TSL.882 / 884

IR sensor tap

+
THE
SPLASH
LAB

contents

TSL.882 220mm IR sensor tap – mains power
TSL.884 150mm IR sensor tap – mains power

Read and save these instructions

WARNING ⚠️

To reduce the risk of fire, electric shock or injury to persons, observe the following:

+ Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer (see back page for more details).

+ Replace batteries only with the same type and rating of batteries.

+ Disconnect power supply before performing any maintenance on product.

+ Ensure wiring is installed correctly before connecting to power supply (see installation instructions, page 11, for details).

+ Keep plugs and receptacles dry.

+ All plumbing is to be installed in accordance with applicable codes and regulations.

For more information contact:

Tel: +44 (0)161 482 7000

Email: technical@thesplashlab.com

box contents
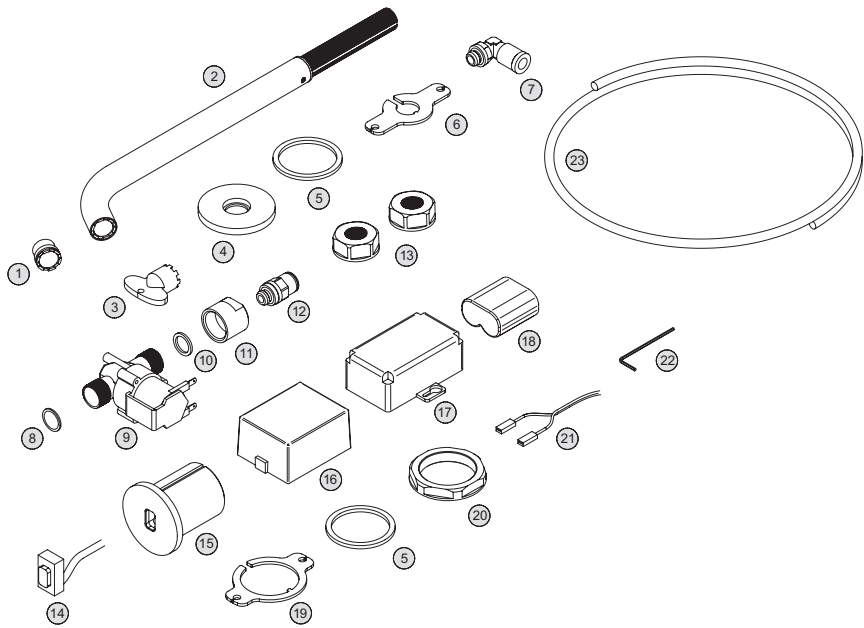
		TSL.882	TSL.884
1	Aerator – 1.89lpm – Spray pattern	TSLP.260063	TSLP.260063
2	Tap spout	TSLP.009	TSLP.010
3	Aerator key	TSLP.260050	TSLP.260050
4	Wall bezel	TSLP.021	TSLP.021
5	Wall seal gasket	TSLP.111	TSLP.111
6	Anti rotation plate	TSLP.110	TSLP.110
7	Elbow coupling	TSLP.033	TSLP.033
8	Inline filter / strainer	TSLP.0853O015	TSLP.0853O015
9	Solenoid valve	TSLP.120030	TSLP.120030
10	Sealing washer	TSLP.101	TSLP.101
11	Solenoid valve adapter coupling	TSLP.115	TSLP.115
12	Straight coupling	TSLP.032	TSLP.032
13	Sensor housing locking nut	TSLP.112	TSLP.112
14	IR sensor	TSLP.260045	TSLP.260045
15	Sensor housing	TSLP.005	TSLP.005
16	Mains power suply unit	TSLP.270066	TSLP.270066
17	Battery holder (Optional)	TSLP.270029	TSLP.270029
18	Battery (Optional)	TSLP.270030	TSLP.270030
19	Sensor housing anti-rotation plate	TSLP.113	TSLP.113
20	Sensor housing fixing nut	TSLP.112	TSLP.112
21	Solenoid connector cable	TSLP.120032	TSLP.120032
22	Hex wrench	TSLP.030	TSLP.030
23	Inlet tubing	TSLP.260064	TSLP.260064

technical data

Finishes	TSL.882/884.BK Brushed Black
	TSL.882/884.BR Brushed Brass
	TSL.882/884.CP Brushed Copper
	TSL.882/884.CS Brushed Stainless Steel

MECHANICAL

Body Material	AISI 304 Stainless Steel
Coating Type	PVD (colours only)
Aerator	Cascade
Water Pressure (Dynamic)	0.5 to 7.5 Bar [0.05 to 0.75MPa]
Water Temperature (max)	60°C
Flow Rates	3.8l/min [1.0gpm]
	Also available as optional extras:
	1.35l/min [0.35gpm]
	1.89l/min [0.5gpm]

ELECTRICAL

Power supply	110–230 Vac, 50–60Hz, 1.5A
Output (max)	6 Vdc, 1A
Power consumption	< 87% Active mode, 0.3W No load
Solenoid valve type	6V Latching
Water Ingress	IP55
Cable lengths	800mm – Power supply connection
	800mm – Solenoid valve connection

technical data

SENSOR FUNCTION

Sensor type	Infrared
Pre-set sensor range	50 to 120mm
Sensor range (max)	250mm
Tolerance on range	± 20%
Comfort delay	2 sec
Security time-out	30 sec
Operating Temperature	0 to 50°C
Response Time (max)	0.3 – < 1 sec
Tolerance on times	± 20%

before you install

Power Supply

The TSL.880 IR Sensor Tap system is provided with a mains power supply (110–240Vac transformer) compatible for European and North American markets which requires wiring into a fused connection unit (FCU) or spur.

To reduce installation costs the power supply can be wired into a junction box (not supplied) and then fed directly into a FCU or distribution board.

Water Supply

Flush water supply lines thoroughly before installing the tap. Do not allow dirt, Teflon tape or metal particles to enter the tap. Shut off the water supply before installation. Gravity–fed systems may require a booster pump to achieve the optimal operating pressure.

Flow Rates

The aerator supplied as standard has a flow rate of 3.8l/min [0.5gpm]. However, different flow rates may need to be achieved and The Splash Lab offer alternatives with flow rates of 1.35l/min [0.35gpm] and 1.89l/min [0.5gpm] respectively. Refer to Spare Parts & Accessories (page 29) for more information.

before you install

Access Requirements

It is critical all components which require fixing behind the wall are easily accessible at all times during installation and routine maintenance.

Wall Cavity: a minimum cavity depth of 100mm is recommended to ensure enough clearance for installing and commissioning tap components, connecting to mains water supply and safe installation of power supply.
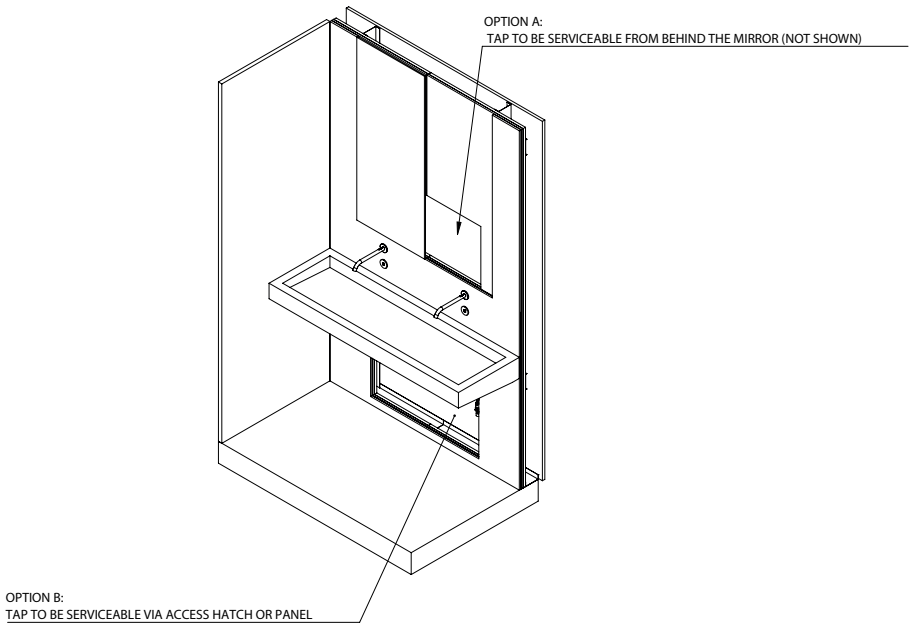

∅ 16MM THROUGH HOLE REQUIRED FOR SPIGOT

∅ 40MM THROUGH HOLE REQUIRED FOR SENSOR HOUSING

90mm (MIN) SERVICES VOID

220

100

200

30°

200

850 TYP.

METAL STUDWORK TYP.

50 (MAX) WALL THICKNESS

C

SECTION B-B

DETAIL C
SCALE 1 : 5
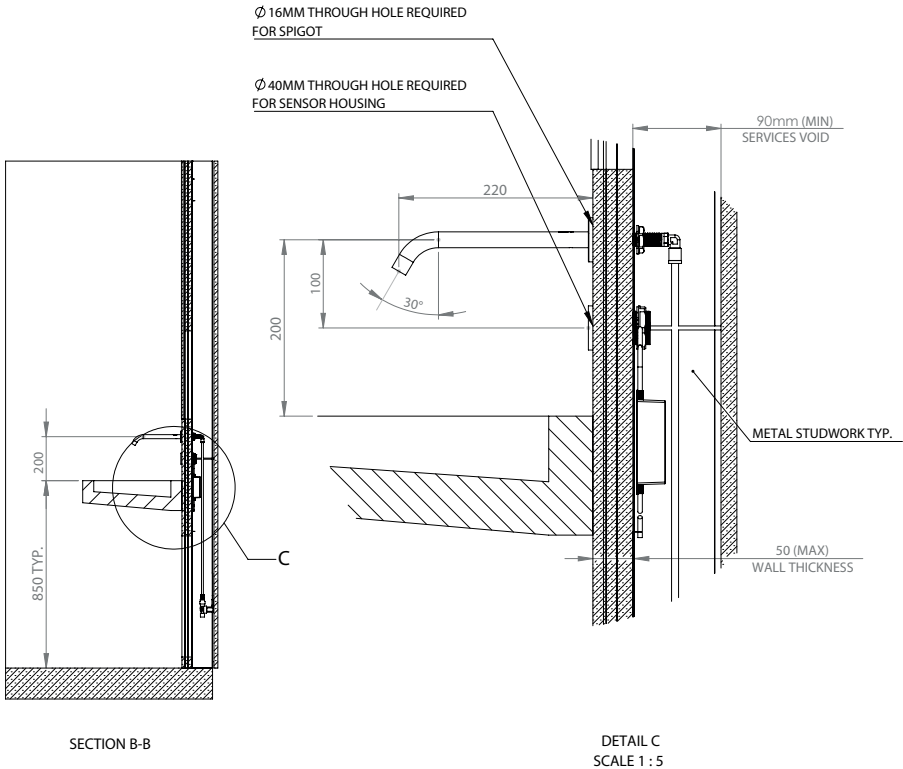
before you install

Access Requirements

Front access: a hatch or panel(s) must be constructed either below the washbasin or behind the mirror to ensure the tap, solenoid valve, isolation valves and power supply are accessible.

ACCESSIBILITY REQUIREMENTS

OPTION A:
TAP TO BE SERVICEABLE FROM BEHIND THE MIRROR (NOT SHOWN)

OPTION B:
TAP TO BE SERVICEABLE VIA ACCESS HATCH OR PANEL

Ensure access hatches below the washbasin and/or behind the mirror are accounted for to ensure easy access of components during installation and for routine maintenance.

before you install

Mounting Location

+ The maximum wall thickness the tap can be mounted to is 50mm (incl. all finishes).

+ The recommended distance from the centre of the spout to the countertop of the washbasin is 200mm.

+ The distance between the centres of the spout and sensor housing is 100mm

+ Ensure the holes and appropriate mounting points are created in accordance with the 1:1 drilling template shown on page 30.

+ Taps should not be installed above highly polished surfaces to avoid reflection interference

FRONT

SIDE

50mm Max wall thickness

80 - 100mm
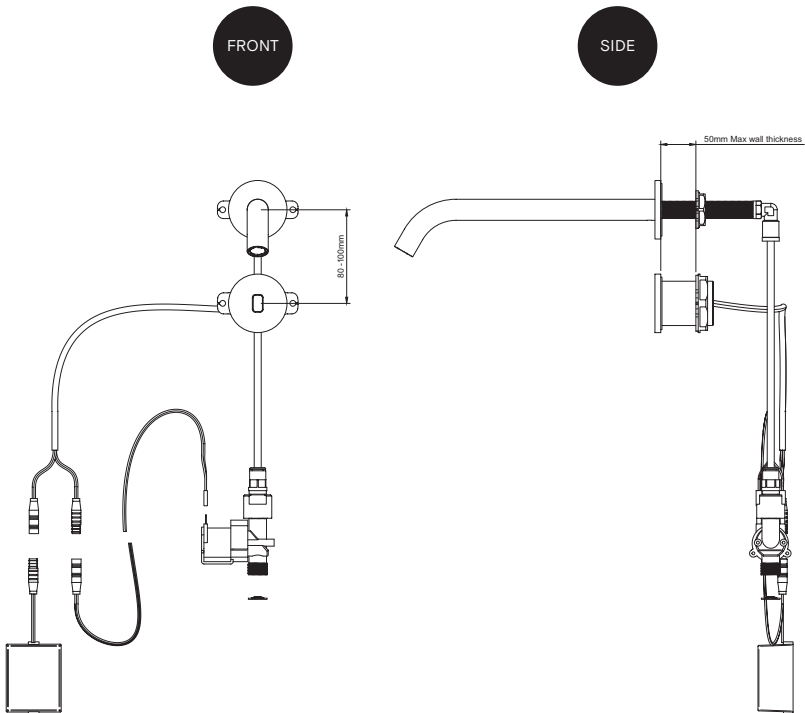
how to install

Tap & Sensor Housing Installation

1
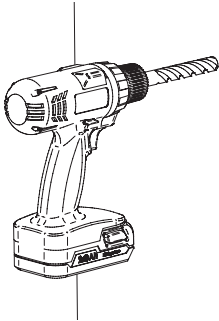
Drill a Ø16mm hole through the mounting surface and into the wall cavity.

2
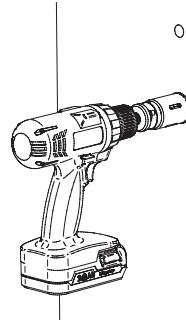
Drill a Ø40mm hole through the mounting surface and into the wall cavity.
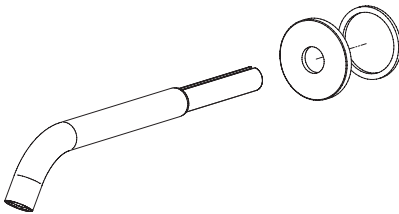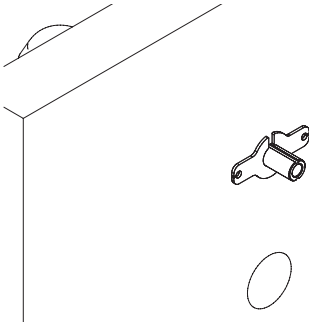
3

Slide the collar and gasket over the spigot
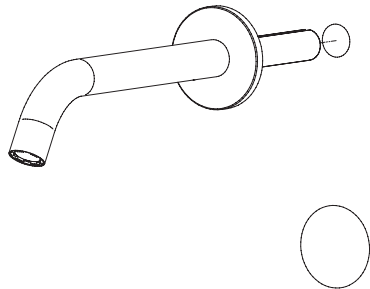
4

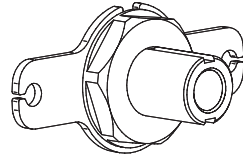Slot the spigot end of the tap through the pre-drilled hole

how to install
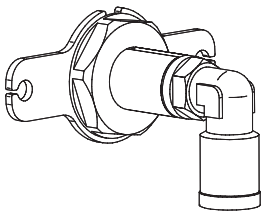
Tap & Sensor Housing Installation

5

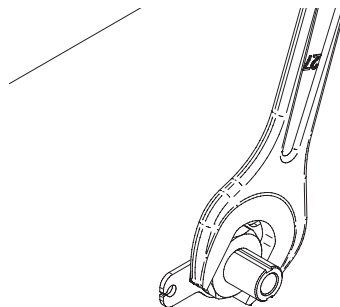Fit the anti-rotational washer over the spigot.

6

Thread the locking nut onto the spigot until hand tight

7

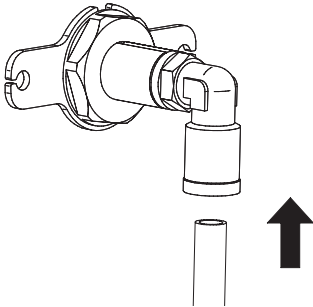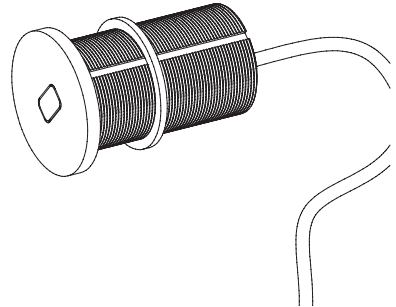Tighten elbow fitting into the spigot and tighten with a spanner.

8

Tighten locking nut with a spanner and check spout of tap is aligned correctly from the front.
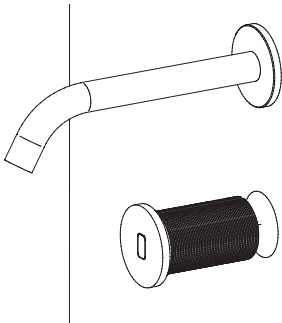
how to install

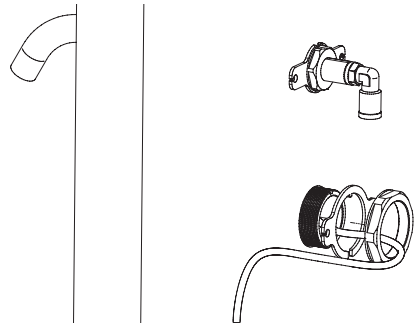**Tap & Sensor Housing Installation**

9

Push plastic inlet tubing all the way into the elbow fitting.

10

Insert the gasket into the shoulder of the sensor housing

11

Slot the sensor housing assembly through the pre-drilled hole

12

Fit the anti-rotational washer and locking nut onto the sensor housing and thread until hand tight.

how to install

Tap & Sensor Housing Installation
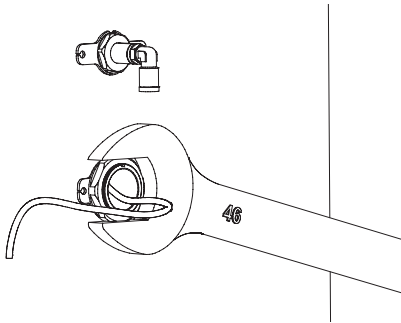
13

Tighten locking nut with a spanner and check sensor housing is aligned vertically and is square.

14

Fix the power supply to the wall or support ensuring the cables are long enough to connect to both the sensor and solenoid valve.

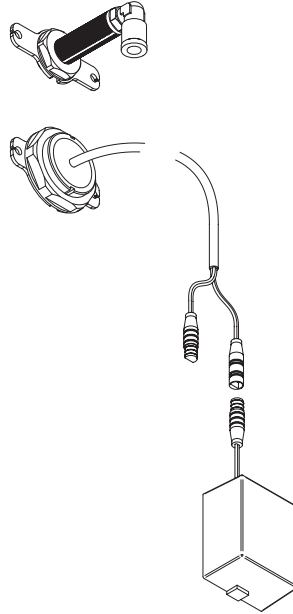# how to install

Solenoid Valve Installation
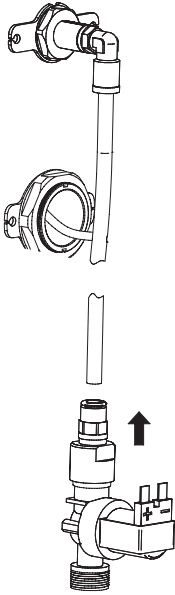
15

Trim any excess tubing not required and fit solenoid valve and reducing coupler assembly to plastic inlet tubing.

WARNING: Ensure both push-fit connections are securely sealed with the plastic inlet tubing.
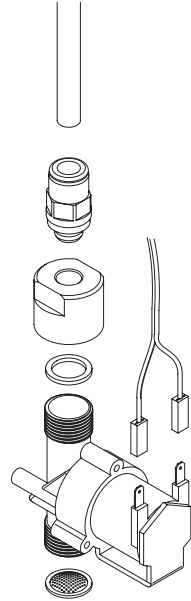
16

Insert conic filter into inlet side of valve and connect to water supply.

The filter must be fitted, otherwise the warranty may be invalid.

Activation

17

The installation is now ready to commission.

commissioning
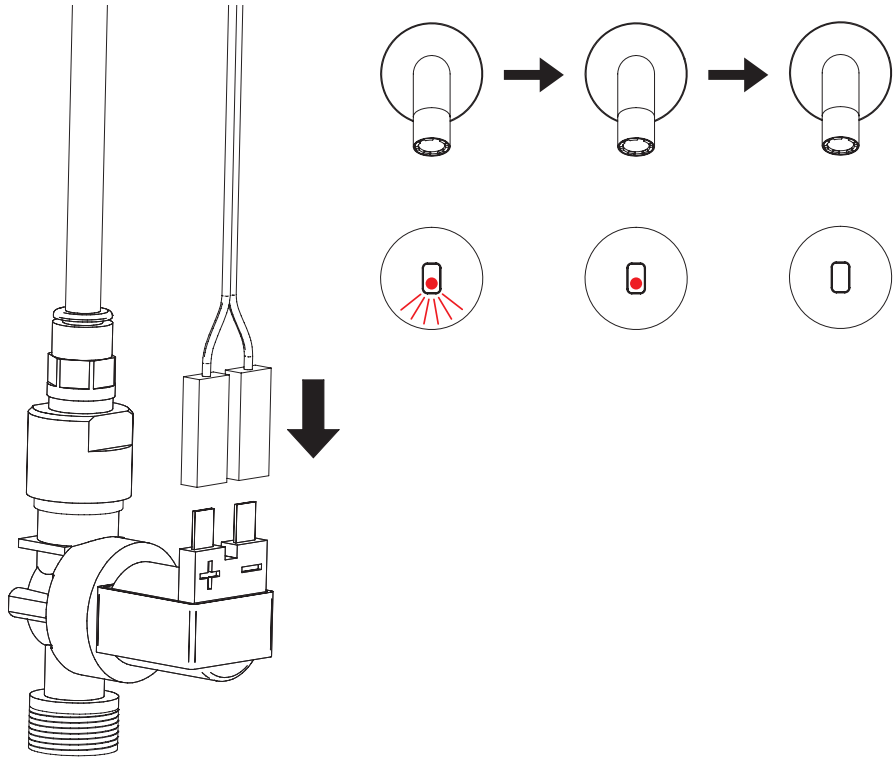
+ Connect the solenoid valve cable to the sensor.
+ Wait a minimum of 5 seconds.
+ Check the sensor mounted on the wall starts flashing red,
+ Once the red LED is flashing, position your hand within 50mm of the tap.
+ When the red LED is continuously lit (and no longer flashing), position your hand at the desired activation position.
+ Wait until the red LED goes out before removing your hand
+ Once the red light goes out the pre-set range is set.

the complete system

50mm Max wall thickness

80 - 100mm
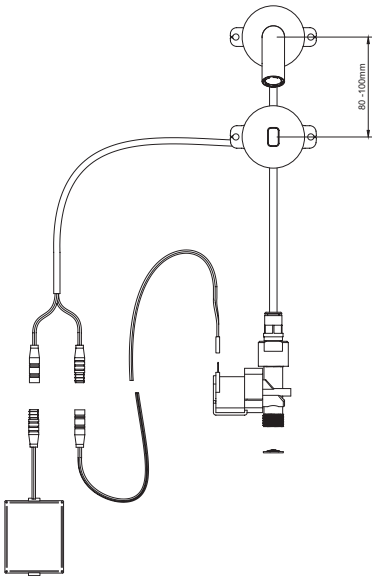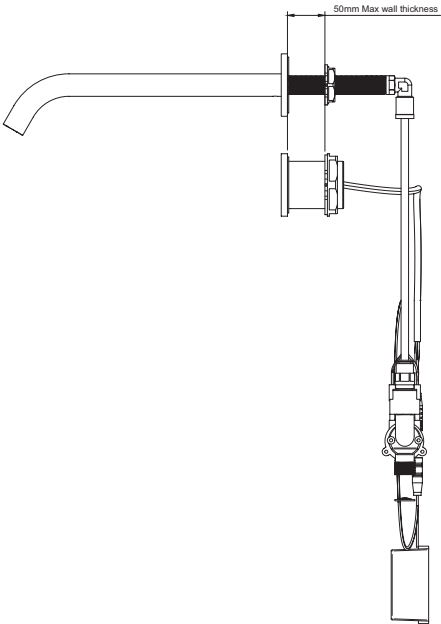
settings adjustment: wired controller

Disconnect the plug from the solenoid valve cable and connect to the wired controller to access information such as diagnostics, function and programmable settings (see table below).

Comfort Delay: keeps the water running for 2 seconds after there is no detection.

Security time-out   after 30 seconds of continuous water flow the solenoid valve will close and the sensor will be blocked for 10 seconds. During this period the red LED will start flashing two times on repeat.

	Detection Range	Comfort delay	Security time-out	Auto-rinse cycle (after last activation)
Pre-set	220 mm*	2 seconds	30 seconds	Inactive
Programmable	200 – 250 mm Intervals: [50, 70, 100, 120, 150, 170, 200, 220, 250 mm]	0 -100 seconds [1 sec intervals]	1 -240 seconds [1 sec intervals]	Inactive or Active Active: 6, 12 or 24 hours Rinse Duration: 10 – 180 seconds [10sec intervals]

*Pre-set detection range is valid for sensor for which the range has not been changed since factory-set. For sensors where the detection range has been changed this distance will be kept in memory even if reset to the appropriate mode using the controller.

maintenance
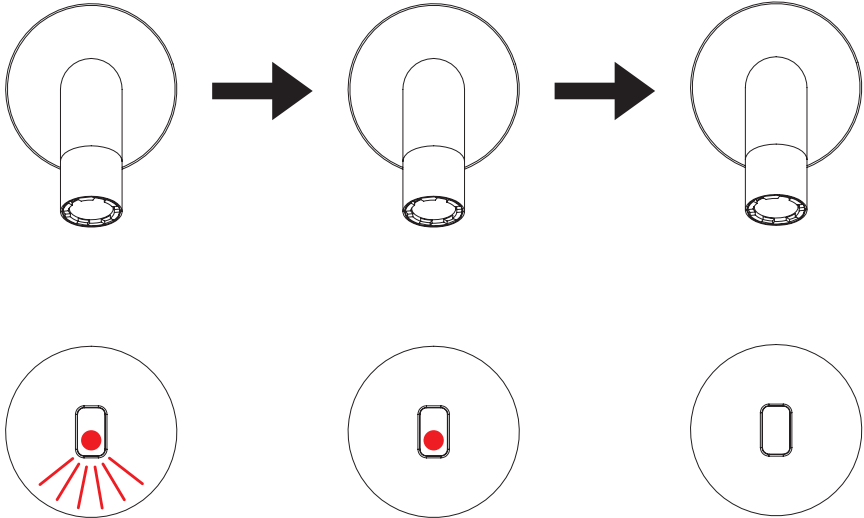
Re-setting the Sensor

+ Disconnect the sensor cable from the power supply.

+ Wait a minimum of 5 seconds and reconnect the power.

+ When the sensor mounted on the wall starts flashing red, position your hand within 50mm of the tap.

+ When the red LED is continuously lit (and no longer flashing), position your hand at the desired activation position.

+ Wait until the red LED goes out before removing your hand

+ Once the red light goes out the new detection distance is set.

+ Test the system and repeat from step 1 until the tap works as required.

WARNING: Re-setting the sensor can lead to errors in the system with unnecessary activations or poor sensitivity. If you are considering altering the pre-set sensor settings, we recommend calling The Splash Lab for assistance.

maintenance
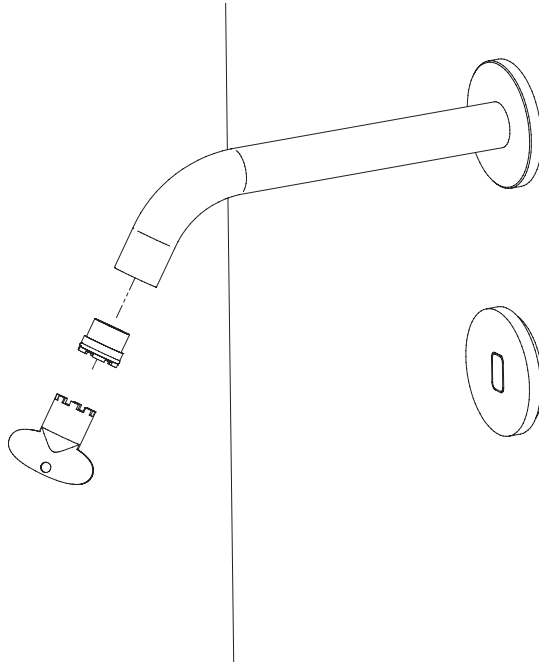
Changing the Aerator

+   Shut off the water supply to the tap.

+   Carefully unscrew the aerator using the supplied Aerator Key

+   Thread the new aerator taking care not to over tighten and damage the o-ring.

+   Reconnect water supply

Refer to Spare Parts & Accessories (page 29) for alternative aerators available.

maintenance
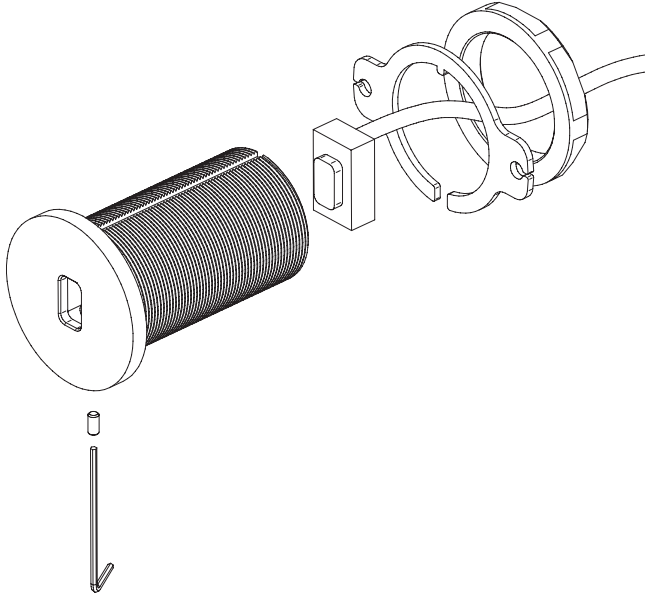
Changing the Sensor

+ Shut off the water supply to the tap.

+ Disconnect the sensor cable from the power supply

+ Loosen the locking nut for the sensor housing

+ Feed sensor housing back through the front of the wall

+ Using a 1.5 Hex/Allen key, loosen the grub screw taking care not to misplace it

+ Remove sensor

+ Insert new sensor and re-fit parts

+ Re-connect to power supply

+ Ensure sensor is set to the correct range

maintenance

Changing the Solenoid Valve

+   Shut off the water supply to the tap.

+   Disconnect the solenoid cable from the power supply.

+   Disconnect the solenoid valve from the brass reducing adaptor and the brass fitting attached to the mains water supply.

+   Remove the filter from the faulty solenoid valve.

+   Re-fit new filter to replacement solenoid valve.

+   Reassemble the parts as shown.

+   Restore the incoming water supply checking there are no water leaks.

+   Reconnect the solenoid cable to the power supply.

Note: the directional flow of water is shown on the solenoid housing with an arrow.

maintenance
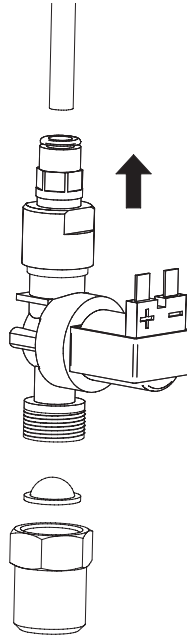
Cleaning the Solenoid Valve Filter

The tap is provided with a stainless steel filter preventing foreign particles to enter the lines. If the water flow has decreased, this may be because the filter is blocked.

+ Shut off the water supply to the tap.
+ Disconnect the solenoid cable from the power supply.
+ Disconnect the solenoid valve from the brass fitting attached to the mains water supply and locate the filter.
+ Wash the filter under running water to remove any debris.
+ Reassemble the parts as shown.
+ Restore the incoming water supply and check there are no water leaks.
+ Reconnect the solenoid cable to the power supply.

cleaning

+ Take extra care when cleaning decorative surfaces.

+ For surface cleaning of the tap use ONLY soap and water, then wipe dry with a clean cloth or towel.

+ DO NOT use steel wool or cleaning agents containing alcohol, acid, abrasives or the like.

+ Use of any prohibited cleaning or maintenance products or substances could damage the surface of the tap.

+ When cleaning bathroom tiles, the taps should be protected from any splattering of harsh cleansers.

+ For solenoid filter cleaning instructions see page 23.

diagram
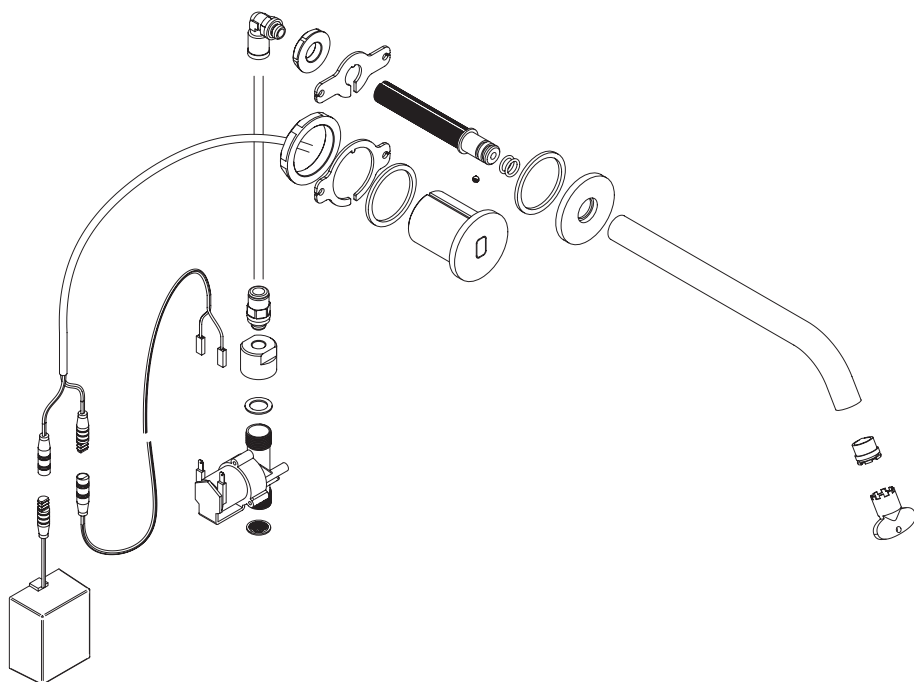
troubleshooting

Corrective Actions for Initial Installation Failures

No water flow out of the tap when user's hands are within sensor range:

+ No power
+ Range is too short
+ Range is too long
+ Sensor is dirty or covered.
+ Debris or scale in the solenoid.
+ Unit is in "Security time-out" mode
+ Check polarity of solenoid valve cable connection is correct
+ Sensor is picking up reflections from the washbasin or another object.

Water flow does not stop when user's hands are within sensor range:

+ Debris or scale in solenoid diaphragm.
+ Cables between the power supply and solenoid valve are disconnected.
+ Check polarity of solenoid valve cable connection is correct
+ The water supply pressure is too high
+ Check sensor setting with wired remote controller to ensure the sensor is set to Hand-wash mode

We are always looking to improve. If these did not solve your problem please contact us and we will endeavour to help.

Tel: +44 (0)161 482 7000
Email: info.uk@thesplashlab.com

troubleshooting

Corrective Actions for Initial Installation Failures

Slow response time when opening or closing solenoid valve:

+ Check all cable connections are secure
+ Check the tap is well isolated from the ground or the water.
+ Debris or scale in solenoid diaphragm.
+ Sensor is picking up reflections from the washbasin or another object.

Water flow rate reduced:

+ Aerator or solenoid valve filter is clogged. Inspect inline strainer and clean if necessary.
+ Increase the sensor range (see page 18).
+ Decrease the sensor range (see page 18).
+ Remove obstruction to sensor.
+ Eliminate cause of reflection.
+ Reduce the water supply pressure.
+ Remove, clean and re-install

warranty

We believe the future is personal. With a global mindset, we challenge conventional restroom norms via product innovation to create considered washroom solutions for corporate and educational spaces. We use rich raw materials, cutting-edge automation and considered washroom design to powerfully and positively influence the lives of people. We are The Splash Lab.

Demonstrating our commitment to quality and our belief in the strength of our designs, we can offer the following warranties.

The Splash Lab will warrant that its products will be free of manufacturing and material defects during normal use and environmental conditions as detailed below:

Sensor taps   2 years' parts & labour

If a defect is found in normal use, The Splash Lab will, at their discretion, repair, provide a replacement part or product, or make appropriate adjustments. Damage caused by accident, misuse, or abuse is not covered by this warranty. Improper care and cleaning will void the warranty.

Non-operation of the product due to environmental conditions beyond our control, installation error, incorrect maintenance, water quality, fair wear and tear, incorrect or inappropriate installation, misuse and abuse is not covered by the warranty.

Proof of purchase (original sales receipt) must be provided to The Splash Lab with all warranty claims.

The above warranty is valid for goods supplied within the United Kingdom.

For goods supplied outside of the United Kingdom, The Splash Lab will honour the above stated warranty periods for the parts only.

THE SPLASH LAB DISCLAIM ANY LIABILITY FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

spare parts & accessories

Spare Parts

TSLP.120030	Solenoid valve assembly
TSLP.120032	Solenoid valve connector cable
TSLP.260045	IR Sensor
TSLP.270066	Power Supply 110~240V AC / 6V DC
TSLP.230161	Sensor Tap Extension Cable 1.2M
TSLP.260050	CACHE-TT Aerator Key
TSLP.260062	CACHE-TT Aerator PCA AERATED 3.8l/min [1.0gpm]
TSLP.270029	Battery Holder

Accessories

TSLP.260051	CACHE-TT Aerator PCA Spray 1.35l/min [0.35gpm]
TSLP.260063	CACHE-TT Aerator PCA SPRAY 1.89l/min [0.5gpm]
TSLP.120020	Daisy Chain Enclosure
TSLP.120021	Daisy Chain Cable
TSLP.230161	Extension cable for sensor / power lead 1.2m
TSLP.230099	Wired Controller RIO14-WP

If further information is required, contact The Splash Lab technical team for more detailed guidelines

drilling template

∅ 16

∅ 40

100
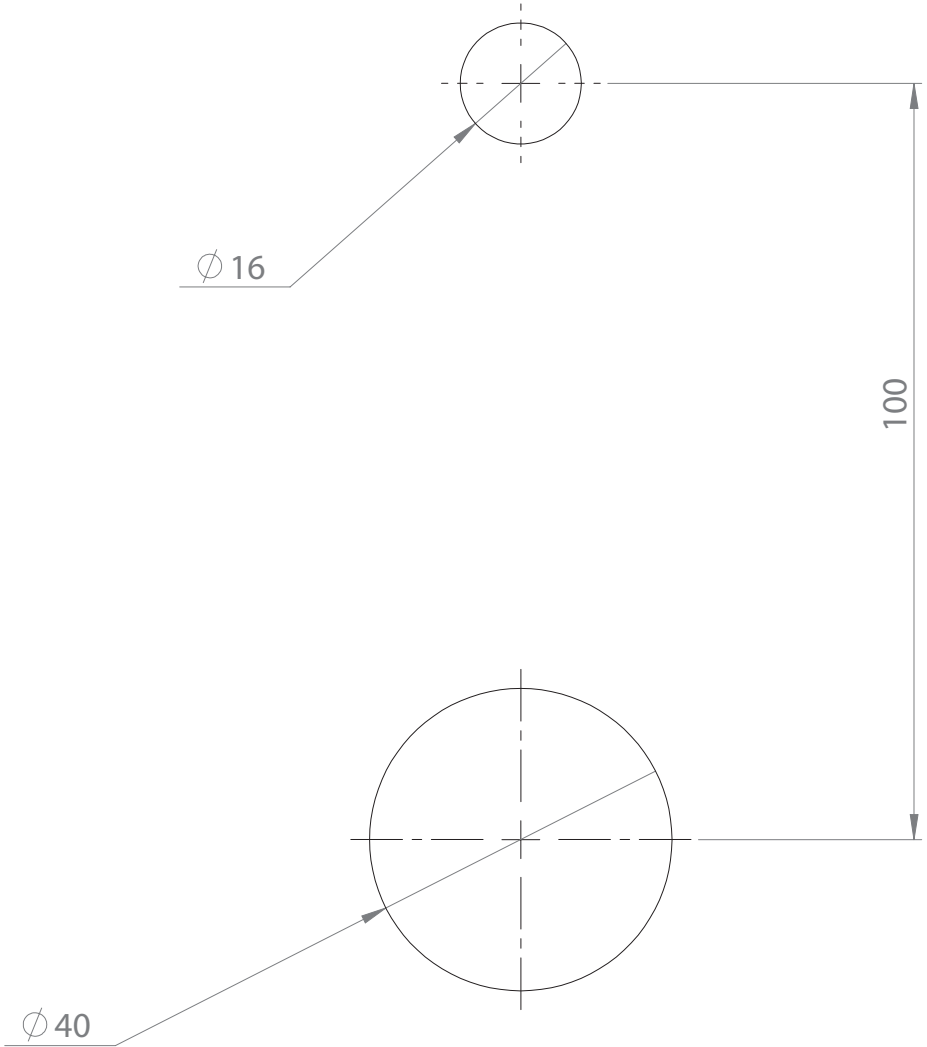
contact

General information
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For further contact information visit:
www.thesplashlab.com