



TM48H50		
Performance		
Cooling Rated Capacity	Btu/h	48,000
Cooling Cap. Range Min-Max	Btu/h	3,412~54,592
SEER/EER		18.0/8.8
Heating Rated Capacity	Btu/h	54,000
Heating Cap. Range Min-Max	Btu/h	4,094~59,369
HSPF/COP		10.0/3.2
Electrical		
Voltage, Phase, Cycle	V-Ph-Hz	208/230-1-60
Voltage Range	V	187~253
MCA	A	39
MOP	A	60
Compressor RLA	A	29
Fan Motor FLA	A	2 x 1.0
Piping		
Total Pipe Length	ft	443
Pipe Length to Any Indoor Unit Min-Max	ft	10~230
Max Elevation between Indoor Units	ft	49
Max Lift/Drop from ODU to IDU	ft	98
Liquid Line	in	3/8
Vapor Line	in	5/8
Connection Type		Flared



Operating Range		
Cooling Outdoor DB	°F	50~129
Heating Outdoor DB	°F	-31~81
System Data		
Compressor Type		DC Inverter Rotary
Refrigerant Type		R410A
Pre-Charge	oz	229.3
Pre-Charge Length	ft	98
Additional Charge	oz/ft	0.5
Refrigerant Control		EXV
ODU Sound Pressure (Cooling/Heating)	dB(A)	56/56
Max Number of IDUs Min-Max		2-7
Max Number of BU Boxes Max		3



Job Name:		Date:	
Reference #:			
Signature:			

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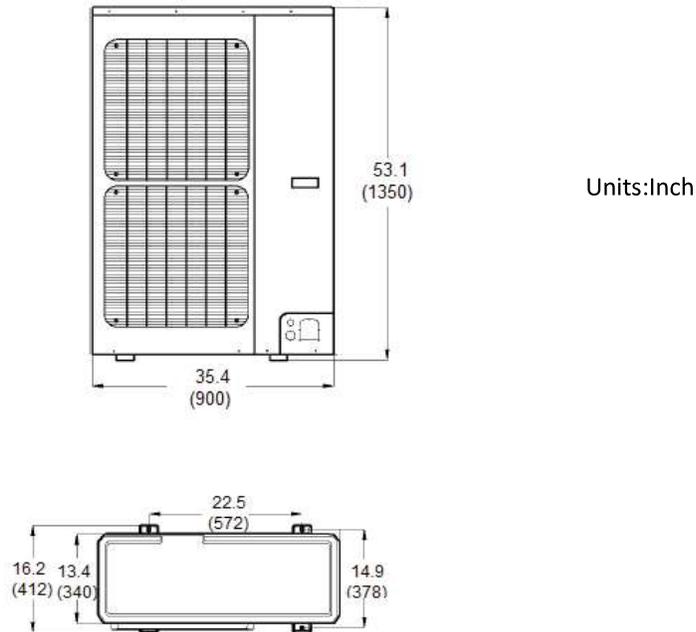


COOLING PERFORMANCE*									
Indoor Entering Temperatures							ULTRA COOL		
Outdoor Ambient DB	68°F DB		73°F DB		80°F DB				
	57°F WB		61°F WB		67°F WB				
	TC	SHC	TC	SHC	TC	SHC			
50°F	56,201	47,771	60,482	48,386	62,130	49,704			
59°F	55,105	46,839	58,303	46,642	59,516	47,613			
68°F	55,420	47,107	56,742	45,394	57,952	46,362			
77°F	53,521	45,493	54,783	43,826	56,180	44,944			
86°F	51,145	43,473	52,541	42,033	53,791	43,033			
95°F	49,548	42,116	50,726	40,581	52,183	41,746			
104°F	48,030	40,826	48,203	38,562	49,782	39,826			
113°F	45,208	38,427	46,503	37,202	47,982	38,386			
122°F	38,901	33,066	40,112	32,090	41,650	33,320			
129°F	29,651	25,203	31,583	25,266	33,742	26,994			
HEATING PERFORMANCE*									
Indoor Entering Air Temperatures							ULTRA COOL		
Outdoor Ambient DB	68°F DB		73°F DB		80°F DB				
	57°F WB		61°F WB		67°F WB				
	TC	Power Input (kW)	COP	TC	Power Input (kW)	COP	TC	Power Input (kW)	COP
-31°F	29,651	6.30	1.38	31,802	6.12	1.52	31,802	6.01	1.55
-22°F	36,502	6.36	1.68	36,351	6.18	1.72	36,351	6.08	1.75
-13°F	42,102	6.53	1.89	41,725	6.35	1.93	41,725	6.24	1.96
-5°F	48,000	6.70	2.10	47,600	6.52	2.14	47,600	6.41	2.18
0°F	49,012	6.72	2.14	48,914	6.53	2.20	48,914	6.42	2.23
5°F	50,815	6.75	2.21	50,628	6.57	2.26	50,628	6.46	2.30
10°F	51,568	6.70	2.26	51,357	6.52	2.31	51,357	6.41	2.35
17°F	53,541	6.60	2.38	53,418	6.42	2.44	53,418	6.31	2.48
20°F	55,000	6.50	2.48	54,482	6.31	2.53	54,482	6.21	2.57
24°F	56,300	6.43	2.57	56,100	6.25	2.63	56,100	6.13	2.68
32°F	59,000	6.40	2.70	58,800	6.20	2.78	58,800	6.10	2.83
41°F	61,000	6.23	2.87	60,200	6.05	2.92	60,000	5.94	2.96
43°F	61,520	6.10	2.96	60,520	5.90	3.01	60,850	5.80	3.07
47°F	63,120	6.20	2.98	58,120	5.53	3.08	56,450	5.27	3.14
53°F	63,120	6.00	3.08	58,120	5.40	3.15	56,450	5.14	3.22
59°F	63,120	5.60	3.30	58,120	5.10	3.34	56,450	4.94	3.35
64°F	63,120	4.86	3.81	58,120	4.39	3.88	56,450	4.24	3.90
70°F	63,120	4.45	4.16	58,120	4.00	4.26	56,450	3.82	4.33
75°F	63,120	4.23	4.37	58,120	3.76	4.53	56,450	3.61	4.58
78°F	63,120	4.09	4.52	58,120	3.52	4.84	56,450	3.40	4.87

Maximum System Capacity
 TC - Total Capacity (BtuH)
 COP - Coefficient of Performance



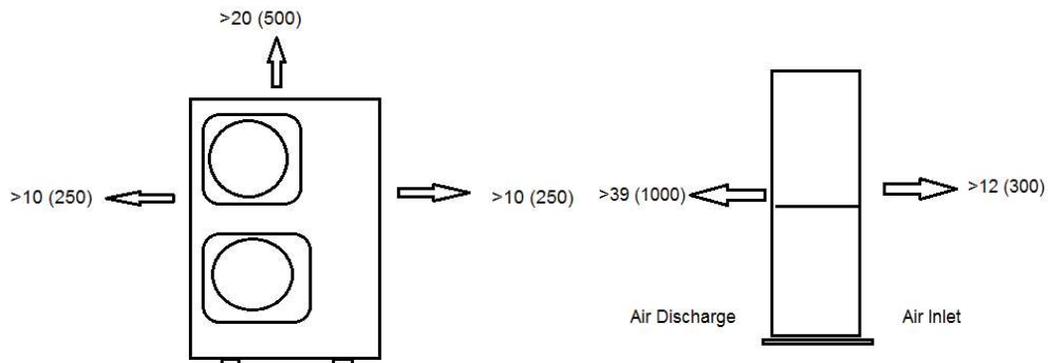
OUTLINE AND PHYSICAL DIMENSIONS



Net Weight	307 lbs
Shipping Weight	331 lbs

Liquid Line Port Size	3/8-in OD Flared
Suction/Gas Line Port Size	3/8-in OD Flared

Minimum Spacing Requirements



Notes:

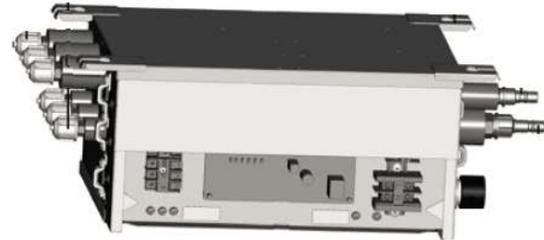
1. Communication Cable minimum 18 AWG Type Stranded Copper Conductors THHN 300V Unshielded Wire
2. Power wiring cable size must comply with applicable national and local codes.



BRANCH(BU) SPECIFICATIONS



1-Port In/2-Ports Out
Model no: FXA2A-D (RFX12A)



1-Port In/3-Ports Out
Model no: FXA3A-D (RFX13A)

Electrical

		FXA2A-D	FXA3A-D
		RFX12A	RFX13A
No. of Indoor Units		2	3
Power Supply	volts	208/230v	208/230v
Rated Current	amps	3.15	3.15
MOCP	amps	15	15

Piping

		FXA2A-D	FXA3A-D
		RFX12A	RFX13A
Max Equivalent Length	ft	60	60
(BU to last Indoor Unit)			

Notes:

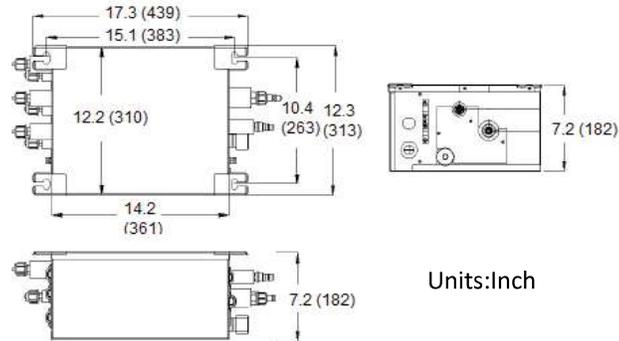
1. Communication Cable minimum 18 AWG Type Stranded Copper Conductors THHN 300V Unshielded Wire
2. Power wiring cable size must comply with applicable national and local codes.



BRANCH(BU) BOX DIMENSIONAL SPECIFICATIONS

1-Port In/2-Ports Out
 Model no:FXA3A-D (RFX12A)

Weight	
Net	Gross
12 lbs	16 lbs

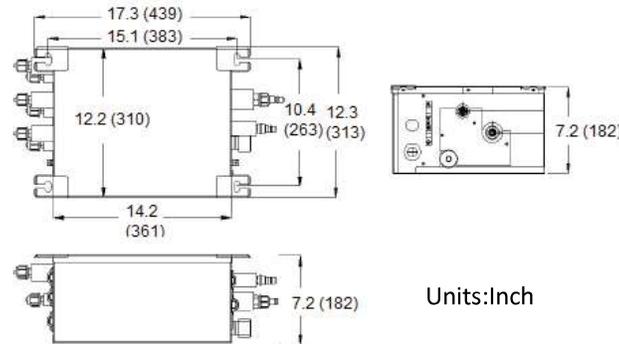


Units:Inch

	Indoor Unit Side		Outdoor Unit Side
	Port A ¹	Port B ¹	
Liquid Pipe (Flare)	1/4	1/4	3/8
Gas Pipe (Flare)	3/8	3/8	5/8

1-Port In/3-Ports Out
 Model no: FXA3A-D (RFX13A)

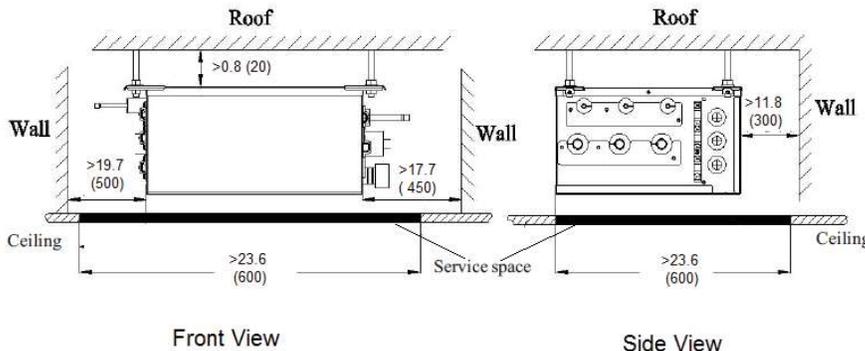
Weight	
Net	Gross
13 lbs	17 lbs



Units:Inch

	Indoor Unit Side			Outdoor Unit Side
	Port A ¹	Port B ¹	Port C ¹	
Liquid Pipe (Flare)	1/4	1/4	1/4	3/8
Gas Pipe (Flare)	3/8	3/8	3/8	5/8

Minimum Spacing Requirements



Notes:

1. Communication Cable minimum 18 AWG Type Stranded Copper Conductors THHN 300V Unshielded Wire
2. Power wiring cable size must comply with applicable national and local codes.



TYPICAL PIPING CONFIGURATION



NON-DUCTED INDOOR UNIT

SAPPHIRE WALL MOUNTED INDOOR UNIT

Model			TW09HQ3D6DI(WIFI)	TW12HQ3D6DI(WIFI)	TW18HQ3D6DI(WIFI)	TW24HQ3D6DI(WIFI)
Capacity	Cooling	Btu/h	9000	12000(2900~15354)	18000(4094~21837)	22000(6800~30700)
	Heating	Btu/h	9000	12200(3071~18766)	18000(4094~24566)	24000(6800~32000)
Power Supply		Ph/V/Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz
Airflow Volume	Indoor	m³/h	720/650/600/550/500/450/350	850/800/750/600/550/450/400	1250/1150/1050/950/850/780/600	1400/1300/1200/1100/1000/850/650
		CFM				
Sound Pressure Level	Indoor	dB(A)	43/40/38/36/33/31/19	49/46/43/40/37/34/22	51/48/45/42/39/36/34	54/49/46/43/40/37/34/27
Dimension(WxHxD)	Outline	inch	38-1/4x11-3/4x8-7/8	39-1/4x11-7/8x8-7/8	43-3/8x12-7/8x9-3/4	42-1/2x12-3/4x9-5/8
	Package	inch	41x14-7/8x8-7/8	41-3/4x15x12-5/8	45-1/4x16-1/4x13-3/4	45-1/8x15-3/4x13
Piping Connection	Liquid	inch	1/4	1/4	1/4	1/4
	Gas	inch	3/8	1/2	5/8	5/8
Net Weight/Gross Weight	Indoor	Kg	13.5/16.5	13.5/16.5	16.5/20	16/19.5
Loading Quantity	40'GP	sets	156	156	87	86
	40'HP	sets	180	180	107	108

LOMO WALL MOUNTED INDOOR UNIT

Model			TW09HQ2C2DI(WIFI)	TW12HQ2C2DI(WIFI)	TW18HQ2C2DI(WIFI)	TW24HQ2C2DI(WIFI)
Capacity	Cooling	Btu/h	9000(3099~9599)	12000(3100~13000)	18000(6800~20000)	22000(6824~27296)
	Heating	Btu/h	11000(1911~12000)	13000(2400~14000)	19800(7340~23500)	23000(6824~30700)
Power Supply		Ph/V/Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz
Airflow Volume	Indoor	m³/h	640/490/410/290	680/490/410/290	950/830/700/570	1200/1100/1000/90
		CFM	376/288/241/170	400/288/241/171	559/488/412/335	706/647/588/530
Sound Pressure Level	Indoor	dB(A)	43/39/35/29	45/39/35/29	47/43/40/39	48/44/40/36
Dimension(WxHxD)	Outline	inch	33-1/4x11-3/8x8-1/4	33-1/4x11-3/8x8-1/4	38-1/4x11-3/4x8-7/8	42-1/2x12-3/4x9-5/8
	Package	inch	36-1/4x14-7/8x11-1/8	36-1/4x14-7/8x11-1/8	41x15-1/8x12-5/8	45-1/4x16-1/4x13-3/4
Piping Connection	Liquid	inch	1/4	1/4	1/4	1/4
	Gas	inch	3/8	1/2	5/8	5/8
Net Weight/Gross Weight	Indoor	Kg	10/12	10/12	12.5/15.5	15.5/19
Loading Quantity	20'GP	sets	300	300	230	172
	40'HP	sets	728/624	728/624	557/489	402/346

FLOOR CEILING TYPE INDOOR UNIT

Model			TM09HTDI	TM12HTDI	TM18HTDI	TM24HBDI
Capacity	Cooling	Btu/h	8500	11900	17000	22800
	Heating	Btu/h	9500	13100	18700	27400
Power Supply		Ph/V/Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz
Airflow Volume	Indoor	m³/h	700/610/540/420	700/610/540/420	680/590/520/410	950/870/800/720
		CFM	38/35/30/26	38/35/30/26	38/35/30/27	38/35/31/27
Sound Pressure Level	Indoor	dB(A)	43/39/35/29	45/39/35/29	47/43/40/39	48/44/40/36
Dimension(WxHxD)	Outline	inch	34-1/4x26-1/8x9-1/4	34-1/4x26-1/8x9-1/4	34-1/4x26-1/8x9-1/4	47-1/4x26-1/8x9-1/4
	Package	inch	40-5/8x30-3/8x11-3/4	40-5/8x30-3/8x11-3/4	40-5/8x30-3/8x11-3/4	53-5/8x30-3/8x11-3/4
Piping Connection	Liquid	inch	1/4	1/4	1/4	3/8
	Gas	inch	3/8	1/2	1/2	5/8
Net Weight/Gross Weight	Indoor	Kg	25/30	25/30	25.5/30.5	33/40
Loading Quantity	20'GP	sets	231	231	231	175
	40'HP	sets	264	264	264	200



NON-DUCTED INDOOR UNIT

4-WAY CASSETTE INDOOR UNIT

Model			TM12HKDI	TM18HKDI	TM24HKDI
Capacity	Cooling	Btu/h	12000	14400	22800
	Heating	Btu/h	13000	16000	27400
Power Supply		Ph/V/Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz
Airflow Volume		m³/h	650/560/520/450	710/670/590/450	1280/1220/1100/880
Sound Pressure Level	Indoor	dB(A)	44/41/38/34	47/45/41/35	47/45/41/36
Main body Dimension(WxHxD)	Outline	inch	23-1/2x23-1/2x9-1/2	23-1/2x23-1/2x9-1/2	33-1/8x33-1/8x9-1/2
	Package	inch	30-5/8x29x11-3/4	30-5/8x29x11-3/4	37-7/8x37-7/8x12-3/4
Panel Dimension(WxHxD)	Outline	inch	26-3/8x2x26-3/8	26-3/8x2x26-3/8	37-3/8x2-3/8x37-3/8
	Package	inch	30x4-1/8x30	30x4-1/8x30	40-5/8x5-1/4x40-7/8
Piping Connection	Liquid	inch	1/4	1/4	3/8
	Gas	inch	3/8	1/2	5/8
Loading Quantity	40'GP	sets	329	329	168
	40'HP	sets	376	376	192
Net Weight/Gross Weight (Main body)		Kg	20/24	20/24	26/32
Net Weight/Gross Weight (Panel)		Kg	3.5/5	3.5/5	7/11

CONSOLE TYPE INDOOR UNIT

Model			TM09HEDI	TM12HEDI	TM18HEDI
Capacity	Cooling	Btu/h	8800	11900	18000
	Heating	Btu/h	9500	12900	19000
Power Supply		Ph/V/Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz	1Ph,208/230V,60Hz
Airflow Volume		m³/h	500	600	650
Sound Pressure Level	Indoor	dB(A)	40/38/36/33/30/27/25	42/40/38/37/35/32/27	48/46/44/41/37/35/32
Dimension(WxHxD)	Outline	inch	27-1/2x8-1/2x23-5/8	27-1/2x8-1/2x23-5/8	27-1/2x8-1/2x23-5/8
	Package	inch	31x27-1/2x11-1/8	31x27-1/2x11-1/8	31x27-1/2x11-1/8
Piping Connection	Liquid	inch	1/4	1/4	1/4
	Gas	inch	3/8	3/8	1/2
Loading Quantity	20'GP	sets	181	181	181
	40'GP	sets	381/454	381/454	381/454
Net Weight/Gross Weight		Kg	15/18	15/18	15/18

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