

# Zio<sup>®</sup> Lite TR40/42 LCD and non-LCD Wall Modules

## INSTALLATION INSTRUCTIONS

### BEFORE INSTALLATION



Fig. 1. LCD Wall Module.



### CAUTION

**Erratic System Operation Hazard.**  
**Failure to follow proper wiring practices can introduce disruptive electrical interference (noise).**  
 Keep wiring at least one foot away from large inductive loads such as motors line starters, lighting ballasts, and large power distribution panels. Shielded cable is required in installations where these guidelines cannot be met. Ground the shield only to the grounded controller case.

### IMPORTANT

*All wiring must comply with local electrical codes and ordinances or as specified on installation wiring diagrams.*

- For Sylk™ wiring, the TR40/42 may be mounted up to 200 ft. (61 m) from the programmable controller. If multiple TR40/42s are installed, the total distance from the controller to the last TR40/42 should not exceed 200 ft.
- Twisted pair wire is recommended for wire runs longer than 100 ft. (30.5 m).
- All wiring is polarity insensitive.
- Compatible with controllers with Sylk communication and firmware able to support TR71s with full functionality.

### INSTALLATION

Mount the wall module on an inside wall approximately 54 in. (1372 mm) from the floor (or in the specified location), to allow exposure to the average zone temperature. Do not mount the wall module on an outside wall, on a wall containing water pipes, or near air ducts. Avoid locations that are exposed to discharge air from registers or radiation from appliances, lights, or the sun.

The wall module can be mounted on a wall, on a standard utility conduit box using No. 6 (3.5 mm) screws or on a 60 mm wall outlet box (see Fig. 3). When mounting directly on a wall, use the type of screws appropriate for the wall material.

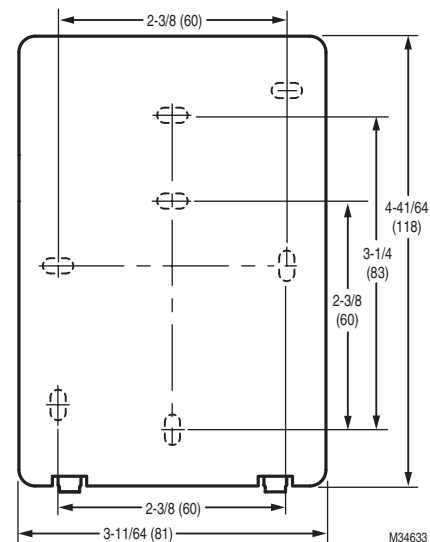
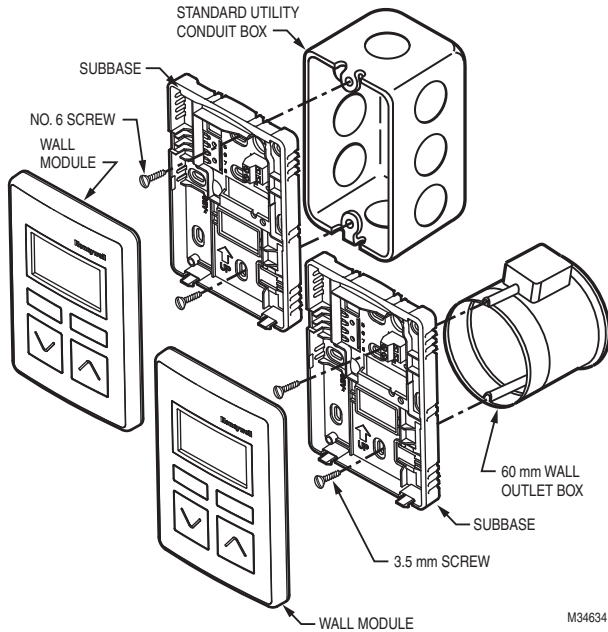
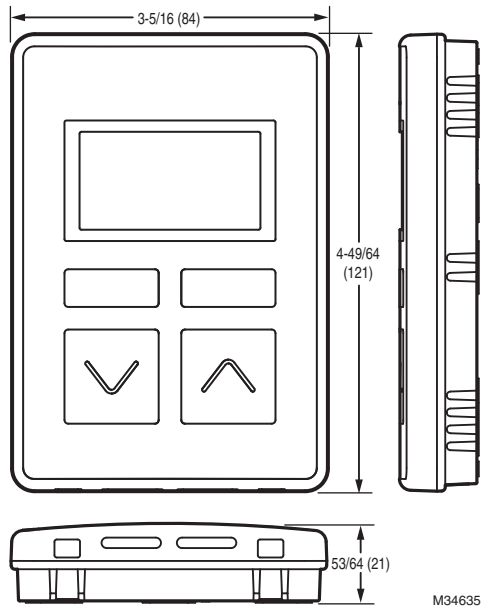


Fig. 2. Subbase mounting holes and locking tabs.





**Fig. 3. Mounting on standard utility conduit box or 60 mm wall outlet box.**



**Fig. 4. LCD Wall Module dimensions in inches (mm).**

## Wiring

All terminal connections can be made to the backside of the module. There are no field adjustable/replaceable components inside the module.

Attach the wires from the programmable controller and network to the appropriate wall module terminals, as indicated in Fig. 6 on page 3.



## CAUTION

**Improper Electrical Contact Hazard.**

**Screw-type terminal blocks are designed to accept no more than one 14AWG (2.5mm sq) conductor. Connect multiple wires that are 14AWG (2.5mm sq) with a wire nut. Include a pigtail with this wire group and attach the pigtail to the individual terminal block.**

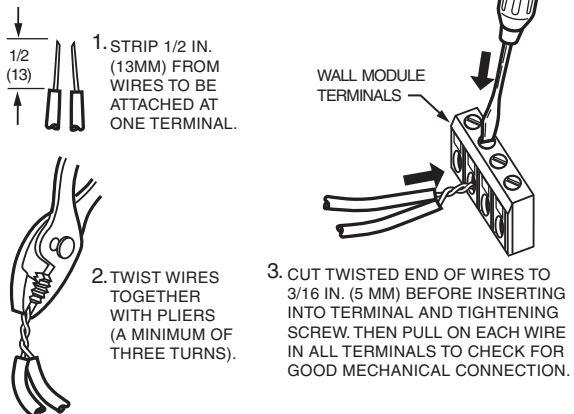
## Wiring Wall Modules

Wire the terminal block shown in Fig. 6 as follows:

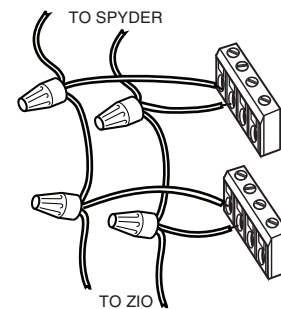
1. For single wires, strip 3/16 in. (5 mm); for multiple wires going into one terminal, strip 1/2 in. (13 mm) insulation from the conductor. See Fig. 5 for wiring multiple TR40/42s.
2. Insert the wire in the required terminal location and tighten the screw to complete the termination.
3. Review and verify the terminal connection wiring illustrated in Fig. 6.

**NOTE: The recommended wire size for the network bus and S-BUS is Level IV, 22 AWG (0.34 sq. mm) plenum or non-plenum rated, unshielded, twisted pair, solid conductor wire. However, larger gauge standard thermostat wiring will also work for runs up to 100 feet.**

### TWO WIRES INTO ONE TERMINAL

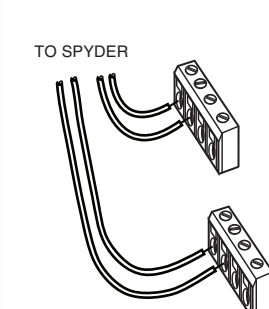


### DAISY-CHAINING MULTIPLE ZIOS



MAX WIRE RUN FROM SPYDER TO FARTHEST ZIO IS 200FT.

### HOME RUNNING MULTIPLE ZIOS



MAX WIRE RUN FOR EACH HOME RUN IS 200FT.

M27348

**Fig. 5. Options for Wiring Multiple TR40/42s.**

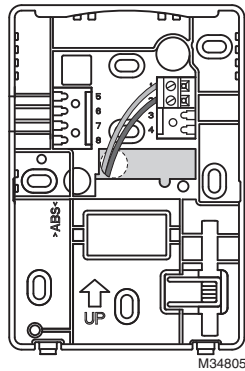


Fig. 6. Terminal connections.

### Setting the Wall Module Bus Address Dial

Each wall module on a Sylk bus must use a different bus address. To change the bus address of a wall module, adjust the address dipswitches to match that of the desired bus address (1-15). Use the bus address label, shown in Fig. 7, as a reference. The default address for both TR40 and TR42 is 1. The address on the wall module must match the address in the configuration tool.

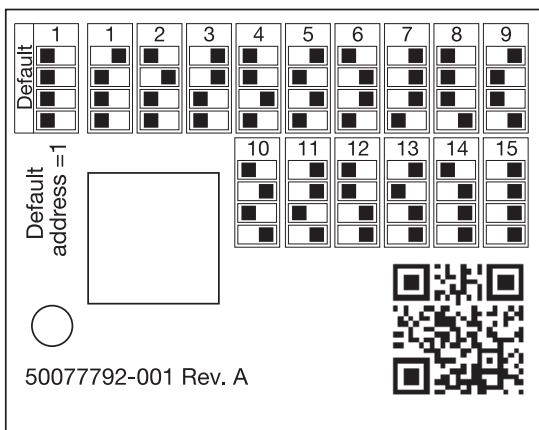


Fig. 7. Bus address settings label.

### Attaching the Wall Module to the Subbase

When all wiring is complete, hook the top side, and then snap down like on a hinge. See Fig. 8.

### Removing the Wall Module from Subbase

To remove the wall module from its subbase:

1. Locate the two snaps on the bottom of the IFC .
2. Push a screwdriver into each snap to release the IFC from the subbase.
3. Pull the wall module up and away from the subbase. See Fig. 8.

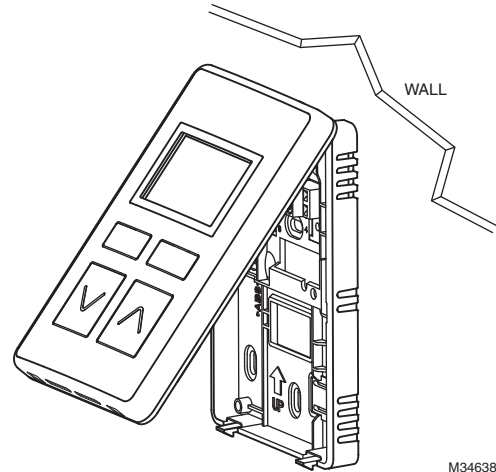


Fig. 8. Removing Wall Module from Subbase.

## POWER UP

After the wall module is properly wired to the controller, it will power up. Upon initial power up, the wall module's LCD panel displays three screens for two seconds each, shown in Figs. 9-11, while the configuration file is being loaded. Once the configuration file has been loaded and the startup screens have cycled through, the LCD panel will then display the home screen. If these screens continuously cycle, this indicates there is no program downloaded to the Spyder, or the bus addresses don't match between the wall module and the workbench config tool.

Refer to the *TR40/42 Wall Modules Operating Guide* (Form 63-2741) to configure and load the desired user interface into the wall module.

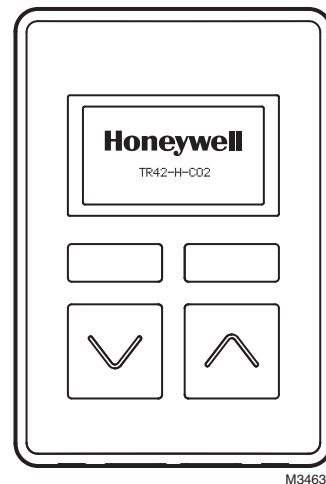


Fig. 9. TR42 Wall Module LCD display startup screen 1.

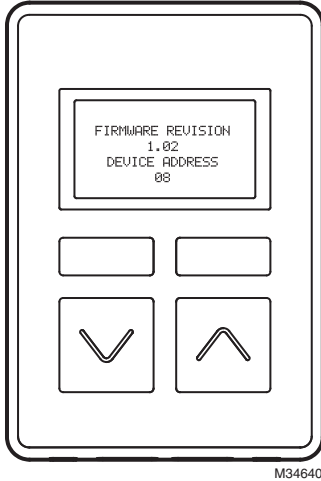


Fig. 10. TR42 Wall Module LCD display startup screen 2.

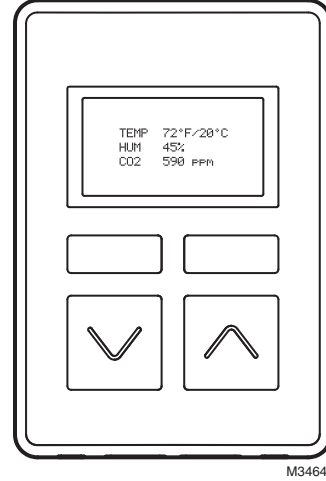


Fig. 11. TR42 Wall Module LCD display startup screen 3.

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