



America's Premier Climate Comfort Brand since 1895

Submittal:

Models: LIAC024-180P431 / LIAH024-180P431
LIAC036-180P431 / LIAH036-180P431
LIAC048-180P431 / LIAH048-180P431
LIAC060-180P431 / LIAH060-180P431

(Refrigerant R410A)

Thank you for selecting LENNOX air conditioners.



Submittal 18SEER Inverter Duct Split

1. Indoor and Outdoor Unit Matching Table

Series	Capacity	Outdoor units	Indoor units
18SEER DC inverter	24K	LIAC024-180P431	LIAH024-180P431
	36K	LIAC036-180P431	LIAH036-180P431
	48K	LIAC048-180P431	LIAH048-180P431
	60K	LIAC060-180P431	LIAH060-180P431

2. External Appearance



3. Specifications

3.1 Outdoor Units

LIAC024-180P431 / LIAC036-180P431 / LIAC048-180P431 / LIAC060-180P431

Model			LIAC024-180P431	LIAC036-180P431	LIAC048-180P431	LIAC060-180P431
Electrical Data	Voltage-Phase-Hz	V-Ph-Hz	208/230V-1Ph-60Hz	208/230V-1Ph-60Hz	208/230V-1Ph-60H	208/230V-1Ph-60H
	Minimum Circuit Ampacity		17.7	24.2	31.9	36.5
	Max. Overcurrent Protection		30	40	50	60
	Min/Max Volts		187 / 253	187 / 253	187 / 253	187 / 253
Cooling	Capacity	Btu/h	24000	35200	48000	58000
	EER	Btu/h.W	12.5	12.2	12.5	11.7
	SEER	Btu/h.W	18	18	18	18
Heating	Capacity	Btu/h	/	/	/	/
	HSPF	Btu/h.W	/	/	/	/
Compressor	Type		Rotary	Rotary	Rotary	Rotary
	Supplier		Mitsubishi	Mitsubishi	GMCC	GMCC
	RLA		13.5	18.5	23.5	27.2
	LRA		45	45	52	52
Fan Motor	Type		PSC	PSC	PSC	PSC
	Rated HP		1/8	1/6	1/3	1/3
	Capacitor	uF	6	6	/	/
	Rated RPM	r/min	1075	825	1050	1050
	FLA		0.8	1	2.5	2.5
Outdoor Fan	material		Metal	Metal	Metal	Metal
	Type		Axial flow	Axial flow	Axial flow	Axial flow
	Diameter	inch	23-5/8	23-5/8	23-5/8	23-5/8
	Height	inch	2-3/4	4-1/2	4-1/2	4-1/2
	Air flow	CFM	2400	2950	4100	4100
Condenser Coil	Number of rows		1	2	2	2
	Tube outside dia	mm(inch)	7(9/32)	7(9/32)	7(9/32)	7(9/32)
Outdoor sound level (sound power level)			75	77	79	79
Outdoor unit	Dimension (W×H×D)	mm	740×633×740	740×633×740	740×843×740	740×843×740
		inch	29-1/8×24-15/16×29-1/8		29-1/8×33-3/16×29-1/8	
	Packing (W×H×D)	mm	768X667X768	768X667X768	768X877X768	768X877X768
		inch	30-1/5x26-1/4x30-1/5		30-1/5x34-1/2x30-1/5	
	Net/Gross weight	kg	61/65	67/71	87/92	87/92
		lbs	134/143	148/157	192/203	192/203
Refrigerant system	Liquid side/ Gas side	inch	3/8 / 3/4	3/8 / 3/4	3/8 / 7/8	3/8 / 7/8
	Factory charge R410A	oz	78	114	152	163
	Metering device		/	/	/	/
Operating temperatures		°F	50-118	50-118	50-118	50-118
Shipping per STD40HQ			180	180	135	135

3.2 Indoor Units

LIAH024-180P431 / LIAH036-180P431 / LIAH048-180P431 / LIAH060-180P431

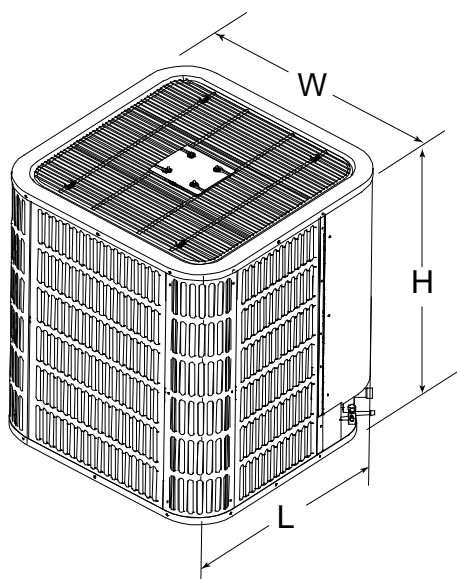
Model		LIAH024-180P431	LIAH036-180P431	LIAH048-180P431	LIAH060-180P431	
Indoor motor	Type	ECM	ECM	ECM	ECM	
	Rated HP	1/3	1/2	3/4	3/4	
	Rated RPM	r/min 1050	1050	1050	1050	
	FLA	2.8	4.1	6.0	6.0	
Indoor fan	material	galvanized plate	galvanized plate	galvanized plate	galvanized plate	
	Type	centrifugal	centrifugal	centrifugal	centrifugal	
	Diameter	inch 10-5/8	11	11	11	
	Height	inch 8	10-5/8	10-5/8	10-5/8	
Indoor coil	Number of rows	4*2	4*2	4*2	5*2	
	Tube outside dia.and type	7mm/inner-groove tube				
	Fin spacing	mm/mm	1.6/0.095/hydrophilic aluminium			
	Tube pitch(a)x row	mm	13.37/21	13.37/21	13.37/21	13.37/21
Indoor limit value of static pressure and air flow		Pa/CFM	25/800	37.5/1180	50/1560	50/1700
Indoor sound level (sound power level)		dB(A)	63	65	67	68
Metering device	Throttle type		TXV	TXV	TXV	TXV
	Model number		3TR	3TR	4TR	5TR
Electrical Data	Voltage-Phase-Hz	V-Ph-Hz	208/230V 1Ph 60Hz			
	Minimum Circuit Ampacity		3.5	5.1	7.5	7.5
	Max. Overcurrent Protection		15	15	15	15
	Min/Max Volts		187 / 253	187 / 253	187 / 253	187 / 253
Indoor unit	Dimension (W*H*D)	mm	500x550x1180		560x1385x610	
		inch	19-5/8"x46-1/2"x21-5/8"		22"x54-1/2"x24"	
	Packing (W*H*D)	mm	644x1205x567		704x1410x627	
		inch	22-3/5"x47-4/5"x22-7/10"		27-7/10"x55-4/5"x25"	
	Net/Gross weight	kg	54/60	74/82	74/82	77/85
		lbs	119/132	161/178	162/180	170/188
Refrigerant piping Liquid side/ Gas side		inch	3/8 3/4	3/8 3/4	3/8 7/8	3/8 7/8
Shipping per STD40HQ			154	104	104	104

4. Dimensions

4.1 Outdoor Units

LIAC024-180P431 / LIAC036-180P431 / LIAC048-180P431 / LIAC060-180P431

(unit: mm)

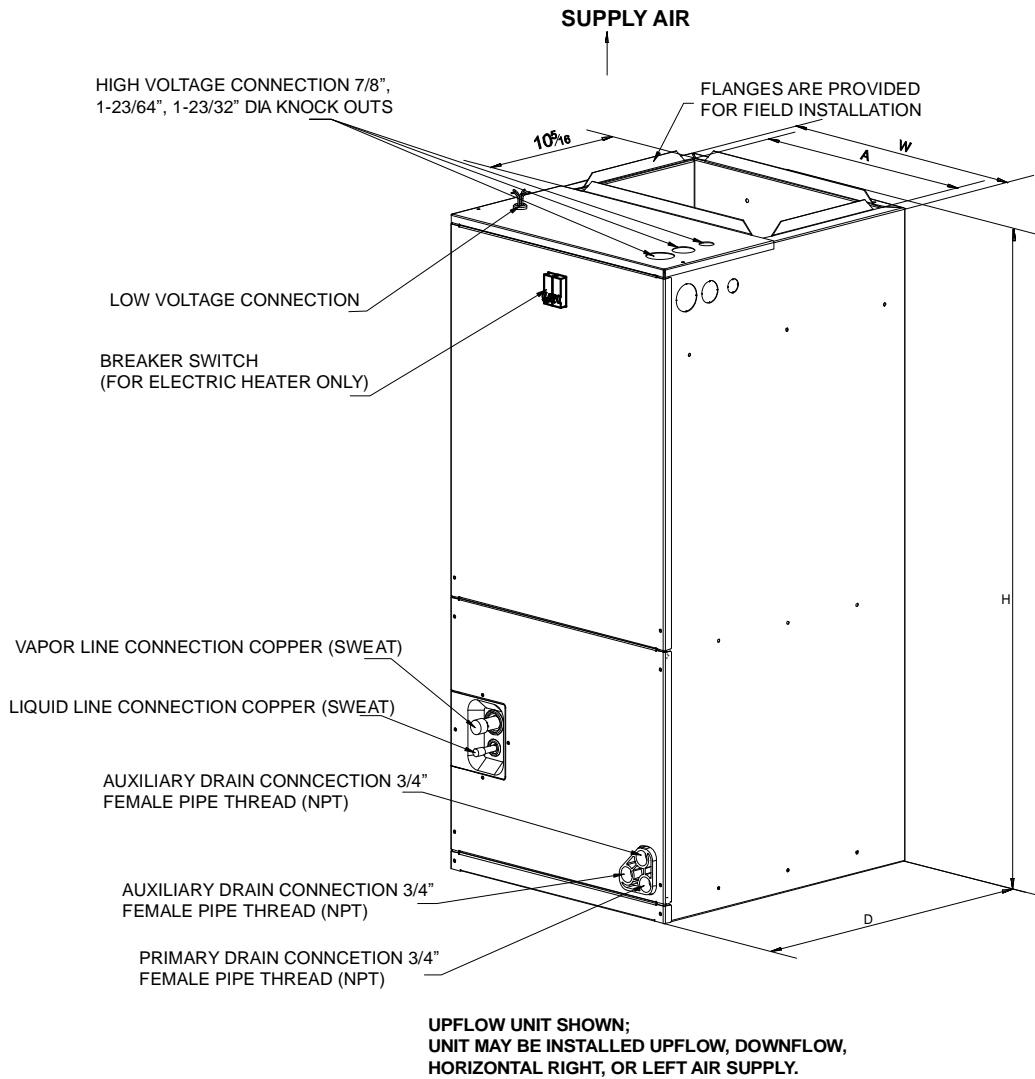


Model name	Dimensions (mm)		
	"H" mm (in.)	"W" mm (in.)	"L" mm (in.)
LIAC024-180P431	633 (24-15/16)	740 (29-1/8)	740 (29-1/8)
LIAC036-180P431			
LIAC048-180P431	843 (33-3/16)	740 (29-1/8)	740 (29-1/8)
LIAC060-180P431			

4.2 Indoor Units

LIAH024-180P431 / LIAH036-180P431 / LIAH048-180P431 / LIAH060-180P431

(unit: mm)

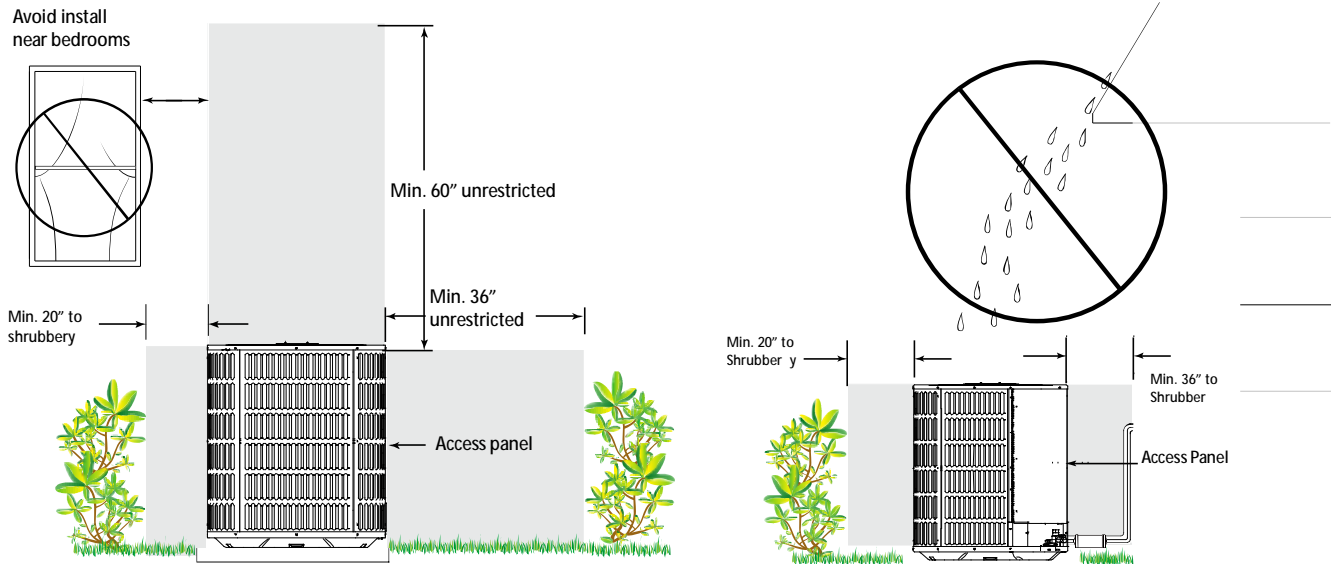


Model name	Dimensions (mm)			
	"H" mm (in.)	"W" mm (in.)	"L" mm (in.)	Supply duct "A"
LIAH024-180P431	1180 (46-1/2)	500 (19-5/8)	550 (21-5/8)	456 (18)
LIAH036-180P431	1385 (54-1/2)	560 (22)	610 (24)	496 (19-1/2)
LIAH048-180P431				
LIAH060-180P431				

5. Installation Space Requirements

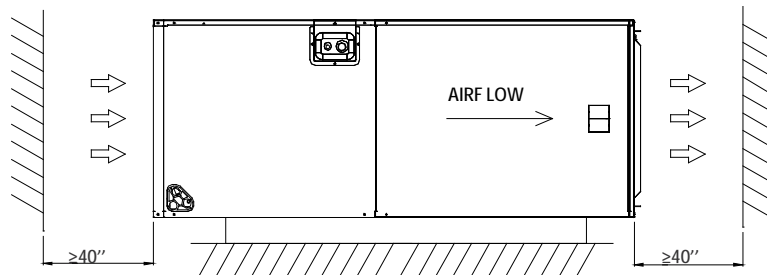
5.1 Outdoor Units

Outdoor units installation space requirements

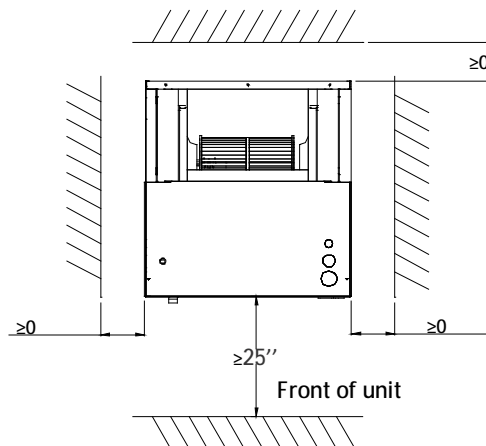


5.2 Indoor Units

Indoor units installation space requirements in the horizontal position

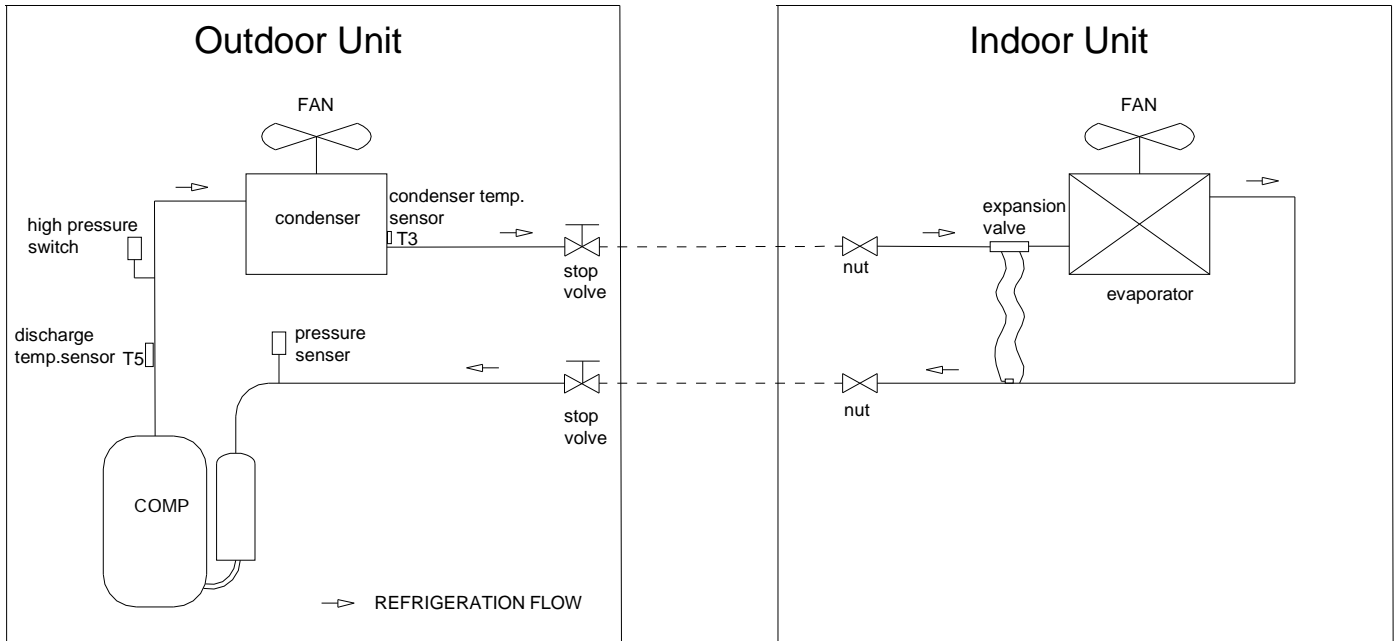


Indoor units installation space requirements in the vertical position



6. Piping Diagrams

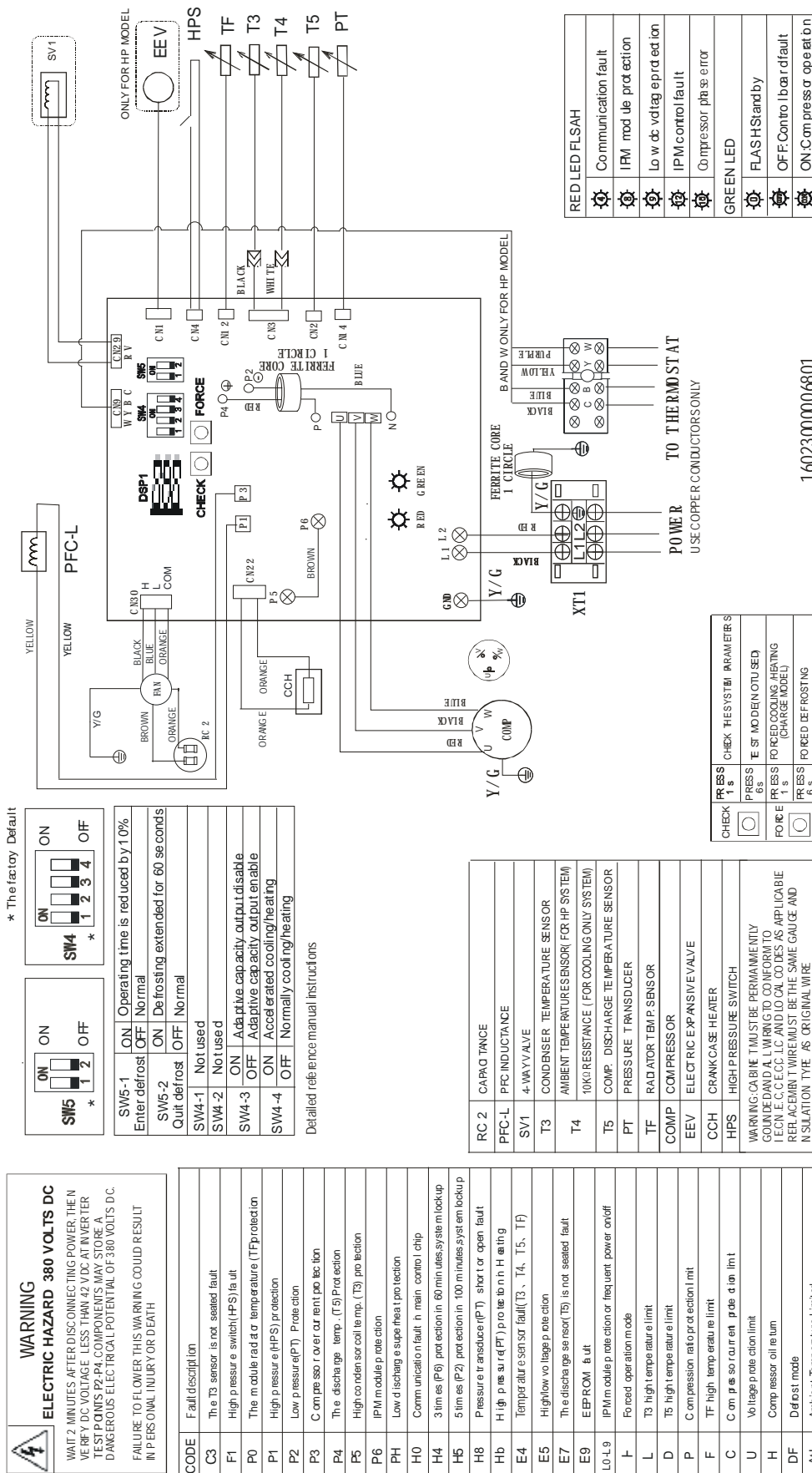
LIAC024-180P431 / LIAC036-180P431 / LIAC048-180P431 / LIAC060-180P431



7. Wiring Diagrams

7.1 Outdoor Units

LIAC024-180P431 / LIAC036-180P431



WARNING
ELECTRIC HAZARD 380 VOLTS DC
 WAIT 2 MINUTES AFTER DISCONNECTING POWER THEN VERIFY DC VOLTAGE LESS THAN 42 VDC AT INVERTER TEST POINTS P2-P4. COMPONENTS MAY STORE A DANGEROUS ELECTRICAL POTENTIAL OF 380 VOLTS DC.
 FAILURE TO FLOWER THIS WARNING COULD RESULT IN PERSONAL INJURY OR DEATH

CODE	Fault description
C3	The T3 sensor is not seated fault
F1	High pressure switch (HPS) fault
P0	The module radiator temperature (TF) protection
P1	High pressure (HPS) protection
P2	Low pressure (PT) Protection
P3	Compressor over current protection
P4	The discharge temp. (T5) Protection
P5	High to medium temperature (T3) protection
P6	IPM module protection
P8	Humidity detection of the fan motor
PH	Low discharge superheat protection
H0	Communication fault in main control chip
H4	3 times (P6) protection in 60 minutes, system lockup
H5	5 times (P2) protection in 100 minutes, system lockup
H8	Pressure transducer (PT) short or open fault
Hb	High pressure (PT) protection in Heating
E4	Temperature sensor fault (T3, T4, T5, TF)
E5	High/low voltage protection
E6	DC fan motor fault
E7	The discharge sensor (T5) is not seated fault
E9	EEPROM fault
Eb	2 times (P0) protection in 10 minutes, system lockup
L0-L9	IPM module protection or frequent power on/off
F	Freewheel operation mode
L	T3 high temperature limit
D	T5 high temperature limit
P	Compression ratio protection limit
F	TF high temperature limit
C	Compressor current protection limit
U	Voltagereaction limit
H	Compressor oil return
DF	Defrost mode
ATL	Ambient Temperature Limit od

* The factory Default

SW5 ON OFF
 1 2

SW4 ON OFF
 1 2 3 4

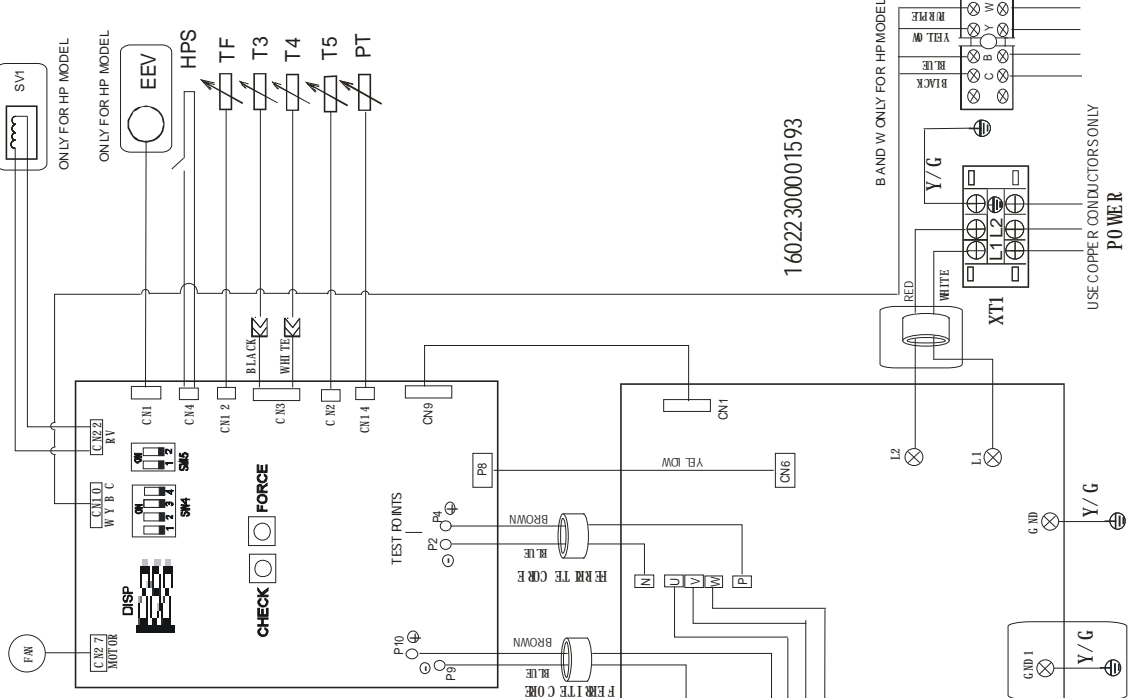
SW5-1	ON	Operating time is reduced by 1.0%
Enter defrost	OFF	Normal
SW5-2	ON	Defrosting extended for 60 seconds
Quit defrost	OFF	Normal
SW4-1	Not used	
SW4-2	Not used	
SW4-3	ON	Adaptive capacity output disable
	OFF	Adaptive capacity output enable
SW4-4	ON	Accelerated cooling/heating
	OFF	Normally cooling/heating

Detailed reference manual instructions

CHECK	PRESS 1s	CHECK SYSTEM PARAMETERS
<input type="checkbox"/>	6s	TEST MODE (NOT USED)
FORCE	1s	FORCED COOLING / HEATING (CHARGE MODEL)
<input type="checkbox"/>	6s	FORCED DEFROSTING

PFC-L	PFC INDUCTANCE
SV1	4-WAY VALVE
T3	CONDENSER TEMPERATURE SENSOR
T4	AMBIENT TEMPERATURE SENSOR (FOR HP SYSTEM)
T5	COMP. DISCHARGE TEMPERATURE SENSOR
PT	PRESSURE TRANSDUCER
TF	RADIATOR TEMP. SENSOR
COMP	COMPRESSOR
EEV	EXPAN. VALVE
CCH	CABINET HEATER
HPS	HIGH PRESSURE SWITCH

WARNING: CABINET MUST BE PERMANENTLY GOUNDED ALL WIRING TO CONFORM TO LOCAL ELECTRICAL CODES AS APPLICABLE. REPLACEMENT WIRE MUST BE THE SAME GAUGE AND INSULATION TYPE AS ORIGINAL WIRE.



RED LED FLASH	GREEN LED
Communication fault	FLASH-Standby
IPM module protection	OFF: Control board fault
Low dc voltage protection	ON: Compressor operation
IPM control fault	
Compressor phase error	

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7.2 Indoor Units

LIAH024-180P431 / LIAH036-180P431 / LIAH048-180P431 / LIAH060-180P431

SCHEMATIC DIAGRAM

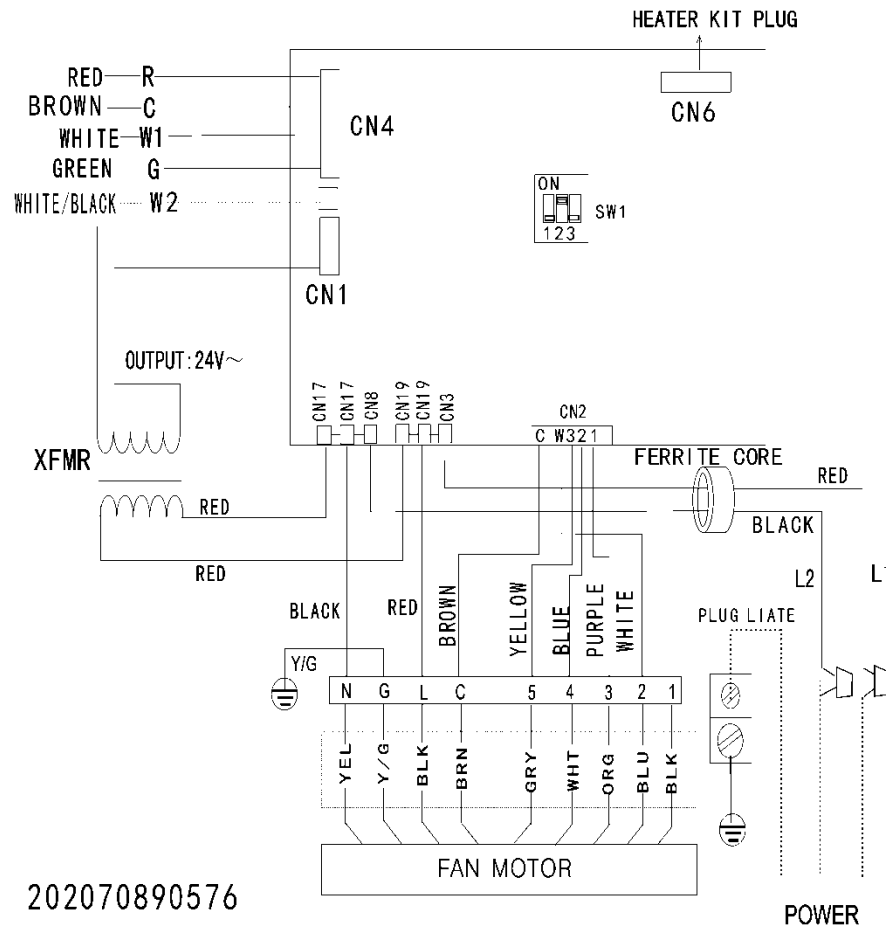
SEE RATING PLATE FOR VOLTS&HERTZ
FIELD POWER WIRING

CAUTION:

NOT SUITABLE FOR USE ON SYSTEMS EXCEEDING 150V TO GROUND

ATTENTION:

NE CONVIENT PAS AUX INSTALLATIONS DE PLUS DE 150V A LA TERRE



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NOTES:

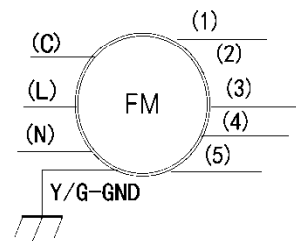
- 1: Use Copper Wire (75°C Min) Only Between Disconnect Switch And Unit .
- 2: To Be Wired In Accordance With NEC And Local Codes.
- 3: If Any Of The Original Wire ,As Supplied, Must Be Replaced. Use The Same Or Equivalent Type Wire.
- 4: Connect R To R, G To G, Etc. See Outdoor Instruction For Details.
- 5: To Change Speed Tap, Regulation of SW1 to choose the Speed.
- 6: See Airflow Tables For Tap Usage.

	PROHIBITED IN THIS STATE
	3 MEDIUM
	4 MEDIUM HIGH
	5 HIGH

SPEED TAP SELECTION

- | | |
|---|-------------|
| 1 | LOW |
| 2 | MEDIUM LOW |
| 3 | MEDIUM |
| 4 | MEDIUM HIGH |
| 5 | HIGH |

SEE NOTES 6



TFMR	TRANSFORMER
FL	FUSE LINK
FM	FAN MOTOR
CAP	FAN CAPACITOR
GND	GROUND
.....	FIELD POWER WIRING

8. Capacity Tables

LIAC024-180P431 + LIAH024-180P431 Cooling Capacity

LIAC024-180P431 + LIAH024-180P431																			
Airflow	Outdoor DB	IW ID	59				63				67				71				
			70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85	
700	65	TC	17.2	17.3	17.3	17.4	20.3	20.4	20.5	20.7	23.4	23.5	23.6	23.7	*	27.4	27.5	27.6	
		S/T	0.85	1.00	1.00	1.00	0.57	0.76	0.97	1.00	0.38	0.55	0.73	0.89	*	0.37	0.52	0.67	
		K	0.84	0.84	0.84	0.84	0.89	0.89	0.89	0.89	1.06	1.06	1.06	1.06	*	1.25	1.25	1.25	
	75	TC	17.2	17.3	17.3	17.4	20.3	20.4	20.5	20.7	23.4	23.5	23.6	23.7	*	27.4	27.5	27.6	
		S/T	0.85	1.00	1.00	1.00	0.57	0.76	0.97	1.00	0.38	0.55	0.73	0.89	*	0.37	0.52	0.67	
		K	1.01	1.01	1.01	1.01	1.08	1.08	1.08	1.08	1.31	1.31	1.31	1.31	*	1.54	1.54	1.54	
	85	TC	17.2	17.3	17.3	17.4	20.3	20.4	20.5	20.7	23.4	23.5	23.6	23.7	*	27.4	27.5	27.6	
		S/T	0.85	1.00	1.00	1.00	0.57	0.76	0.97	1.00	0.38	0.55	0.73	0.89	*	0.37	0.52	0.67	
		K	1.20	1.20	1.20	1.20	1.35	1.35	1.35	1.35	1.58	1.58	1.58	1.58	*	1.90	1.90	1.90	
	95	TC	17.2	17.3	17.3	17.4	20.3	20.4	20.5	20.7	23.4	23.5	23.6	23.7	*	27.4	27.5	27.6	
		S/T	0.85	1.00	1.00	1.00	0.57	0.76	0.97	1.00	0.38	0.55	0.73	0.89	*	0.37	0.52	0.67	
		K	1.33	1.33	1.33	1.33	1.62	1.62	1.62	1.62	1.90	1.90	1.90	1.90	*	2.24	2.24	2.24	
	105	TC	17.2	17.3	17.3	17.4	20.3	20.4	20.5	20.7	22.9	23.0	23.1	23.2	*	24.2	24.3	24.4	
		S/T	0.85	1.00	1.00	1.00	0.57	0.76	0.97	1.00	0.38	0.55	0.73	0.89	*	0.38	0.53	0.68	
		K	1.61	1.61	1.61	1.61	1.96	1.96	1.96	1.96	2.20	2.20	2.20	2.20	*	2.25	2.25	2.25	
	115	TC	17.2	17.3	17.0	17.4	17.8	17.8	17.9	18.0	18.7	18.8	18.9	19.0	*	19.7	19.8	19.9	
		S/T	0.85	1.00	1.00	1.00	0.60	0.82	1.00	1.00	0.42	0.62	0.81	0.99	*	0.39	0.58	0.81	
		K	1.88	1.88	1.88	1.88	1.94	1.94	1.94	1.94	2.00	2.00	2.00	2.00	*	2.05	2.05	2.05	
	800	65	TC	17.5	17.5	17.6	17.7	20.7	20.8	20.9	21.0	23.8	23.9	24.0	24.1	*	27.8	28.0	28.1
			S/T	0.89	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.40	0.59	0.77	0.94	*	0.39	0.55	0.71
			K	0.84	0.84	0.84	0.84	0.90	0.90	0.90	0.90	1.08	1.08	1.08	1.08	*	1.27	1.27	1.27
		75	TC	17.5	17.5	17.6	17.7	20.7	20.8	20.9	21.0	23.8	23.9	24.0	24.1	*	27.8	28.0	28.1
			S/T	0.89	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.40	0.59	0.77	0.94	*	0.39	0.55	0.71
			K	1.02	1.02	1.02	1.02	1.09	1.09	1.09	1.09	1.32	1.32	1.32	1.32	*	1.56	1.56	1.56
85		TC	17.5	17.5	17.6	17.7	20.7	20.8	20.9	21.0	23.8	23.9	24.0	24.1	*	27.8	28.0	28.1	
		S/T	0.89	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.40	0.59	0.77	0.94	*	0.39	0.55	0.71	
		K	1.21	1.21	1.21	1.21	1.36	1.36	1.36	1.36	1.59	1.59	1.59	1.59	*	1.92	1.92	1.92	
95		TC	17.5	17.5	17.6	17.7	20.7	20.8	20.9	21.0	23.8	23.9	24.0	24.1	*	27.8	28.0	28.1	
		S/T	0.89	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.40	0.59	0.77	0.94	*	0.39	0.55	0.71	
		K	1.34	1.34	1.34	1.34	1.63	1.63	1.63	1.63	1.92	1.92	1.92	1.92	*	2.27	2.27	2.27	
105		TC	17.5	17.5	17.6	17.7	20.7	20.8	20.9	21.0	23.3	23.4	23.5	23.6	*	24.6	24.7	24.8	
		S/T	0.89	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.40	0.59	0.77	0.94	*	0.40	0.56	0.72	
		K	1.63	1.63	1.63	1.63	1.98	1.98	1.98	1.98	2.23	2.23	2.23	2.23	*	2.27	2.27	2.27	
115		TC	17.5	17.5	17.3	17.7	18.1	18.1	18.2	18.3	19.0	19.1	19.2	19.3	*	20.1	20.2	20.3	
		S/T	0.89	1.00	1.00	1.00	0.63	0.87	1.00	1.00	0.44	0.65	0.85	1.00	*	0.41	0.61	0.86	
		K	1.90	1.90	1.90	1.90	1.96	1.96	1.96	1.96	2.02	2.02	2.02	2.02	*	2.08	2.08	2.08	
900		65	TC	17.7	17.8	17.9	18.0	21.0	21.1	21.2	21.4	24.2	24.3	24.4	24.5	*	28.3	28.4	28.6
			S/T	0.93	1.00	1.00	1.00	0.62	0.83	1.00	1.00	0.42	0.61	0.80	0.98	*	0.41	0.57	0.73
			K	0.85	0.85	0.85	0.85	0.91	0.91	0.91	0.91	1.09	1.09	1.09	1.09	*	1.28	1.28	1.28
		75	TC	17.7	17.8	17.9	18.0	21.0	21.1	21.2	21.4	24.2	24.3	24.4	24.5	*	28.3	28.4	28.6
			S/T	0.93	1.00	1.00	1.00	0.62	0.83	1.00	1.00	0.42	0.61	0.80	0.98	*	0.41	0.57	0.73
			K	1.03	1.03	1.03	1.03	1.11	1.11	1.11	1.11	1.34	1.34	1.34	1.34	*	1.57	1.57	1.57
	85	TC	17.7	17.8	17.9	18.0	21.0	21.1	21.2	21.4	24.2	24.3	24.4	24.5	*	28.3	28.4	28.6	
		S/T	0.93	1.00	1.00	1.00	0.62	0.83	1.00	1.00	0.42	0.61	0.80	0.98	*	0.41	0.57	0.73	
		K	1.22	1.22	1.22	1.22	1.38	1.38	1.38	1.38	1.61	1.61	1.61	1.61	*	1.94	1.94	1.94	
	95	TC	17.7	17.8	17.9	18.0	21.0	21.1	21.2	21.4	24.2	24.3	24.4	24.5	*	28.3	28.4	28.6	
		S/T	0.93	1.00	1.00	1.00	0.62	0.83	1.00	1.00	0.42	0.61	0.80	0.98	*	0.41	0.57	0.73	
		K	1.36	1.36	1.36	1.36	1.65	1.65	1.65	1.65	1.94	1.94	1.94	1.94	*	2.29	2.29	2.29	
	105	TC	17.7	17.8	17.9	18.0	21.0	21.1	21.2	21.4	23.7	23.8	23.9	24.0	*	25.0	25.1	25.3	
		S/T	0.93	1.00	1.00	1.00	0.62	0.83	1.00	1.00	0.42	0.61	0.80	0.98	*	0.42	0.58	0.75	
		K	1.64	1.64	1.64	1.64	2.00	2.00	2.00	2.00	2.25	2.25	2.25	2.25	*	2.30	2.30	2.30	
	115	TC	17.7	17.8	17.6	18.0	18.4	18.5	18.5	18.6	19.3	19.4	19.5	19.6	*	20.4	20.5	20.6	
		S/T	0.93	1.00	1.00	1.00	0.66	0.90	1.00	1.00	0.46	0.67	0.89	1.00	*	0.42	0.64	0.89	
		K	1.91	1.91	1.91	1.91	1.98	1.98	1.98	1.98	2.04	2.04	2.04	2.04	*	2.10	2.10	2.10	

LIAC036-180P431 + LIAH036-180P431 Cooling Capacity

LIAC036-180P431 + LIAH036-180P431																		
Airflow	Outdoor DB	IWB	59				63				67				71			
			IDB	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80
1000	65	TC	25.2	25.3	25.4	25.5	29.8	30.0	30.1	30.3	34.3	34.4	34.6	34.8	*	40.1	40.3	40.5
		S/T	0.84	1.00	1.00	1.00	0.56	0.75	0.95	1.00	0.37	0.55	0.72	0.88	*	0.37	0.51	0.66
		KW	1.26	1.26	1.26	1.26	1.34	1.34	1.34	1.34	1.60	1.60	1.60	1.60	*	1.89	1.89	1.89
	75	TC	25.2	25.3	25.4	25.5	29.8	30.0	30.1	30.3	34.3	34.4	34.6	34.8	*	40.1	40.3	40.5
		S/T	0.84	1.00	1.00	1.00	0.56	0.75	0.95	1.00	0.37	0.55	0.72	0.88	*	0.37	0.51	0.66
		KW	1.52	1.52	1.52	1.52	1.63	1.63	1.63	1.63	1.97	1.97	1.97	1.97	*	2.32	2.32	2.32
	85	TC	25.2	25.3	25.4	25.5	29.8	30.0	30.1	30.3	34.3	34.4	34.6	34.8	*	40.1	40.3	40.5
		S/T	0.84	1.00	1.00	1.00	0.56	0.75	0.95	1.00	0.37	0.55	0.72	0.88	*	0.37	0.51	0.66
		KW	1.80	1.80	1.80	1.80	2.03	2.03	2.03	2.03	2.37	2.37	2.37	2.37	*	2.86	2.86	2.86
	95	TC	25.2	25.3	25.4	25.5	29.8	30.0	30.1	30.3	34.3	34.4	34.6	34.8	*	40.1	40.3	40.5
		S/T	0.84	1.00	1.00	1.00	0.56	0.75	0.95	1.00	0.37	0.55	0.72	0.88	*	0.37	0.51	0.66
		KW	2.00	2.00	2.00	2.00	2.43	2.43	2.43	2.43	2.86	2.86	2.86	2.86	*	3.47	3.47	3.47
	105	TC	25.2	25.3	25.4	25.5	29.8	30.0	30.1	30.3	34.3	34.4	34.6	34.8	*	37.2	37.4	37.6
		S/T	0.84	1.00	1.00	1.00	0.56	0.75	0.95	1.00	0.37	0.55	0.72	0.88	*	0.37	0.52	0.67
		KW	2.60	2.60	2.60	2.60	2.92	2.92	2.92	2.92	3.60	3.60	3.60	3.60	*	3.80	3.80	3.80
	115	TC	25.2	25.3	25.4	25.5	26.0	26.2	26.3	26.4	27.4	27.5	27.7	27.8	*	29.3	29.4	29.6
		S/T	0.84	1.00	1.00	1.00	0.59	0.81	1.00	1.00	0.42	0.61	0.80	0.98	*	0.38	0.57	0.80
		KW	2.95	2.95	2.95	2.95	3.00	3.00	3.00	3.00	3.09	3.09	3.09	3.09	*	3.20	3.20	3.20
1180	65	TC	25.6	25.7	25.9	26.0	30.3	30.5	30.6	30.8	34.8	35.0	35.2	35.4	*	40.8	41.0	41.2
		S/T	0.88	1.00	1.00	1.00	0.59	0.79	1.00	1.00	0.40	0.58	0.76	0.93	*	0.39	0.54	0.70
		KW	1.27	1.27	1.27	1.27	1.36	1.36	1.36	1.36	1.62	1.62	1.62	1.62	*	1.91	1.91	1.91
	75	TC	25.6	25.7	25.9	26.0	30.3	30.5	30.6	30.8	34.8	35.0	35.2	35.4	*	40.8	41.0	41.2
		S/T	0.88	1.00	1.00	1.00	0.59	0.79	1.00	1.00	0.40	0.58	0.76	0.93	*	0.39	0.54	0.70
		KW	1.53	1.53	1.53	1.53	1.65	1.65	1.65	1.65	1.99	1.99	1.99	1.99	*	2.34	2.34	2.34
	85	TC	25.6	25.7	25.9	26.0	30.3	30.5	30.6	30.8	34.8	35.0	35.2	35.4	*	40.8	41.0	41.2
		S/T	0.88	1.00	1.00	1.00	0.59	0.79	1.00	1.00	0.40	0.58	0.76	0.93	*	0.39	0.54	0.70
		KW	1.82	1.82	1.82	1.82	2.05	2.05	2.05	2.05	2.40	2.40	2.40	2.40	*	2.89	2.89	2.89
	95	TC	25.6	25.7	25.9	26.0	30.3	30.5	30.6	30.8	34.8	35.0	35.2	35.4	*	40.8	41.0	41.2
		S/T	0.88	1.00	1.00	1.00	0.59	0.79	1.00	1.00	0.40	0.58	0.76	0.93	*	0.39	0.54	0.70
		KW	2.02	2.02	2.02	2.02	2.46	2.46	2.46	2.46	2.89	2.89	2.89	2.89	*	3.51	3.51	3.51
	105	TC	25.6	25.7	25.9	26.0	30.3	30.5	30.6	30.8	34.8	35.0	35.2	35.4	*	37.8	38.0	38.2
		S/T	0.88	1.00	1.00	1.00	0.59	0.79	1.00	1.00	0.40	0.58	0.76	0.93	*	0.40	0.55	0.71
		KW	2.63	2.63	2.63	2.63	2.95	2.95	2.95	2.95	3.64	3.64	3.64	3.64	*	3.84	3.84	3.84
	115	TC	25.6	25.7	25.9	26.0	26.5	26.6	26.8	26.9	27.9	28.0	28.2	28.3	*	29.8	29.9	30.1
		S/T	0.88	1.00	1.00	1.00	0.62	0.86	1.00	1.00	0.44	0.64	0.84	1.00	*	0.40	0.60	0.85
		KW	2.98	2.98	2.98	2.98	3.03	3.03	3.03	3.03	3.12	3.12	3.12	3.12	*	3.24	3.24	3.24
1320	65	TC	26.0	26.2	26.3	26.4	30.9	31.0	31.2	31.3	35.4	35.6	35.8	36.0	*	41.5	41.7	41.9
		S/T	0.92	1.00	1.00	1.00	0.62	0.82	1.00	1.00	0.41	0.60	0.79	0.96	*	0.40	0.56	0.73
		KW	1.28	1.28	1.28	1.28	1.37	1.37	1.37	1.37	1.64	1.64	1.64	1.64	*	1.93	1.93	1.93
	75	TC	26.0	26.2	26.3	26.4	30.9	31.0	31.2	31.3	35.4	35.6	35.8	36.0	*	41.5	41.7	41.9
		S/T	0.92	1.00	1.00	1.00	0.62	0.82	1.00	1.00	0.41	0.60	0.79	0.96	*	0.40	0.56	0.73
		KW	1.55	1.55	1.55	1.55	1.66	1.66	1.66	1.66	2.01	2.01	2.01	2.01	*	2.37	2.37	2.37
	85	TC	26.0	26.2	26.3	26.4	30.9	31.0	31.2	31.3	35.4	35.6	35.8	36.0	*	41.5	41.7	41.9
		S/T	0.92	1.00	1.00	1.00	0.62	0.82	1.00	1.00	0.41	0.60	0.79	0.96	*	0.40	0.56	0.73
		KW	1.84	1.84	1.84	1.84	2.07	2.07	2.07	2.07	2.42	2.42	2.42	2.42	*	2.92	2.92	2.92
	95	TC	26.0	26.2	26.3	26.4	30.9	31.0	31.2	31.3	35.4	35.6	35.8	36.0	*	41.5	41.7	41.9
		S/T	0.92	1.00	1.00	1.00	0.62	0.82	1.00	1.00	0.41	0.60	0.79	0.96	*	0.40	0.56	0.73
		KW	2.04	2.04	2.04	2.04	2.48	2.48	2.48	2.48	2.92	2.92	2.92	2.92	*	3.55	3.55	3.55
	105	TC	26.0	26.2	26.3	26.4	30.9	31.0	31.2	31.3	35.4	35.6	35.8	36.0	*	38.5	38.7	38.9
		S/T	0.92	1.00	1.00	1.00	0.62	0.82	1.00	1.00	0.41	0.60	0.79	0.96	*	0.41	0.58	0.74
		KW	2.66	2.66	2.66	2.66	2.98	2.98	2.98	2.98	3.68	3.68	3.68	3.68	*	3.88	3.88	3.88
	115	TC	26.0	26.2	26.3	26.4	26.9	27.1	27.2	27.3	28.4	28.5	28.6	28.8	*	30.3	30.4	30.6
		S/T	0.92	1.00	1.00	1.00	0.65	0.89	1.00	1.00	0.46	0.67	0.88	1.00	*	0.42	0.63	0.88
		KW	3.01	3.01	3.01	3.01	3.07	3.07	3.07	3.07	3.15	3.15	3.15	3.15	*	3.27	3.27	3.27

