ETATRON D.S.

Metering Pumps

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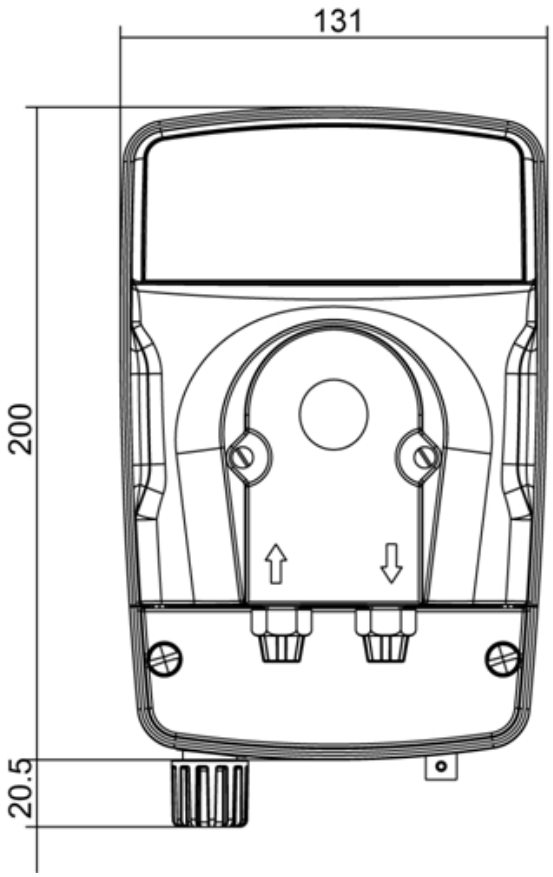

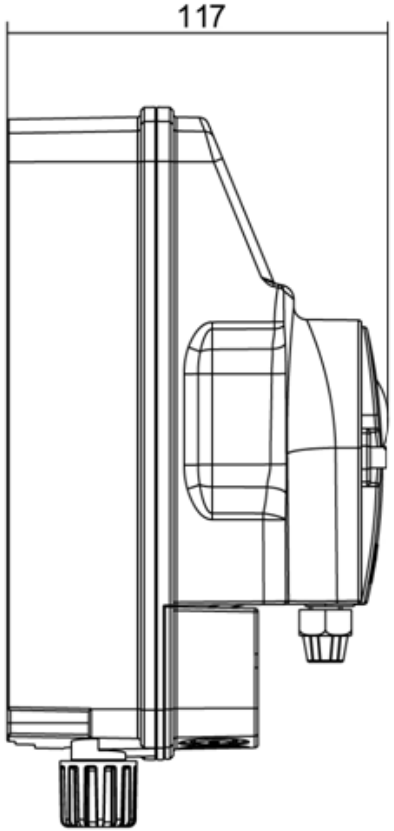

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Type	MAX Flow	MAX Pressure	Net Weight	MAX Overall Dimensions			Absorbed Power	Rotation Speed	Tube Size
				Height	Width	Depth			
	l/h	Bar	Kg	mm	mm	mm	Watts	rpm	mm
ePool	1,5	1,5	1,5	220	131	117	10	20	4.8X8.0
	3,0	1,5	1,5	220	131	117	10	20	4.8X8.0
	2	2	1,5	220	131	117	10	40	4.8X8.0
	3	3	1,5	220	131	117	10	40	4.8X8.0

- ✓ Redox or pH functions
- ✓ Power supply 220-240V
- ✓ Display 2 lines 16 characters with backlight
- ✓ 7 languages available:
  - ✓ Spanish, English, Portuguese, French, German, Dutch, Italian
- ✓ Proportional dosing by time
- ✓ Calibration Single or 2 point

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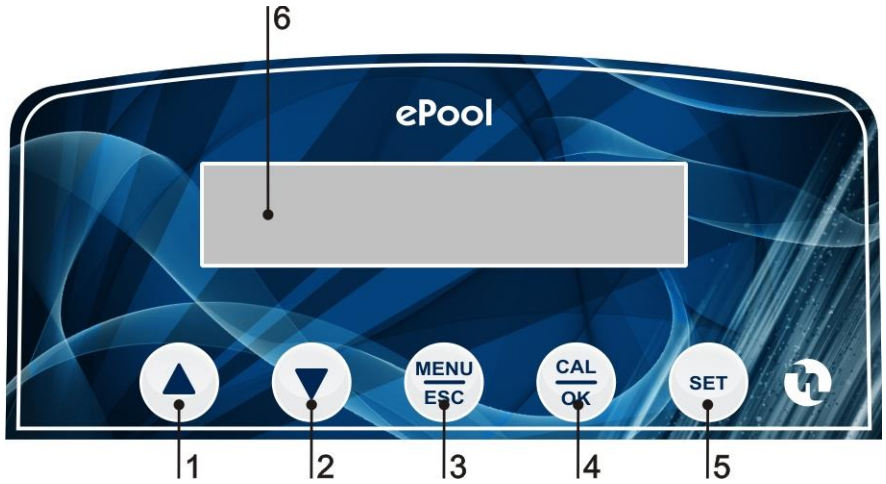
- ✓ Alarm relay output: related to the volume dosed maximum 6 ltr for 4 hours.
- ✓ Connection to the recirculation pump power supply to allow the dosing
- ✓ Level probe connector available or proximity sensor connection
- ✓ Probe quality test at each calibration displayed in percentage: below 25% it is necessary to renew the probe
- ✓ Allowed set point for the pH from 6.8 to 7.8 pH
- ✓ Allowed set point for the Redox from 300 to 900 mV



1 - Button to increase the value

2 - Button to decrease the value

3 - Button MENU/ESC

4 - Button to CAL/OK

5 - Button Setpoint

6 – Digital display

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OVERDOSING ALARM

If the value of the measure is below 5 pH or higher of 9 pH, the display will show a message of error low or high concentration of the acid in the swimming pool. For the REDOX the only type of disinfection is only oxidant direction giving low error readings for values of mV below 100.

STAND-BY

Press and hold at the same time arrow up and arrow down. Repeat the operation to take the ePool out of Standby mode.

PRIMING

With the pump in stand-by at the same time press MENU/ESC and CAL/OK.

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SELECTING THE SET POINT

Press the SET button for 3 seconds until the screen changes to SETPOINT, To change the value at the same time click the arrow up/down buttons to decrease or increase the value. Note that the pH-value can be set is from 6.8 to 7.8 and the ORP from 300 mV to 900 mV

LEVEL ALARM

If the level probe switch is connected to the controller unit, the pump will be stopped and an alarm message will show on the display, “TANK LEVEL LOW.”

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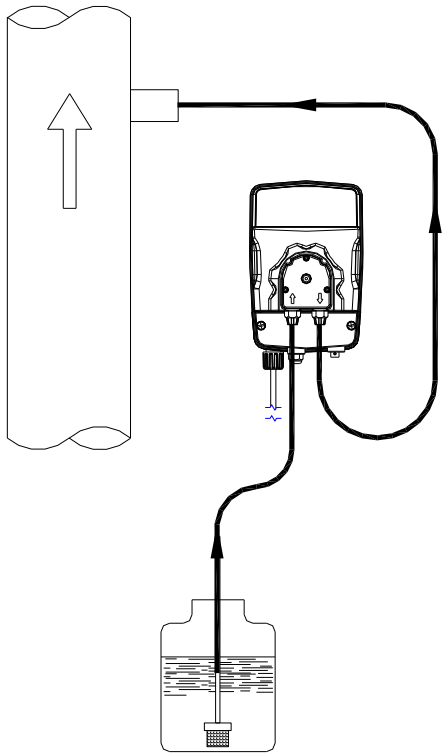

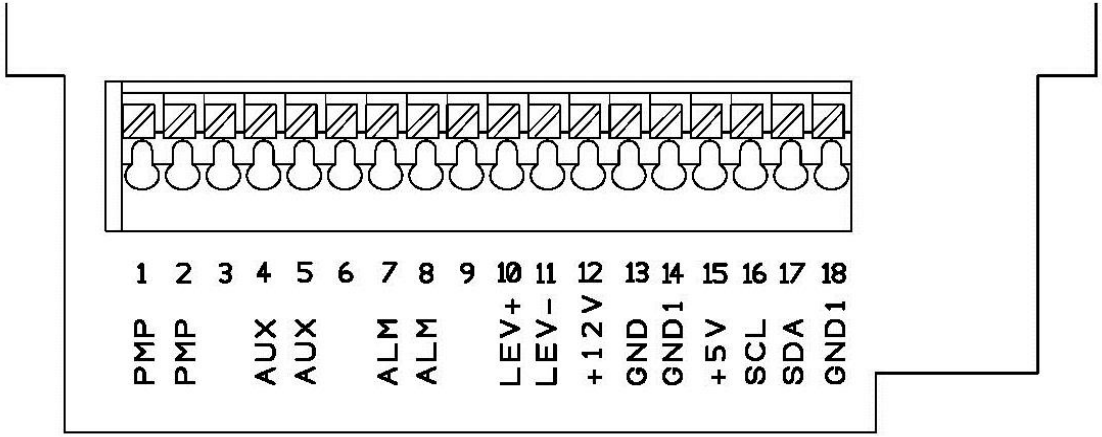

Connectors 1-2 (PMP)= Connection for the recirculation pump. Input at 230V

Connectors 4-5 (AUX)= Output relay. This output is powered at 230V and it works in proportional mode by time.

Connectors 7-8 (ALM)= Alarm relay. Free contact

Connectors 10-11 (LEV)= Level probe connection

Connectors 12-13-14-15-16-17-18 not used

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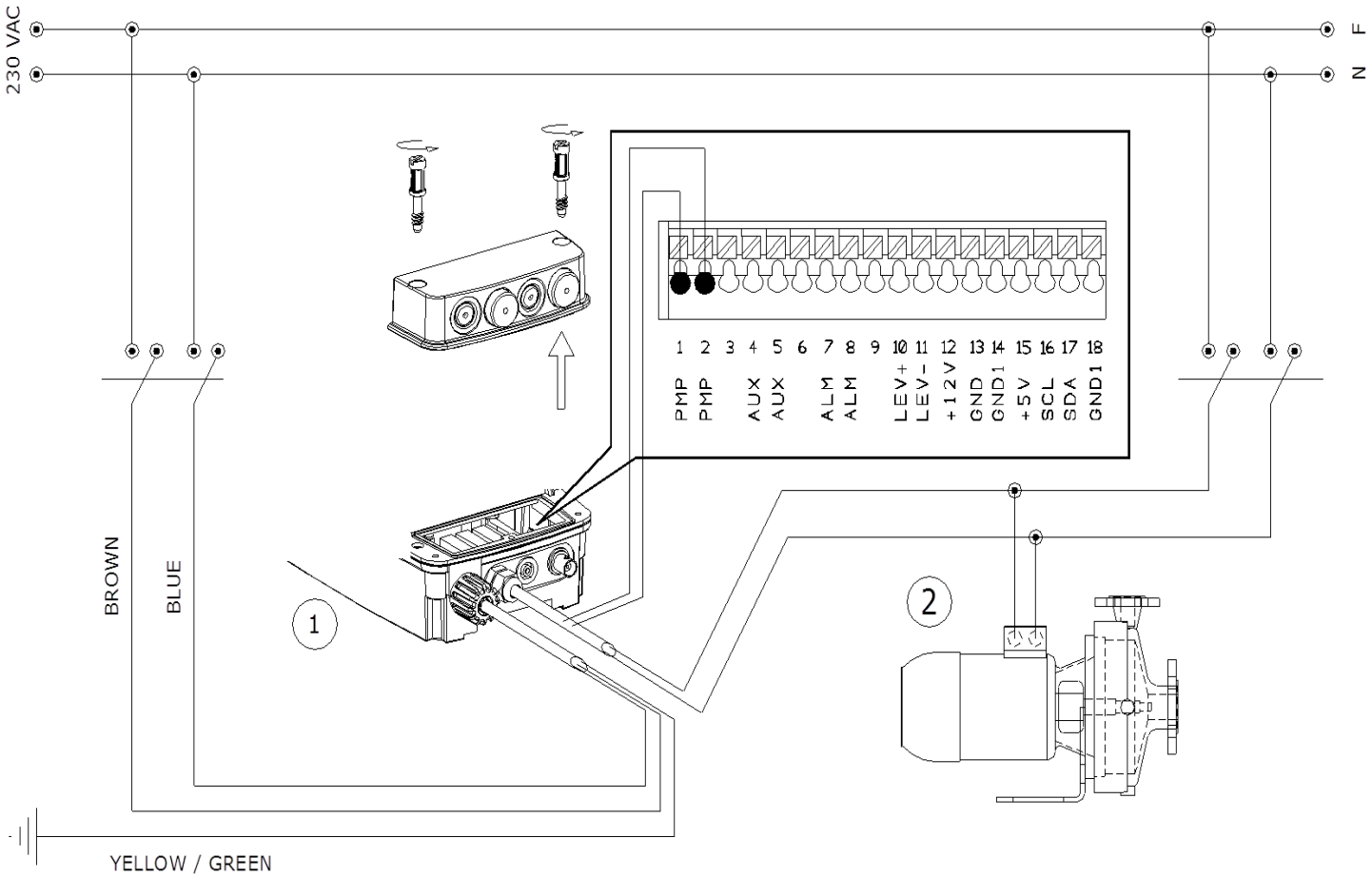

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Push CAL/OK for 5 seconds.

INSERT PROBE IN BUFFER 7 pH, MOVE, LEAVE INSIDE. DO NOT TOUCH IT

CALIBRATING PH 7
7,20PH (90s)

INSERT PROBE IN BUFFER 9 pH, MOVE, LEAVE INSIDE. DO NOT TOUCH IT

CALIBRATING PH 9
9.20PH (90s)

QUALITY: 100%
7,07 pH PRESS OK

QUALITY: 50%
7,07 pH PRESS OK

CALIBRATION ERR.. PH 9
8 PH PRESS OK

Push OK to confirm

Click ESC to exit the calibration menu.

Push OK to confirm each step

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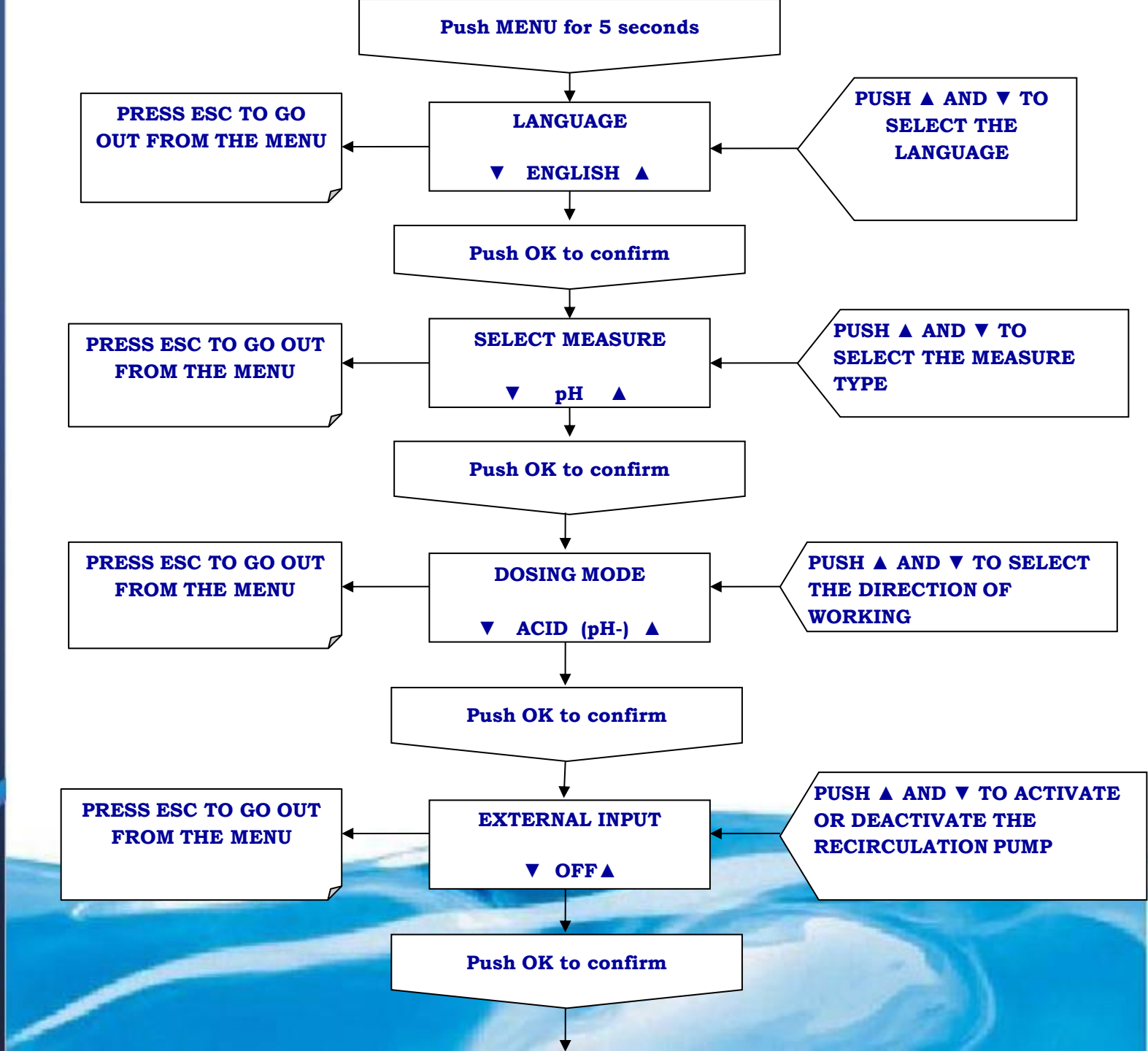

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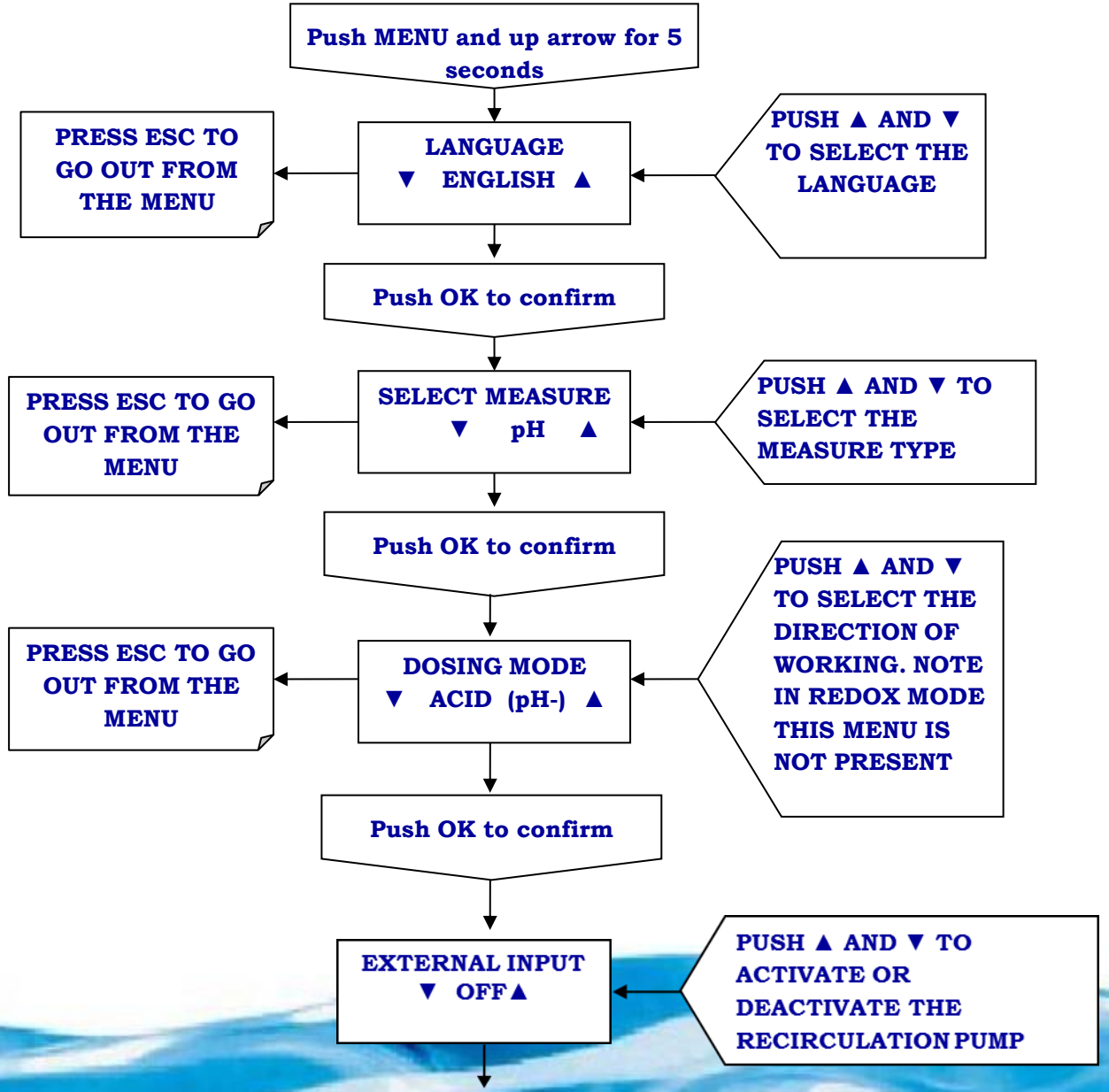
EXPERT MENU



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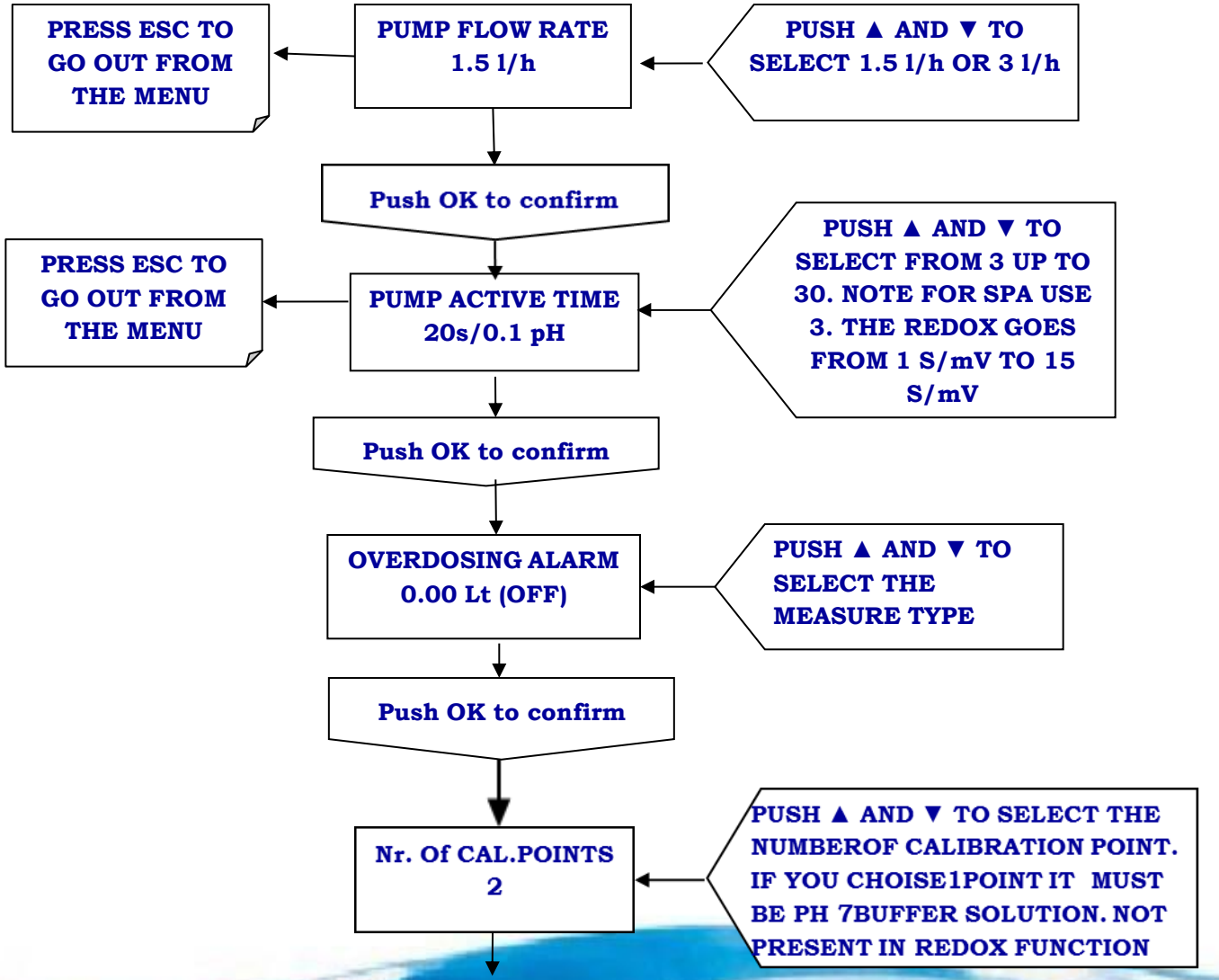
EXPERT MENU



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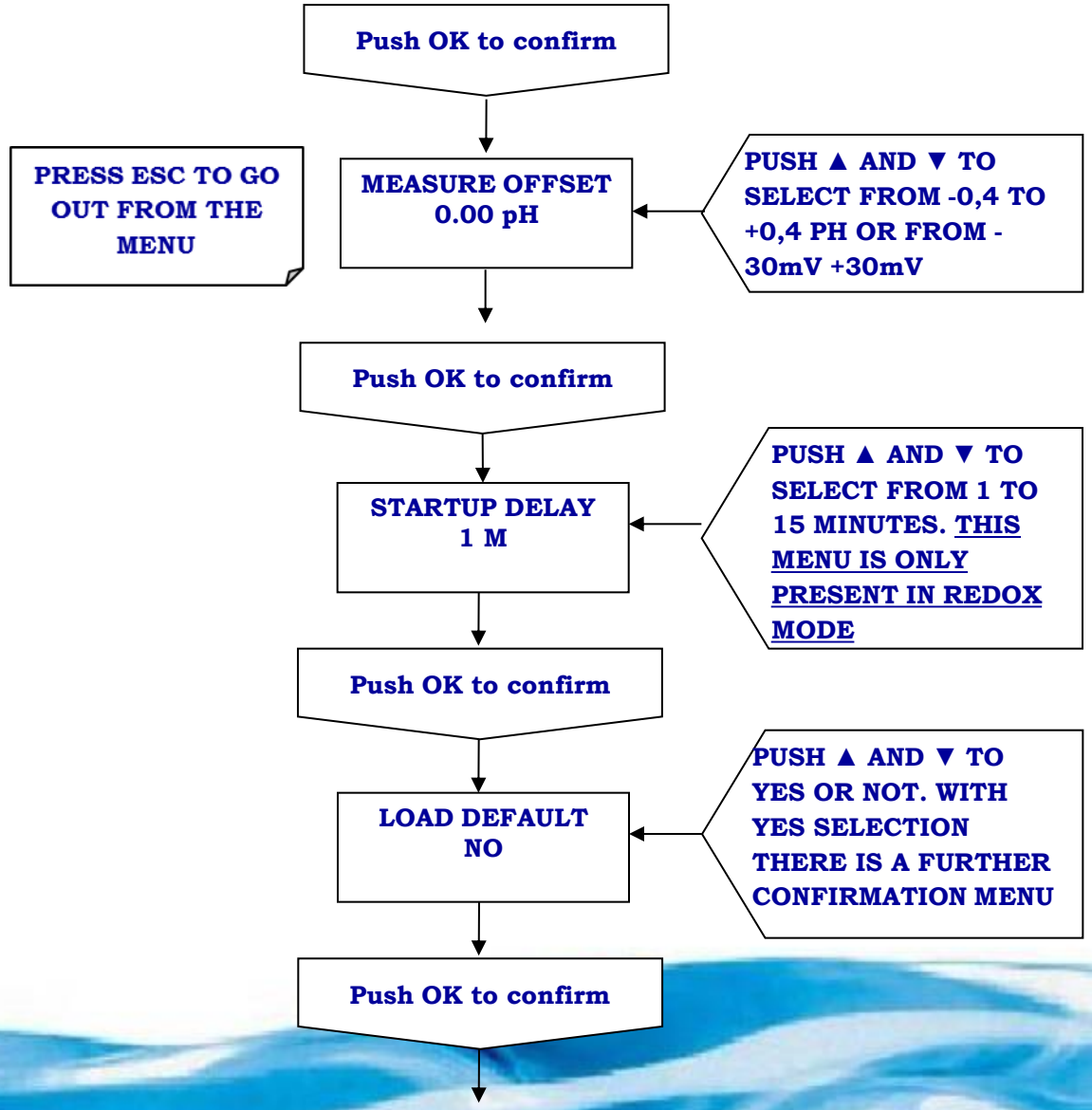
EXPERT MENU



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HOW THE PROPORTIONAL DOSING IS MADE

Ton= (Measure - Setpoint) x 20s/0.1
Toff= 300-Ton

Ton= Dosing time
Toff= Off time

For example, if the Setpoint is 7.2 pH and the Measure is 8.0 pH:
Ton= (8.0 – 7.2) x 20/0.1= 160 seconds
Toff= 300-160= 220 seconds

PROBE TEST

Probe quality	Offset correction for the pH	Offset correction for the redox
100%	from 0 to 0.4 pH	from 0 to 50mV
75%	from 0.5pH to0.7pH	from 51mV to 80mV
50%	from 0.8pH to1.0pH	from 81mV to 115mV
25%	from 1.1pH to1.2pH	from 116mV to 150mV
Calibration Error	Above 1.2pH	Above 150mV

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NEW ELECTRODE IN EPOX 2013

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ORP Specification

ORP Range:	±2000 mV
Operating Temperature:	-5 to 60°C
Reference Impedance:	< 50 KΩ at 25°C
Pressure:	6 Bar (87 psi) at 25°C
Diaphragm:	Ceramic
No. of Junctions:	Single
Reference System:	Ag/AgCl
ORP Storage Solution (in bottle):	Saturated KCl
Reference Electrolyte:	Gel
Shape of Membrane:	Platium Spiral
Diameter:	12 mm
Shaft Length:	120 mm
Shaft Material:	Epoxy
Cable:	Low-Noise Coaxial Cable
Connector Type:	BNC or S7 or S8 (PG 13.5)

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Ph Specification

PH Range:	0 - 12
Operating Temperature:	-5 to 60°C
Slope:	59±3 mV (95-105%) at 25°C
Zero Point:	pH 7
Asymmetry Potential:	0+25 mV
Response Time:	< 10 sec for 95% response from pH 7.00 to pH 4.01
Stability:	< 3 mV drift/24 hours in pH7 buffer
Glass Membrane Impedance:	< 200 MΩ at 25°C
Pressure:	6 Bar (87 psi) at 25°C
Diaphragm:	Ceramic
No. of Junctions:	Single
Reference System:	Ag/AgCl
pH Storage Solution (in bottle):	Saturated KCl
Reference Electrolyte:	Gel
Shape of Membrane:	Spherical
Diameter:	12 mm
Shaft Length:	120 mm
Shaft Material:	Epoxy
Cable:	Low-Noise Coaxial Cable
Connector Type:	BNC or S7 or S8 (PG 13.5)