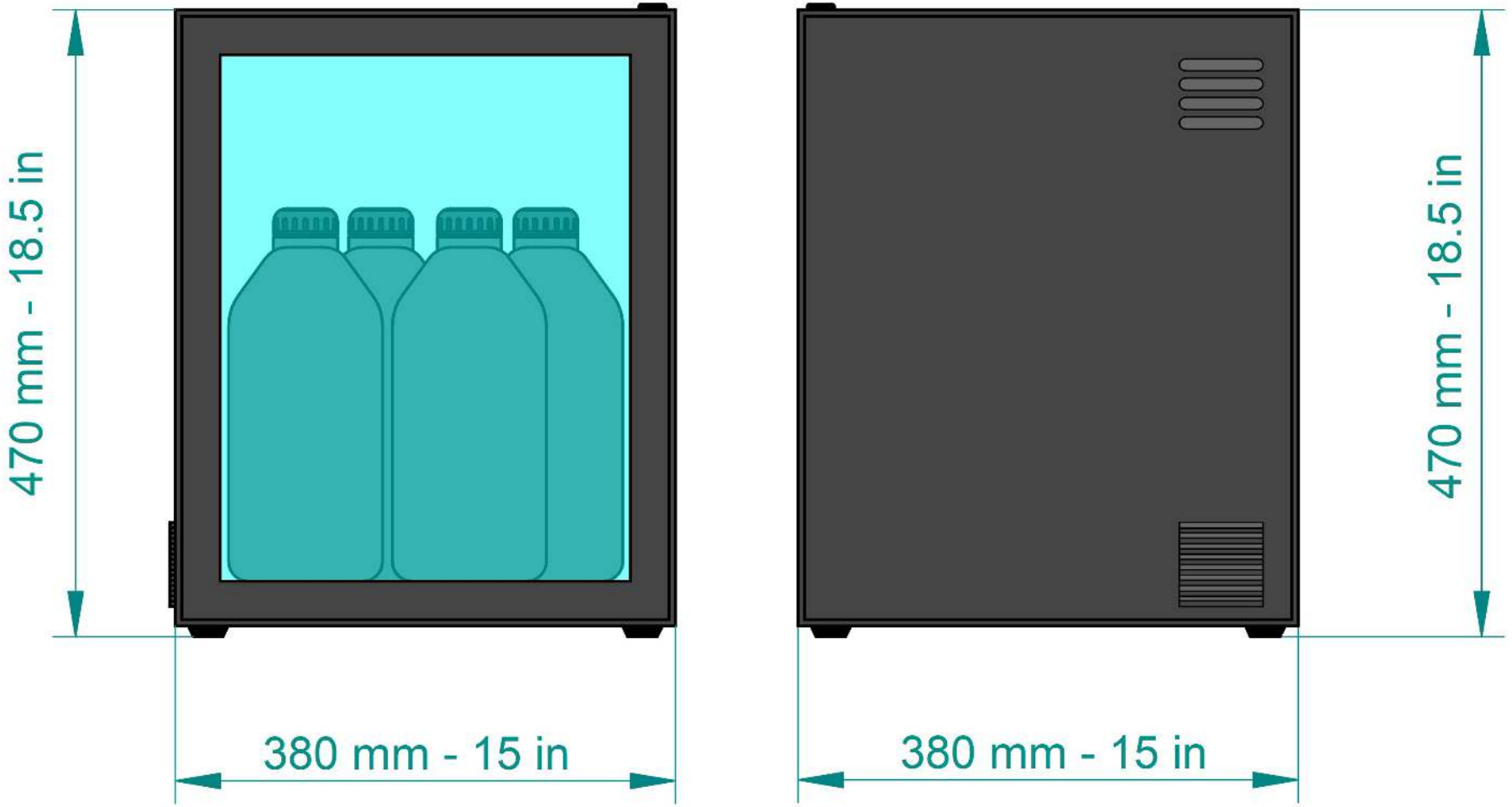
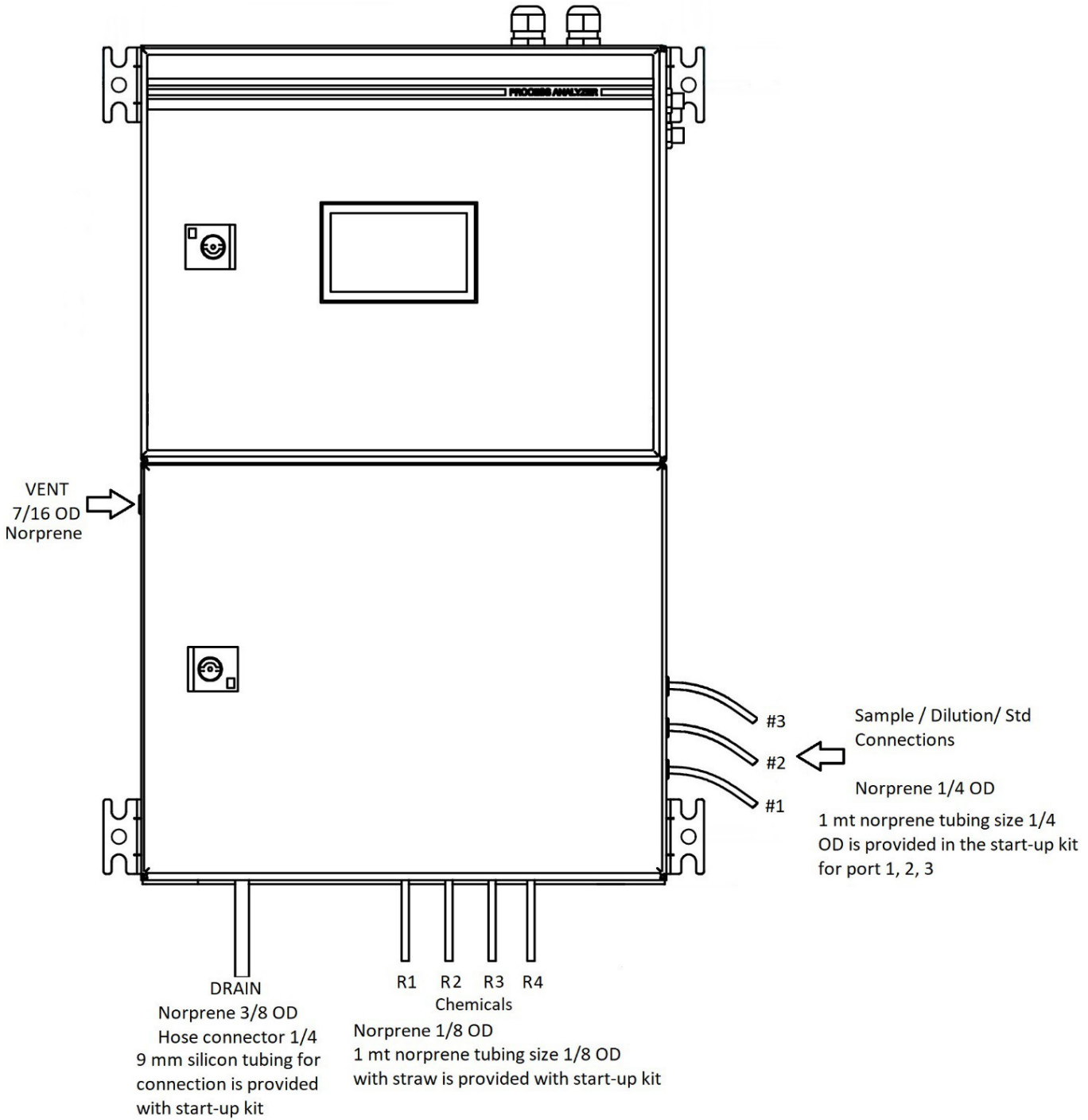
Installation of optional equipments – Sampling pump and Filtration unit



Installation of optional equipments – Fridge for chemicals



Hydraulics connections - overview

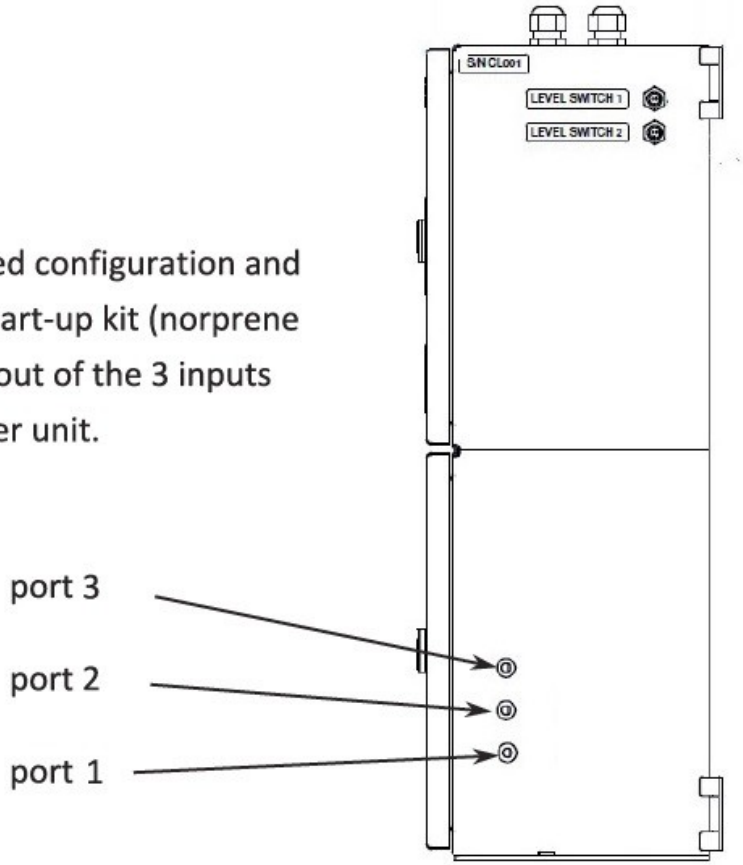


Hydraulics connections – port # 1, 2, 3

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.

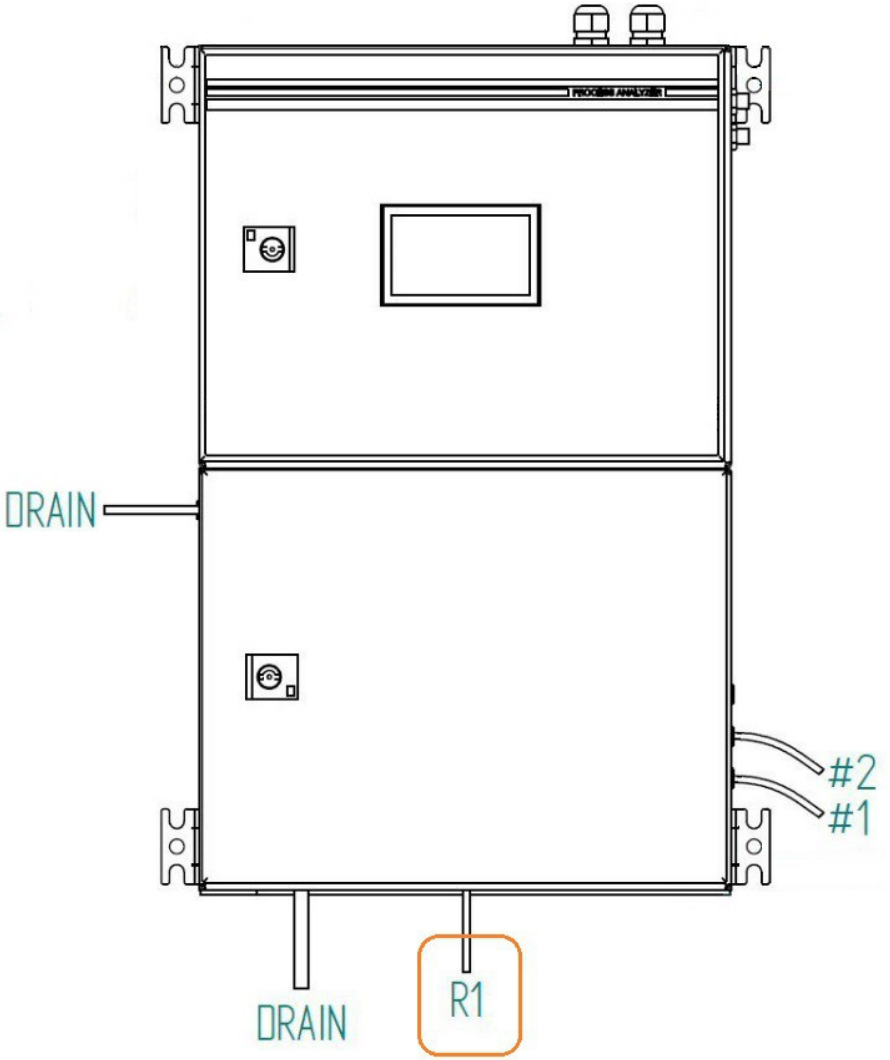


Hydraulics connections – port # 1, 2, 3 – selection block

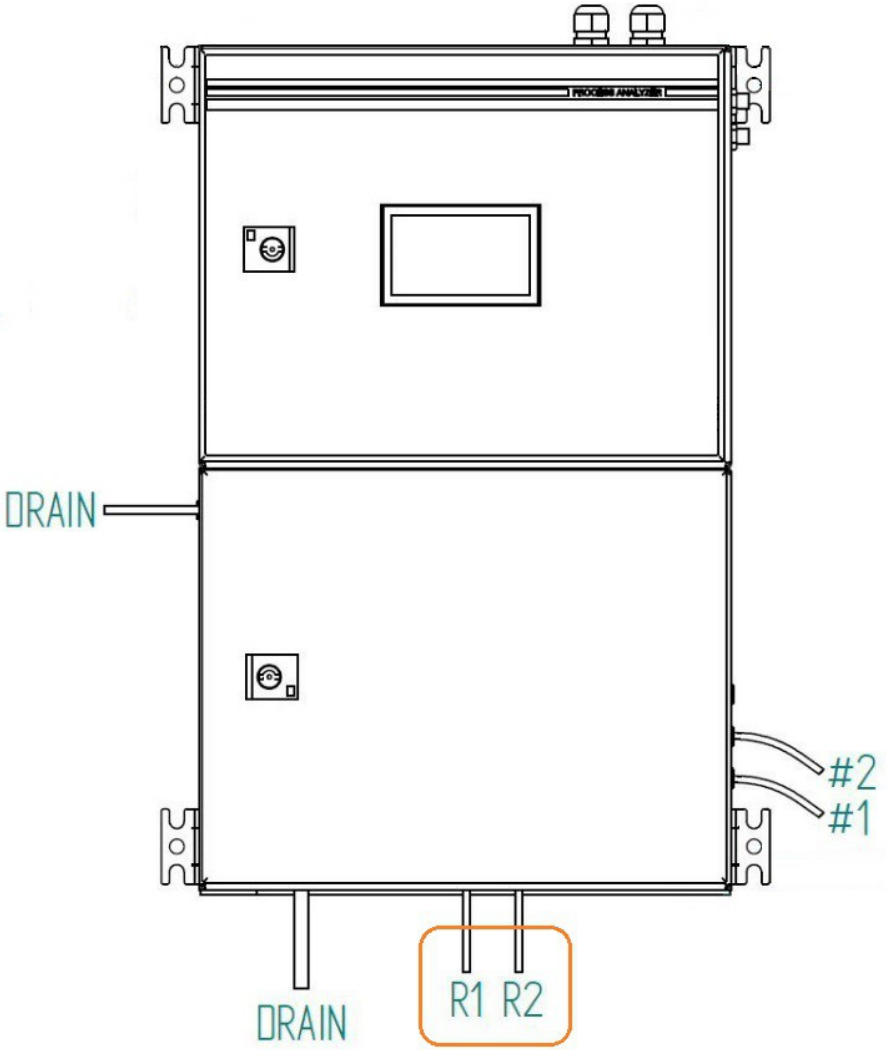
CONFIGURATION	PORT #	CONNECTIONS
Single channel without autocalibration or dilution	0	From external fast loop reservoir – direct connection to the sampling pump
Single channel with autocalibration / validation or autozero or internal dilution	1-2	Follow instructions delivered along with the analyzer;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

ECD Analyzers

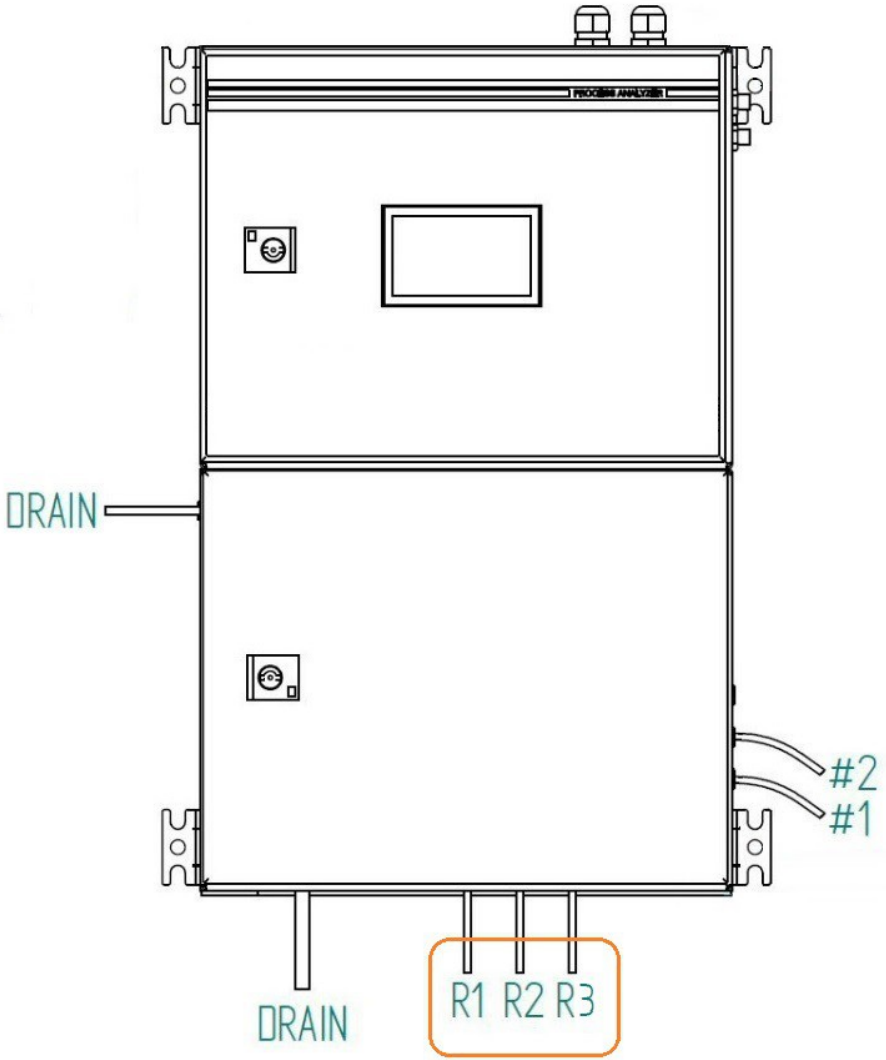
Hydraulics connections – Reagents – 1 reagent configuration

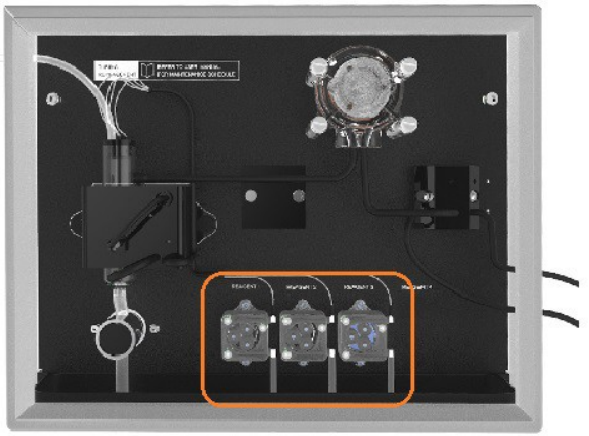


Hydraulics connections – Reagents – 2 reagents configuration

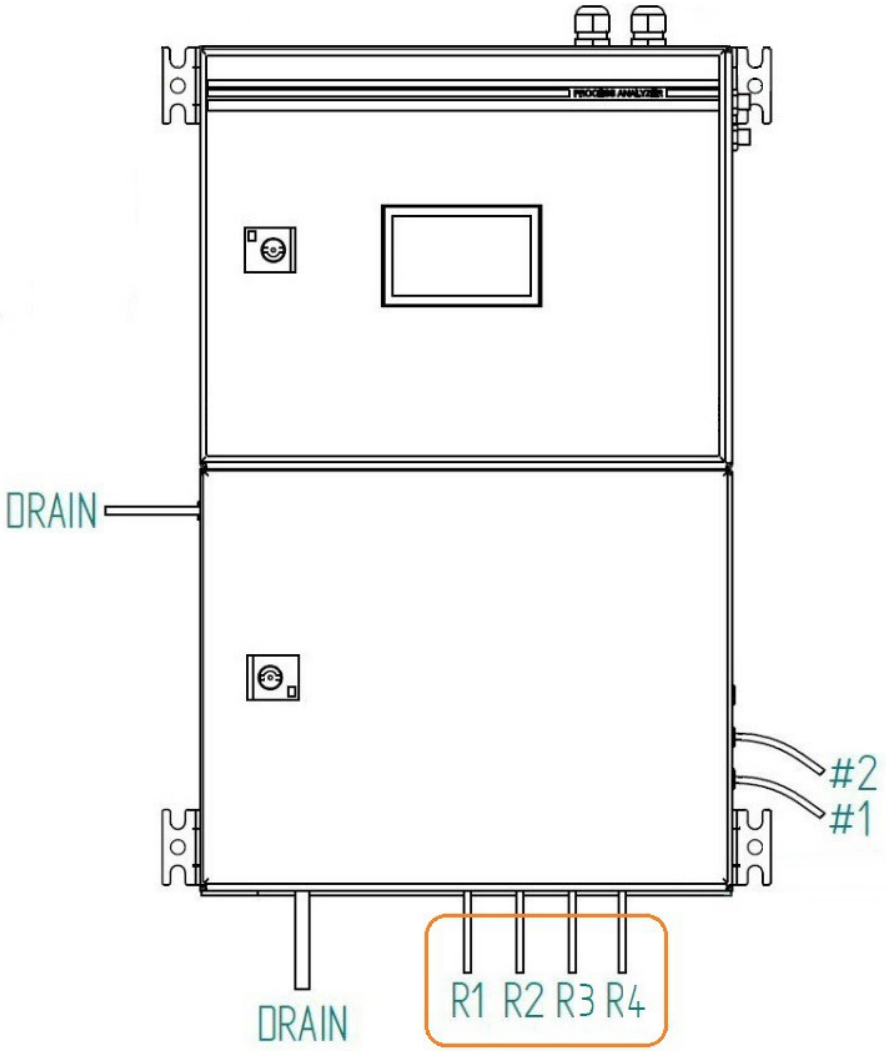


Hydraulics connections – Reagents – 3 reagents configuration



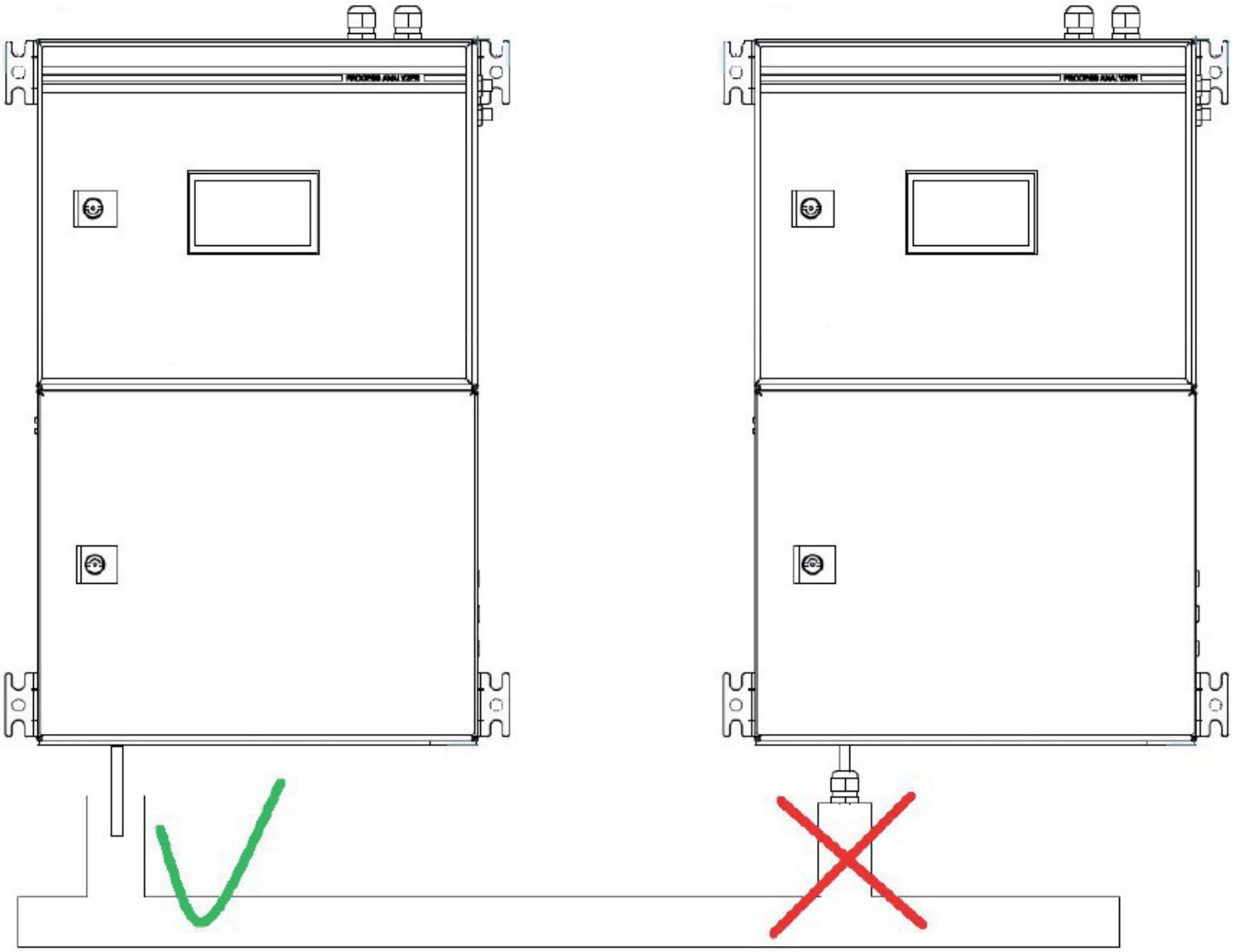


Hydraulics connections – Reagents – 4 reagents configuration



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

TERMINAL	CONNECTION	NOTE
1	- remote input	connect to a SPDT contact
2	+ remote input	
3	- 4-20 mA analogic signal channel 2	max impedence 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	

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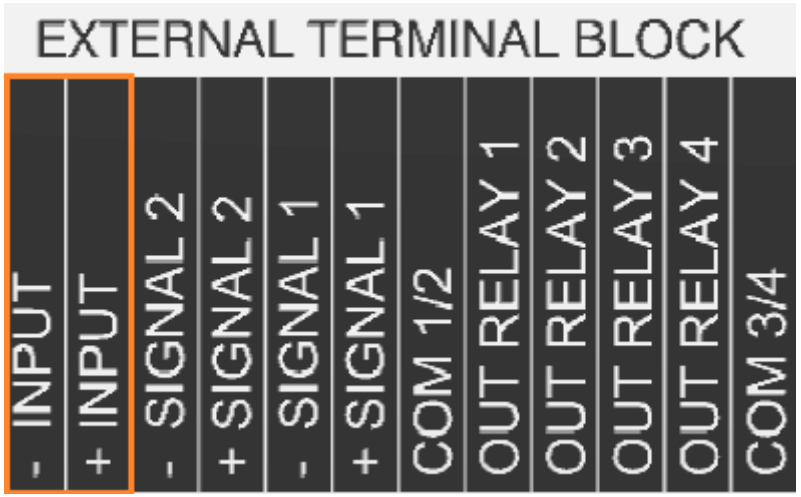
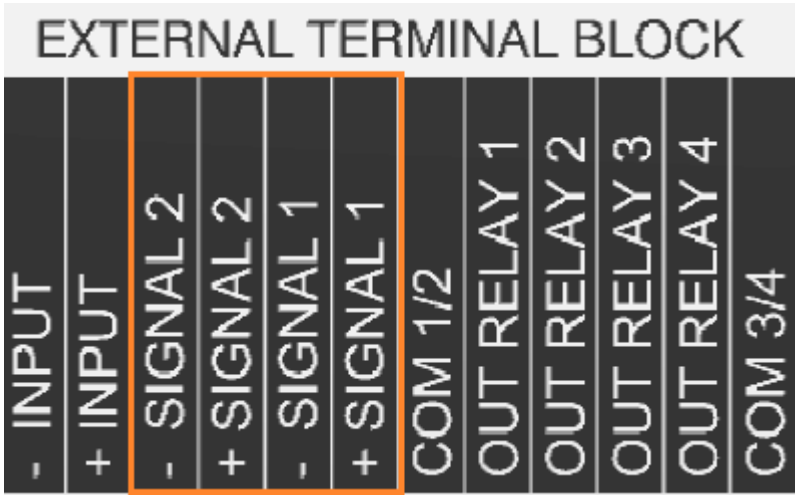
External Terminal Block connections - input

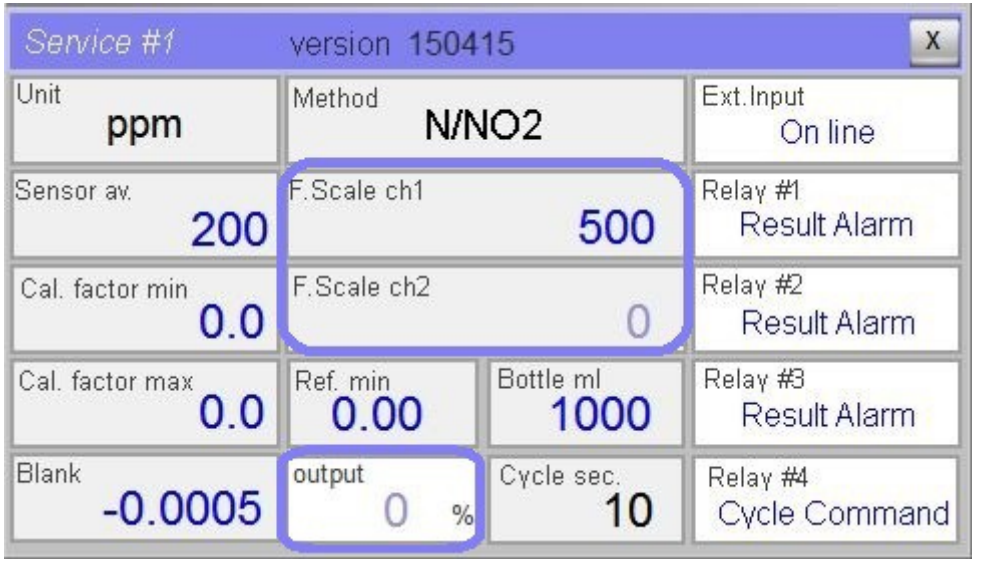


Online or None

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

External Terminal Block connections – analog outputs





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

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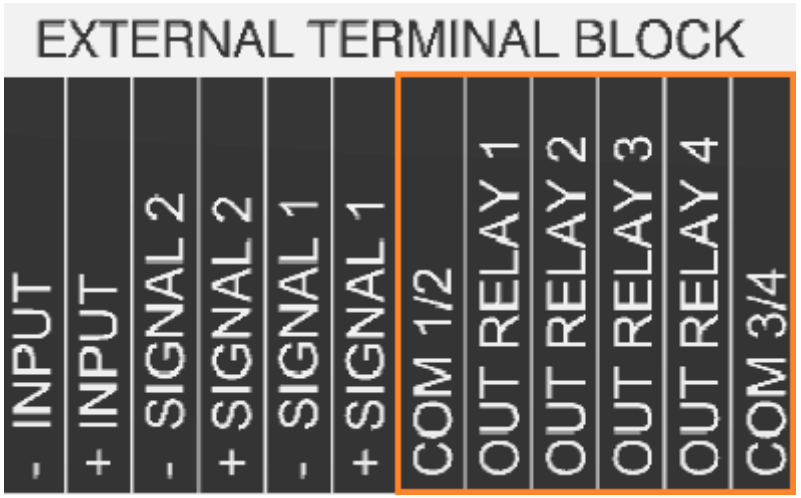
External Terminal Block connections - relays



4 programmable relays, potential free.
Each contact relay can be independently set as normally open or normally closed

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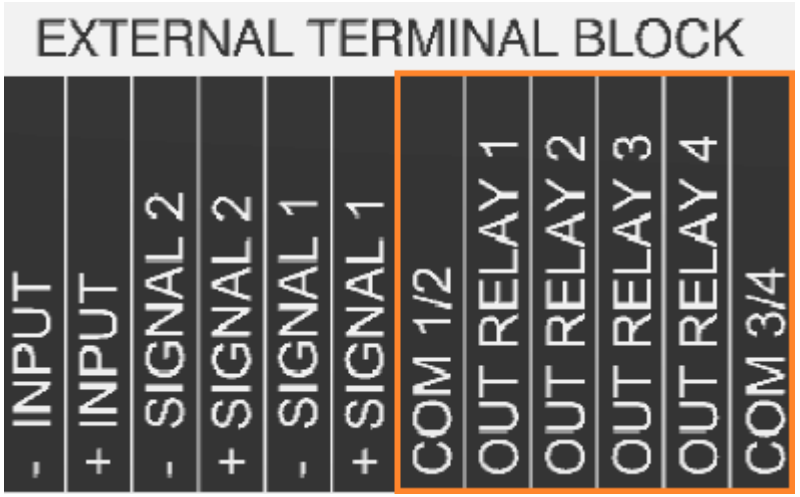
External Terminal Block connections – relays functions



Relay 1	Scrolling	The user can choose one among the below list: - 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: - Result Alarm - Loss of Sample 1 - Loss of Sample 2 - Fault Alarm - Cycle Command
Relay 4		

Result alarm settings
Expressed in full scale %

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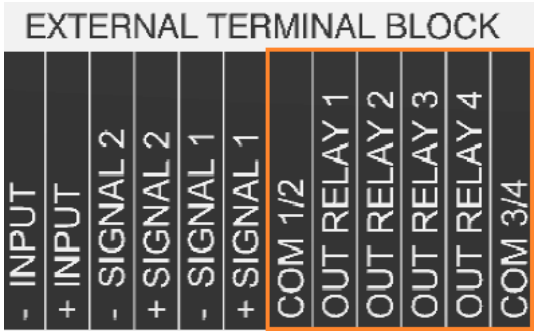
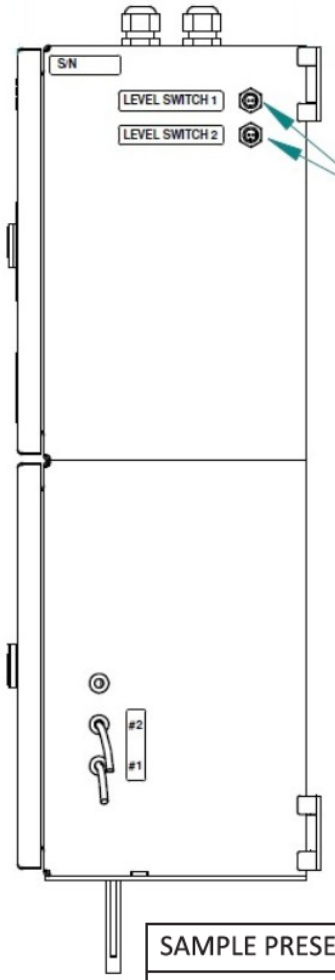
External Terminal Block connections – relays functions

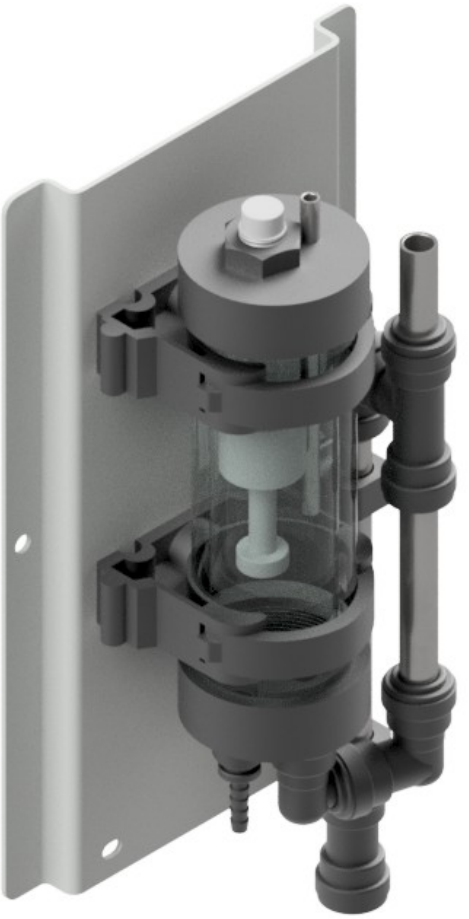


RESULT ALARM	The relay is activated when the last measured value exceeds the set limits. Once the value is within the limits, the alarm is reset.
LOSS OF SAMPLE 1,2	The relay is activated when the contact of the recirculating tank indicates the absence of sample / dilution water.
FAULT ALARM	The relay 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.
CYCLE COMMAND	The relay is activated by a command in the cycle programming and ca be used for external components and accessories (e.g. external sampling pump, end/start of an analysis contact,...).
LATCH/UNLATCH	The 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).
POWER ON	The relay is always active when the analyser is electrically powered.
LOW REAG	The relay is activated when reagent level drops below 5%.
CALIBR ALARM	The relay is activated when there is an out-of-limits calibration alarm.

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

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RS485 connections

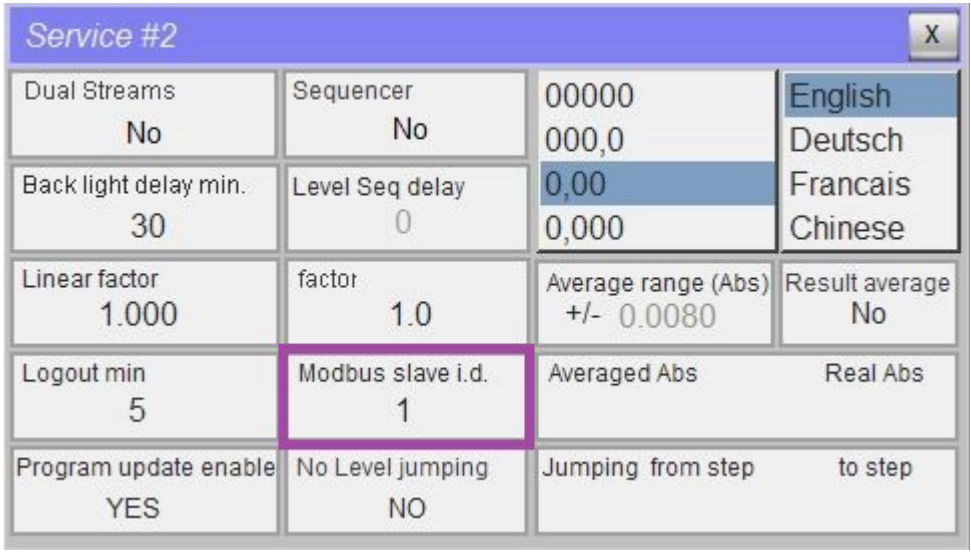
Using this connection a modbus RTU connection can be made.

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	callibration alarm



Modbus slave i.d.	keybord	RS485 modbus node number