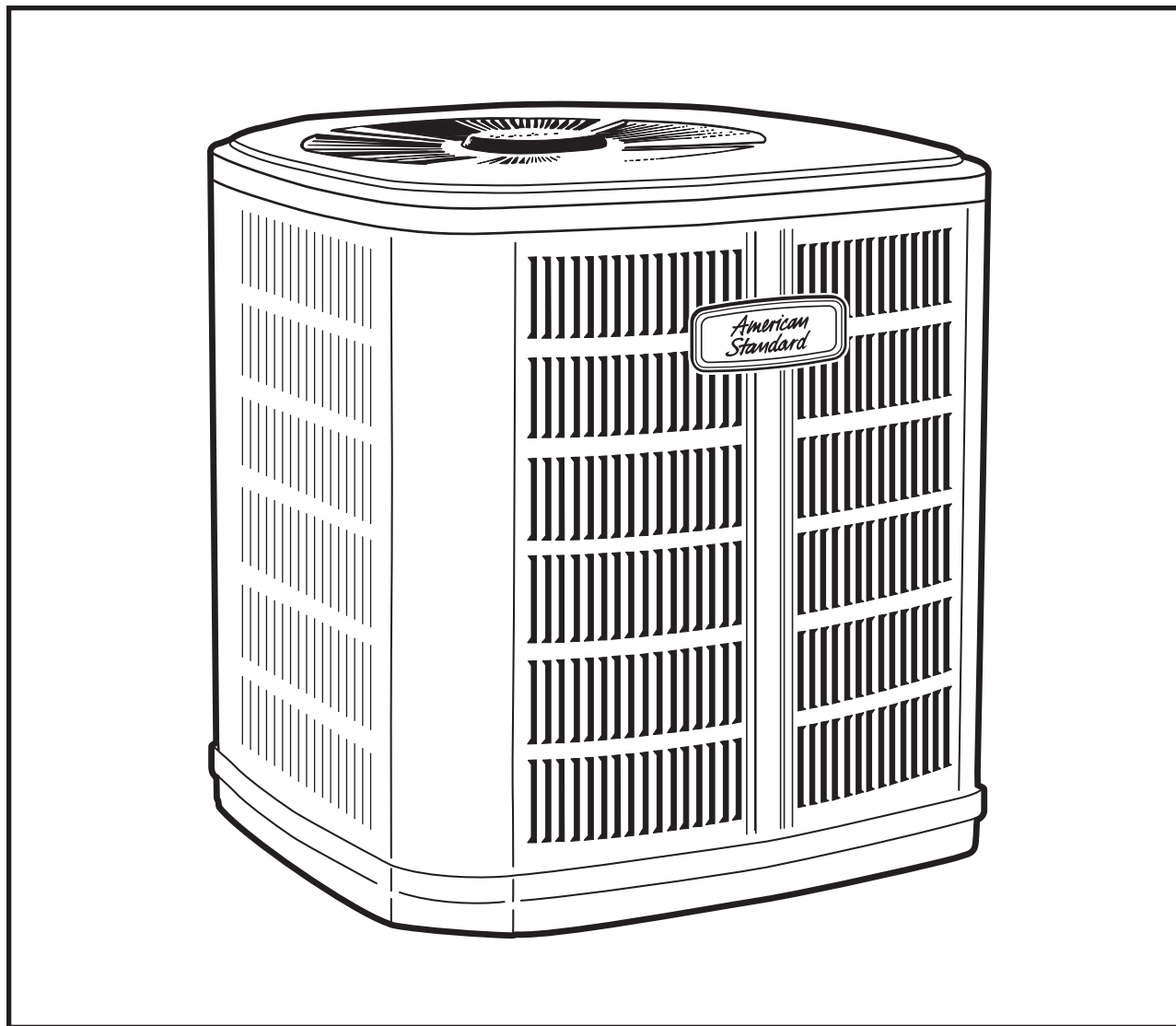




ALLEGIANCE® 13 - 4A7A3

Features and Benefits

- **Duration™** compressor
- Efficiency up to 14.00 SEER
- All aluminum **Spine Fin™** coil
- **Easy-Sess™** service access and refrigerant connections with full coil protection
- **DuraBase™** base pan won't rust, drains completely
- **Comfort "R"™** mode approved
- Warm gray cabinet with anthracite gray grill and Cap
- Glossy corrosion resistant finish
- Corrosion resistant fasteners
- Service valve cover
- Liquid line filter-drier
- 018, 024, 030 and 060 ship with start kits
- Internal compressor high/low pressure and temperature protection
- R-410 refrigerant
- Low ambient cooling to 55°F as shipped
- Low ambient cooling to 30°F with AY28X079
- High pressure switch
- S.E.E.T. design testing
- **Extended warranties available**

Contents

Manufacturing Control

American Standard Heating & Air Conditioning's exclusive control over the design and manufacturing of all major components is unique in the industry. This approach assures us total control over both the quality and reliability of these components. It also allows us to custom match components to deliver the best in split system performance.

Designing the Details

Careful attention was given to designing the details — from control wiring to the access panels. American Standard units feature time-saving color-coded wiring and removable panels which allow complete access to all major components and controls. All outdoor units feature external high and low pressure gauge ports for easy diagnosing and servicing of the unit.

Certification

American Standard Heating & Air Conditioning meets or exceeds all nationally recognized agency safety and design standards. Each condensing unit is UL designed, approved, and labeled in accordance to UL Standards, 1995, including approval for use in Canada. Each unit is rated in accordance with ARI Standard 210/240 and 270.

Features and Benefits 2

General Data 4

Product Specifications 4

A-weighted Sound

Power Level [dB(A)] 4

Accessory Description and Usage 5

ARI Standard Capacity Rating Conditions 5

Model Nomenclature 6

Typical Wiring 7

Dimensional Data 10

Mechanical Specifications 11

**DATA SUBJECT
TO CHANGE
WITHOUT NOTICE**

PRODUCT DATA

American Standard Heating & Air Conditioning

General Data

Product Specifications

Model No. ①	4A7A3018A1	4A7A3024A1	4A7A3030A1	4A7A3036B1
Electrical Data V/Ph/Hz ②	200/230/1/60	200/230/1/60	200/230/1/60	208/230/1/60
Min Cir Ampacity	9	12	15	18
Max Fuse Size (Amps)	15	20	25	30
Compressor	DURATION™	DURATION™	DURATION™	DURATION™
RL Amps - LR Amps	6.4 - 38.6	8.8 - 57.8	11.1 - 63	13.9 - 71.8
Outdoor Fan FL Amps	0.7	0.7	0.7	0.7
Fan HP	1/8	1/8	1/8	1/8
Fan Dia (inches)	23.0	23.0	23.0	23.0
Coil	Spine Fin™	Spine Fin™	Spine Fin™	Spine Fin™
Refrigerant R-410A	5/04-LB/OZ	5/10-LB/OZ	5/11-LB/OZ	7/14-LB/OZ
Line Size - (in.) O.D. Gas ③	1/2	5/8	3/4	3/4
Line Size - (in.) O.D. Liquid ③	1/4	5/16	5/16	3/8
Charge Spec. Subcooling	10°	10°	10°	12°
Dimensions H x W x D (Crated)	38 x 30.1 x 33	38 x 30.1 x 33	38 x 30.1 x 33	42 x 30.1 x 33
Weight - Shipping	216	217	217	219
Weight - Net	188	190	190	190
Start Components	YES	YES	YES	YES
Sound Enclosure	YES	YES	YES	YES
Compressor Sump Heat	NO	NO	NO	NO
Optional Accessories: ④				
Anti-short Cycle Timer	TAYASCT501A	TAYASCT501A	TAYASCT501A	TAYASCT501A
Evaporator Defrost Control	AY28X079	AY28X079	AY28X079	AY28X079
Rubber Isolator Kit	BAYISLT101	BAYISLT101	BAYISLT101	BAYISLT101
Extreme Condition Mounting Kit	BAYECMT001	BAYECMT001	BAYECMT001	BAYECMT001
Start Kit				
Crankcase Heater Kit	BAYCCHT300	BAYCCHT300	BAYCCHT300	BAYCCHT301
Seacoast Kit	BAYSEAC001	BAYSEAC001	BAYSEAC001	BAYSEAC001
Low Ambient Kit	BAYLOAM103	BAYLOAM103	BAYLOAM103	BAYLOAM103
Refrigerant Lineset ⑤	TAYREFLN5*	TAYREFLN6*	TAYREFLN2*	TAYREFLN7*

① Certified in accordance with the Unitary Air-Conditioner equipment certification program which is based on ARI Standard 210/240.

② Calculated in accordance with N.E.C. Only use HACR circuit breakers or fuses.

③ Standard line lengths - 60'. Standard lift - 60' Suction and Liquid line.

For Greater lengths and lifts refer to refrigerant piping software Pub# 32-3312-0†. (†denotes latest revision)

④ For accessory description and usage, see page 5.

⑤ * = 15, 20, 25, 30, 40 and 50 foot lineset available.

A-weighted Sound Power Level [dB(A)]									
MODEL	SOUND POWER LEVEL [dB(A)]	A-WEIGHTED FULL OCTAVE SOUND POWER LEVEL dB - [dB(A)]							
		63	125	250	500	1000	2000	4000	8000
4A7A3018A1	76	47.5	60.4	63	70.3	69.8	69.3	59.3	50.9
4A7A3024A1	76	47.2	61.1	64.8	70.6	70.7	68.4	57.9	50.6
4A7A3030A1	76	49.3	61.1	66.2	70.3	70	67.4	58	51.6
4A7A3036B1	77	45.5	58.7	59.3	69.7	71.2	71.1	60.3	51.8
4A7A3042A1	76	54.9	58.7	61.6	67.2	69	67.7	60.4	53.7
4A7A3048A1	76	55.8	57	62.4	67.5	70.2	67.4	61.1	54.2
4A7A3060B1	76	51.8	55	64	67.7	73.5	65.5	60.2	52.3

Note: Tested in accordance with ARI Standard 270.95. (Not listed with ARI)

General Data

Product Specifications

Model No. ①	4A7A3042A1	4A7A3048A1	4A7A3060B1
Electrical Data V/Ph/Hz ②	208/230/1/60	208/230/1/60	208/230/1/60
Min Cir Ampacity	25	27	34
Max Fuse Size (Amps)	40	45	60
Compressor	DURATION™ - SCROLL	DURATION™ - SCROLL	DURATION™ - SCROLL
RL Amps - LR Amps	18.6 - 105	20.5 - 109	27.6 - 135
Outdoor Fan FL Amps	1.3	1.3	1.3
Fan HP	1/4	1/4	1/4
Fan Dia (inches)	27.6	27.6	27.6
Coil	Spine Fin™	Spine Fin™	Spine Fin™
Refrigerant R-410A	7/00-LB/OZ	7/04-LB/OZ	8/06-LB/OZ
Line Size - (in.) O.D. Gas ③	3/4	7/8	7/8
Line Size - (in.) O.D. Liquid ③	3/8	3/8	3/8
Charge Spec. Subcooling	13°	10°	10°
Dimensions H x W x D (Crated)	38.4 x 35.1 x 38.7	38.4 x 35.1 x 38.7	46.4 x 35.1 x 38.7
Weight - Shipping	249	251	287
Weight - Net	216	218	251
Start Components	NO	NO	YES
Sound Enclosure	NO	NO	NO
Compressor Sump Heat	NO	NO	YES
Optional Accessories: ④			
Anti-short Cycle Timer	TAYASCT501A	TAYASCT501A	TAYASCT501A
Evaporator Defrost Control	AY28X079	AY28X079	AY28X079
Rubber Isolator Kit	BAYISLT101	BAYISLT101	BAYISLT101
Extreme Condition Mounting Kit	BAYECMT001	BAYECMT001	BAYECMT001
Start Kit	BAYKSKT260	BAYKSKT260	
Crankcase Heater Kit	BAYCCHT301	BAYCCHT301	
Seacoast Kit	BAYSEAC001	BAYSEAC001	BAYSEAC001
Low Ambient Kit	BAYLOAM103	BAYLOAM103	BAYLOAM103
Refrigerant Lineset ⑤	TAYREFLN7*	TAYREFLN3*	TAYREFLN3*

Accessory Description and Usage

Anti-Short Cycle Timer — Solid state timing device that prevents compressor recycling until 5 minutes have elapsed after satisfying call or power interruptions. Use in area with questionable power delivery, commercial applications, long lineset, etc.

Evaporator Defrost Control — SPST Temperature actuated switch that cycles the condenser off as indoor coil reaches freeze-up conditions. Used for low ambient cooling to 30°F with TXV.

Rubber Isolators — 5 large rubber donuts to isolate condensing unit from transmitting energy into mounting frame or pad. Use on any application where sound transmission needs to be minimized.

Hard Start kit — Start capacitor and relay to assist compressor motor startup. Use in areas with marginal power supply, on long linesets, low ambient conditions, etc.

Extreme Condition Mount Kit — Bracket kits to securely mount condensing unit to a frame or pad without removing any panels. Use in areas with high winds, or on commercial roof tops, etc.

ARI Standard Capacity Rating Conditions

ARI STANDARD 210/240 RATING CONDITIONS —

- (A) Cooling 80°F DB, 67°F WB air entering indoor coil, 95°F DB air entering outdoor coil.
- (B) High Temperature Heating 47°F DB, 43°F WB air entering outdoor coil, 70°F DB air entering indoor coil.
- (C) Low Temperature Heating 17°F DB, 15°F WB air entering outdoor coil, 70°F DB air entering indoor coil.
- (D) Rated indoor airflow for heating is the same as for cooling.

ARI STANDARD 270 RATING CONDITIONS — (Noise rating numbers are determined with the unit in cooling operation.) Standard Noise Rating number is at 95°F outdoor air.



ARI Standard
210/240 UAC



PRODUCT DATA

American Standard Heating & Air Conditioning

Model Nomenclature

Outdoor Units

Refrigerant Type

2 = R-22
4 = R-410A

AMERICAN STANDARD

Product Type

6 = Split Heat Pump
7 = Split Cooling

Product Family

A = Allegiance
H = Heritage
B = Basic
C = Light Commercial

Family SEER

0 = 10 3 = 13 6 = 16
1 = 11 4 = 14 8 = 18
2 = 12 5 = 15 9 = 19

Split System Connections 1-6 Tons

0 = Brazed

Nominal Capacity in 000s of BTUs

Major Design Modifications

Power Supply

1 = 200-230/1/60 or 208-230/1/60
3 = 200-230/3/60
4 = 460/3/60

Secondary Function

Minor Design Modifications

Unit Parts Identifier

High Efficiency Furnaces

Furnace Configuration

AU = Upflow / Horizontal
AD = Downflow / Horizontal

Type

D = 80% Premium
X = 90% Premium

Number of Heating Stages

1 = Single Stage
2 = Two Stage
3 = Three Stage

Cabinet Width

A = 14.5" Cabinet Width
B = 17.5" Cabinet Width
C = 21.0" Cabinet Width
D = 24.5" Cabinet Width

Heating Input

080 = 80,000 BTUH

Major Design Change

Power Supply / Fuel

9 = 115 Volts / Natural Gas

Airflow Capacity for Cooling

36 = 3 Ton Standard PSC Motor
H3 = 3 Ton High Efficiency Motor
V3 = 3 Ton Variable Speed Motor

Draft Inducer Speeds

1 = Single Speed
2 = Two Speed
V = Variable Speed

Minor Design Change

Service Digit – Not Orderable

Air Handlers – Residential

Refrigerant Type

4 = R-410A
2 = R-22

Application

TE = Fully Convertible
TG = Semi Convertible
TF = Front Return
TV = Vertical

Product Family

E = Leadership – Variable Speed
P = Leadership
C = Replacement/Retail
B = Basic

Flow Control

3 = Nonbleed TXV
4 = FCCV*

Feature Identifier

0 = Standard Unit
F = Air-Tite™

Nominal Capacity in 000s of BTUs

Major Design Modifications

Power Supply

1 = Single Phase

Electrical Connection

0 = Pig Tails
B = Circuit Breaker
D = Pull Disconnect

Future Option – Factory Installed Heater Nominal KW Value

Minor Design Modifications

Unit Parts Identifier

NOTE: There will be a phase-in of new model numbers for new air handlers over next 2 years.

*Shipped with R-22 FCCV

Heat Pump / Cooling Coils

Refrigerant Type

2 = R-22 4 = R-410A

Product Family

T = Premium (Heat Pump or Convertible Coil)
C = Standard (Cooling Only)

Coil Design

X = Direct Expansion Evaporator Coil

Product Family

C = Cased A Coil
A = Uncased A Coil
F = Cased Horizontal Flat Coil

Coil Width (Cased / Uncased)

A = 14.5" / 13.3" C = 21.0" / 19.8" H = 10.5"
B = 17.5" / 16.3" D = 24.5" / 23.3"

Refrigerant Line Coupling

0 = Brazed

Nominal Capacity in 000s of BTUs

Major Design Change

Efficiency

C = Standard S = Hi Efficiency

Refrigerant Control

3 = TXV – Non-Bleed

Coil Circuitry

H = Heat Pump
C = Cooling Only

Airflow Configuration

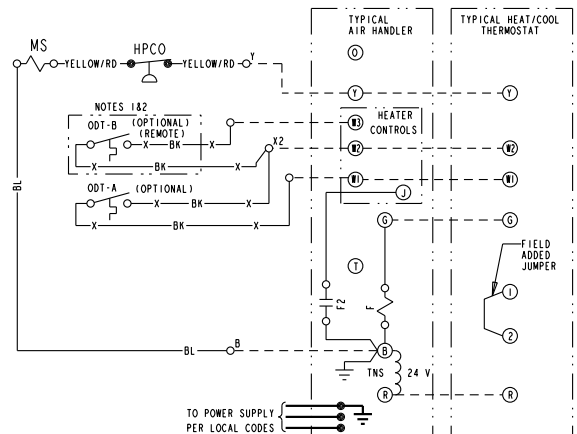
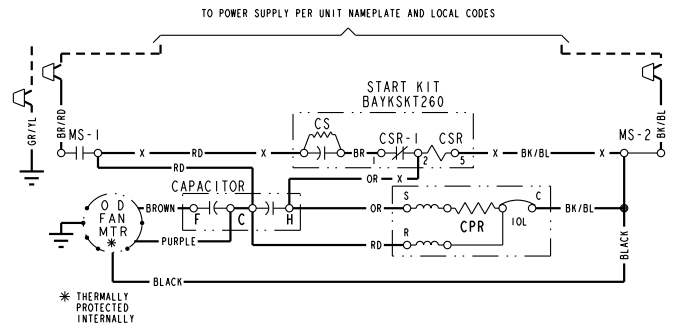
A = Upflow Only
U = Upflow / Downflow
H = Horizontal Only
C = Convertible – Upflow, Downflow, Left Airflow
M = Convertible – Upflow, Downflow, Left or Right Airflow

Minor Design Change

Unit Parts Identifier

SCHEMATIC DIAGRAMS
(SEE LEGEND)

4A7A3042A



NOTES:

1. IF ODT-B IS NOT USED, ADD JUMPER BETWEEN W2 & W3 AT AIR HANDLER.
IF USED, ODT-B MUST BE MOUNTED REMOTE OF CONTROL BOX IN AN APPROVED WEATHER PROOF ENCLOSURE.
2. IF ODT-A IS NOT USED, ADD JUMPER BETWEEN W1 & W2 AT AIR HANDLER.
3. LOW VOLTAGE (24 V.) FIELD WIRING MUST BE 18 AWG MIN.

⚠ CAUTION
USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED
TO ACCEPT OTHER TYPES OF
CONDUCTORS.
FAILURE TO DO SO MAY CAUSE
DAMAGE TO THE EQUIPMENT!

⚠ CAUTION
USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED
TO ACCEPT OTHER TYPES OF
CONDUCTORS.
FAILURE TO DO SO MAY CAUSE
DAMAGE TO THE EQUIPMENT!

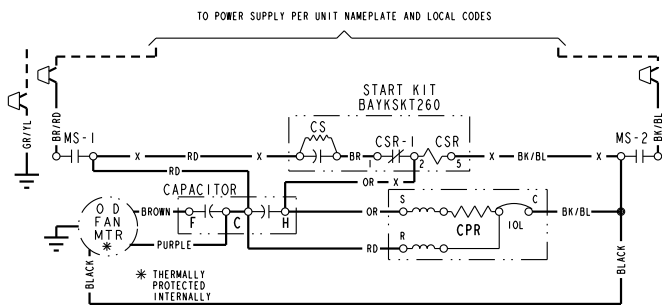
FOR CANADIAN INSTALLATIONS
POUR INSTALLATIONS CANADIENNES
CAUTION: NOT SUITABLE FOR USE ON
SYSTEMS EXCEEDING 150V-TO-GROUND.
ATTENTION: NE CONVIENT PAS AUX
INSTALLATIONS DE PLUS DE 150 V A
LA TERRE.

Typical Wiring

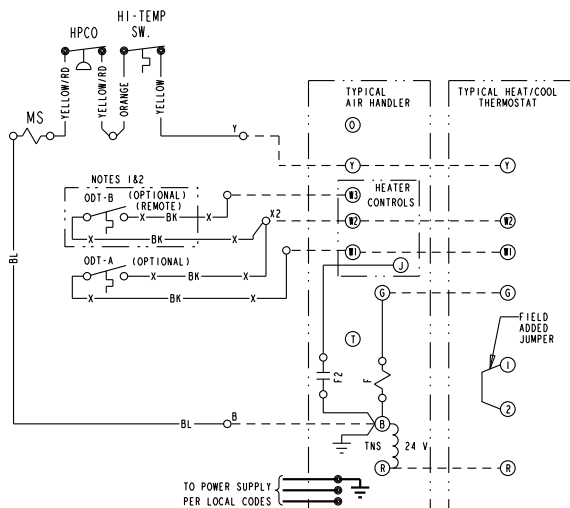
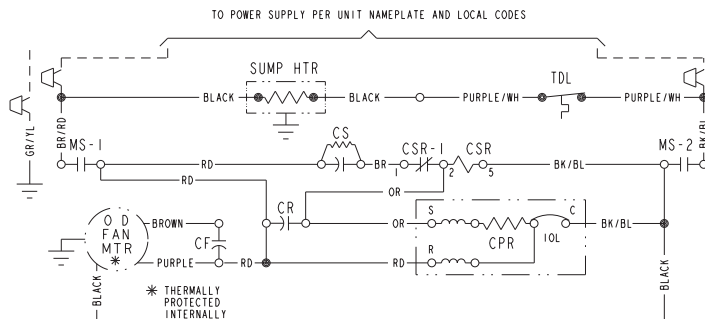
SCHEMATIC DIAGRAMS

(SEE LEGEND)

4A7A3048A



4A7A3060B



NOTES:

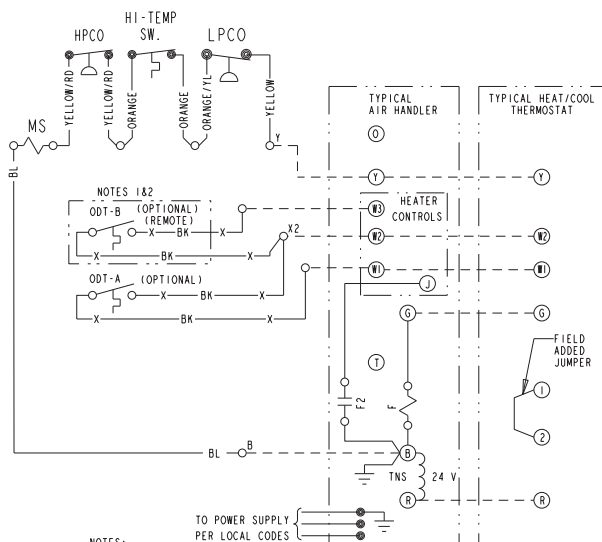
1. IF ODT-B IS NOT USED, ADD JUMPER BETWEEN W2 & W3 AT AIR HANDLER.
IF USED, ODT-B MUST BE MOUNTED REMOTE OF CONTROL BOX IN AN APPROVED WEATHER PROOF ENCLOSURE.
2. IF ODT-A IS NOT USED, ADD JUMPER BETWEEN W1 & W2 AT AIR HANDLER.
3. LOW VOLTAGE (24 V.) FIELD WIRING MUST BE 18 AWG MIN.

⚠ WARNING HAZARDOUS VOLTAGE! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING. FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH!	⚠ CAUTION USE COPPER CONDUCTORS ONLY! UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT!
--	---

FOR CANADIAN INSTALLATIONS
POUR INSTALLATIONS CANADIENNES

CAUTION: NOT SUITABLE FOR USE ON SYSTEMS EXCEEDING 150V-TO-GROUND.
ATTENTION: NE CONVIENT PAS AUX INSTALLATIONS DE PLUS DE 150 V A LA TERRE.

PRINTED FROM DI54863P01 REV00



NOTES:

1. IF ODT-B IS NOT USED, ADD JUMPER BETWEEN W2 & W3 AT AIR HANDLER.
IF USED, ODT-B MUST BE MOUNTED REMOTE OF CONTROL BOX IN AN APPROVED WEATHER PROOF ENCLOSURE.
2. IF ODT-A IS NOT USED, ADD JUMPER BETWEEN W1 & W2 AT AIR HANDLER.
3. LOW VOLTAGE (24 V.) FIELD WIRING MUST BE 18 AWG MIN.

⚠ WARNING HAZARDOUS VOLTAGE! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING. FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH!	⚠ CAUTION USE COPPER CONDUCTORS ONLY! UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT!
--	---

FOR CANADIAN INSTALLATIONS
POUR INSTALLATIONS CANADIENNES

CAUTION: NOT SUITABLE FOR USE ON SYSTEMS EXCEEDING 150V-TO-GROUND.
ATTENTION: NE CONVIENT PAS AUX INSTALLATIONS DE PLUS DE 150 V A LA TERRE.

PRINTED FROM D155205P01 REV00

Typical Wiring

SCHEMATIC DIAGRAMS

LEGEND

		COLOR OF WIRE			
BK/BL		BLACK WIRE WITH BLUE MARKER			
		COLOR OF MARKER			
BK	BLACK	OR	ORANGE	YL	YELLOW
BL	BLUE	RD	RED	GR	GREEN
BR	BROWN	WH	WHITE	PR	PURPLE

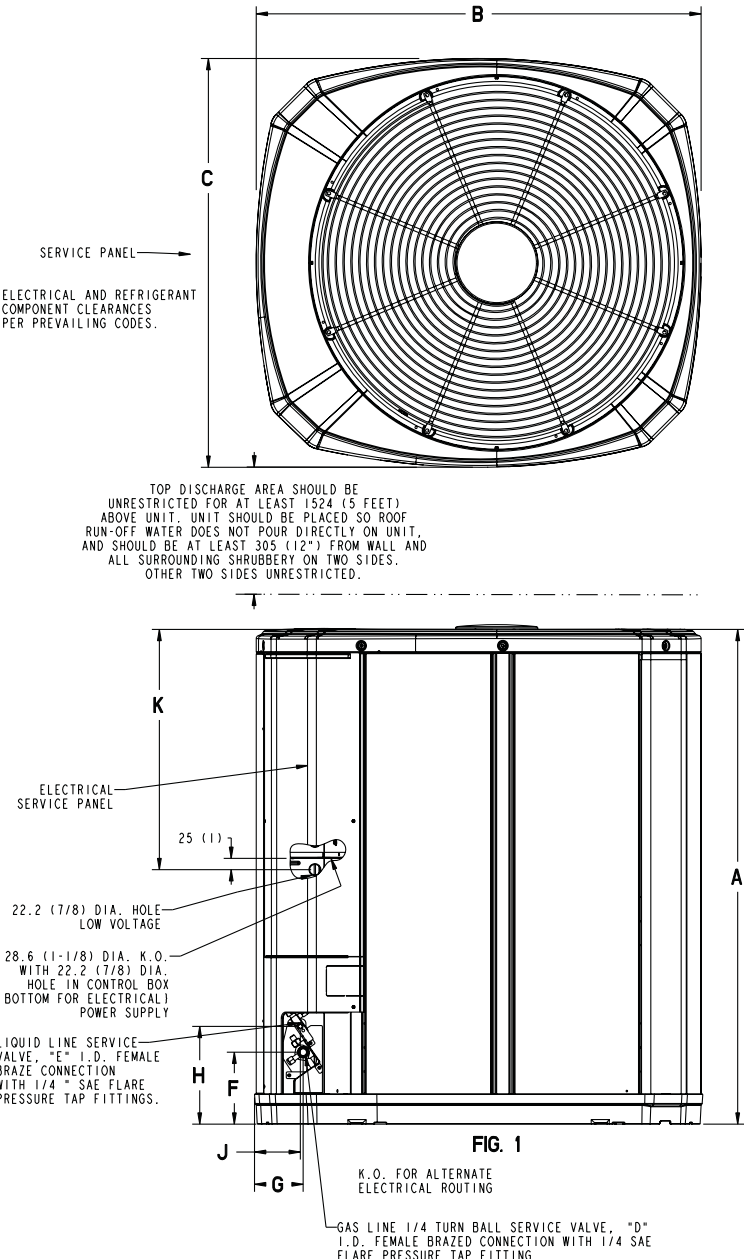
SYMBOLS

	24 V.	}	FACTORY WIRING
	LINE V.		
	24 V.	}	FIELD WIRING
	LINE V.		
	FIELD INSTALLED FACTORY WIRING		
	GROUND		
	JUNCTION		
	WIRE NUT OR CONNECTOR		
	COIL		
	CAPACITOR		
	RELAY CONTACT (N.O.)		
	RELAY CONTACT (N.C.)		
	THERMISTOR		
	INTERNAL OVERLOAD PROTECTOR		
	PRESSURE ACTUATED SWITCH		
	TEMP. ACTUATED SWITCH		
	POL. PLUG FEMALE HOUSING (MALE TERM.)		
	POL. PLUG MALE HOUSING (FEMALE TERM.)		
	RESISTOR OR HEATING ELEMENT		
	MOTOR WINDING		
	TERMINAL		

CA	COOLING ANTICIPATOR	LPCO	LOW PRESSURE CUTOFF SW.
CBS	COIL BOTTOM SENSOR	MS	COMPRESSOR MOTOR CONTACTOR
CF	FAN CAPACITOR	ODA	OUTDOOR ANTICIPATOR
CN	WIRE CONNECTOR	OFT	OUTDOOR FAN THERMOSTAT
CPR	COMPRESSOR	ODS	OUTDOOR TEMPERATURE SENSOR
CR	RUN CAPACITOR	ODT	OUTDOOR THERMOSTAT
CS	STARTING CAPACITOR	RHS	RESISTANCE HEAT SWITCH
CSR	CAPACITOR SWITCHING RELAY	SC	SWITCHOVER VALVE SOLENOID
DFC	DEFROST CONTROL	SM	SYSTEM "ON-OFF" SWITCH
F	INDOOR FAN RELAY	TDL	DISCHARGE LINE THERMOSTAT
HA	HEATING ANTICIPATOR	TNS	TRANSFORMER
HPCO	HIGH PRESSURE CUTOFF SW.	TS	HEATING-COOLING THERMOSTAT
IOL	INTERNAL OVERLOAD PROTECTOR	TSH	HEATING THERMOSTAT

Dimensional
Data

4A7A3 OUTLINE DRAWING
NOTE: ALL DIMENSIONS ARE IN MM (INCHES).



MODELS	BASE	FIG.	A	B	C	D	E	F	G	H	J	K
4A7A3018A	3	1	832 (32-3/4)	829 (32-5/8)	756 (29-3/4)	1/2	3/8	143 (5-5/8)	92 (3-5/8)	210 (8-1/4)	79 (3-1/8)	508 (20)
4A7A3024A	3	1	832 (32-3/4)	829 (32-5/8)	756 (29-3/4)	5/8	3/8	143 (5-5/8)	92 (3-5/8)	210 (8-1/4)	79 (3-1/8)	508 (20)
4A7A3030A	3	1	832 (32-3/4)	829 (32-5/8)	756 (29-3/4)	3/4	3/8	143 (5-5/8)	92 (3-5/8)	210 (8-1/4)	79 (3-1/8)	508 (20)
4A7A3036B	3	1	933 (36-3/4)	829 (32-5/8)	756 (29-3/4)	3/4	3/8	143 (5-5/8)	92 (3-5/8)	210 (8-1/4)	79 (3-1/8)	508 (20)
4A7A3042A	4	1	841 (33-1/8)	946 (37-1/4)	870 (34-1/4)	3/4	3/8	152 (6)	98 (3-7/8)	219 (8-5/8)	86 (3-3/8)	508 (20)
4A7A3048A	4	1	841 (33-1/8)	946 (37-1/4)	870 (34-1/4)	7/8	3/8	152 (6)	98 (3-7/8)	219 (8-5/8)	86 (3-3/8)	508 (20)
4A7A3060A	4	1	1045 (41-1/8)	946 (37-1/4)	870 (34-1/4)	7/8	3/8	152 (6)	98 (3-7/8)	219 (8-5/8)	86 (3-3/8)	508 (20)

Mechanical Specifications

General

The 4A7A3 is fully charged from the factory for up to 15 feet of piping. This unit is designed to operate at outdoor ambient temperatures as high as 115°F. Cooling capacities are matched with a wide selection of air handlers and furnace coils that are ARI certified. The unit is UL listed. Exterior is designed for outdoor application.

Casing

Unit casing is constructed of heavy gauge, G90 galvanized steel and painted with a weather-resistant powder paint on all louvers, panels, prepaint on all other panels. Corrosion and weatherproof CMBP-G30 DuraTuff™ base.

Refrigerant Controls

Refrigeration system controls include condenser fan, compressor contactor and high pressure switch. High and low pressure controls are inherent to the compressor. A factory installed liquid line drier is standard.

Compressor

The Duration™ compressor features internal over temperature and pressure protection and total dipped hermetic motor. Other features include: roto lock suction and discharge refrigerant connections, centrifugal oil pump and low vibration and noise.

Condenser Coil

The outdoor coil provides low airflow resistance and efficient heat transfer. The coil is protected on all four sides by louvered panels.

Low Ambient Cooling

As manufactured, this unit has a cooling capability to 55°F. The addition of an evaporator defrost control permits operation to 40°F. The addition of an evaporator defrost control with TXV permits low ambient cooling to 30°F.

Accessories

Thermostats — Cooling only and heat/cooling (manual and automatic change-over). Sub-base to match thermostat and locking thermostat cover.

Evaporator Defrost Control — See Low Ambient Cooling.

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

Technical Literature - Printed in U.S.A.

American Standard Heating & Air Conditioning

Troup Highway
Tyler, TX 75707