LENNOX Powered by SAMSUNG

SUBMITTAL V1UCK01

Unv Com Kit for 3rd party AHUs

Job Name _____ Location _____

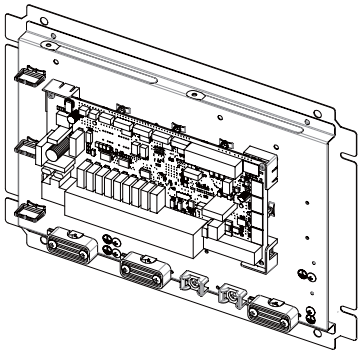
Purchaser _____ Engineer _____

Submitted to _____ Reference ☐ Approval ☐ Construction ☐

Unit Designation _____ Schedule # _____

Specifications

Power Supply	Voltage		24VAC
Connected EEV Capacity	Refrigeration Capacity	Tons	1 ~ 40
	Cooling (Min)	Btu/h	7000
	Cooling (Max)	Btu/h	480000
	Heating (Min)	Btu/h	8500
	Heating (Max)	Btu/h	540000
AHU Heat Exchanger Volume Allowance (for total EEV's connected)	Min	in^3	28
	Max	in^3	1725
Accessories	Individual Wired Controller		☐ VSTAT04P-1
	Touch Screen Wired Controller		☐ VSTAT02P-1
	Wireless Remote (option programming only)		☐ VSTAT01P-1
	External Room Temperature Sensor		☐ VCTRL11P-1
Safety Certifications			ETL (UL 1995)



Features

- Economizer output for connection to activate third party economizer controller (cooling thermal-ON output, field provided)
- Free cooling input - used with economizer controller to let UCK know it is providing "free cooling" to shut outdoor off and still operate fan and provide a cooling mode set temperature.
- Enthalpy sensor (field provided) connection for return air sensing
- Discharge air temperature sensor with target discharge temperature control capability
- Ventilation damper control with 2~10VDC output with customizable settings
- DOAS setting - can be used as standard AHU that uses indoor air or DOAS that uses 100% outside air
- Simple BMS control can be used to control set temperature or discharge air temperature when using discharge air control (0~10VDC input). Mode can also be changed with dry contact input (cool, heat, auto)
- All indoor unit addressing and option settings shall be done digitally; the indoor unit shall not contain rotary dials or setting switches.
- The indoor unit shall have a removable EEPROM that stores system programming information, unit name, and other data
- V1UCK01 shall have an IR receiver and digital display to allow programming with a wireless controller and for simple data viewing
- V1UCK01 contents: 1 X control PCB mounted on a metal plate with pull restraints, 1 X evaporator inlet sensor and pipe holder, 1 X evaporator outlet sensor with pipe holder, insulation, and other fasteners.

General Information

- Universal Communication Kit (UCK) is an adaptor control PCB that allows connection of custom, third-party air handling units (AHU) to VRF Systems.
- Compatible with Lennox Powered by Samsung VRF, VRF Water, and Mini-VRF systems.
- One V1UCK01 can accommodate connection of 1-4 electronic expansion valves (EEV).
- EEV models: V1EEVK01UC, V1EEVK02UC, V1EEVK03UC, and V1EEVK04UC (purchased separately).
- V1UCK01 can be used for standard air handling units or for 100%outside air systems. Single kit capacity range: 7,000 Btu/h ~ 480,000 Btu/h.
- When connecting to Heat Recovery systems, maximum capacity for one V1UCK01 is 108,000 Btu/h due to MCU port capacity limitation.
- Multiple V1UCK01 kits can be connected to a single air handling unit
- Multiple V1UCK01 kits can be connected to a single VRF system
- F1/F2 and F3/F4 control wiring shall be 16x2 AWG shielded wire

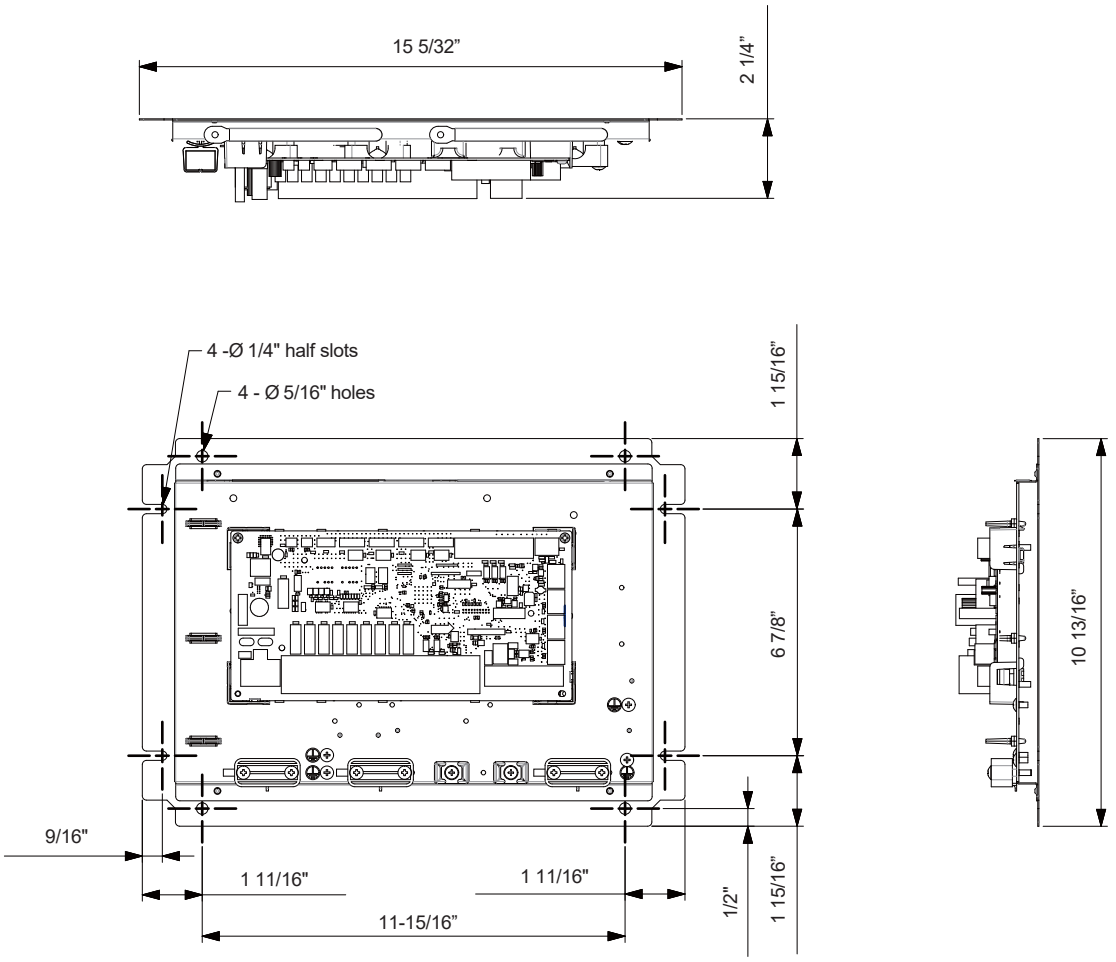
Electronic Expansion Valve (EEV) Kits (Sold separately)

			V1EEVK01UC	V1EEVK02UC	V1EEVK03UC	V1EEVK04UC
Capacity	Refrigeration Ton		1	2	4	8
	Minimum Cooling (Btu/h)		7,000	18,000	30,000	60,000
	Maximum Cooling (Btu/h)		18,000	30,000	60,000	96,000
	Minimum Heating (Btu/h)		8,500	22,000	34,000	64,000
	Maximum Heating (Btu/h)		22,000	34,000	64,000	108,000
AHU Heat Exchanger Volume Allowance	Min	in^3	28	71	118	236
	Max	in^3	71	118	236	566
EEV in/out Connection	Liquid Pipe	Ø"	3/8"	1/2"	3/8"	1/2"
	Gas Pipe	Ø"	3/8"	1/2"	3/8"	1/2"

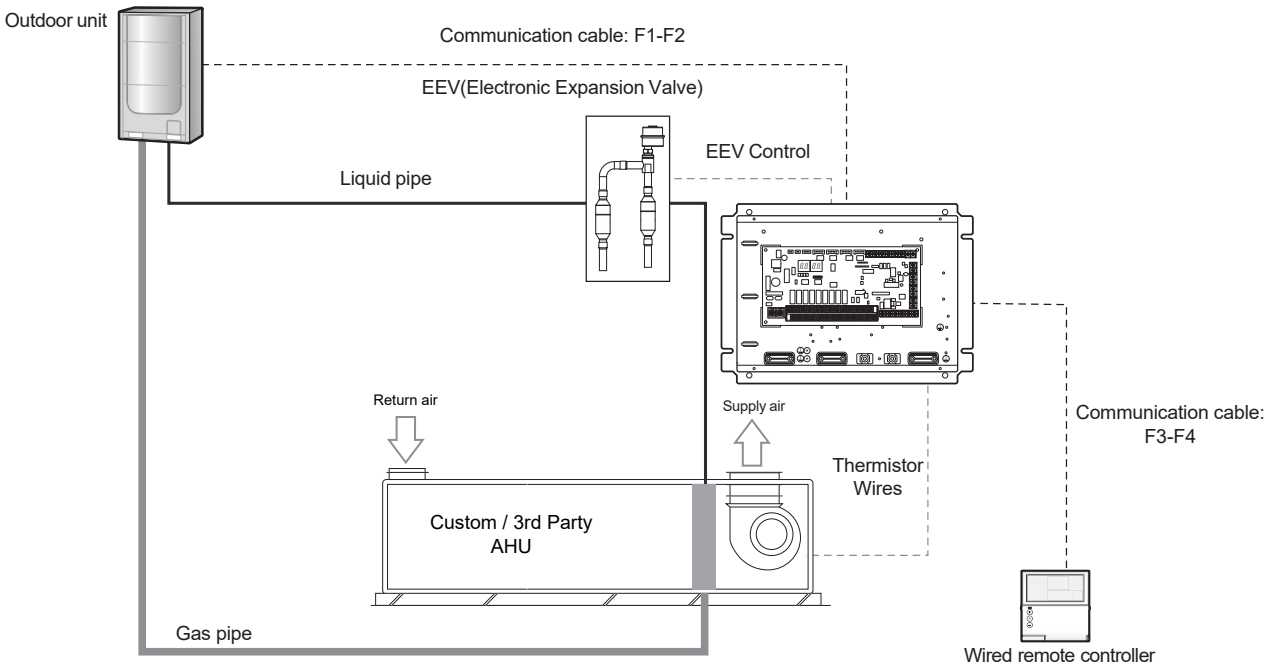
NOTE – Due to Lennox' ongoing commitment to quality, Specifications, Ratings, and Dimensions are subject to change without notice and without incurring liability. Improper installation, adjustment alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

Intertek

V1UCK01 Control Kit



Structure diagram of a Universal Communication Kit (UCK)



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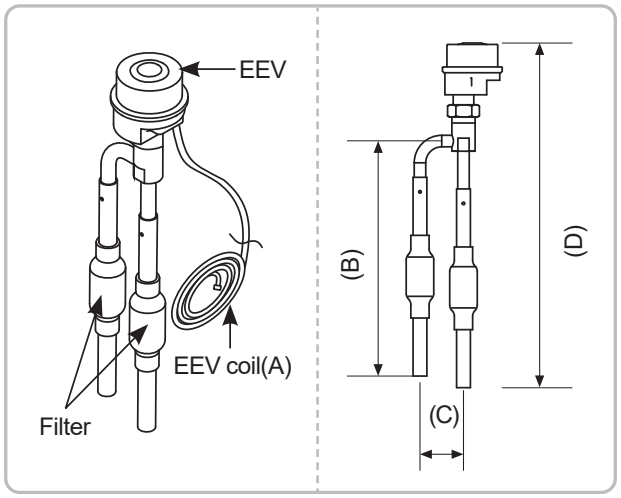
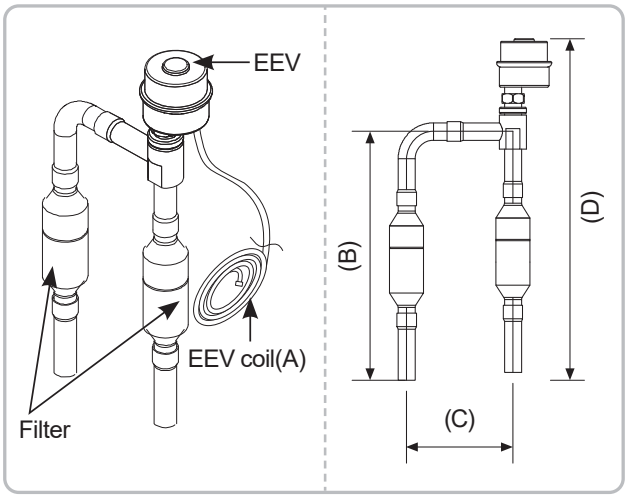
EEV Kit (Electronic Expansion Valve)

V1EEVK04UC
V1EEVK02UC



V1EEVK03UC
V1EEVK01UC



MODEL	A (ft)	B (inch)	C (inch)	D (inch)
V1EEVK04UC	22.97'	7.28"	3.03"	10.04"
V1EEVK03UC	6.56'	6.57"	1.34"	9.65"
V1EEVK02UC	6.56'	7.28"	2.91"	9.96"
V1EEVK01UC	3.28'	6.38"	1.18"	9.33"

Setting of the indoor unit capacity and EEV model selection

(SEG 20 of the installation option 05 series)

05 Series SEG 20 Setting	Rated Capacity (Btu/h)	Capacity Range (Btu/h)	Heat Exchanger Volume (in^3)	EEV kit	EEV Kit Quantity
0	12k	7k to 18k	28 to 71	V1EEVK01UC	1
1	12k	7k to 18k	28 to 71		1
2	24k	7k to 30k	71 to 118	V1EEVK02UC	1
3	36k	30k to 42k	118 to 165	V1EEVK03UC	1
4	48k	42k to 60k	165 to 236		1
5	60k	60k to 72k	236 to 283	V1EEVK04UC	1
6	72k	72k to 96k	283 to 378		1
7	96k	96k to 144k	378 to 566		2
8	144k	144k to 192k	566 to 755		2
9	192k	192k to 240k	755 to 944		3
A	240k	240k to 288k	944 to 1,133		3
B	288k	288k to 336k	1,133 to 1,322		4
C	336k	336k to 384k	1,322 to 1,510		4
D	384k	384k to 480k*	1,510 to 1,725		4

**Requires a product option code modification along with normal setup via the installation option codes.*

When connecting to Heat Recovery systems, maximum capacity for one UCK is 108,000 Btu/h due to MCU port capacity limitation.