

Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc. P.O. Box 16620 Little Rock, AR 72231 Phone 501-834-3320 Fax 501-834-5416

Date: 2/4/2025

Return Request: 2/14/2025

Project: City Of Sherwood Public Works (Maintenance Building)

Supplier: Harrison Energy Partner

Manufacturer: Daikin

Submittal: Ductless & Mini-Split Systems

Submittal Number: 23 81 28-01

Drawing # and Installation: Mechanical Drawings

ARCHITECT

Cromwell 1300 East 6th Street Little Rock, AR 72202 501-372-2900

GENERAL CONTRACTOR

Baldwin & Shell 1000 W. Capitol Ave. Little Rock, AR 72201 501-374-8677 **ENGINEER**

Cromwell 1300 East 6th Street Little Rock, AR 72202 501-372-2900

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc. 9924 Landers Rd. N. Little Rock, AR 72117 501-834-3320

Notes:				

CSUSA PROJECT NO. 24-6084

sean@comfortar.com

Submittal



Prepared For: Date:
Cromwell Architects Engineers 12/10/2024

Sold To: Job Name:

Comfort Systems USA Sherwood Public Works

Harrison Energy Partners is pleased to provide the enclosed submittal for your review and approval.

Qty. Product Summary

2 Mini-Split (DSS/DSCU-1 & DSS/DSCU-1)

1501 Westpark Dr., Ste. 9 • Little Rock, AR 72204

Josh Robinson, New Systems Sales
501-539-0633 • <u>harrisonenergy.com</u> **Harrison** Energy Partners • Commercial HVAC Excellence

The attached information describes the equipment we propose to furnish for this project and is submitted for your approval.

Daikin Mini-Split (DSS/DSCU-1 Admin & DSS/DSCU-1 Maint)

- 2 Ton Nominal Capacity
- Condensing Unit/ Wall Mounted Fan Coil
- Low Ambient Wind Baffle
- DKN Plus Interface
- Wall Mounted Thermostat
- Cooling Only System



R-32 --- 2-Ton Wall Mounted Daikin OTERRA Cooling Only System - FTKF24AXVJU-RKF24AXVJU

Project: City of Sherwood - Public Works

Submitted by: Ronald Holt of HARRISON ENERGY PARTNERS on 12/18/2024

Submitted to: Tags: DSS/DSCU-1

FEATURES

- Daikin Swing Compressor
- Indoor Quite Operation
- Included Handheld Remote
- Titanium Apatite Air-Purifying Filter
- Anti-corrosion Treatment of Outdoor Heat Exchanger

• R-32 Fasy P

- R-32 Easy, Proven, Efficient, Available
- Precharged for up to 33 ft
- Cooling Operation Range 50-118F for 9K/12K 50-122F for 18/24K
- 12 Year Parts and Compressor Registered Residential Warranty
- 5 year Parts and Compressor Commercial Warranty
- Cooling down to -4F for Facilities

INDOOR UNIT



OUTDOOR UNIT



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R-32 --- 2-Ton Wall Mounted Daikin OTERRA Cooling Only System - FTKF24AXVJU-RKF24AXVJU

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SYSTEM PERFORMANCE			
Indoor Unit Model No.	FTKF24AXVJU	Indoor Unit Name:	R-32 Daikin OTERRA 2 Ton AC only mini split indoor unit
Outdoor Unit Model No.	RKF24AXVJU	Outdoor Unit Name:	R-32 2 Ton, Cooling only, Ductless ODU Daikin OTERRA
Rated Cooling Capacity (Btu/hr):	22,400	Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 / 75
Sensible Capacity (Btu/hr):	16,360	Rated Piping Length(ft):	25
Max/Min Cooling Capacity (Btu/hr):	26,400 / 7,000	Rated Height Difference (ft):	0.00
Cooling Input Power (kW):	6.570		
SEER2 (Non-Ducted/Ducted):	21.00 /		
EER2 (Non-Ducted/Ducted):	12.00 /		

SYSTEM DETAILS			
Refrigerant Type:	R-32	Cooling Operation Range (°F DB):	50 - 122
Holding Refrigerant Charge (lbs):	3.31		
Additional Charge (oz/ft):	0.18	Max. Pipe Length (Vertical) (ft):	66
Pre-charge Piping (Length) (ft):	33	Cooling Range w/Baffle (°F DB):	-44
Max. Pipe Length (Total) (ft):	99		
Max Height Separation (Ind to Ind ft):	0		
Fan/Compressor Drive Input:			

Submittal Date: 12/18/2024 4:17:08 PM

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R-32 --- 2-Ton Wall Mounted Daikin OTERRA Cooling Only System - FTKF24AXVJU-RKF24AXVJU

Project: City of Sherwood - Public Works

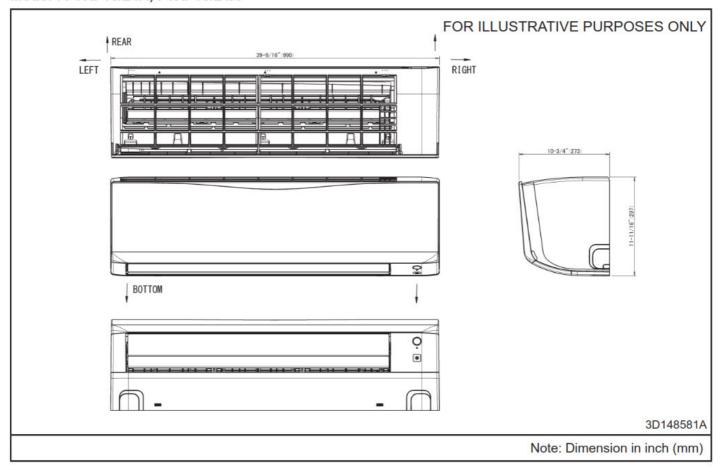
Submitted by: Ronald Holt of HARRISON ENERGY PARTNERS on 12/18/2024

Submitted to: Tags: DSS/DSCU-1

INDOOR UNIT DETAILS			
Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (HH/H/M/L/SL) (CFM):	754/716/605/467/395
Power Supply Connections:	L1, L2, L3, Ground	Moisture Removal (Gal/hr):	0.9
Min. Circuit Amps MCA (A):		Gas Pipe Connection (inch):	5/8
Max Overcurrent Protection (MOP) (A):		Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	11-11/16 x 39-9/16 x 10-3/4	Condensate Connection (inch):	5/8
Ext. Static Pressure (Rated/Max) (inWg):	I	Sound Pressure (H/M/L/SL) (dBA):	53/45/39/34
Net Weight (lb):	30.5	Sound Power Level (dBA):	

DIMENSIONAL DRAWING - INDOOR UNIT

Model: FTKF18/24A, FTXF18/24A



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R-32 --- 2-Ton Wall Mounted Daikin OTERRA Cooling Only System - FTKF24AXVJU-RKF24AXVJU

Project: City of Sherwood - Public Works

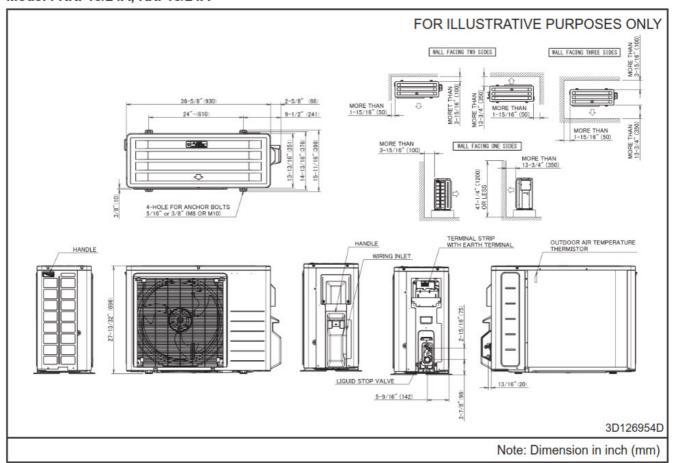
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Submitted to: Tags: DSS/DSCU-1

OUTDOOR UNIT DETAILS			
Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Compressor Stage:	Inverter
Power Supply Connections:	L1, L2, L3, Ground	Capacity Control Range (%):	-
Min. Circuit Amps MCA (A):	14.23	Airflow Rate (H) (CFM):	1879
Max Overcurrent Protection (MOP) (A):	20	Gas Pipe Connection (inch):	5/8
Max Starting Current MSC(A):		Liquid Pipe Connection (inch):	1/4
Rated Load Amps RLA(A):		Sound Pressure (H) (dBA):	55
Dimensions (HxWxD) (in):	27-13/32 x 36-5/8 x 13-13/16	Sound Power Level (dBA):	
Net Weight (lb):	101		

DIMENSIONAL DRAWING - OUTDOOR UNIT

Model: RKF18/24A, RXF18/24A





R-32 --- 2-Ton Wall Mounted Daikin OTERRA Cooling Only System - FTKF24AXVJU-RKF24AXVJU

Project: City of Sherwood - Public Works

Submitted by: Ronald Holt of HARRISON ENERGY PARTNERS on 12/18/2024

Submitted to: Tags: DSS/DSCU-1

INDOOR ACCESSORIES

PA	RT
NU	MBER

DESCRIPTION

INCLUDED

AZAI6WSCDKB	DKN Residential Cloud Wi-Fi Adaptor for Single- and Multi-Zone System (S21)	No
AZAI6WSPDKC	DKN Plus Interface	No
BRC51D61	Wired Remote Controller Kit	No
DACA-CP1-1	Mini Aqua Condensate Pump	No
DACA-CP4-1	MINI WHITE PUMP KIT 100-250V	No
DTST-LTE-LA-A	Daikin One Lite (with Translation Adaptor for S21 only)	No
DTST-ONE-ADA-A	Daikin One+ Smart Thermostat for VRV, SkyAir, Single- and Multi-Zone System	No
DTST-TOU-ADA-A	Daikin One Touch Smart Thermostat (with Translation Adaptor for S21 and P1P2)	No
KRP928BB2S	RA Interface Adaptor for DIII-Net -	No

OUTDOOR ACCESSORIES

PART NUMBER

DESCRIPTION

INCLUDED

DACA-WB-3	Powder-Coated Wall-Mounted Bracket	No
KEH063A4EA	Bml LRg Drain Pan Heater Rev A	No
KPW063B4E	Air Adjustment Grille	Yes

Daikin North America LLC, 19001 Kermier Rd, Waller, TX 77484



Air Adjustment Grille (Wind Baffle) KPW063B4E

DESCRIPTION

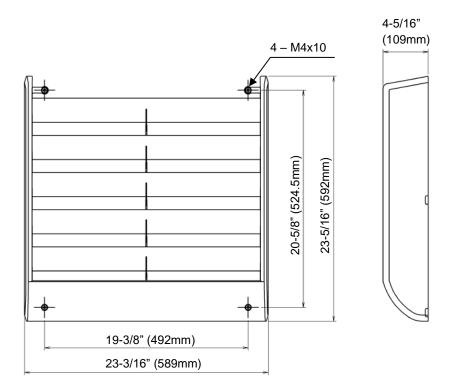
Air Adjustment Grille (Wind Baffle) mounts over the standard air grille and allows adjustment in air blow-off direction.





SPECIFICATION	SPECIFICATIONS		
Model No:	KPW063B4E		
Unit Compatibility:	RK18AXVJU, RK24AXVJU, RX18AXVJU, RX24AXVJU	Qty (1)	
Unit Names:	Air Adjustment Grille (Wind Baffle)		
Dimensions (WxHxD):	23-3/16" x 23-5/16" x 4-5/16" (589mm x 592mm x 109mm)		
Shipping Unit Weight:	6 lb. (2.7 kg)		
Material:	Flame Retardant Grade UL94V-HB		

DIMENSIONAL DRAWING



Daikin North America LLC, 5151 San Felipe, Suite 500, Houston TX, 77056 <u>www.daikinac.com</u> <u>www.daikincomfort.com</u>



BRC51D61 – Wired Remote Controller Kit

Project Name:		
Location:	Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

MODEL COMPATIBILITY:

Compatible with Single-Zone system indoor unit models:

Indoor Unit Models	Interface Adaptor
FTKB09AXVJU, FTKB12AXVJU, FTKB18AXVJU, FTKB24AXVJU, FTXB09AXVJU, FTXB12AXVJU, FTXB18AXVJU, FTXB24AXVJU, FTXB09BXVJU, FTXB12BXVJU, FTXB18BXVJU, FTXB24BXVJU	Not needed
CTX07AXVJU, CTX09AXVJU, CTX12AXVJU, FTK09AXVJU, FTK12AXVJU, FTK18AXVJU, FTK24AXVJU, FTX09AXVJU, FTX12AXVJU, FTX18AXVJU, FTX24AXVJU, FTK09BXVJU, FTK12BXVJU, FTK18BXVJU, FTK24BXVJU, FTX09BXVJU, FTX12BXVJU, FTX18BXVJU, FTX24BXVJU	Not needed

SPECIFICATIONS:

Model	BRC51D61
Description	Wired Remote Controller Kit
Maximum Indoor Units	1
Total Wiring Length	32.8ft (10m)
Dimensions	4.72 in x 4.72 in x 0.78 in (120mm x 120mm x 19.5 mm)
Connection Point	CN_WIRED (FTK/XB_AXVJU) CN_NS (FTK/X_AXVJU, FTK/X_BXVJU, FTXB_BXVJU)
Comfort Setpoint Range	60°F – 86°F
	Start / Stop
	Mode (Auto/Heat/Cool/Dry/Fan)
	Set Temperature Setpoint
Operation	Fan Speed
•	Airflow Direction
	Feature Selection (SLEEP, ECO+, POWERFUL, QUIET)
	Turn ON/OFF indoor unit LED display
Scheduling	Weekly ON/OFF Timer

PRODUCT IMAGE:



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BRC51D61 - Wired Remote Controller Kit

Project Name:		
Location:	_ Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

FEATURES:

- The Wired Remote Controller Kit includes a wired remote controller, a 32 ft. connecting cable and mounting screws.
- Selectable auto / cool / heat / dry / fan operation modes with adjustable setpoint and fan speed
- Set temperature setpoint in °F or °C units with 1 degree increments
- Temperature is controlled through indoor unit temperature sensor
- Built in weekly ON/OFF timer functionality with up to 2 ON/OFF cycles per day
- Can be used together with the factory supplied standard wireless remote controller the system will follow the last command provided by either the handheld remote or BRC51D61.
- Room temperature display available via jumper readout is return air temp at the indoor unit.
- System maintains a 3° to 5°F temperature correction of the set point, depending on the mode of operation.
- The unit runs based on a 1°C temperature control. The setpoint command will be rounded to °C and sent to the indoor unit. For some setpoints, the indoor unit temperature command may not change as shown in the table below.

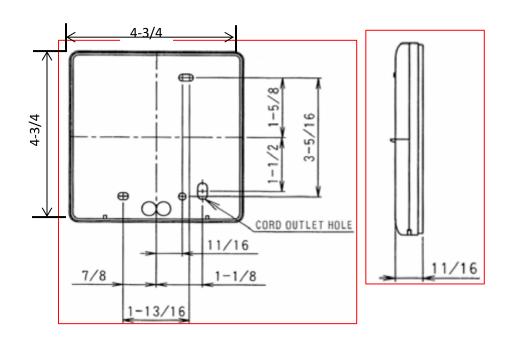
User Setpoint on Controller (°F)	Actual Indoor Unit Setpoint (°F)
68	68
69	68
70	70
71	70
72	72
73	73
74	73
75	75
76	75
77	77
78	77
79	79
80	79
81	81
82	82



BRC51D61 – Wired Remote Controller Kit

Project Name:		
Location:	Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

DIMENSIONS:



DOCUMENTATION:

Documentation available on www.daikinac.com: and/or www.daikinac.com:

- Submittal
- Operation Manual (including installation instructions)



AZAI6WSPDKC - DKN Plus Interface

Project Name:		
Location:	Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

MODEL COMPATIBILITY:

Compatible with the following indoor units:

Indoor Unit Family	Model Number	Туре
VRV and VRV Life	CXTQ, FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXNQ, FXSQ, FXTQ,	P1P2
	FXUQ, FXZQ	
SkyAir	FAQ, FBQ, FTQ, FCQ, FHQ	P1P2
Single-Zone and	FDMQ, FFQ	P1P2
Multi-Zone	CDXS, CTXS*, FDXS, FTK*, FTKB*, FTX*, FTXB* FTXG, FTXR, FTXS, FVXS, FTXM	S21

^{*}FTK_AXVJU, FTKB_AXVJU, FTX_AXVJU, FTXB_AXVJU and CTX_AXVJU units are not compatible.

The following indoor units do not have the S21 connection and require an additional interface adaptor (ordered separately) to provide the S21 connector:

Indoor Unit Models	Required Interface Adaptor
FTX09NMVJU(A), FTX12NMVJU(A), FTX09WVJU9, FTX12WVJU9	KRP067A41E
FTX15NMVJU(A), FTX15WVJU9	KRP980B2E
FTXM09VVJU, FTXM12VVJU, FTXM18VVJU, FTXM24VVJU, FTXM09WVJU9,	KER087A41
FTXM12WVJU9. FTXM18WVJU9. FTXM24WVJU9	

SPECIFICATIONS:

Model			AZAI6WSPDKC
Descripti	on		DKN Plus Interface
Maximum	n connecti	ons	1 for each S21/P1P2 indoor unit
147	S21 Wire		8.2 ft / 2.5 m (Included)
Wiring	P1P2 Wire		8.2 ft / 2.5 m (Included)
Modbus I baud rate		net MSTP communication	9600, 19200, 38400, 57600, 76800, 115200 bps (Default: 38400)
Power supply		For DKN Plus Interface	12-16VDC from indoor unit PCB
		For 3 rd party thermostat	24VAC from external power supply
Contact Rating Digital output (Aux. Heat Digital Input (Force Off)		Digital output (Aux. Heat)	1 amp. at 24VAC (Normally Open (NO))
		Digital Input (Force Off)	Dry contact (Configurable as NO or NC).
Dimensio	ons		3.62 in x 3.15 in x 1.14 in / 92mm x 80 mm x 29 mm
Weight			3.24 oz / 92g
Storage temperature		re	-4°F to 158°F
Operation temperature		ture	32°F to 113°F
Compliance			EMC with the standard 47 CFR Part 15B (US) EMC with ICES-003 Issue 6 standard (Canada)

PRODUCT IMAGE:



DAIKIN COMFORT TECHNOLOGIES NORTH AMERICA, INC.

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AZAI6WSPDKC - DKN Plus Interface

Project Name:		
Location:	_ Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

FEATURES:

- Versatile interface that can integrate with smart thermostat through multiple approaches:
 - Cloud API (Honeywell Home App/Cloud Ecobee App/Cloud Nest App/Cloud)
 - Local API (integration to Daikin Color Touch (DT4272C) with firmware v4.05 Premium Mini (D2270C) "Future"
 - Modbus RTU
 - BACnet MS/TP
- 3rd party thermostat G/Y/W (Fan/Cool/Heat) relay control through thermostat wiring.
 - Automatically disables thermostat relay logic when cloud API connection detected.
 - Custom control logic applied to minimize the loss of the indoor unit efficiency when no cloud API, BACnet or Modbus connection detected
 - Compatible Daikin thermostats: App Stat 250803400 Value Series (TSTATD1100-2 or TSTATD1152-2) –
 Premium series (D4271C) Premium Mini (D2270C) Color Touch (DT4272C)
- Easy commissioning with Bluetooth configuration App (DKN Cloud NA App)
- Indoor unit control and monitoring points (for integration through cloud, Modbus, and BACnet MS/TP only)
 - On/Off Setpoint Room temperature Mode (Auto, Cool, Heat, Fan, Dry) Fan speed Louver position Error code
- Indoor unit force off by interlock control through digital input dry contact.
- Controls auxiliary heater with dry contact as a secondary heat source:
 - Turn on and off the auxiliary heater based on the differential (configured in App) between the setpoint and the room temperature.
 - Enable/Disable the auxiliary heater based on outdoor temperature (S21 IDU only)
 - The user can enable the emergency heat mode from the DKN App
 - If the indoor unit has an error, the user can enable the emergency heater from the app.
- Integration to home automation systems through software drivers
 - Crestron
 - o Control4
 - o RTI Control
 - Fibaro
- Modbus RTU and BACnet MS/TP Integration
 - o The following points are available:

No.	Point Name	Read Only/Writable
1	Unit on/off	Writable
2	Setpoint	Writable
3	Room temperature	Writable**
4	Mode Auto/Cool/Heat/Fan/Dry	Writable
5	Fan speed	Writable
6	Louver position	Writable
7	Error code	Read only
8	Digital input status	Read only
9	Aux heat output status	Read only

^{**} The room temperature is writable for P1P2 indoor units only and read only for S21 indoor units.

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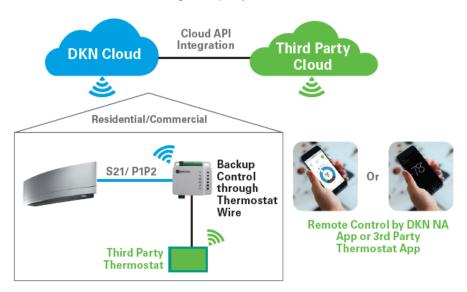


AZAI6WSPDKC - DKN Plus Interface

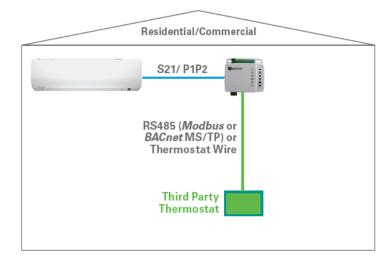
Project Name:		
Location:	_ Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

SYSTEM DIAGRAM:

- Integration with 3rd party thermostat
 - o Integration with Smart Thermostats through 3rd party Cloud API



Integration through RS485 or Thermostat Wire



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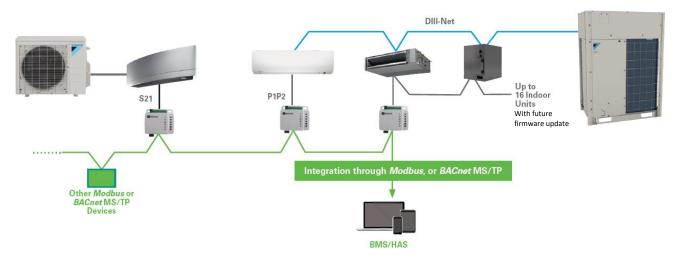
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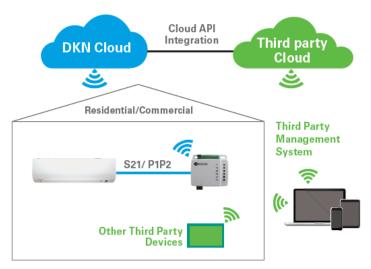
AZAI6WSPDKC - DKN Plus Interface

Project Name:		
Location:	_ Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

- Integration with Building Management System (BMS) or Home Automation System (HAS)
 - Integration through Modbus or BACnet MS/TP



Integration through Cloud API



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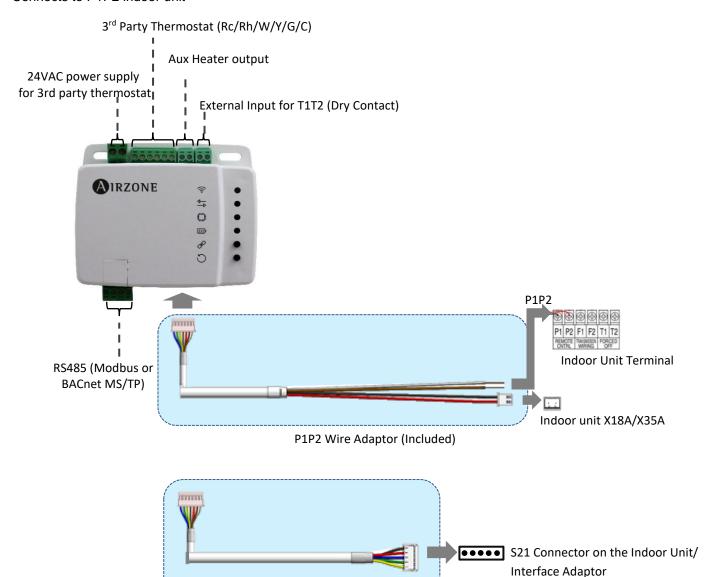


AZAI6WSPDKC - DKN Plus Interface

Project Name:		
Location:	_ Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

WIRING DIAGRAM:

Connects to P1P2 indoor unit



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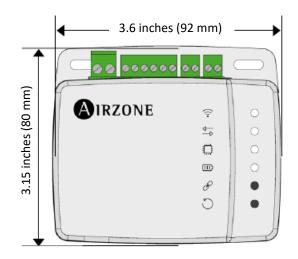
S21 Wire Adaptor (Included)

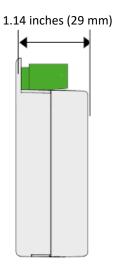


AZAI6WSPDKC - DKN Plus Interface

Project Name:		
Location:	Approval:	
Engineer:	Date:	
Submitted to:	Construction:	
Submitted by:	Unit #:	
Reference:	Drawing #:	

DIMENSIONS:





DOCUMENTATION:

Documentation available on www.daikincity.com and/or www.daikinac.com:

- Submittal
- Operation Manual
- Installation Manual
- Product Flyer
- Written Guide Specs