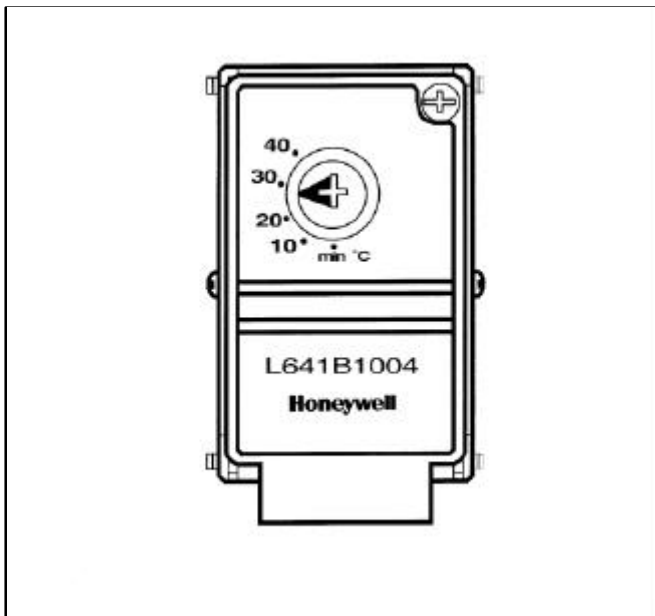


## L641 SURFACE CONTACT THERMOSTAT

### PRODUCT DATA



### DESCRIPTION

The L641 is a surface contact thermostat designed to sense the water temperature in storage cylinders and water pipes, and to provide temperature control, temperature limiting, and temperature feedback functions.

L641A mounts directly onto domestic hot water cylinders and can be wired to directly switch a wet central heating circulating pump, or boiler, or to operate spring return and motor open/motor close zone valves.

L641B mounts directly onto a pipe and can provide high limit, low limit or frost protection in wet central heating systems or automatic summer/winter changeover in XE70 and XE90 fan-coil control systems.

### FEATURES

- Versions available for use as a cylinder thermostat in domestic hot water installations
- Versions available for use as a pipe thermostat in fan-coil applications
- Version available for use as a pipe thermostat in frost protection applications
- Version available for use as a pipe thermostat to limit the supply water temperature in underfloor heating and solid fuel systems
- The S.P.D.T. switching action is accomplished by a snap-action MICRO SWITCH which is actuated by a bimetal temperature sensing element
- The desired temperature control point is set by the clearly scaled temperature selector on the front cover
- Wiring terminals are easily accessible
- Tamperproof temperature setting (L641B)
- Screwdriver slot temperature setting, with optional manual setting knob supplied (L641A)
- Approvals - B.E.A.B. (meets EN 60730)

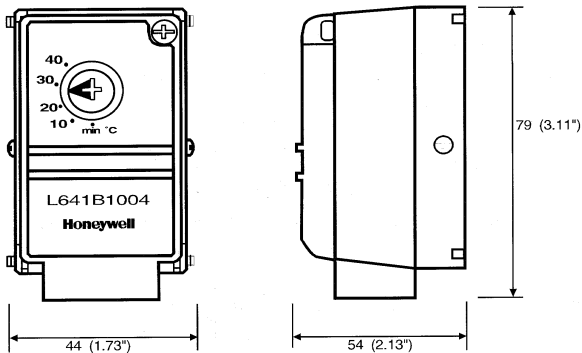
## SPECIFICATIONS

|                           |   |
|---------------------------|---|
| Supply voltage            | : 230 V~, 50...60 Hz  |
| Switch action             | : S.P.D.T. Type 1CL   |
| Switch rating             | : 4(2) A, 230 V~  |
| Temperature setting range | : see table   |
| Differential              | : Approximately 10 K non-adjustable   |
| Surface temperature range | : 0 to 95°C   |
| Ambient temperature range | : 0 to 70°C   |
| Mounting                  | : L641A mounts directly onto cylinder using fixing strap provided<br>L641B mounts directly onto pipes using fixing springs provided |
| Dimensions                | : 44 x 79 x 54mm (1.73" x 3.11" x 2.13")<br>(w x h x d)   |
| Wiring                    | : 3 terminals with wiring clamps, accepting wires up to 1.5 mm <sup>2</sup>   |

## ORDERING SPECIFICATION

| Model     | Application                | Temperature Setting Range |
|-----------|----------------------------|---------------------------|
| L641AI039 | Cylinder Thermostat        | Min, 40 to 80 °C          |
| L641BI004 | Low Limit Pipe Thermostat  | Min, 10 to 40° C          |
| L641B1012 | High Limit Pipe Thermostat | 50 to 95°C                |
| L641BI020 | High Limit Pipe Thermostat | 40 to 95°C                |

## DIMENSIONS



Dimensions in millimetres (inches in brackets)

## INSTALLATION

### Mounting

The L641A cylinder thermostat should be mounted  $\frac{1}{4}$  to  $\frac{1}{3}$  of the way from the bottom of the domestic hot water cylinder after removing a section of the insulation and cleaning the surface.

The L641B pipe thermostat should be positioned less than 0.6 m (2') from the boiler, or on a supply pipe to a fan-coil unit, close to the 3-port control valve.

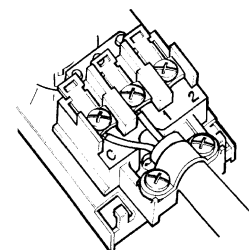
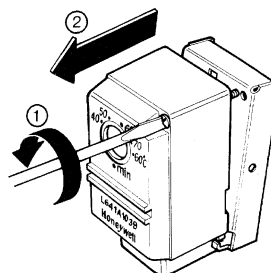
### IMPORTANT

1. The installer must be a trained service engineer
2. Disconnect the power supply before beginning installation

### Wiring

Cover removal

Wiring to terminals



# APPLICATION

|           | DHW Storage Tanks/<br>Cylinders<br>(see note 1) | High Limit<br>Underfloor<br>Heating<br>Systems (see<br>note 2) | High Limit<br>Solid Fuel<br>Systems (see<br>note 2) | Low Limit<br>Frost<br>Protection<br>(see note 3) | Fan-Coil Unit<br>Summer/<br>Winter<br>Changeover<br>for 2-pipe<br>units (see<br>note 4) |
|-----------|---|--|---|--|---|
| L641AI039 | ✓   |  |   |  |   |
| L641BI004 |   |  |   | ✓  | ✓   |
| L641BI012 |   | ✓  | ✓   |  |   |
| L641BI020 |   | ✓  | ✓   |  |   |

## Notes

1. The L641A should be mounted  $\frac{1}{4}$  to  $\frac{1}{3}$  of the way from the bottom of the cylinder.
2. The L641B should be mounted less than 0.6 m (2') from the boiler.
3. The L641B should be mounted on the boiler return pipe and used in conjunction with the T4360A FrostStat.
4. The L641B should be set to approx. 25° C and mounted on the supply pipe close to the 3-port control valve such as to sense the water temperature even when the valve is closed.

## Water Temperature Sensing and

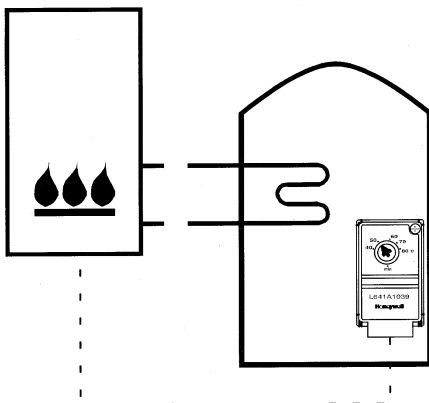
D.H.W. Storage Cylinders  
and Tanks

Limit Control in Pipes

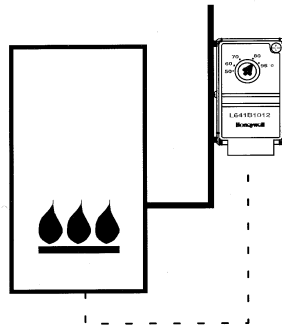
**L641A1039**

High Limit  
For Underfloor Heating  
For Solid Fuel Systems

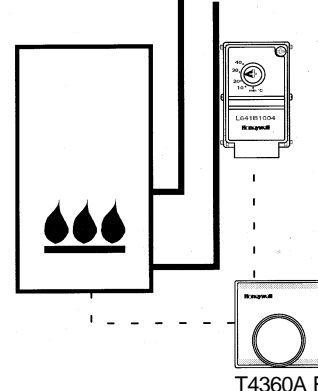
Low Limit  
For Frost Protection of  
Exposed Pipework



**L641B1012**

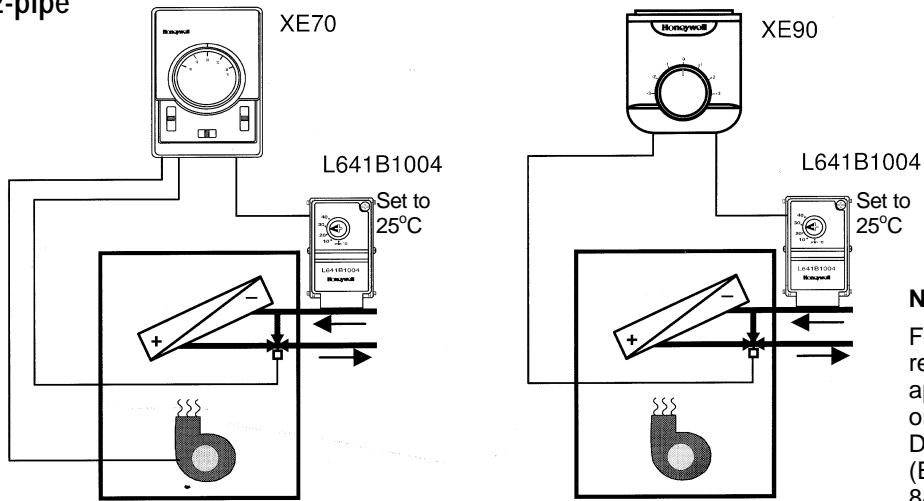


**L641B1004**



T4360A FrostStat

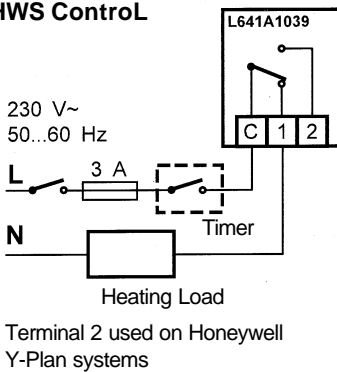
Summer/Winter  
Changeover for 2-pipe  
Fan Coil Unit



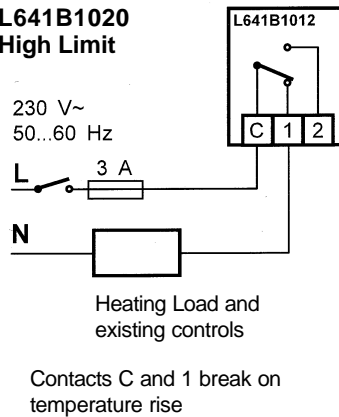
**Note:**  
For wiring details refer to the appropriate XE70 or XE90 Product Data sheet. (ENOR8402, 8403, 8406)

WIRING DIAGRAMS

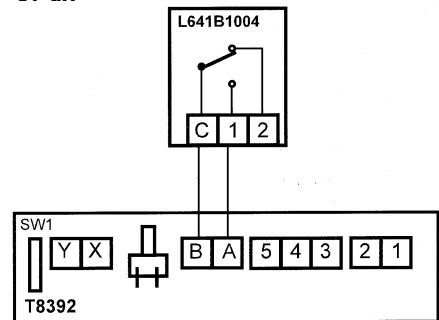
L641A1039  
DHWS Control



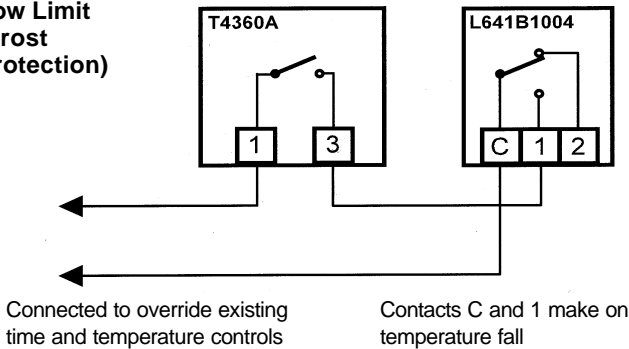
L641B1012  
L641B1020  
High Limit



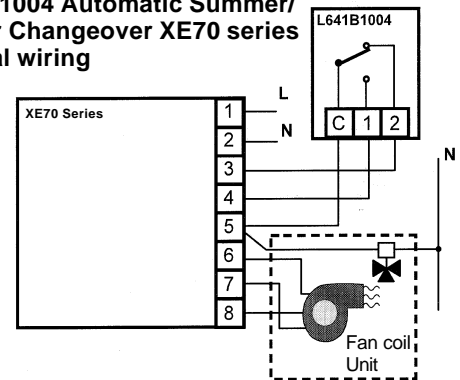
L641B1004 Automatic  
Summer/Winter Changeover  
YFan



L641B1004  
Low Limit  
(Frost Protection)



L641B1004 Automatic Summer/  
Winter Changeover XE70 series  
Typical wiring



**Honeywell**