

RC845 - Installation Instructions

Heat Pump Add-On Fossil Fuel Relay

RC845

Application

The RC845 is designed to control either a gas, oil furnace burner or an electric furnace as well as the fan when adding a heat pump on an existing heating system.

The RC845 includes a low voltage dry contact output to activate the auxiliary heating system, and a line voltage contact output to control the fan operation.

When installed with an Aube heat pump thermostat (TH144HP), the installer can configure the auxiliary heat sequence to turn OFF the compressor (Y) on a call for auxiliary heat.

The RC845 combined with the TH144HP thermostat offers a complete integrated solution that simplifies installation and provides proper equipment operation.

Installation

- ▶ All wiring must comply with national and local electrical code regulations.
- ▶ Installation should be carried out by an electrician.
- ▶ Disconnect power supply before installing the relay to prevent electrical shock.

- 1 Secure relay in or on the electrical enclosure using the provided lock-nut (see Figure 1).
- 2 Wire the RC845 line voltage side as per Figure 2. The line voltage contact must be connected in parallel with the Plenum Thermostat, usually known as the Fan and Limit Controller (fan side). Connect as follows:
 - RC845 black wire must be connected to L1 (hot).

- 3 RC845 red wire must be connected to the fan side.
- 3 Connect the RC845 low voltage terminals W, G and C to the corresponding terminals on the heat pump thermostat.
- 4 Connect the RC845 Auxiliary Heat dry contact outputs (T, T) to:
 - oil burner terminals T and T; or
 - gas control terminals TH and TH; or
 - electric heat furnace terminals R and W.
- 5 Once mounting and wiring have been completed, return power to the heating system and proof installation.
- 6 To proof installation, select the Emergency Heat mode on your thermostat. Increase the thermostat setpoint to activate the auxiliary heating system. Allow system operation long enough to proof relay operation. Once installation has been proofed, disable the Emergency Heat mode and define setpoint for normal operation.

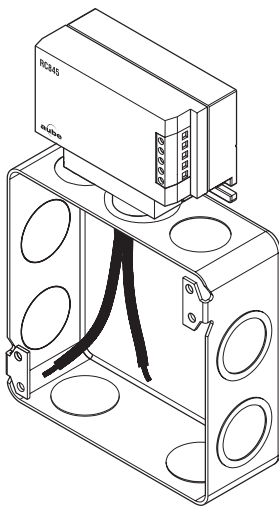
Operating Sequence

On a call for heat or cool, the heat pump thermostat (TH144HP) activates the G terminal; the RC845 activates the fan.

When auxiliary heat is required, the heat pump thermostat activates the W terminal; the RC845 dry contact outputs T, T closes to activate the auxiliary heat system.

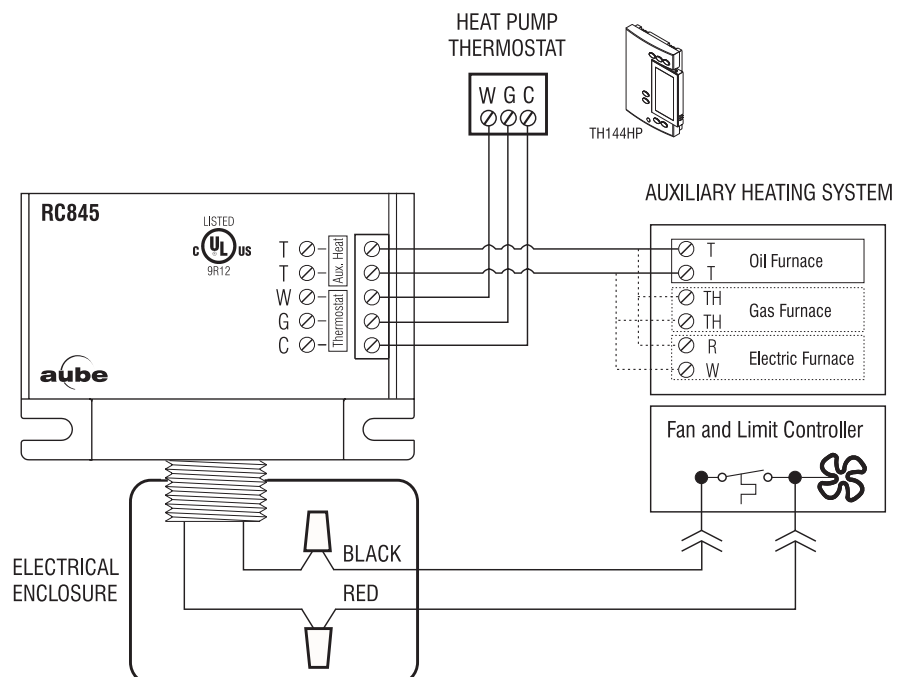
NOTE: The RC845 line voltage contact is connected in parallel with the furnace fan and limit controller (fan side). When the thermostat setpoint has been reached, the fan may continue to run until the fan and limit controller setpoint is reached.

FIGURE 1



Installation on the side of an electrical box

FIGURE 2



Electrical Specifications

Ensure ratings are suitable for your application.

Auxiliary Heat Contacts	
Resistive load	30 V / 5 A
Input signal W	24 V / 22 mA

Fan Contacts		
Volt	120	240
Resistive load	22 A	
Motor	0.8 HP	1.5 HP
FLA	16	12
LRA	42	42
Input signal G	24 V / 40 mA	

Ambient operating temp.: -4°F to 140°F (-20°C to 60°C)

Ambient storage: -40°F to 175°F (-40°C to 80°C)

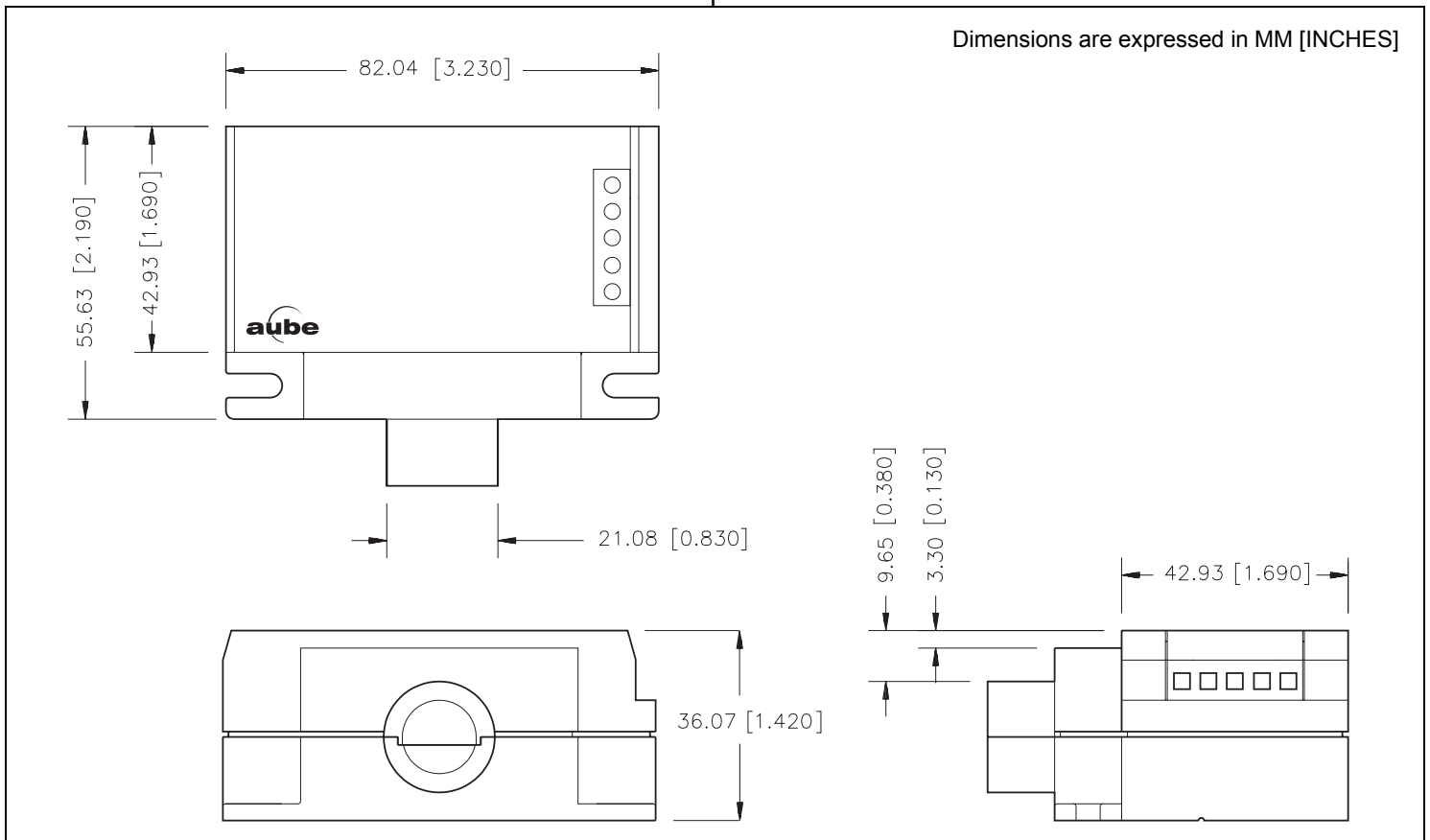
Humidity limits: 0 to 95% non-condensing

Net weight: 326 g (11.5 oz)

Terminal wire size: 12 AWG

Certification: 

RC845 Dimensions



Warranty

AUBE TECHNOLOGIES INC. ONE (1) YEAR LIMITED WARRANTY
 This product is guaranteed against workmanship defects for a one year period following the initial date of purchase. During this period, AUBE Technologies Inc. will repair or replace, at our option and without charge, any defective product which has been used under normal conditions.

The warranty does not cover delivery costs and does not apply to products poorly installed or randomly damaged following installation. This warranty cancels and replaces any other manufacturer's express or implied warranty as well as any other company commitment.

AUBE Technologies Inc. cannot be held liable for related or random damages following the installation of this product. The defective product as well as the purchase invoice must be returned to the place of purchase or mailed, prepaid and insured, to the following address:

Aube Technologies Inc.
 705 Montrichard
 Saint-Jean-sur-Richelieu, Quebec, Canada J2X 5K8

Technical Support

If you have any questions concerning the installation of the RC845 relay, call our technical support team at:

Phone: Montreal area: (450) 358-4600
 Canada / U.S.: 1-800-831-AUBE (2823)
 Fax: (450) 358-4650
 Email: service@aubetech.com

Monday to Friday from 8:30 AM to 5:00 PM EST.

For more information on our products, visit us at:
www.aubetech.com