



Every part matters

Legionella Temperature Monitoring Guide

What is Legionnaires' disease?

Legionnaires' disease is a potentially fatal form of pneumonia which is caused by the legionella bacterium. This type of bacteria can be found in water systems such as cooling towers, evaporative condensers, hot and cold water systems and spa pools. It can also be found naturally in lakes, rivers and reservoirs but this is normally in low numbers.

This type of bacteria can be an issue if the conditions are favourable for the bacteria to multiply, thus leading to the risk of Legionnaires' disease.

How can it be contracted?

Legionnaires' disease is caught by inhaling small droplets of water suspended in the air which contain the legionella bacterium.

What are the sources of the legionella bacterium?

The legionella bacterium is found mainly in stagnant water e.g. naturally in ponds and rivers or in purpose built water systems such as cooling towers, evaporation condensers, air conditioning, spa pools and hot and cold water systems.

Using temperature to control and manage Legionella

Legionella bacteria thrive and multiply in water temperature which is between 20-45°C.

A typical method of control is to store hot water above 60°C and distribute it at above 50°C (55°C for healthcare establishments). Cold water should be kept below 20°C.

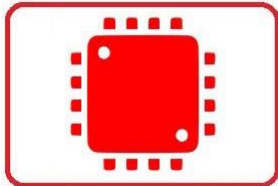
Other water treatment methods

Legionella can also be treated by using biocides, ultra violet (UV) irradiation, copper/silver ionisation, ozone and chlorine dioxide. Further information on these methods can be found by contacting the Health & Safety Executive (HSE).

RS PRO Legionella Temperature Monitoring Equipment

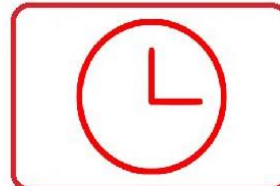
RS PRO legionella range is a comprehensive range of thermometers, temperature probes and accessories which are specifically designed for legionella temperature management.

Features



High Accuracy Measurement

All RS PRO thermometers are microprocessor driven for greater stability and accuracy over time.



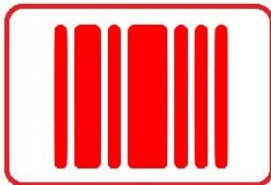
Integral Timers

Integral 1 & 2 minute timers to help ensure that the correct temperature is taken.



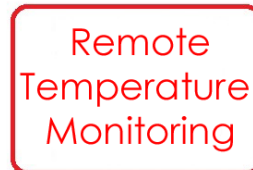
Dual Surface and Immersion

Dual purpose probes or both surface and immersion temperatures to help save time.



Barcode Traceability

Record temperature along with asset identity.



Access difficult to reach or inaccessible areas

Monitor temperature meters away from the source with the TC Wall Port.

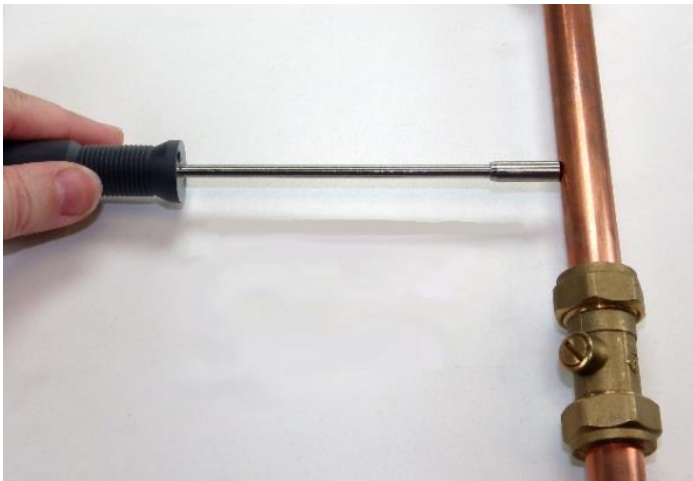


Designed and Built in the UK

Taking the temperature of water pipe surfaces

It is usually necessary to measure water pipe temperatures at TMV inlets, calorifier flow and return pipes and other points where it is not possible to use an immersion probe. You will need an accurate handheld digital thermometer with suitable probe. The [RS PRO Legionella Thermometer \(204-8413\)](#) and [RS PRO Surface Temperature Probe \(342-8956\)](#) are ideal for this purpose.

For combined water and surface temperature measurement, choose the [RS PRO Single Band Dual Probe \(712-8196\)](#) or [RS PRO Crossed Band Dual Probe \(219-5353\)](#) for more heavy duty applications.



Testing Tips

- Choose a smooth area of the pipe for a more accurate result;
- Using very light pressure, apply the tip of the probe to the pipe;
- Keep the probe still and avoid rotation to extend the life of your probe.

RS PRO Products for monitoring pipe surfaces:

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
K Type Thermocouple	Compact Legionella Kit with budget Dual Purpose Probe		219-5349	CLEGK1
K Type Thermocouple	Compact Legionella Kit with heavy duty Dual Purpose Probe		204-8405	CLEGK3
K Type Thermocouple	Facilities Management Kit With Holster (Dual Probe)		219-5350	FMK2
T Type Thermocouple	Legionella Kit with Surface Probe And Immersion Probe, Carry Case		255-522	LEGK1




RS PRO Products for monitoring pipe surfaces:

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
Thermocouple	Legionella Thermometer with Integral Timers		204-8413	MM2008
K Type Thermocouple	Fast Response Ribbon Surface Probe		342-8956	KS01
K Type Thermocouple	Sprung Shield Surface Probe		342-8962	KS07
K Type Thermocouple	Pipe Clamp Probe		342-9202	KPS10

RS PRO Products for monitoring pipe surfaces:

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
K Type Thermocouple	Crossed Ribbon Surface Probe		204-8394	KS21
T Type Thermocouple	Sprung Shield Surface Probe		342-8984	TS04
T Type Thermocouple	Plug Mounted Sprung Shield Surface Probe		342-9139	THS02
T Type Thermocouple	Dual Purpose Probe		712-8206	TS01-S

RS PRO Products for monitoring pipe surfaces:

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
K Type Thermocouple	Plug Mounted Surface Probe		342-9117	KHS01
K Type Thermocouple	Dual Purpose Probe (for more heavy duty applications)		219-5353	KS21-S
K Type Thermocouple	Dual Purpose Probe		712-8196	KS01-S

Taking the temperature of running water

- Run the tap for the prescribed time*
- Place the end of the probe in the water flow ensuring that the last 10mm is immersed;
- Once the reading on your thermometer has stabilised, you can record the temperature;
- Note that if a TMV is fitted you will need to take the surface temperature of the hot water pipe before it enters the valve.

*The [RS PRO Legionella Thermometer \(204-8413\)](#) and [RS PRO Immersion Probe \(342-8899\)](#) is ideal for this purpose as the thermometer features a built-in timer. This timer can help ensure that the correct temperature is being taken when carrying out this test.





For combined water and surface temperature measurement, choose the [RS PRO Single Band Dual Probe \(712-8196\)](#) or [RS PRO Crossed Band Dual Probe \(219-5353\)](#) for more heavy duty applications.






RS PRO Products for monitoring water temperature:

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
K Type Thermocouple	Compact Legionella Kit with budget Dual Purpose Probe		219-5349	CLEGK1
K Type Thermocouple	Compact Legionella Kit with heavy duty Dual Purpose Probe		204-8405	CLEGK3
K Type Thermocouple	Facilities Management Kit With Holster (Dual Probe)		219-5350	FMK2
T Type Thermocouple	Legionella Kit with Surface Probe And Immersion Probe, Carry Case		255-522	LEGK1




RS PRO Products for monitoring water temperature:

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
Thermocouple	Legionella Thermometer with Integral Timers		204-8413	MM2008
K Type Thermocouple	Immersion Probe (100 x 3mm)		342-8899	KM03
K Type Thermocouple	Immersion Probe Ext. Length (300 x 3mm)		342-8928	KM04
K Type Thermocouple	Fine Immersion Probe (100 x 1.5mm)		342-8883	KM01



RS PRO Products for monitoring water temperature:

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
K Type Thermocouple	Fine Immersion Probe Ext. Length (300 x 1.5mm)		255-594	KM02
K Type Thermocouple	Immersion Probe (210 x 3mm)		204-8390	KM09
K Type Thermocouple	Plug Mounted Immersion Probe		342-9072	KHM01

RS PRO Products for monitoring water temperature:

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
T Type Thermocouple	Immersion Probe (100 x 3mm)		342-8906	TM03
T Type Thermocouple	Fine Immersion Probe (100 x 1.5mm)		342-8912	TM01
T Type Thermocouple	Fine Immersion Probe Ext. Length (300 x 1.5mm)		342-8940	TM04

RS PRO Products for monitoring water temperature:

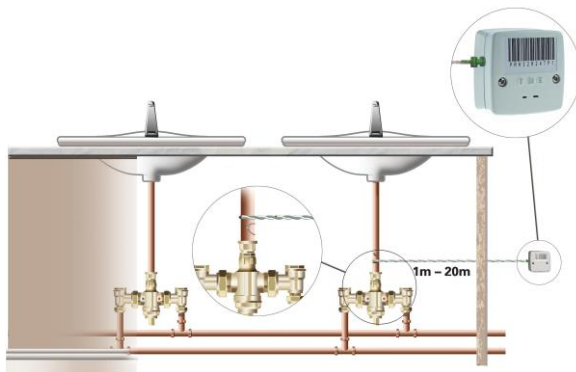
Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
T Type Thermocouple	Plug Mounted Immersion Probe		342-9088	THM01
T Type Thermocouple	Dual Purpose Probe		712-8206	TS01-S

Temperature points with difficult access: The RS PRO TC Wall Port

If you have pipes that are boxed-in or located at height, consider using a fine wire probe with the RS PRO TC Wall Port. This low cost device acts as an intermediary temperature testing point between probe and thermometer and can be wall mounted at an easy-to-reach location.

No external power is required, simply install the Wall Port using screws and connect your thermometer* for an instant and accurate temperature reading.

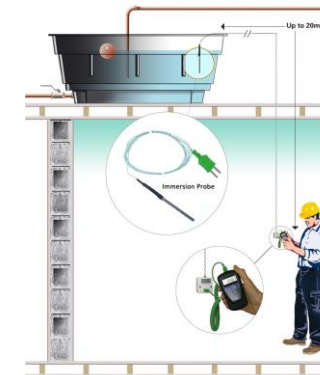
Use for boxed-in TMV's:



Boxed-in shower pipes:



Or water storage tanks located at height:



*All Wall Ports require a [connection cable \(788-7122\)](https://www.rs-pro.com/products/connection-cable-788-7122). These devices can be used with any thermocouple thermometer but we recommend the [RS PRO Legionella Thermometer \(204-8413\)](https://www.rs-pro.com/products/rs-pro-legionella-thermometer-204-8413).

Temperature points with difficult access: The RS PRO TC Wall Port

All RS PRO TC Wall Ports are constructed from durable ABS plastic with a splash-proof design and need little to no maintenance once installed. And, measuring only 52 x 52mm, these devices are unobtrusive and can be wall mounted almost anywhere.

The RS PRO Wall Port range is available in a variety of configurations depending on your application:

Single Input Thermocouple Wall Port for use with an external Probe

RS Order Code: [788-7129](#)

Allied Code: TCWALLPORT



- Use with a fine wire probe (409-4908) for monitoring pipework or immersion probe (788-7144) for water storage tanks
- Can also be used with 3m fine wire probe (479-1788) for access to temperature points up to 3m away
- Requires a connection cable (788-7122) and thermocouple thermometer. We recommend the RS PRO Legionella Thermometer (204-8413)

Temperature points with difficult access: The RS PRO TC Wall Port

Single Input Thermocouple Wall Port with integral 1m Fine Wire Probe

RS Order Code: [219-5354](#)

Allied Code: TCWALLPORT-KA01-01



- Features an integral 1m length fine wire probe
- Probe can be configured to exit from the side or rear of the device
- Requires a connection cable (788-7122) and thermocouple thermometer. We recommend the RS PRO Legionella Thermometer (204-8413)

Temperature points with difficult access: The RS PRO TC Wall Port

Dual Input Thermocouple Wall Port with two integral 1m Fine Wire Probes

RS Order Code: [219-5355](#)

Allied Code: TCWALLPORT-D-KA01-01



- Features two integral 1m length fine wire probe
- Designed for monitoring two points, such as hot and cold pipes
- Compact – measures only 52 x 52mm.
- Probe can be configured to exit from the side or rear of the device
- Requires a connection cable (788-7122) and thermocouple thermometer. We recommend the RS PRO Legionella Thermometer (204-8413)

The RS PRO TC Wall Port: Accessories

Single Input Legionella Thermometer

RS Order Code: [204-8413](#)

Allied Code: MM2008



- High accuracy, thermocouple thermometer
- Specifically designed for legionella temperature monitoring
- Features an integral 1 & 2 minute timer for added reassurance that the correct temperature is being recorded

K Type Fine Wire Thermocouple Probe (1m)

RS Order Code: [409-4908](#)

Allied Code: KA01



- 1m Length fine wire probe
- For use with RS PRO TC Wall Port (788-7129)
- High accuracy K type thermocouple.
- PTFE insulated
- Terminated with mini plug

The RS PRO TC Wall Port: Accessories

K Type Fine Wire Thermocouple Probe (3m)

RS Order Code: [479-1788](#)

Allied Code: KA01-3



- 3m Length fine wire probe
- For use with RS PRO TC Wall Port (788-7129)
- High accuracy K type thermocouple
- PTFE insulated
- Terminated with mini plug

K Type Thermocouple Immersion Probe

RS Order Code: [788-7144](#)

Allied Code: KM07



- Ideal for monitoring water storage tanks
- Weighted probe can be suspended in liquid
- For use with RS PRO TC Wall Port (788-7129)
- 2m length and terminated with mini plug

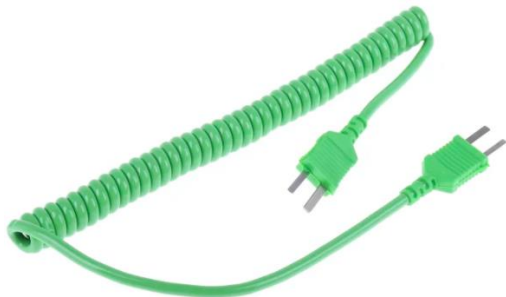
The RS PRO TC Wall Port: Accessories

Thermo Attachment Pads (book of 100)
RS Order Code: [788-7148](#)
Allied Code: TAPS



- Designed for attaching fine wire thermocouples to surfaces.
- Manufactured from standard grade PTFE on impregnated fibre glass.
- Temperature range -50°C to $+250^{\circ}\text{C}$

K Type Thermocouple Coiled Connection Cable
RS Order Code: [788-7122](#)
Allied Code: KMPC1MP



- High accuracy K type thermocouple
- Required for connecting a thermocouple thermometer to Wall Port
- Manufactured from durable polyurethane

Recording Temperature with Barcode Traceability: RS PRO Barcode Scanning Thermometer



Traceable records are a vital part of any water temperature compliance procedure. Barcode technology offers a quick and effective method for guaranteeing these records. Barcodes are easy and free to generate, can be displayed on any test point and allow the user to identify test points instantly.

The unique [RS PRO Barcode Scanning Thermometer \(204-8411\)](#) gives the user the ability to implement a practical temperature management system using barcodes. It features an integral barcode scanner and can record time, date, temperature and the location or test point identity in an instant. A wide variety of 1D and 2D barcode formats can be scanned and temperature readings are stored to the device to be downloaded to a PC at a later stage.

Generate reports and log books using the RS PRO software and assign alarms to barcodes to help identify problem areas.





Recording Temperature with Barcode Traceability: Using the RS PRO Barcode Scanning Thermometer for Legionella applications




The RS PRO Barcode Scanning Thermometer is ideal for legionella applications. It has a waterproof design and is compatible with most thermocouple probes for water temperature testing.

Additionally, each RS PRO TC Wall Port features a recessed area, allowing for the Wall Port to be identified with a barcode.


The RS PRO Barcode Scanning Thermometer can be used with the following equipment to help with legionella compliance:

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
Thermocouple	Barcode Scanning Thermometer		204-8411	MM7000-2D
Thermocouple	TC Wall Port for use with External Temperature Probe		788-7129	TCWALLPORT




Recording Temperature with Barcode Traceability: RS PRO Barcode Scanning Thermometer and Accessories

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
Thermocouple	TC Wall Port with Integral 1m Fine Wire Probe		219-5354	TCWALL- KA01-01
Thermocouple	TC Wall Port with Dual Integral 1m Fine Wire Probes		219-5355	TCWALL PORT-D- KA01-01
K Type Thermocouple	Fast Response Ribbon Surface Probe		342-8956	KS01


Recording Temperature with Barcode Traceability: RS PRO Barcode Scanning Thermometer and Accessories

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
K Type Thermocouple	Sprung Shield Surface Probe		342-8962	KS07
K Type Thermocouple	Pipe Clamp Probe		342-9202	KPS10
K Type Thermocouple	Plug Mounted Surface Probe		342-9117	KHS01




Recording Temperature with Barcode Traceability: RS PRO Barcode Scanning Thermometer and Accessories

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
K Type Thermocouple	Crossed Ribbon Surface Probe		204-8394	KS21
T Type Thermocouple	Sprung Shield Surface Probe		342-8984	TS04
T Type Thermocouple	Plug Mounted Sprung Shield Surface Probe		342-9139	THS02



Recording Temperature with Barcode Traceability: RS PRO Barcode Scanning Thermometer and Accessories

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
K Type Thermocouple	Immersion Probe (100 x 3mm)		342-8899	KM03
K Type Thermocouple	Immersion Probe Ext. Length (300 x 3mm)		342-8928	KM04
K Type Thermocouple	Fine Immersion Probe (100 x 1.5mm)		342-8883	KM01

Recording Temperature with Barcode Traceability: RS PRO Barcode Scanning Thermometer and Accessories

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
K Type Thermocouple	Fine Immersion Probe Ext. Length (300 x 1.5mm)		255-594	KM02
K Type Thermocouple	Immersion Probe (210 x 3mm)		204-8390	KM09
K Type Thermocouple	Dual Purpose Probe (for more heavy duty applications)		219-5353	KS21-S

Recording Temperature with Barcode Traceability: RS PRO Barcode Scanning Thermometer and Accessories

Sensor Type	Product Description	Product Image	RS Order Code	Allied Code
K Type Thermocouple	Dual Purpose Probe		712-8196	KS01-S
T Type Thermocouple	Dual Purpose Probe		712-8206	TS01-S