

MODEL: PAC-US446CN-1



Job Name:

System Reference:

Date:



SPECIFICATIONS:

- Allows users to control Mitsubishi Electric indoor units with a third-party thermostat
- Thermostats tested:
 - ecobee
 - Honeywell®
 - Nest® *1
 - Lyric®
 - INNCOM® (with fan speed control)
- Indoor unit modes: Cool, Heat, Fan, and Off
- Provides 3 input terminals to control fan speed:
 - G1 (High)
 - G2 (Medium)
 - G3 (Low)
- Limited to one Thermostat Interface per indoor unit
- Works with PAA intelli-HEAT™ indoor unit
 - Includes PAA wire harness
- Connects to CN105
- Dimensions: (H x W x D) 3.96 in x 3.17 in x 0.93 in
- Terminal Block: 20-30 VAC Rated

ACCESSORIES:

Transformer (VPL24-210)

REQUIREMENTS:

- Compatible Mitsubishi Electric indoor unit
 - See controls compatibility chart
- 24VAC Thermostat or I/O Controller (field supplied)
- 24VAC circuit for HVAC Thermostat (field supplied)

TERMINALS:

Connector	Purpose	Purpose
TC	Common (In)	To Transformer
C	Common (Out)	To Thermostat
TR	24VAC (In)	To Transformer
R	24VAC (Out)	To Thermostat
G3	Fan High	High Fan Speed
G2	Fan Medium	Medium Fan Speed
G1	Fan Low	Low Fan Speed
Y2	Y2	Stage 2 Cooling
Y1	Y1	Stage 1 Cooling
W2	W2	Stage 2 Heating
W1	W1	Stage 1 Heating
G	G	Fan Mode

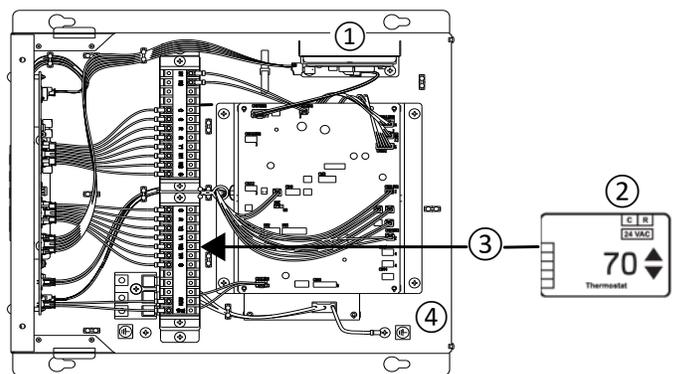
ADVANCED FEATURES:

- New intelli-HEAT settings for current PAA-NL models
 - Intelligent Comfort Control settings (Capacity Balance Point)
 - Delay time options of 19, 44, 59 minutes and Economic Balance Point (EBP) only mode
 - New Economic Balance Points (EBP)
 - Standard heat pump: 5° F, 9° F, 14° F, 23° F, 32° F, 41° F, Furnace only
 - Hyper-heating heat pump: -13° F, 5° F, 9° F, 14° F, 23° F, 32° F, 41° F, Furnace only
- Thermo-OFF time delay
 - Stay in heat or cool mode for 2 hours once W or Y is no longer active (default)
 - Turn off the unit or go into fan mode immediately when set point is met
- Fan speed setting for when setpoint is met in cooling or heating
 - OFF (default)
 - Extra low
- Fan Speed
 - Custom Auto (default, more comfortable than Auto)
 - Medium
 - High
 - Auto (more efficient than Custom Auto)
- Two-stage thermostat operation
 - W1/Y1: Capacity is adjusted automatically based on room (default)
 - W2/Y2: Full capacity
- Adjustable static pressure settings
- Enable CN24 backup heat operation during defrost
- Auto recovery after power failure
- Select the thermostat power supply source on PAA intelli-HEAT™
- Set Emergency and test mode operations PAA intelli-HEAT™
 - OFF Thermostat controls heat and fan signals (default)
 - ON Test mode operation
- Thermostat Interface DIP switch settings for intelli-HEAT™
 - OFF G & Y (default)
 - ON Y1 & Y2

NOTES:

*1 Non-learning Nest thermostats require installation of 2.2k mW resistors between terminals TC-Y1 and C-W1 on the PAC-US445CN-1

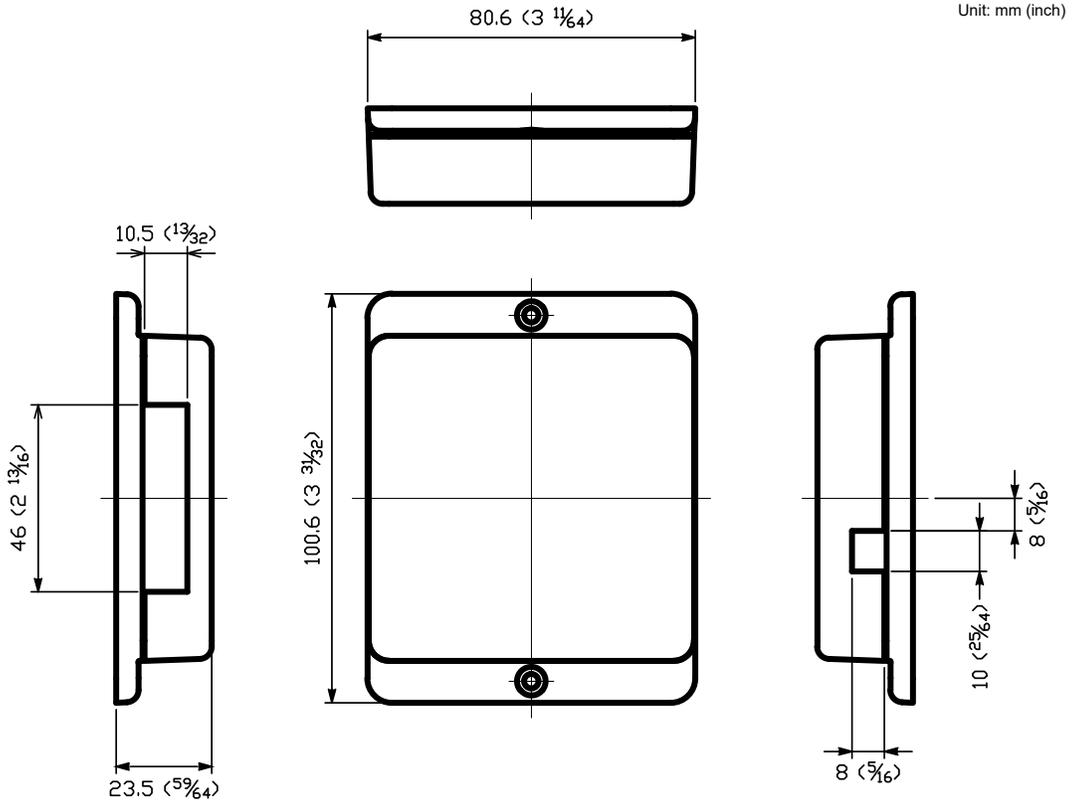
WIRING DIAGRAM: PAC-US445CN-1 WHEN USED WITH PAA intelli-HEAT™ INDOOR UNIT



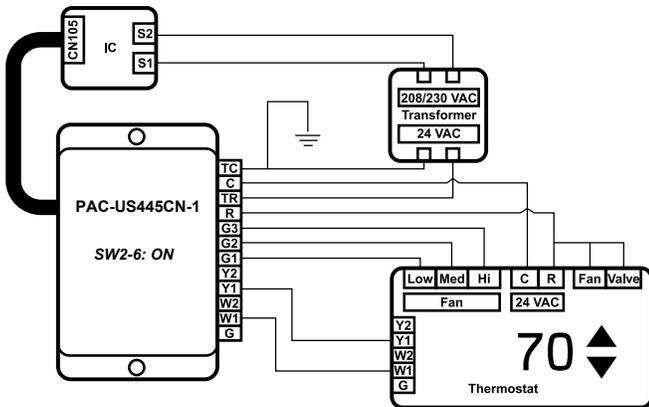
① Thermostat Interface	② Third-party thermostat
③ Thermostat control signals (R, C, W1, W2, Y1, Y2, G)	④ PAA unit control box

DIMENSIONS AND WIRING DIAGRAMS: PAC-US445CN-1

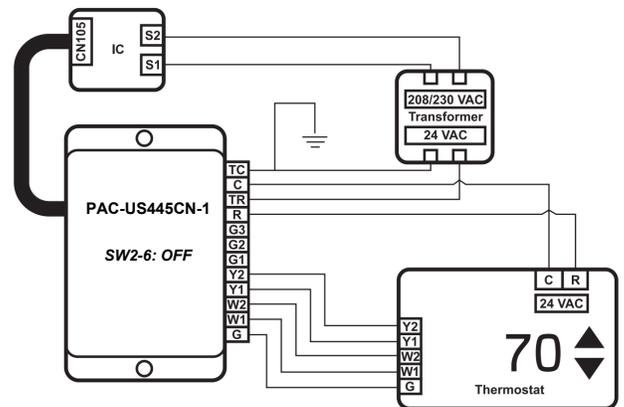
DIMENSIONS:



WIRING DIAGRAMS:



Single-stage Cooling and Heating with Dedicated Fan Speed Relays



Two-stage Cooling and Heating