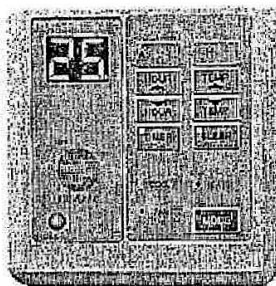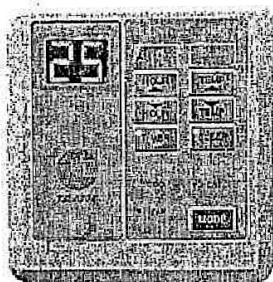**TRANE®**

# Owner & Installation Manual

## Remote Control
## Digital Thermostat

ACYSTAT007A (WIRED CONTROL, COOLING ONLY)
ACYSTAT008B (WIRELESS CONTROL, COOLING ONLY)
ACYSTAT009A (WIRED CONTROL, COOLING & HEATING)
ACYSTAT010B (WIRELESS CONTROL, COOLING & HEATING)

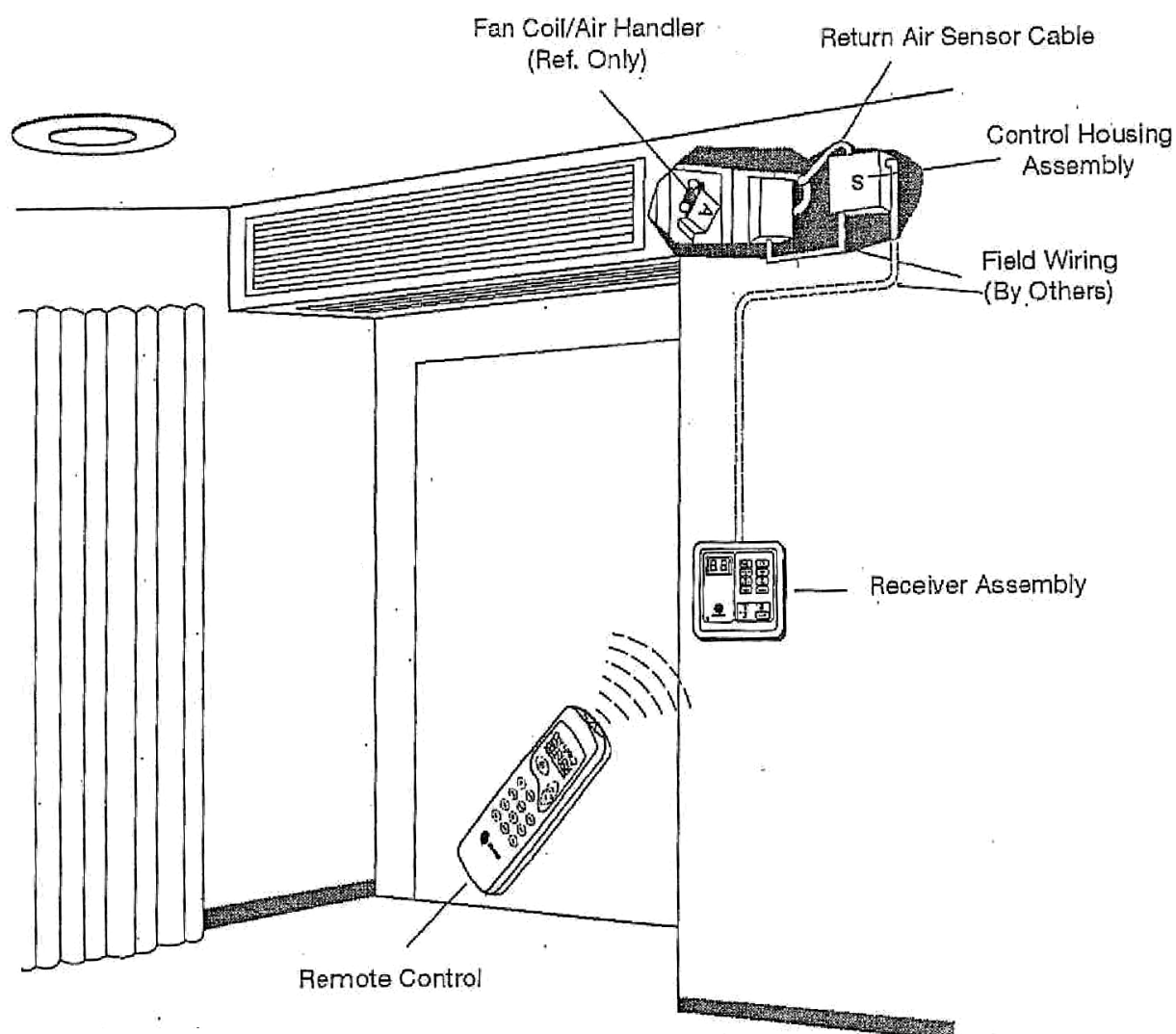July 2003          ACYSTAT-IOM-EN

# General System Appearance



Figure 1

# Contents

# General Information

## General Information

Congratulations on your selection of Trane Digital Thermostat Control. These systems have been carefully designed and manufactured under strict Trane Worldwide Quality Standards. Each model of Digital Thermostat includes all of those operating features most desired by today's discriminating consumer and latest state-of-the-art electronic technology in design and materials.

Installation procedures should be performed in the sequence that they appear in this manual. Additionally, the services be employed, through a maintenance contract with a reputable service company.

Also, This manual is a user guide to operate and maintain the digital thermostat.

Please read this manually carefully before installing and using this thermostat.

## About This Manual

Cautions appear at appropriate places in this instruction manual. Your personal safety and the proper operation of this machine require that you follow them carefully. The Trane Company assumes no liability for inappropriate use of the unit.

## About The Unit

The Trane ACYSTAT is typically used with room air conditioning systems using concealed type indoor units. These series offer digital thermostat control with LCD wireless remote or wired control. Provide convenient and precise control of both Cooling only and Cooling/Heating concealed type chilled water fan coil or direct expansion air handling units.

The typical system wiring schematics are generic by necessity and do not apply to all possible indoor unit configurations and control requirements. If you have any question relating to proper application or installation of these thermostats, please contact your nearest Trane Dealer.

## Reception

On arrival, inspect the unit before signing the delivery note. Specify any damage of the unit on the delivery note, and send a registered letter of protest to the last carrier of the goods within 72 hours of delivery. Notify the dealer at the same time.

The unit should be totally inspected within 7 days of delivery. If any concealed damage is discovered, send a registered letter of protest to the carrier within 7 days of delivery and notify the dealer.

## Warning

Warnings are provided at appropriate places in this manual to indicate to installers, operators and service personnel of potentially hazardous situations which, if not avoided, COULD result in death or serious injury.

## Caution

Cautions are provided at appropriate places in this manual to indicate to installers, operators, and service personnel of potentially hazardous situations which, if not avoided, MAY result in minor or moderate injury or malfunction of the unit.

Your personal safety and the proper operation of this unit require that you follow them carefully. The Trane Company assumes no liability for installations or servicing performed by unqualified personnel.

# General Information

## Warranty

Warranty is based on the general terms and conditions by country. The warranty is void if the equipment is modified or repaired without the written approval of The Trane Company, if the operating limits are exceeded or if the control system or the electrical wiring is modified.

Damage due to misuse, lack of maintenance or failure to comply with the manufacturer's instructions, is not covered by the warranty obligation. If the user does not follow the instructions in the Owner Manual, it may entail cancellation of warranty and liabilities by The Trane Company.

## Important

These instructions do not cover all variations in systems, nor do they provide for every possible contingency to be met. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to your authorized Trane dealer.
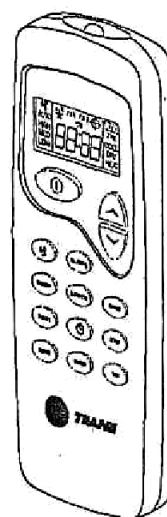
# Wireless Remote Control

There are three major components of the Wireless Remote Control system as follows:
(1) Control Box Assembly
(2) Display Unit and Receiver Board (wall mounted)
(3) Hand Held Remote Controller
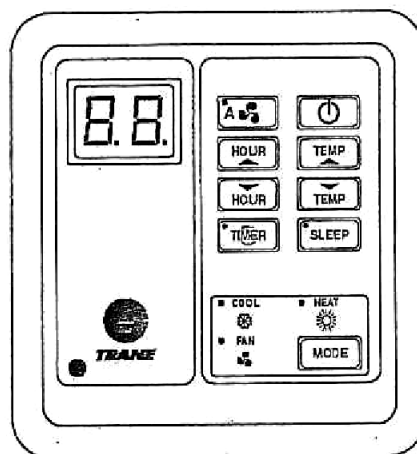


**Display Unit and Receiver Board**

**Figure 2**



**Hand Held Remote Controller**

**Figure 3**

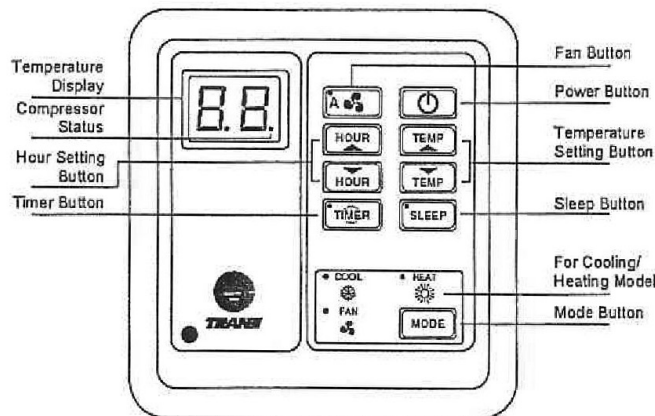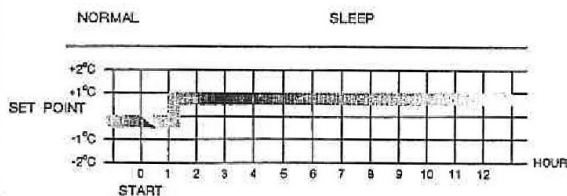# Display Unit and Receiver Board (Wall Mounted)



Figure 4



**SLEEP (COOLING MODE)**

By pressing SLEEP button, the unit will operate at SLEEP FUNCTION It will automatically return to normal operation when the air-conditioner is switched off and on again.
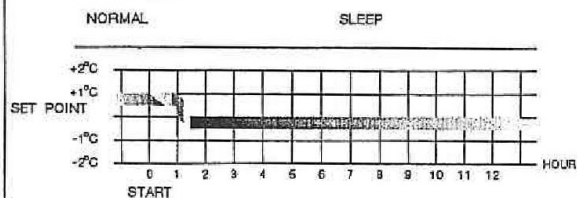


**SLEEP (HEATING MODE)**

By pressing SLEEP button, the unit will operate at SLEEP FUNCTION It will automatically return to normal operation when the air-conditioner is switched off and on again.

1. **Fan**
   Three fan speeds (high, medium, low) can be selected. The fan speed can also be put in AUTO fan mode. It will change automatically from high to medium and low according to the difference between room and setting temperature.

2. **Power on/off**
   Press POWER button to turn the air conditioner on and off it will operate according to the last program setting.

3. **Temperature Setting**
   The temperature can be set in the range of 15°C- 30°C.

4. **Sleep**
   The facility to raise up the setting temperature 1°C (in Cool mode) for the purpose of comfort and energy saving.

5. **Operating Mode**
   Press MODE button to select system operating modes The air conditioner can be put in 2 modes (COOL and FAN) for cooling only model. And 3 modes COOL, HEAT and FAN) for cooling heating model.

6. **Compressor Status**
   When lit, the dot LED after the second digit of the 7 segment display indicates the compressor is on.

7. **Timer**
   The air conditioner can be timed to switch "on" or "off" up to 15 hours in advance.
   TIMER OFF To set timer off press TIMER button when air conditioning is on, TIME LED will blink and show last hour time setting. Press HOUR ▲ or HOUR ▼ to increase or decrease hour digit (between 1 to 15 hours).
   TIMER ON Use same procedure to set timer off except press TIMER button when air conditioner is off.

8. **Toggle °C/ °F**
   By Pressing TEMP+ and TEMP- at the same time for 5 seconds the display can be changed from °C to °F and °F to °C.

**TRANE**

# Display Unit and Receiver Board (Wall Mounted)

**Notes:**
- If TIMER LED is off, HOUR ▲ and HOUR ▼ button do not function.
- If TIMER LED is on, pressing HOUR ▲ and HOUR ▼ button will change display time setting to show hour setting. New time will be displayed on blinking 2 digit LED display. Pressing HOUR ▲ and HOUR ▼ will change display to new time setting.
- If the air conditioner looses power, on/off timer settings are lost and will need to be re-programmed.
- If POWER button is pressed during setting the timer, setting of timer on/off will be cancelled and remote will turn on/off air conditioner as normal.
- If TIMER button is pressed again during setting of time (TIMER LED is lit), setting time will be cancelled.

## Display Unit
The following LED's display system mode.
1. An LED in the fan button lights when fan speed control is in AUTO mode.
2. A SLEEP LED lights when sleep mode is selected.
3. A TIMER LED lights when system operation is controlled by the timer.

## Temperature Display (2 digit 7 Segment LED's)

**Temperature**
1. Room Temperature.
2. Temperature Setting (while blinking).

**System Status**
1. "RE" Temperature sensor alarm.
2. "HF" Heating system failure.
3. "Fr" Evaporator coil frozen.
4. "FE" Freeze sensor alarm.

**Fan Speed/Mode**
1. "F3" High Speed.
2. "F2" Medium Speed.
3. "F1" Low Speed.
4. "FA" Fan speed in Automatic mode.

# Hand Held Remote Control

## Infrared Remote Control
## Name and function of buttons

1. Infrared signal transmitter
   Transmits the signal to indoor unit.
2. MODE Button
   Press this button to select system operating modes. In cooling only system, a mode is selected in a sequence as FAN, COOL, DRY and back to FAN. In cooling and heating system, a mode is selected in a sequence as FAN, COOL, DRY, HEAT, AUTO and back to FAN.
3. SWEEP Button
   Press this button to activate sweep motor to distribute air flow (not available in all models).
4. LOUVER Button
   Press this button to adjust the direction of air flow.
5. POWER Button
   Press this button to start operation. Press the button again to stop operation.
6. Temperature Setting Button
   TEMP ▲ :Press this button to increase the set temperature.
   TEMP ▼ :Press this button to decrease the set temperature.
7. FAN Button
   Press this button to select fan speed.
8. SLEEP Button
   Press this button to control temperature while sleeping.
9. CLOCK Button
   This button is used to set the clock. If button is pressed during 18.00 hrs. to 6.00 hrs., it will turn on the back light. If there is no button pressed within 3 seconds, the back light will be turn off.
10. STOP Button
    Press this button to set the OFF timer.

11. START Button
    Press this button to set the ON timer.
12. MIN Button
    This button is used to set the minute.
13. HOUR Button
    This button is used to set the hour.
14. SEND Button
    This button is used to confirm the programming on the remote unit to the fan coil unit.
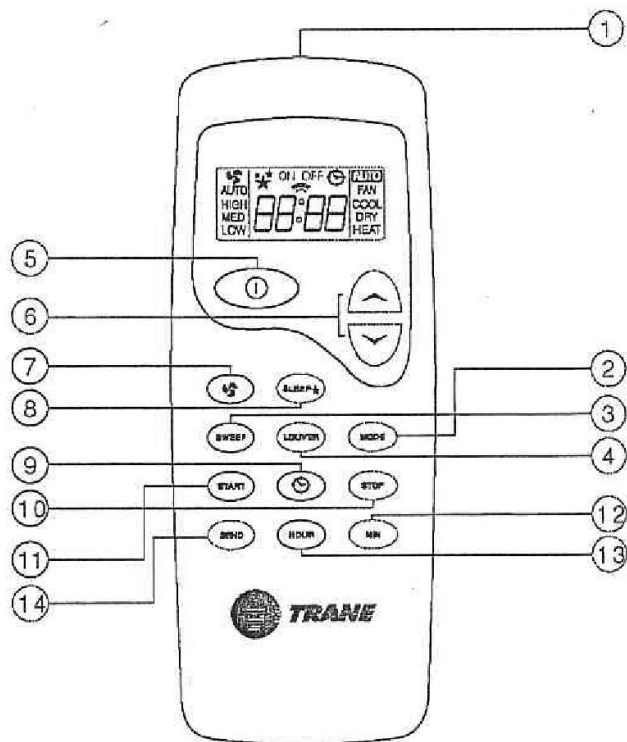


Battery: Two AAA batteries are used in this remote control unit.

# Hand Held Remote Control

## Indicators on Infrared Remote Control
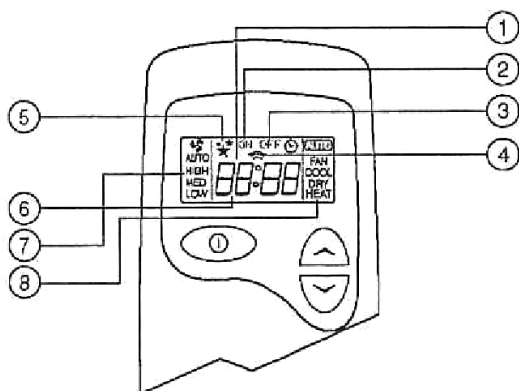


1. **Clock**
   Displays the current time when the handset is under POWER OFF status.
2. **Timer START**
   The time set for timer on operation is indicated.
3. **Timer STOP**
   The time set for timer off operation is indicated.
4. **Transmission Indicator**
   This transmission indicator lights when remote control transmits signals to the indoor unit.
5. **SLEEP Mode**
   Displayed by pressing the SLEEP button. Press the SLEEP button again to disappear.
6. **Temperature Setting**
   Displays the temperature setting (15°C to 30°C) When the handset is under POWER ON status. Note: No temperature setting display when FAN Mode is selected.
7. **Fan Speed**
   Displays the selected fan speed. Fan speed level, low (LOW), medium (MED), high (HIGH), auto (AUTO) will be indicated.
8. **System Mode**
   Displays the current operation mode. In cooling only (FAN, COOL or DRY). In cooling and heating system (FAN, COOL, DRY or HEAT).

## System Operating Selection

FAN Only System Operation
- Press POWER button (the display panel shows the previous settings).
- Press MODE button to select the system operating mode, FAN mode will be shown on the display.
- Press FAN button to select any fan speed. The FAN display will show ♪ LOW, ♪ MED, ♪ HIGH or AUTO according to fan speed selected low, medium, high and auto.

COOLING System Operation
- Press POWER button (the display panel shows the previous settings).
- Press MODE button to select the COOL operating mode, "COOL" mode will be shown on the display.
- Press either TEMP ▲ or TEMP ▼ button to set the desired room temperature. Temperature set range is 15°C to 30°C.
- Press FAN button to select any fan speed. The FAN display will show ♪ LOW, ♪ MED, ♪ HIGH or AUTO according to fan speed selected low, medium, high and auto.

DRY System Operation
- Press POWER button (the display panel shows the previous settings).
- Press MODE button to select the DRY operating mode, "DRY" mode will be shown on the display.
- Press either TEMP ▲ or TEMP ▼ button to get the desired room temperature setting at the indication. Temperature set range is 15°C to 30°C.
- The system automatically cycles the compressor and fan (low speed) to remove moisture from the air without overcooling the room.

Note: Fan speed cannot be changed when DRY Mode is selected.

# Hand Held Remote Control

**HEATING System Operation**
**(Heating/Cooling Models)**
- Press POWER button (the display panel shows the previous settings).
- Press MODE button to select the HEAT operating mode, "HEAT" mode will be shown on the display.
- Press either TEMP ▲ or TEMP ▼ button to set the desired room temperature. Temperature set range is 15°C to 30°C.
- Press FAN button to select any fan speed. The FAN display will show ♪ LOW, ♫ MED, ♫ HIGH or AUTO according to fan speed selected low, medium, high and auto.
- The system will automatically switch between cooling mode and heating mode to maintain desired temperature setting.

**AUTO System Operation**
**(Heating/Cooling Models)**
- Press POWER button (the display panel shows the previous settings).
- Press MODE button to select the AUTO operating mode, "AUTO" mode will be shown on the display.
- Press either TEMP ▲ or TEMP ▼ button to set the desired room temperature. Temperature set range is 15°C to 30°C.
- Press FAN display will show ♪ LOW, ♫ MED, ♫ HIGH or AUTO according to fan speed selected low, medium, high and auto.

**Setting Clock**
To set clock, press CLOCK button until CLOCK symbol ⊙ is blinking.
The current time value can be set by pressing HOUR or MIN (minute) button.

**Note:** During the clock symbol is blinking (the time value has not been changed), if there are no other buttons pressed within 10 seconds, the LCD display will return to show setting temperature when the handset is under POWER ON status, or to show current time value when the handset is under POWER OFF status.

**Timer Operation**
Once you select the timer operation, the settings are saved in the remote control. Thereafter, the air conditioner will start operating under the same conditions when simply push the POWER button of the remote control.

**Setting STOP timer**
You can set the STOP timer to stop the unit automatically at any desired time up to 24 hour ahead.
- Press POWER button to turn on the unit and the display panel show the previous condition.
- Press STOP button once. On the display panel, the last set time of the STOP timer will be blinking.
- Press HOUR or MIN buttons to change the time (pass this step, if no time change is required).
- Press SEND or STOP buttons to transmit the signal to the air conditioner. The set time will stop blinking.
- The unit will stop automatically at set time of OFF timer.
- To cancel the STOP timer, press STOP button again.

**Setting START timer**
You can set the START timer to start the unit automatically at any desired time up to 24 hour ahead.
- Press POWER button to turn on the unit, and the display panel shows the previous conditions.
- Press START button once. On the display panel, the last set time of the START timer will be blinking.
- Press HOUR or MIN buttons to change the time (pass this step, if no time change is required).
- Press SEND or START buttons to transmit the signal to the air conditioner. The set time will stop blinking.
- The unit is now standby for starting automatically at set time of START timer.
- To cancel the START timer, press START button again.

# Hand Held Remote Control

Note: In case of power failure, the START/STOP timer will be automatically cancelled as there is no electricity in the air-conditioner. (But the set time on the remote unit is still displayed due to the batteries). If any button or the remote unit is pressed when the electricity is back to normal, this feature will be reactivated.

**SLEEP Mode**
This feature automatically adjusts the temperature setting to provide increased comfort and save energy (The SLEEP display on LCD will disappear after 1 hour).

**SLEEP (COOLING MODE)**

By pressing SLEEP button, the unit will operate at SLEEP FUNCTION It will automatically return to normal operation when the air-conditioner is switched off and on again.



NORMAL                    SLEEP

+2°C
+1°C
SET POINT
-1°C
-2°C
        0  1  2  3  4  5  6  7  8  9  10  11  12     HOUR
        START
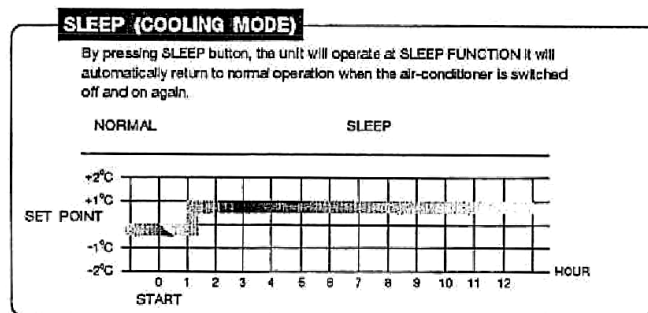
**COOLING Mode**
- Press SLEEP button, one hour after pressing, the air conditioner will automatically raise the set temperature by 1°C.

**SLEEP (HEATING MODE)**

By pressing SLEEP button, the unit will operate at SLEEP FUNCTION It will automatically return to normal operation when the air-conditioner is switched off and on again.



NORMAL                    SLEEP

+2°C
+1°C
SET POINT
-1°C
-2°C
        0  1  2  3  4  5  6  7  8  9  10  11  12     HOUR
        START
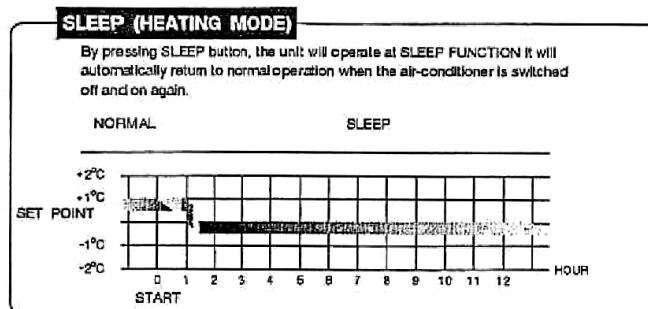
**HEATING Mode**
- Press SLEEP button, one hour after pressing, the air conditioner will automatically reduce the set temperature by 1°C.

# Wired Control
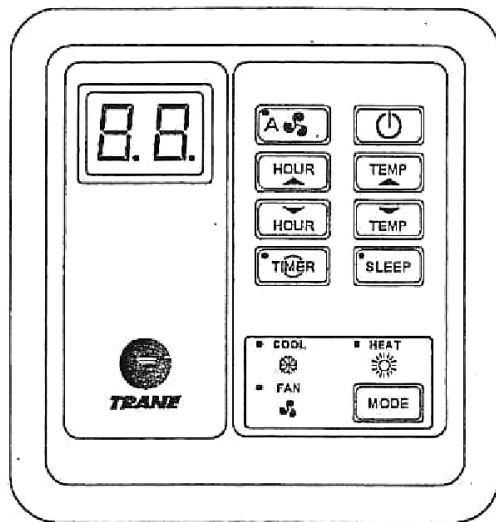


Display Unit

Figure 6

There are two major components of the wired control as follows
(1) Control Housing Assembly
(2) Display unit (wall mounted)

# Display Unit (Wall Mounted)



Figure 7

**Temperature Display**
**Compressor Status**
**Hour Setting Button**
**Timer Button**

**Fan Button**
**Power Button**
**Temperature Setting Button**
**Sleep Button**
**For Cooling/ Heating Model**
**Mode Button**



**SLEEP (COOLING MODE)**

By pressing SLEEP button, the unit will operate at SLEEP FUNCTION It will automatically return to normal operation when the air-conditioner is switched off and on again.



**SLEEP (HEATING MODE)**

By pressing SLEEP button, the unit will operate at SLEEP FUNCTION It will automatically return to normal operation when the air-conditioner is switched off and on again.

1. **Fan**
   Three fan speeds (high, medium, low) can be selected. The fan speed can also be put in AUTO fan mode. It will change automatically from high to medium and low according to the difference between room and setting temperature.

2. **Power on/off**
   Press POWER button to turn the air conditioner on and off it will operate according to the last program setting.

3. **Temperature Setting**
   The temperature can be set in the range of 15°C-30°C.

4. **Sleep**
   The facility to raise up the setting temperature 1°C (in Cool mode) for the purpose of comfort and energy saving.

5. **Operating Mode**
   Press MODE button to select system operating modes The air conditioner can be put in 2 modes (COOL and FAN) for cooling only model. And 3 modes COOL, HEAT and FAN) for cooling heating model.

6. **Compressor Status**
   When lit, the dot LED after the second digit of the 7 segment display indicates the compressor is on.

7. **Timer**
   The air conditioner can be timed to switch 'on' or 'off' up to 15 hours in advance.
   TIMER OFF To set timer off press TIMER button when air conditioning is on, TIME LED will blink and show last hour time setting. Press HOUR ▲ or HOUR ▼ to increase or decrease hour digit (between 1 to 15 hours).
   TIMER ON Use same procedure to set timer off except press TIMER button when air conditioner is off.

8. **Toggle °C/°F**
   By Pressing TEMP+ and TEMP- at the same time for 5 seconds the display can be changed from °C to °F and °F to °C.

# Display Unit (Wall Mounted)

## Note:
- If TIMER LED is off, HOUR ▲ and HOUR ▼ button do not function.
- If TIMER LED is on, pressing HOUR ▲ and HOUR ▼ button will change display time setting. New time will be displayed on blinking 2 digit LED display. Pressing HOUR ▲ and HOUR ▼ will change display to new time setting.
- If the air conditioner looses power, on/off timer settings are lost and will need to be re-programmed.
- If POWER button is pressed during setting if timer, setting of timer on/off will be cancelled and remote will turn on/off air conditioner as normal.
- If TIMER button is pressed again during setting of time (TIMER LED is lit), setting time will be cancelled.

## Display Unit
The following LED's display system mode.
1. An LED in the fan button lights when fan speed control is in AUTO mode.
2. A SLEEP LED lights when sleep mode is selected.
3. A TIMER LED lights when system operation is controlled by the timer.

## Temperature Display (2 digit 7 Segment LED's)

### Temperature
1. Room Temperature.
2. Temperature Setting (while blinking).

### System Status
1. "RE" Temperature sensor alarm.
2. "HF" Heating system failure.
3. "Fr" Evaporator coil frozen.
4. "FE" Freeze sensor alarm.

### Fan Speed/Mode
1. "F3" High Speed.
2. "F2" Medium Speed.
3. "F1" Low Speed.
4. "FA" Fan speed in Automatic mode.

# System Operation

## System Features

1. Watchdog
   There is a circuit in the system to watch the operation of the microprocessor.
2. Compressor Delay Protection
   There is a time delay for the compressor to restart.
3. Compressor Minimum on Time
   Once the compressor starts to operate, it will not stop unless the compressor has operated for at least 24 seconds.
4. Non-Volatile Memory (Auto Restart)
   After power interruption, the control will resume its operation with same setting parameters except those related to the time.
5. Pre-heat/Post-heat (Heat Model)
   Prevents the fan coil from blowing a cold draught when the indoor coil tempera ture is low.
6. Freeze Function (Optional)
   Stops the compressor if the indoor coil temperature is below 0°C.

## Operating Precautions

This system must be installed properly by a qualified installer and in accordance with installation instructions.

## Anti-Recycle Timer

- The control system has a built-in 3 minute anti-recycle timer which helps to preserve the life of system components.
- Anti-Recycle Timer will operate as circum stances occur during operation of unit:
  - Temperature setting is adjusted back and forth.
  - ON/OFF switch is turned ON and OFF.
  - Room temperature reaches the set point.
  - Power failure.

Any of the above conditions will prevent operation of the outdoor unit for approximately 3 minutes.

## Freeze Protection

The system is protected against low indoor coil temperatures. Under certain conditions, the "COOL/DRY" LED will blink indicating the protective function has been activated. There is no need to adjust the system.

# Installation

## Power Supply - 220 VAC 1 Phase 50/60 Hz

ACYSTAT can be applied for MCD512-060

Maximum current ratings are as follows:
* Fan motor running current:
  5 amperes (inductive)
  (FH, FM, FL and F1 Terminals)
* Auxiliary and compressor control circuits current:
  10 Amperes (resistive)
  5 Amperes (inductive)
  (C Terminals)
* Auxiliary and Heater control circuit current:
  (For Cooling/Heating Model)
  10 Amperes (resistive)
  5 Amperes (inductive)
  (H Terminals)

## Control Box Assembly
### Location
The Control Box assembly may be located on any stable moisture-free surface adjacent to fan coil or air handler. It may be mounted in any orientation except with the housing cover inverted, However, the following caution and constraints must be observed when selecting the mounting location.

1. The Control Box must not be located more than 2 meters from the location for mounting of the return air sensor. Please ensure that return air sensor cable is sufficiently long.
2. The Control Box must be located such as it is accessible for future unscheduled inspection and that it does not hinder inspection and removal of return air filters or servicing of the fan coil or air handler.
3. Location of the Control Box must be over 14-meter length of the cable assembly. That is sufficient to reach and attach to the wall mounted receiver.

## Attachment/Mounting Control Box
The Control Box attached to the mounting surface by installing a screw through each of 4 holes in the Control Box mounting flanges. The Control Box must not be mounted in the inverted position such as overhead ceiling.

## Mounting the Temperature Sensor
The return air sensor cable is factory installed inside the Control Box and is connected to main PCB. Remove the cover of Control Box, insert the sensor end through the wiring bushing. Pull the sensor cable until the maximum cable is outside of the Control Box.

# Installation

## Locating the Temperature Sensor
Locate the return air sensor directly in the air returning to the fan coil or air handler. It should be located so as not to interfere with inspection or removal of return air filters or servicing and repair fan coil or air handler.



**Temperature Sensor**

**Figure 8**



**Freeze Sensor**

**Figure 9**
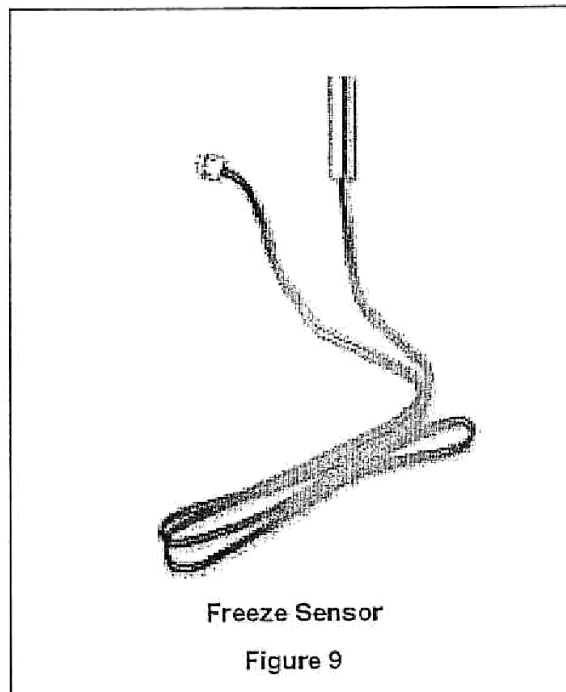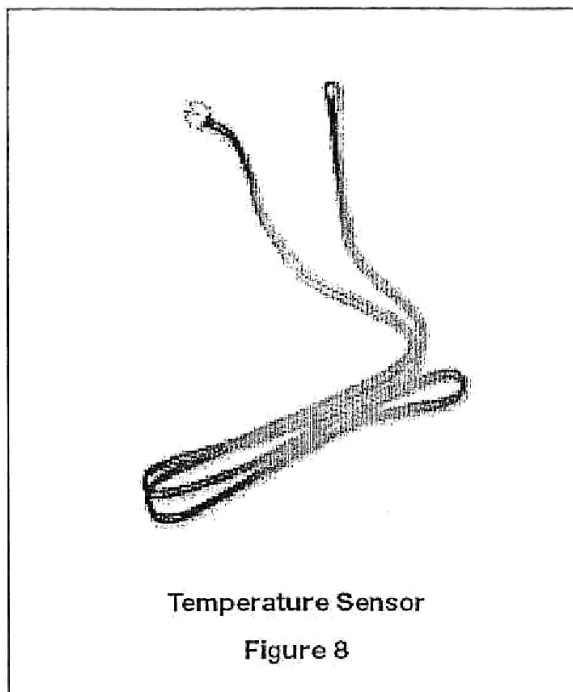
## Locating the Freeze Sensor
Locate the freeze sensor close to either U bend tube.

# Remote Control Installation

### Location
Both of display unit and receiver can be installed within the maximum length cable of 15 meters.
- The display unit and receiver should be located on the wall approximately 150 centimeters above floor level and should be clearly visible from most locations in the conditioning space.
- Do not place the remote control near heat sources or exposed to the direct rays of the sun.
- Do not place in a confined stream.

### Cable Routing
- Connect either terminal to connector P10 at the printed circuit board and the other to Display unit (wall mouth).
- The cable should be installed and routed in the area that not exposed to excessively hot temperature, moisture, sharp edges and moving surface.

Install the wireless remote control and wired control as follows:

### Locate and attach the wireless remote control and wired control as follows:
1. Do not place the control and the remote control near heat sources or expose to the direct rays of the sun.
2. Do not expose the control to the indoor unit's supply air stream.
3. Do not place in a confined space.
4. Attach the remote control holder as shown in Figure 10.
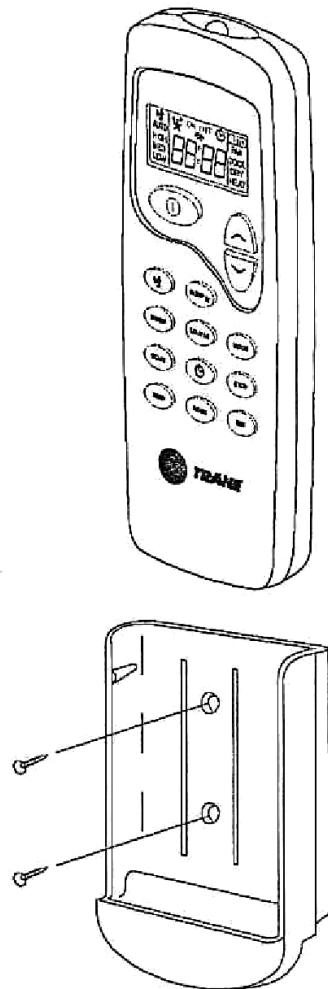


**Wireless Remote Control**

**Figure 10**

# Remote Control Installation
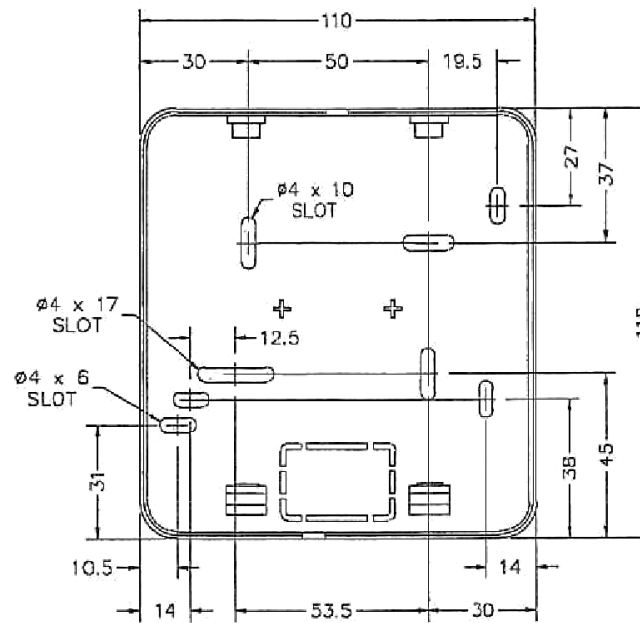


Dimension

Figure 11
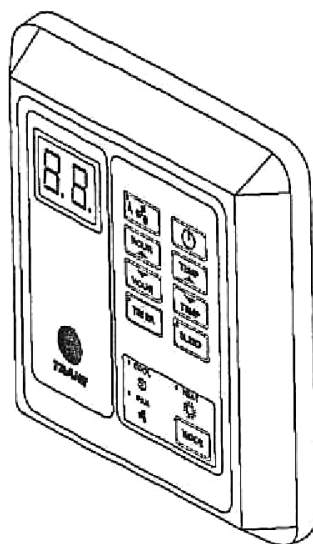


Remote Control
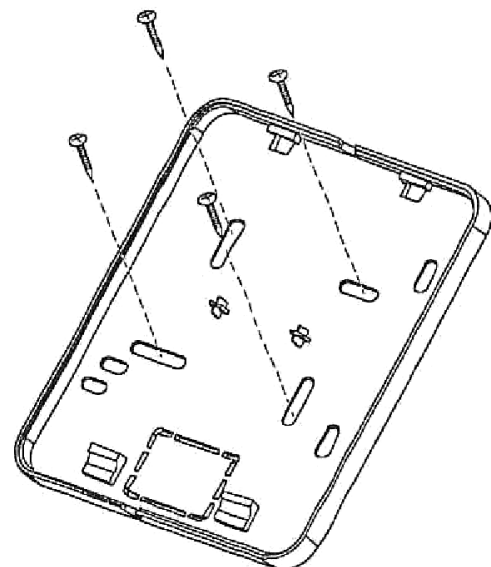


Mounting Bracket

Figure 12

# Electrical Installation

All wiring and grounding must comply with local electrical codes.

- Disconnect both indoor and outdoor power supplies before servicing.
- Remove the cover of control box to access the terminal block.
- Connect the wire terminal to the terminal block. (Connection indicated on system wiring diagram).
- Make sure all connections are tight.
- After completing the connection, re-confirm them to be in accordance with the indoor unit, outdoor unit and system wiring diagram.
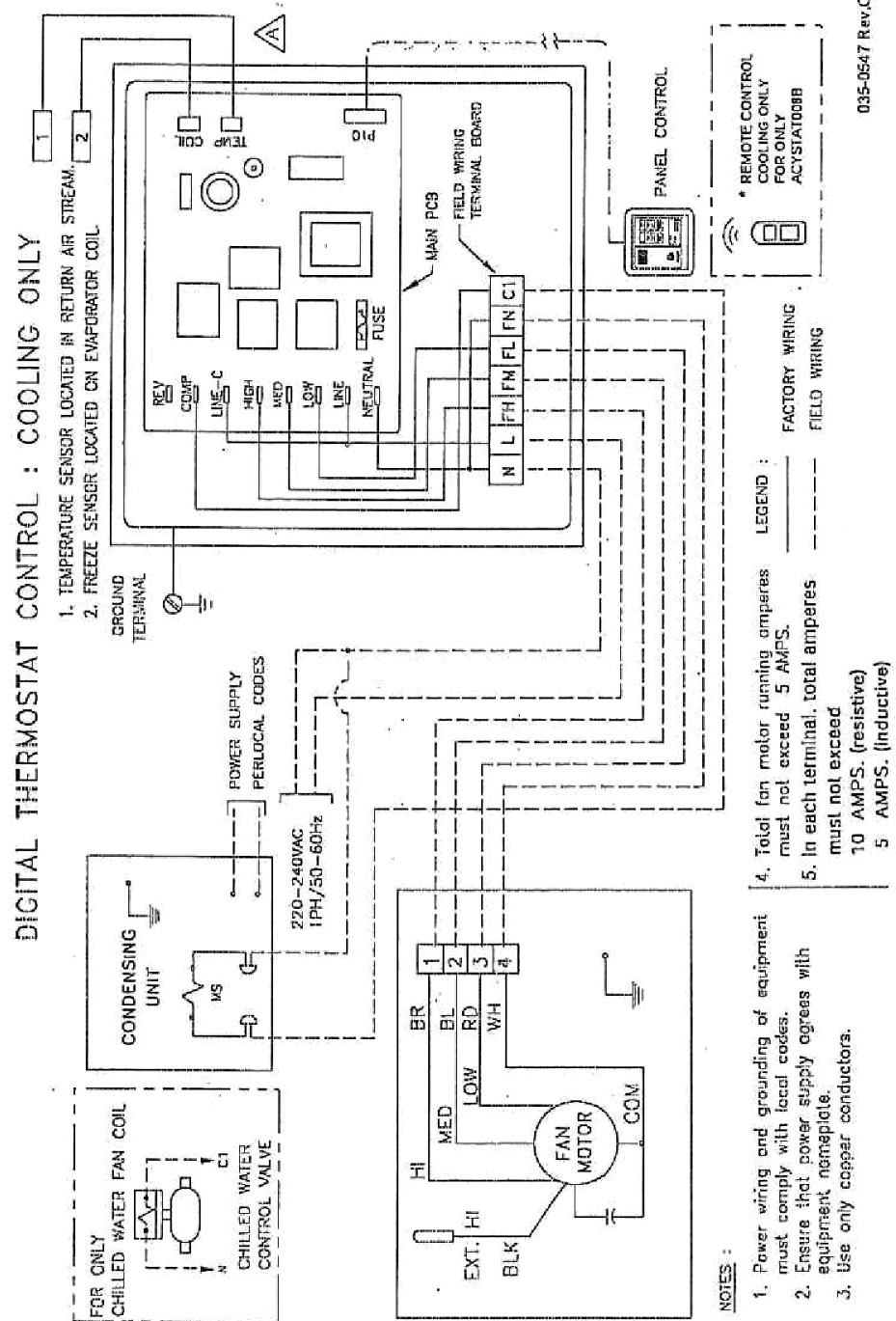
# Wiring Diagram



DIGITAL THERMOSTAT CONTROL : COOLING ONLY

035-0547 Rev.C

1. TEMPERATURE SENSOR LOCATED IN RETURN AIR STREAM.
2. FREEZE SENSOR LOCATED ON EVAPORATOR COIL.

MAIN PCB

FIELD WIRING
TERMINAL BOARD

PANEL CONTROL

* REMOTE CONTROL
COOLING ONLY
FOR ONLY
ACYSTAT08B

GROUND
TERMINAL

REV
COMP
LINE-C
HIGH
MED
LOW
LINE
NEUTRAL

N | L | FH | FM | FL | FN | C1

POWER SUPPLY
PERLOCAL CODES

220-240VAC
1PH/50-60Hz

CONDENSING
UNIT

MS

FOR ONLY
CHILLED WATER FAN COIL

C1

CHILLED WATER
CONTROL VALVE

N

BR
BL
RD
WH

1
2
3
4

HI
MED
LOW
COM

FAN
MOTOR

EXT. HI
BLK

LEGEND :

FACTORY WIRING

FIELD WIRING

4. Total fan motor running amperes
must not exceed 5 AMPS.
5. In each terminal, total amperes
must not exceed
10 AMPS. (resistive)
5 AMPS. (inductive)

NOTES :

1. Power wiring and grounding of equipment
must comply with local codes.
2. Ensure that power supply agrees with
equipment nameplate.
3. Use only copper conductors.

22

ACYSTAT-IOM-EN

DIGITAL THERMOSTAT CONTROL : COOLING—HEATING

1. TEMPERATURE SENSOR LOCATED IN RETURN AIR STREAM.
2. FREEZE SENSOR LOCATED ON EVAPORATOR COIL

PANEL CONTROL

* REMOTE CONTROL
COOLING–HEATING
FOR ONLY
ACYSTAT010B

035-0548 Rev.C

TEMP COIL

P10

MAIN PCB

FIELD WIRING
TERMINAL BOARD

H1 | C1 | FN | FL | FM | FH | L | N

REV
COMP
LINE-C
HIGH
MED
LOW
LINE
NEUTRAL
FUSE

GROUND
TERMINAL

POWER SUPPLY
PER LOCAL CODES

220–240VAC
1PH/50–60Hz

CONDENSING
UNIT

MS

FOR ONLY
CHILLED WATER FAN COIL

C1

N

CHILLED WATER
CONTROL VALVE

EXTRA-HI BLK
HI
MED BL
LOW RD
COM WH
BLK
RD
RD

BR

1
2
3
4
5
6

BLOWER
MOTOR

Electric Heater Control

LEGEND :

———————  FACTORY WIRING
– – – – –  FIELD WIRING

NOTES :
1. Power wiring and grounding of equipment
   must comply with local codes.
2. Ensure that power supply agrees with
   equipment nameplate.
3. Use only copper conductors.
4. Total fan motor running amperes
   must not exceed .5 AMPS.
5. In each terminal, total amperes.
   must not exceed
   10 AMPS. (resistive)
   5 AMPS. (inductive)

ACYSTAT-IOM-EN

23

| 2.7 | ACCESSORIES | |
|---|---|---|
| A | Thermostat: Wireless infrared functioning to remotely control compressor and evaporator fan, with the following features: | Comply |
| | 1. Compressor time delay. | Comply |
| | 2. 24- hour time control of system stop and start. | Comply |
| | 3. Liquid crystal display indicating temperaure, set point temperature, time setting, operating mode and fan speed. | Comply |
| | 4. Fan speed selection, including auto setting. | Comply |
| B | Automatic reset timer to prevent rapid cycling of compressor. | Comply |
| C | Refrigerant Line Kits: Soft annealed copper suction and liquid lines factory cleaned, dried, pressurised, and sealed; factory insulated suction line with flared fittings at both ends. | By Contractor. |

**TRANE**®

ISO 9001
QUALITY ASSURED FIRM

UKAS
QUALITY MANAGEMENT
005

THAILAND

| | |
|---|---|
| Literature Order Number: | ACYSTAT-IOM-EN 0703 |
| Supersedes: | ACYSTAT-IOM-EN 0502 |
| Stocking Location: | Bangkok, Thailand |

บริษัท แอมแอร์ จำกัด    35 หมู่ 8 ถ.ปู่เจ้าสมิงพราย ต.สำโรงใต้ อ.พระประแดง จ.สมุทรปราการ 10130

Since The Trane Company has a policy of continuous product and product data improvement, it reserves the right to change design and specifications without notice.

Al Arabia
Technical Supplies & Contracts L.L.C

العربية
للتوريدات الفنية والعقود ذ.م.م

TRANE
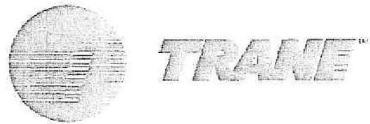
Project: JUMERIAH SOUTH
VILLAGE

TECHNICAL SUBMITTAL – REV.2

May. 2008

Al Arabia
Technical Supplies & Contracts L.L.C

العربية
للتوريدات الفنية والعقود ذ.م.م

## System Overview & Sequence of operation

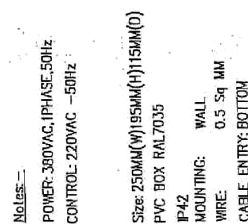Every system comprise of 1 No. constant speed fan and 2 stages of compressor. The fan will be switched on by the external switch provided by other. One number outside air temperature sensor is connected to the controller. The temperature set point can be set from the set point adjustor knob at the fascia of the controller. Compressors will be operated in stages based on the temperature input. Starting of the compressor will be sequenced based on fixed running hours he wear and tear of machine.

Compressor are interlocked with the fan such that compressor will operate only when the fan is running.

In case of broken fan belt, The Fan motor will be stopped after a fixed time delay , and Red Alarm light on panel will remain ON. The Alarm Light will be reset by External Switch cycling.

3 PH INPUT SUPPLY
380 VAC

R Y B N E

1GF

1KM1
6A
(LC1K06 10M7)

TO MOTOR
1 2 3

REMOTE ON\OFF
SWITCH
4 5

L N

C1
NO NC C

COMPRESOR-1
6 7

C2
NO NC C

COMPRESOR-2
8 9

FAULT
NO NC C

FAN ON
C NO NC C

1KM1

Notes:—
POWER: 380VAC, 1PHASE, 50Hz
CONTROL- 220VAC –50Hz

Size: 250MM(W)195MM(H)115MM(D)
PVC BOX RAL7035
IP42
MOUNTING:      WALL
WIRE:      0.5 Sq MM
CABLE ENTRY: BOTTOM

Notes:—
INDICATION 220V LED (8MM DIA)
LABLE: STICKER TYPE

250MM

195MM

| | | | | |
|---|---|---|---|---|
| | | | FINAL ASBUILT | |
| A | ThamBd | 26.06.08 | DESCRIPTION | |
| REV | BY | DATE | | |

| DRG. TITLE | | | | |
|---|---|---|---|---|
| DESIGNED | TM | DRG. No. | SHEET | OF |
| DRAWN | ThamBd | | | |
| DATE | 26th Jun '08 | REFERENCE: | | |
| CHECKED | TM | ACAD FILE: | | |

PROJECT
CLIENT
CONSULTANT
MAIN CONTRACTOR          TM
MEP CONTRACTOR          CHKD.
          BY

REV.
0