



TJERNLUND PRODUCTS, INC.

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UNIVERSAL CONTROL *MODEL UC1* HIGHLIGHTS

Over time, Tjernlund Products has developed a variety of built-in and accessory interlock controls to match the needs of different boiler, furnace, and water heater control systems. As the years went by we expanded the number of power venter models to include a variety of these interlock controls. This led wholesalers to stock those versions that sold best in their market and special order those variations of the same size power venter that included a different type or voltage control system. In order to simplify product selection, and at the same time update our products with a host of new features, we are introducing a new Universal Control (UC1). It will be the standard interlock used for all of our products with a motor horsepower rating of 1 HP and less.

The Universal Control (UC1) interlocks mechanical draft and combustion air systems with gas/oil fired heating equipment. It can be activated by any 18-130 VAC heater control signal or by a pressure switch or relay using the 5 VDC Control supplied dry contacts.

The UC1 features:

- Adjustable pre & post purge
- LED status/diagnostic indicators
- Selectable voltage to avoid false triggering by electronic burner controls
- Prover switch check circuit to verify that the fan prover switch is open prior to operation
- A 10-second prover switch delay to eliminate burner start up or wind induced prover switch short cycling
- A 5 VDC Control supplied fan prover signal that isolates the burner load circuit from the prover switch circuit

As of July 22, 2002 the following revised models will incorporate the UC1 as their standard interlock control:

HSJ, HS1, HS2, HS3, HS4, HS5
SS1, SS2 (In addition the SS2 also gets a new fan prover)

The following models will be discontinued after July 22, 2002:

HS115-J, HS115-1, HS115-2, HST-J, HST-1, HST-2, GPAK-J, GPAK-1, GPAK-JT, GPAK-1T & SS2G. The models HSUL-J, HSUL-1, & HSUL-2 will still be available through 2002.

The UC1 will be the standard (optional) accessory interlock control for the following models:

DJ-3, D-3, I, IL, XL (These models will still require the PS1505 Fan Proving Switch)
PAI-3, PAI-4, PAI-5, PAI-6, PAI-7

Interlocking the UC1 with multiple or millivolt appliances:

New millivolt and multiple heater interlock controls that end with "E" will be similar to previous versions, but designed to easily interface with the UC1 control.

To interlock with one additional 24/115 VAC heater add the new MAC-1E. It is a stripped down auxiliary board version of the UC1 and is powered by and communicates with the UC1 through a factory-wired whip.

To interlock with a millivolt water heater only, add the WHK-E water heater interlock kit.

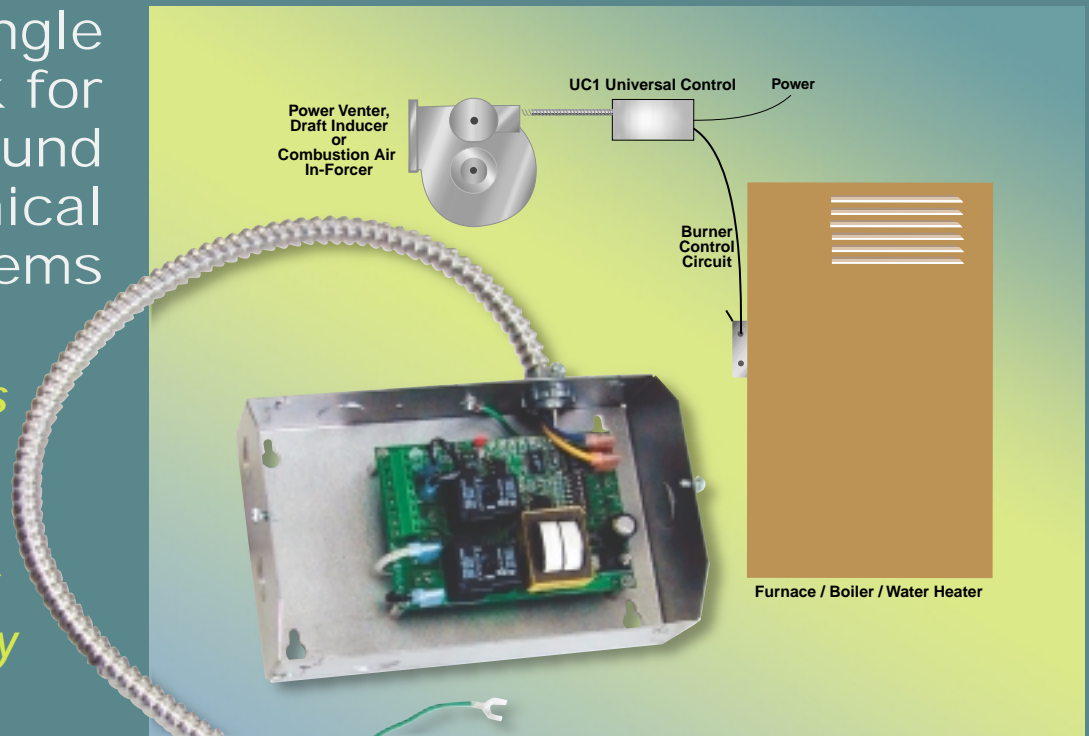
To interlock a millivolt water heater and a 24/115 VAC furnace or boiler, add the WHK-E and the MAC-1E.

To interlock more than two 24/115 VAC heaters add the MAC-4E for a total of up to 5 heaters. It is powered by and communicates with the UC1 through a factory wired whip.

Tjernlund Universal Control (UC1)

The single interlock for all Tjernlund mechanical draft systems

Simplifies installation and service, reduces inventory



Superb Performance and Safety Features:

- Adjustable pre and post purge
- LED status/diagnostic indicators
- Selectable voltage avoids false triggering by electronic burner controls
- Prover switch check circuit verifies fan prover switch is open prior to operating
- 10-second prover switch delay eliminates burner start up or wind induced prover switch short cycling
- 5 VDC fan prover signal eliminates issues with switching burner load through prover switch contacts

Practical Contractor Benefits

- Eliminates appliance control circuit compatibility issues since the UC1 interlocks with dry contact, 24 VAC or 115 VAC appliance control systems. Appliance control circuit voltage can be selected, eliminating false triggering by burner check circuits.
- Simplifies servicing and new installations. Universal Control can replace any relay or timer/relay previously installed.
 - Allows installer to position junction box for easy wiring and service.
- Simplifies Tjernlund Power Venter model selection.
- Simplifies new installations and service calls since operation and wiring interlock problems are diagnosed and displayed through LED indicators.
- Reduces liability with prover status check circuit.
- Simplifies on-truck inventory.

Tjernlund Universal Control (UC1)

Typical Installations



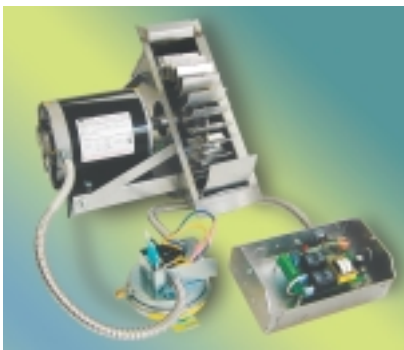
UC1 Universal Control



New HSJ, HS1 & HS2 includes UC1 Control



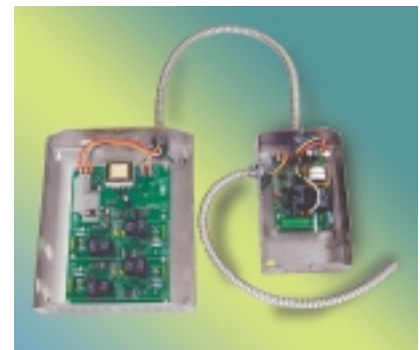
New HS3, HS4 & HS5 includes UC1 Control



In-Line Draft Inducers with optional UC1 Control and PS1505 Fan Proving Switch

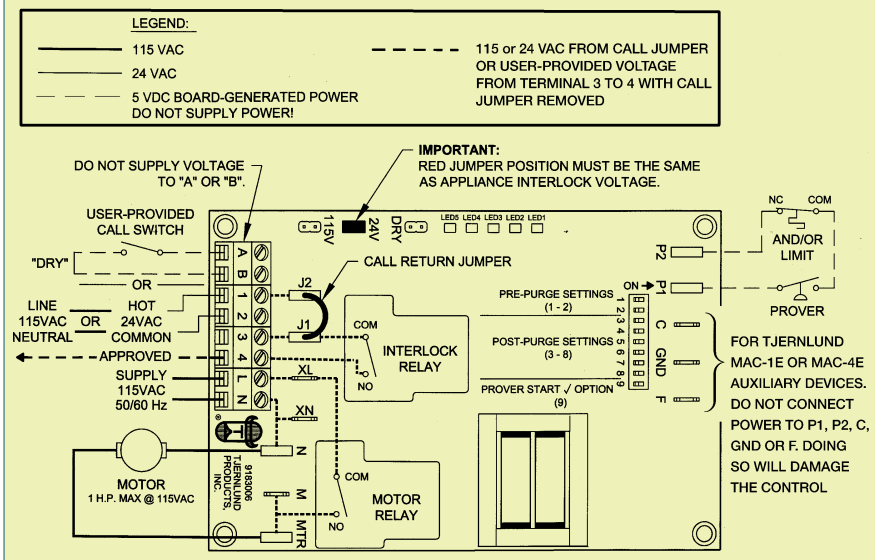


SideShot® Model SS1 & SS2 includes UC1 Control (Note: New Fan Prover for SS2)



New MAC-4E Multiple Appliance Control with UC1 Control (Interlocks up to 5 heaters)

UC1 Electrical Schematic



To interlock with one additional 24/115 VAC heater add the new **MAC-1E**. It is a stripped down auxiliary board version of the UC1 and is powered by and communicates with the UC1 through a factory wired whip.

To interlock with a millivolt water heater only, add the **WHK-E** water heater interlock kit.

To interlock a millivolt water heater and a 24/115 VAC furnace or boiler, add the **WHK-E** and the **MAC-1E**.

To interlock more than two 24/115 VAC heaters add the **MAC-4E** for a total of up to 5 heaters. It is powered by and communicates with the UC1 through a factory wired whip.

DISTRIBUTED BY:



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