BL120 and **BL121**

pH/ORP Swimming Pool and Spa Controllers with Built-In Chemical Feed Pumps

The BL120 and BL121 are an all-in-one solution for automatic control of pH and chlorine levels in swimming pool, hot tub, and spa water.

The BL120 and BL121 Swimming Pool Controller is a complete system designed for maintaining swimming pool, hot tub, and spa disinfection water quality. These controllers are available in two configurations. The basic version is the inline model which allows for direct installation of probe and chemical injection fittings into existing piping. A panel mounted version with a bypass flow cell is also available. The bypass flow cell allows for calibration and maintenance of the probe without having to shut down the recirculation pump.

The BL120 and BL121 use a multiparameter digital Hl1036-1802 probe that incorporates pH, ORP, and temperature sensors along with a matching pin. All readings are measured within the probe and the data transferred to the controller by a digital connection. Both a digital connection and matching pin provide for stable, reliable measurements. Without these two components, electrical noise from recirculation pumps and ground loops can interfere, causing erratic readings and premature probe failure.

These controllers have two built-in peristaltic chemical feed pumps that are proportionally controlled with adjustable flow rates. One of the pumps is used to dose acid while the other is used to dose chlorine. The effectiveness of the available chlorine, as determined by ORP, is inversely related to the water's pH value. A pool with a fixed concentration of chlorine

will show a decrease in ORP as the pH of the water increases. The BL120 and BL121 utilize a dosing consent feature that will not dose chlorine until the pH value is first corrected, since it is possible to have a low ORP value even though there is sufficient chlorine. The dosing consent feature will prevent chemical wastage and having a higher chlorine concentration level than desired.

For compliance monitoring, BL120 and BL121 have a built-in datalogger. Measurement readings are logged every 10 seconds with a new log starting for each new day or when the instrument is calibrated. Logged data include pH, ORP, and temperature values, last calibration data, setup configuration, and any event data.

For BL121 models, three 4-20 mA analogout puts are available for users that wish to connect to an external chart recorder or datalogger to monitor any of the three measured parameters. The outputs are scalable, offering increased flexibility and better resolution as needed.

Additional features of the BL121 include LED indicators for dosing, meter status and service, real-time graph display, programmable alarms, and password protection.

These controllers are an all-in-one solution for automatic control of pH and chlorine levels in swimming pool, hot tub, and spa water.









Three Display Modes

The versatile display of the BL120 and BL121 allows for three display modes. The LCD can display all three parameters at one time, a 3-second cycle of single parameters, or a real-time plot screen with options for parameter selection, zooming, and log recall.



Peristaltic Dosing Pumps

BL120 and BL121 are equipped with two peristaltic dosing pumps with replaceable chemical resistant tubing. A problem that occurs with chlorine dosing pumps is the formation of chlorine gas. When using a diaphragm pump, chlorine gas can collect in the pump head and cause the pump to lose prime; the buildup of chlorine gas is not a problem with peristaltic pumps that use rollers and tubing.

Automatic Proportional Pump Control

BL120 and BL121 feature proportionally controlled dosing pumps. Based on the sensitivity of the process to chemical addition, these controllers allow the user to adjust a proportional band. This setting determines the amount of time that the pumps are dosing as a percentage of the deviation from the set point. For example, a large body of water will use a small proportional band; having a small band (e.g., 0.1 pH) will ensure the pumps are dosing more often when the reading is close to the set point. For smaller bodies of water such as hot tubs or spas, it is more useful to set a larger proportional band (e.g.,1.0 pH); when the reading is close to the set point, the amount of time that the dosing pump is on is minimal to avoid large swings of pH or ORP. This valuable feature allows for very fine control in maintaining the desired set point.

Adjustable Flow Rate

The flow rate from the dosing pumps is adjustable from 0.5 to 3.5L/h. Larger bodies of water require more chemical to be dosed than small bodies since it takes more chemical to see a change in the reading. The adjustable flow rate, like the proportional band, allows for better control in maintaining a desired set point.

ORP (Chlorine) Dosing Consent

Both pH and ORP meters are commonly used with swimming pools. With chlorine disinfection there is an inverse relationship between pH and ORP. As the pH level increases, the ORP level decreases. The BL120 and BL121 utilize a dosing consent feature that will not dose chlorine until the pH value is first corrected since it is possible to have a low ORP value even though there is sufficient chlorine. The dosing consent feature prevents wastage of chemicals and avoids a higher than necessary chlorine concentration.

Acid and Chlorine Tank Level Inputs

The BL120 and BL121 allow for a connection to an optional level controller. This input is used to disable the dosing pumps when there is no chemical left in the reservoir tank.

Hold Input

It is possible to connect a flow switch mounted in-line or a mechanical relay that is connected to the recirculation pump power source to the hold input of these controllers. With no flow or when no power is applied to the recirculation pump, the hold circuit will disable the dosing pumps. This will prevent any dosing of chemical when there is no movement of water in the system.



Programmable Alarm System

These controllers allow users to enable or disable the low and high level of alarms for all parameters: pH, ORP, and temperature. When an alarm is activated, all dosing will stop. The alarm system also offers overdosing protection in that if the value is not corrected within a specified time interval then the meter will go into alarm status.



Multicolored LED Indicators

BL120 and BL121 offers multiple LED indicators for status, servicing, and pump operation. The STATUS LED changes color based on operational state; a green LED means the water is within the desired parameter ranges, a yellow LED means that the controller needs attention, and a red LED identifies a problem in the system such as high and low pH, ORP and/or temperature readings. The SERVICE LED indicates any alarms and process errors experienced by the controller.



BL121 Analog Outputs

The BL121 controller offers three 4-20 mA outputs. Each output can be disabled or connected to an external recording device. Each of the three measured parameters (pH, ORP, and temperature) can be assigned to an analog output where the current signal will be proportional to the measured value. For more flexibility and better resolution, the analog output can be scaled; users can define any two points within a parameter range to correspond to the analog output span. For example, the controller assigns 0 pH to 4 mA and 14 pH to 20 mA as a default. The user can adjust the pH range to assign pH 6 to 4 mA and pH 8 to 20 mA. This adjustment allows better resolution in the range of interest.







Automatic Logging

The readings for each parameter are automatically logged every 10 seconds. A new log is started each time the instrument is calibrated or at the start of a new day. Logged data include pH, ORP, and temperature values, last calibration data, setup configuration, and any event data.



USB Connectivity

For review and storage the users can easily transfer data to a PC using a flash drive and the USB port.



Password Protected

BL120 and BL121 controllers feature a password protection solution that offers restricted access to calibration, setup, and review of logged data. The password can be set and enabled/disabled during general setup of the instrument.





HI1036-1802 Multiparameter Digital pH, ORP, Temperature Probe

The HI1036-1802 is a digital combined probe that measures pH, ORP, and temperature. This probe also incorporates a potential matching pin. The matching pin is considered the "earth ground" connection and is used to prevent ground loop effects from causing erratic readings and damage to the system.

The pH glass has been chosen to produce stable quick equilibration even in low conductivity waters. Additionally, the pH sensor is designed to produce a mV value near pH 4 (not pH 7 like typical pH sensors) should it stop working. A broken pH electrode that produces a mV value near pH 7 would produce an alarm state and disable any pump activated.

The ORP sensing surface is a large smooth surfaced platinum band that encircles the circumference of the temperature probe. It is referenced to Ag/AgCI reference electrode (3.5M KCI).

The ORP and pH sensors and reference electrode use a differential measurement technique which is known to stay in service and provide accurate measurements adverse conditions that may cause conventional pH probes to produce erroneous measurements. HI1036-1802 probe with its differential amplifiers greatly reduces inaccuracies caused by ground loops which may exist between process and instrument With the differential grounds. technique, a ground loop current will flow through the low impedance path of the matching pin thus providing immunity to the measurement signals. Additionally the probe converts these measurements to a digital signal to eliminate noise and static due to high impedance signals carried by cable.

The HI1036-1802 with the BL120 or BL121 pool controller helps to promote the health and safety of pool and spa water.



Multiple Configurations
BL120 and BL121 swimming pool
controllers are available in one
of two configurations. The basic
version is the in-line model which
allows for direct installation of
the probe and chemical injection
fittings into existing piping.

A panel mounted version of these

controllers with a bypass flow cell is also available. The bypass flow cell allows for calibration and maintenance of the probe without having to shut down the

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Additional Specifications Alarm Relay Output (1) SPDT 5A/230 VAC; activated by pH/ORP/temperature selectable alarm conditions BL121 Analog Outputs (3) 4 to 20 mA, sourcing, configurable; output impedance < 500 Ohm; accuracy < 0.5 % PS; galvanically isolated up to 50 V relative to earth ground Auxillary Inputs (3) love level in acid/base tank (contact open); bid linput (contact open) bid linput (contact open) Digital Probe Input (1) galvanic isolated digital input HIL036-1802 pH/ORP/temperature/matching pin combined probe with DN waterproof connector Power Supply 100 – 240 VAC Power Consumption 10 VA Environment 0.10 50°C (22-122°P); max 95% RH non-condensing Dimensions 245 x.188 x.55 mm (73 mm with pumps); 9.6 x.7.4 x.2.2° (2.9° with pumps) Weight 1700 g (60 oz.) In-Line Configuration BL120-10p1/ORP/temperature Pool Controller is supplied with HIL036-1802 pH/ORP/temperature digital probe with matching pin. 50 mm probe saddle (1), Hitting for probe, chemical injectors (2), peristalfic tubing (2), 5 m of injection tubing, aspiration filter (2), pH / 201 buffer sachets, 20mL (3), pH / 401 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration Bl.120-20 pH/ORP/temperature pool controller with flow cell is supplied with HIL036-1802 pH/ORP/temperature digital probe with matching pin. 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristalfic tubing (2), 5 m of injection tubing, aspiration filter (2), pH / 701 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration Bl.120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, Hill036-1802 pH/ORP/temperature digital probe with matching pin. 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), 50 mm saddle for injectors (2), 50 mm saddle for injectors (2), 50 mm saddle fo	Storage Interface USB GLP pH/ORP calibration information including date and time for pH/ORP sensors Alarm Relay Output (1) SPDT 5A/230 VAC; activated by pH/ORP/temperature selectable alarm conditions BL121 Analog Outputs (3) 4to 20 mA, sourcing, configurable; output impedance s 500 Ohm; accuracy < 0.5 % FS; galvanically isolated up to 50 V relative to earth ground Auxiliary Inputs (3) 6w level in acid/base tank (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); but put the probe input (1) galvanic isolated digital input HII.036-1802 pH/ORP/temperature/matching pin combined probe with DIN waterproof connector Power Supply 100 – 240 VAC Power Consumption 10 VA Environment 01o 50°C (32-122°F); max 95% RH non-condensing Dimensions 245 x 188 x 55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2" (2.9" with pumps) Weight 1700 g (60 oz.) In-Line Configuration BL120-10 pH/ORP/Temperature Pool Controller is supplied with HII.036-1802 pH/ORP/temperature digital probe with matching pin, 50 m probe achieved in ph/70; buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manue BL121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HII.036-1802 pH/ORP/temperature digital probe with matching pin, 50 m probe addle (1), fitting for probe, chemical injectors (2), beristalitic tubing (2), 5 m injection tubing, aspiration filter (2), pH 201 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manue BL121-10 pH/ORP/Temperature Pool Controller with flow cell is supplied with panel mounted flow cell, HII.036-1802 pH/ORP/temperature probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristalitic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 201 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3) power cable an		Alarm System	intuitive alert system based on LEDs; alarm filtering options; alarm relay control based on user setup
Additional Specifications Alarm Relay Output (1) SPOT 5A/230 VAC, activated by pt/VORP/remperature selectable alarm conditions BL121 Analog Outputs (3) 4t 0.20 m.k. sourcing, configurable: output impedance 4.500 Ohm; accuracy < 0.5 % PS; galvanically isolated up to 50 V relative to earth ground Auxiliary Inputs (3) low level in acid/base tank (contact open); low level in chlorine tank (contact open) hold input (contact open) by galvanic isolated digital input H11036-1802 pH/ORP/temperature/matching pin combined probe with DN waterproof connector Power Supply 10 – 240 VAC Power Consumption 10 VA Environment 0 to 50°C (22-122°F); max 95% RH non-condensing Dimensions 245 x 188 x 55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2° (2.9° with pumps) Weight 1700 g (60 oz.) In-Line Configuration BL120-10 pH/ORP/Temperature Pool Controller is supplied with H11036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristallit cubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20ml (3), 47 of the stockholic sachial cubing pin, 50 mm probe saddle (1), fitting for probe chemical injectors (2), beneficial for injectors (2), peristallit cubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20ml (3), 470 m test solution sachet (3), power cable and instruction manual. User Panel Flow Cell Configuration B120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, H11036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristallit cubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20ml. (3), pH 4.01 buffer sachets, 20ml. (3), 470 mV test solution sachets (3), power cable and instruction manual. Vser Panel Flow Cell Configuration B120-200 pool controller injector, 1/2° thread B120-201 p	Additional Specifications Alarm Relay Output (1) SPDT 5A/230 VAC; activated by pH/ORP/temperature selectable alarm conditions BL121 Analog Outputs (3) 4 to 20 mA, sourcing, configurable; output impedance 4 500 Ohm; accuracy < 0.5 % FS; galvanically isolated up to 50 V relative to earth ground Auxiliary Inputs (3) low level in acid/base tank (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold input (contact open); low level in chlorine tank (contact open); hold (contact open); low level in chlorine tank (contact open); low level in chlorine tank (contact open); hold		Password Protection	setup, calibration and log recall options features are password protected
Alarm Relay Output (1) SPDT 5A/230 VAC, activated by pH/ORP/temperature selectable alarm conditions BL121 Analog Outputs (3) dayourcing, configurable: output impedance s 500 Ohm; accuracy < 0.5 % PS; galvanically isolated up to 50 V relative to earth ground Auxiliary Inputs (3) low level in acid/base tank (contact open); low level in chlorine tank (contact open); hold input (contact open) Digital Probe Input (1) galvanic isolated up to 50 V relative to earth ground in lorine tank (contact open); hold input (contact open) Power Supply 100 – 240 VAC Power Consumption 10 VA Environment 0 to 50°C (32-122°F); max 95% RH non-condensing Dimensions 245 x 188 x 55 mm (73 mm with pumps); 9.5 x 7.4 x 2.2° (2.9° with pumps) Weight 1700 g (60 ez.) In-Line Configuration Bl.120-10 pH/ORP/Temperature Pool Controller is supplied with H1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristatlic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl.12-10 pH/ORP/Temperature Pool Controller with analog output is supplied with H11036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristatlic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration Bl.120-20 pH/ORP/temperature pool controller with flow cell as supplied with panel mounted flow cell, H1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV te	Adarm Relay Output (1) SPDT 5A/230 VAC: activated by pH/ORP/temperature selectable alarm conditions BL121 Analog Outputs (3) 4 to 20 mA, sourcing, configurable: output impedance 4 500 Ohm; accuracy < 0.5 % PS; galvanically isolated up to 50 V relative to earth ground Auxiliary Inputs (3) low level in acid/base tank (contact open); low level in chlorine tank (contact open); low level tank (contact open); low level tank (contact open); low level tank		Storage Interface	USB
Alam Relay Output (1) SPOT SAY 23 UNCL, activated by pPFOMP/remperature selectable alam conditions BL121 Analog Outputs (3) 4 to 20 Pm. Sourcing, or onliginarible coutput impedance \$500 Ohm, accuracy < 0.5 % PS; galvanically isolated up to 50 V relative to earth ground Auxiliary Inputs (3) Iow level in chlorine tank (contact open); hold input (contact open) Digital Probe Input (1) galvanic Isolated digital input HI1036-1802 pH/ORP/temperature/matching pin combined probe with DIN waterproof connector Power Supply 100 – 240 VAC Power Consumption 10 VA Environment 0 to 50°C (32-122°F); max 95% RH non-condensing Dimensions 245 x 188 x 55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2° (2.9° with pumps) Weight 1700 g (60 oz.) In-Line Configuration BL120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), inting for probe, chemical injections (2), 50 mm saddle for injections (2), peristalitic fubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20ml (3), aph 4.01 buffer sachets (3), power cable and instruction manual. BL121-10 pH/ORP/Temperature Pool Controller with flow cell is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin. 50 mm probe saddle (1), ifting for probe, chemical injections (2), 5 mm saddle for injection tubing, aspiration filter (2), pH 701 buffer sachets, 20ml (3), pH 4.01 buffer sachets, 20ml (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration BL120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin. 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 5 mm saddle for injectors (2), peristalic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20ml (3), pH 4.01 buffer sachets, 20ml (3), 470 mV test solution sachets (3), power cable and inst	Specifications Alarm Relay Outputs (1) SPU1 SAY/230 VAL: activated by pH/OutPriceriperature selectable plant monotions		GLP	pH/ORP calibration information including date and time for pH/ORP sensors
BL121 Analog Outputs (3) Spalvanically isolated up to 50 V relative to earth ground Auxiliary inputs (3) low level in acid/base tank (contact open); low level in chlorine tank (contact open); hold input (contact open) Digital Probe Input (1) galvanic Isolated dipital input HI1036-1802 pH/ORP/temperature/matching pin combined probe with DIN waterproof connector Power Supply 100 – 240 VAC Power Consumption 10 VA Environment 0 to 50°C (32-122°F); max 95% RH non-condensing Dimensions 245 x 188 x 55 mm (73 mm with pumps): 9.6 x 7.4 x 2.2° (2.9° with pumps) Weight 1700 g (60 oz.) In-Line Configuration Bl.120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl.121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration Bl.120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20mL (3), HA 01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl.121-20 pH/ORP/temperature pool controller with flow cell and analog output its supplied with panel mo	BL121 Analog Outputs (3) Auxiliary Inputs (3) Iow level in acid/base tank (contact open); low level in chlorine tank (contact open); low level tank (contact open); low level tank (contact open); low low level tank (contact open); low		Alarm Relay Output (1)	SPDT 5A/230 VAC; activated by pH/ORP/temperature selectable alarm conditions
Digital Probe Input (1) galvanic isolated digital input HI1036-1802 pH/ORP/temperature/matching pin combined probe with DIN waterproof connector Power Supply 100 – 240 VAC Power Consumption 10 VA Environment 0 to 50°C (32-122°F); max 95% RH non-condensing Dimensions 245 x 188 x 55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2° (2.9° with pumps) Weight 1700 g (60 oz.) In-Line Configuration Bl.120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20mL (3), 47 do m Vets stolution sachets (3) nower cable and instruction manual. Bl.121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for	Digital Probe Input (1) galvanic isolated digital input HI1036-1802 pH/ORP/temperature/matching pin combined probe with DIM waterproof connector Power Supply 100 – 240 VAC Power Consumption 10 VA Environment 0 to 50°C (32-122°F); max 95% RH non-condensing Dimensions 245 x 188 x 55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2° (2.9° with pumps) Weight 1700 g (60 o.2) In-Line Configuration BL120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration pH 701 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manue BL121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe watching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m injection tubing, aspiration filter (2), pH701 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration BL120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubin S m of injection tubing, aspiration filter (2), pH701 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2),	Specifications	BL121 Analog Outputs (3)	
Ordering Information Ordering Information Ordering Information Bl.120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (3), pH 4.01 buffer sachets, 20mL (3), pD 4.01 buffer sachets,	Uigrtal Probe input (1) with DIN waterproof connector Power Supply 100 – 240 VAC Power Consumption 10 VA Environment 0 to 50°C (32-122°F); max 95% RH non-condensing Dimensions 245 x 188 x55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2" (2.9" with pumps) Weight 1700 g (60 oz.) In-Line Configuration Bl 120-10 pH/ORP/Temperature Pool Controller is supplied with HIL036-1802 pH/ORP/temperature digital probe with matching pin, 50 saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration pH 701 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manue Bl 121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HIL036-1802 pH/ORP/temperature digital probe w matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sachets (2) power cable and instruction manual. User Panel Flow Cell Configuration Bl 120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HIL036-1802 pH/ORP/temperature probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), born saddle for injectors (2), born saddle for injectors (2), born saddle for injectors (2), 50 mm saddle for in		Auxiliary Inputs (3)	low level in acid/base tank (contact open); low level in chlorine tank (contact open); hold input (contact open)
Power Consumption 10 VA Environment 0 to 50°C (32-122°F); max 95% RH non-condensing Dimensions 245 x 188 x 55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2" (2.9" with pumps) Weight 1700 g (60 oz.) In-Line Configuration B1120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. B1121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration B1120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. B1120-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. B1120-200 pool controller	Power Consumption 10 VA Environment 0 to 50°C (32-122°F); max 95% RH non-condensing Dimensions 245 x 188 x 55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2" (2.9" with pumps) Weight 1700 g (60 oz.) In-Line Configuration Bl.120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration pH 701 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl.121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe w matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m injection tubing, aspiration filter (2), pH 701 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration Bl.120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 power cable and instruction manual. Bl.121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors		Digital Probe Input (1)	
Environment 0 to 50°C (32-122°F); max 95% RH non-condensing Dimensions 245 x 188 x 55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2" (2.9" with pumps) Weight 1700 g (60 oz.) In-Line Configuration Bl120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 701 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration Bl120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manu	Environment 0 to 50°C (32-122°F); max 95% RH non-condensing Dimensions 245 x 188 x 55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2" (2.9" with pumps) Weight 1700 g (60 oz.) In-Line Configuration BL20-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual BL12-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/Temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (power cable and instruction manual. User Panel Flow Cell Configuration BL120-20 pH/ORP/Temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/Temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/Temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injector peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 47 solution sachets (3), power cable and instruction manual. BL121-20 pH/ORP/Temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injector peristaltic tu		Power Supply	100 – 240 VAC
Dimensions 245 x188 x55 mm (73 mm with pumps); 9.6 x 7.4 x2.2" (2.9" with pumps) Weight 1700 g (60 oz.) In-Line Configuration BL120-10 pH/DRP/Temperature Pool Controller is supplied with HII036-1802 pH/DRP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL12-10 pH/DRP/Temperature Pool Controller with analog output is supplied with HII036-1802 pH/DRP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration BL120-20 pH/DRP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HII036-1802 pH/DRP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL121-20 pH/DRP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HII036-1802 pH/DRP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL120-200 pool controller aspiration filter BL120-201 pool co	Dimensions 245 x 188 x 55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2" (2.9" with pumps) Weight 1700 g (60 oz.) In-Line Configuration Bl.120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 mof injection tubing, aspiration pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), pH 4.07 mV test solution sachets (3), power cable and instruction manual Bl.121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe w matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (power cable and instruction manual. User Panel Flow Cell Configuration Bl.120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 power cable and instruction manual. Bl.121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injector peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl.120-200 pool controller aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl.120-201 pool controller injector, 1/2" thread Bl.120-202 aspiration and dispensing tubi		Power Consumption	10 VA
Weight 1700 g (60 oz.) In-Line Configuration BL120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), pV dest solution sachets (3), power cable and instruction manual. BL121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/Temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration BL120-20 pH/ORP/Temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL120-200 polocontroller aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (Weight 1700 g (60 oz.) In-Line Configuration Bl120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl121-10 pH/ORP/Temperature Pool Controller with haalog output is supplied with HI1036-1802 pH/ORP/temperature digital probe w matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (power cable and instruction manual. User Panel Flow Cell Configuration Bl120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubins 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injector peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl120-200 pool controller aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), PH 4.01 buffer sachets, 20mL (3), 47 solution sachets (3), power cable and instruction manual. Bl120-201 pool controller injector, 1/2" thread Bl120		Environment	0 to 50°C (32-122°F); max 95% RH non-condensing
In-Line Configuration Bl.120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl.121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration Bl.120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl.121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl.120-200 pol controller aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. Bl.120	In-Line Configuration BL120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration pH 701 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manue BL121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe w matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (power cable and instruction manual. User Panel Flow Cell Configuration BL120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubin 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sach power cable and instruction manual. BL121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injector peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 47 solution sachets (3), power cable and instruction manual. BL120-200 pool controller aspiration filter BL120-201 pool controller aspiration filter BL120-202 aspiration and dispensing tubing (5m) BL120-402 flow cell tubing (5m) BL120-402 flow cell tubing (5m)		Dimensions	245 x 188 x 55 mm (73 mm with pumps); 9.6 x 7.4 x 2.2" (2.9" with pumps)
BL120-10 pH/ORP/Temperature Pool Controller is supplied with HII1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. User Panel Flow Cell Configuration BL120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH7.01 buffer sachets, 20mL (3), pH4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL120-200 pool controller aspiration filter BL120-201 pool controller peristaltic pump tubing (5m) BL120-402 flow cell tubing (5m) BL120-402 flow cell tubing (5m) BL120-163 fittings Kit	BL120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration pH 701 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual BL121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe w matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (power cable and instruction manual. User Panel Flow Cell Configuration BL120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 ph/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sachets power cable and instruction manual. BL121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injector peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL120-200 pool controller aspiration filter BL120-201 pool controller peristaltic pump tubing Kit (2) BL120-402 flow cell tubing (5m		Weight	1700 g (60 oz.)
User Panel Flow Cell Configuration BL120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL120-200 pool controller aspiration filter BL120-201 pool controller injector, 1/2" thread BL120-202 aspiration and dispensing tubing (5m) BL120-300 pool controller peristaltic pump tubing Kit (2) BL120-402 flow cell tubing (5m) BL120-163 fittings Kit for 63 mm pipe diameter (saddle for injectors (2), saddle for probe (1))	User Panel Flow Cell Configuration BL120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubin 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sach power cable and instruction manual. BL121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injector peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 47 solution sachets (3), power cable and instruction manual. BL120-200 pool controller aspiration filter BL120-201 pool controller injector, 1/2" thread BL120-202 aspiration and dispensing tubing (5m) BL120-402 flow cell tubing (5m) BL120-402 flow cell tubing (5m) BL120-163 fittings Kit for 63 mm pipe diameter (saddle for injectors (2), saddle for probe (1))	_	BL120-10 pH/ORP/Temperature Pool Controller is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL121-10 pH/ORP/Temperature Pool Controller with analog output is supplied with HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3),	
peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL120-200 pool controller aspiration filter BL120-201 pool controller injector, 1/2" thread BL120-202 aspiration and dispensing tubing (5m) BL120-300 pool controller peristaltic pump tubing Kit (2) BL120-402 flow cell tubing (5m) BL120-163 fittings Kit for 63 mm pipe diameter (saddle for injectors (2), saddle for probe (1))	peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 47 solution sachets (3), power cable and instruction manual. BL120-200 pool controller aspiration filter BL120-201 pool controller injector, 1/2" thread BL120-202 aspiration and dispensing tubing (5m) BL120-300 pool controller peristaltic pump tubing Kit (2) BL120-402 flow cell tubing (5m) BL120-163 fittings Kit for 63 mm pipe diameter (saddle for injectors (2), saddle for probe (1))		User Panel Flow Cell Configuration BL120-20 pH/ORP/temperature pool controller with flow cell is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/temperature digital probe with matching pin, 50 mm probe saddle (1), fitting for probe, chemical injectors (2), 50 mm saddle for injectors (2), peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual. BL121-20 pH/ORP/temperature pool controller with flow cell and analog output is supplied with panel mounted flow cell, HI1036-1802 pH/ORP/	
Accessories BL120-201 pool controller injector, 1/2" thread BL120-202 aspiration and dispensing tubing (5m) BL120-300 pool controller peristaltic pump tubing Kit (2) BL120-402 flow cell tubing (5m) BL120-163 fittings Kit for 63 mm pipe diameter (saddle for injectors (2), saddle for probe (1))	Accessories BL120-201 pool controller injector, 1/2" thread BL120-202 aspiration and dispensing tubing (5m) BL120-300 pool controller peristaltic pump tubing Kit (2) BL120-402 flow cell tubing (5m) BL120-163 fittings Kit for 63 mm pipe diameter (saddle for injectors (2), saddle for probe (1))		peristaltic tubing (2), 5 m of injection tubing, aspiration filter (2), pH 7.01 buffer sachets, 20mL (3), pH 4.01 buffer sachets, 20mL (3), 470 mV test solution sachets (3), power cable and instruction manual.	
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BL120-163 fittings Kit for 63 mm pipe diameter (saddle for injectors (2), saddle for probe (1))	BL120-163 fittings Kit for 63 mm pipe diameter (saddle for injectors (2), saddle for probe (1))	Accessories		
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