

Title: Air Conditioner Option Sales Matrix

Department: Engineering

Objective: To provide a matrix of allowed air conditioner options and option combinations.

Revision History:

Rev	Date	Owner	Description of Changes
1	03-10-2011	G. Gonzalez	Initial Release New Format
2	09-21-2011	G. Gonzalez	Update Options
3	10-12-2011	G. Gonzalez	Update Ethernet/IP options list
4	05-23-2012	B. Slotnick	Remove XRX option for CS011 & update model numbers
5	01-07-2014	B. Slotnick	Added GXX, 7XX, 8XX, 9XX, X2X, X3X, XXF, XXZ. Removed WF, HC241. Removed XZX from CS011. Corrected HC151 voltage.
6	03-26-2014	B. Slotnick	Added XX9 & X4X
7	08-21-2015	B. Slotnick	Added 48 VDC air conditioners. Added X4X, X5X, X6X, X7X, XX12 & Miscellaneous Options page.
8	10-09-2015	B. Slotnick	Removed XXXRX for CS020.
9	01-18-2016	B. Slotnick	Removed XUXXX for 48 VDC air conditioners.
10	05-02-2016	B. Slotnick	Removed XXXRX for NE020-030-040, XXHXX & XXIXX.
11	05-31-2016	B. Slotnick	Eliminated heater option for Haz Loc models.
12	07-25-2016	B. Slotnick	Added TM061 & TM081
13	03-13-2017	B. Slotnick	Introduce new part number schema
14	03-23-2017	B. Slotnick	Add painted option for air outlet extension
15	03-31-2017	B. Slotnick	Update corrosion protection options
16	04-28-2017	B. Slotnick	Updated options rules for Haz Loc units
17	06-26-2017	B. Slotnick	Removed Low Ambient/High Ambient prohibition rule
18	06-29-2017	B. Slotnick	Added K15
19	10-19-2017	B. Slotnick	Removed NE040 50 Hz options
20	01-23-2018	B. Slotnick	Added J4; removed J1, J2, & J3; Changed Adjustable Temperature Probe to Extended Temperature Probe
21	02/15/2018	B. Slotnick	Added J4 option for HC081 & Rules & Exceptions note 4.
22	03/22/2018	B. Slotnick	Added W4 option
23	07/06/2018	B. Slotnick	Deleted Low Ambient option for NE040D48, NE010 & NE015
24	02/14/2019	B. Slotnick	Added External Heater Control to Haz Loc options
25	10/31/2019	B. Slotnick	Added Redundant System option for CS020
26	05/01/2020	B. Slotnick	Added B2, B3, M13 & M14. Replaced E1/E2 with E5/E6. Changed K1 cable length.
27	07/02/2020	B. Slotnick	Replaced B1 & B21 with B4. Replaced K1 & K15 with K4, K5 & K6. Added M2. Deleted Extended Warranty & W4. Deleted redundant system heater exception.
28	09/23/2020	B. Slotnick	Deleted options K5 & K6
29	12/01/2020	K. Do	Updated E5 & E6. Added E7, E8, and Diagnostics X1, X2, & X3
30	12/15/2020	K.Do	Added Diagnostics X4 & X5
31	09/15/2021	D. Richardson	Updated Hazardous Locations rules and exceptions
32	10/22/2021	L. Biru	Updated HazLoc rules and exceptions to include option codes for clarification. Added B1 and B21 to capture HazLoc option for remote controller
33	12/23/2022	L. Biru	Added K7, B6, and B7 options
34	12/06/2023	S. Vue	Added B2,3,5 / E1,2,3,4 / F6,6,62 obsoleted and removed / Q1-6 obsoleted and removed / added F2,21,22 / R4,5,6 / K1,2,3,5,6,15 / Replaced HC201 with HC20C / N1,2,3,4 obsoleted and removed / M4 obsoleted and removed / Added NE020,030 D48

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	OPTION CODE	DESCRIPTION	CS011	CS011D48	CS020	NE010-015	NE020-030-040	NE020-030-040 D48	NE050-060-080	TM061-081	HC081	HC101-121-151	HC20C
Voltage /Frequency	D48	48VDC		X				X					
	105	100V/50Hz	X			X	X (NE020/NE030)						
	125	115V/50Hz							X (NE050/NE060)				
	126	115V/60Hz	X		X	X	X		X	X		X (HC101/HC121)	
	205	200V/50Hz				X	X (NE030)						
	235	230V/50Hz			X		X (NE020)		X (NE050/NE060)		X	X (HC101/HC121)	X
	236	230V/60Hz			X	X	X		X	X		X	X
	237	230V/50-60Hz							X (NE050/NE060)				
	385	380V/50Hz					X (NE020/NE030)		X (NE050/NE060)		X	X (HC101/HC121)	X
	405	400V/50Hz					X (NE020/NE030)		X (NE050/NE060)		X	X (HC101/HC121)	X
	406	400V/60Hz					X		X	X		X	X
	415	415V/50Hz					X (NE020/NE030)		X (NE050/NE060)		X	X (HC101/HC121)	X
	485	460V/50Hz					X (NE020/NE030)		X (NE050/NE060)		X	X (HC101/HC121)	X
	486	460V/60Hz					X		X	X		X	X
	576	575V/60Hz					X		X	X		X	X
	605	600V/50Hz					X (NE020/NE030)		X (NE050/NE060)		X	X (HC101/HC121)	X
606	600V/60Hz					X		X	X		X	X	
NEMA	12	Type 12	X	X	X	X	X	X	X	X	X	X	X
	04	Type 4	X	X	X	X	X	X	X	X	X	X	X
	4X	Type 4X	X	X	X	X	X	X	X	X	X	X	X
Ambient	A1	Low Ambient, Std	X		X		X		X	X	X	X	X
	A2	Low Ambient, Custom	X		X		X		X	X	X	X	X
	A3	High Ambient	X	X	X	X	X	X	X	X	X	X	X
	A4	Low Ambient, Std + High Ambient	X		X		X		X	X	X	X	X
	A5	Low Ambient, Custom + High Ambient	X		X		X		X	X	X	X	X
Remote Controller	B1	Mount Controller Inside Enclosure (10 ft. Cable)	X	X	X	X	X	X	X	X	X	X	X
	B2	Custom, 5 ft cable, Master	X	X	X	X	X	X	X	X	X	X	X
	B21	Mount Controller Inside Enclosure (21 ft. Cable)	X	X	X	X	X	X	X	X	X	X	X
	B3	Custom, 7 ft cable, Slave	X	X					X			X	
	B4	Mount Low Voltage Controller inside Enclosure. Includes Bracket. (10 ft. Cable)	X	X	X	X	X	X	X	X	X	X	X
	B5	Std 10 ft cable, Low Voltage Controller, No Bracket	X	X	X	X	X	X	X	X	X	X	X
	B6	Locking Controller Cover, ANSI 61 Grey	X	X	X	X	X	X	X	X	X	X	X
B7	Locking Controller Cover, 316 SST	X	X	X	X	X	X	X	X	X	X	X	
Corrosion Protection	C1	A-Level Protection Coated Condenser Coil (NEMA 12/4)	X	X	X	X	X	X	X	X	X	X	X
	C2	B-Level Protection Coated Condenser & Evaporator Coils (NEMA 12/4)	X	X	X	X	X	X	X	X	X	X	X
	C3	C-Level Protection Coated Condenser & Evaporator Coils + Coated Tubing (NEMA 12/4)	X	X	X	X	X	X	X	X	X	X	X
	C5	B-Level Protection Coated Condenser & Evaporator Coils (NEMA 4X)	X	X	X	X	X	X	X	X	X	X	X
	C6	C-Level Protection Coated Condenser & Evaporator Coils + Coated Tubing (NEMA 4X)	X	X	X	X	X	X	X	X	X	X	X
Dry Contact	D1	Normally Open	X	X	X	X	X	X	X	X	X	X	X
	D2	Normally Closed	X	X	X	X	X	X	X	X	X	X	X
	D3	Normally Open & Normally Closed	X	X	X	X	X	X	X	X	X	X	X
	D4	Compressor Status N.O. + Hi Temp Warn N.O. & N.C.			X	X	X	X	X	X	X	X	X
	D5	Power Status N.O. (closed with power on) + Hi Temp Warn N.O. & N.C.			X	X	X	X	X	X	X	X	X
Redundant System	E1	Primary*	X	X	X	X	X	X	X	X	X	X	X
	E2	Secondary*	X	X	X	X	X	X	X	X	X	X	X

Redundant System	E3	Primary, Side by Side Mounting*	X	X	X	X	X	X	X	X	X	X	X
	E4	Secondary, Side by Side Mounting*	X	X	X	X	X	X	X	X	X	X	X
	E5	Primary PLR Based Redundant Unit	X	X	X	X	X	X	X	X	X	X	X
	E6	Secondary PLR Based Redundant Unit	X	X	X	X	X	X	X	X	X	X	X
	E7	Replacement Primary PLR Based Redundant Unit	X	X	X	X	X	X	X	X	X	X	X
	E8	Secondary Redundant Unit with Backup PLR	X	X		X	X	X	X	X	X	X	X

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Filter	F1	Painted Filter Hood for Thin Filter			X		X	X	X		X	X	X
	F11	SS Filter Hood for Thin Filter			X		X	X	X		X	X	X
	F12	Aluminum Filter Hood for Thin Filter			X		X	X	X		X	X	X
	F3	Painted Louvered Cover for Thin Filter			X		X	X	X	Standard	X	X	X
	F31	SS Louvered Cover for Thin Filter			X		X	X	X		X	X	X
	F32	Aluminum Louvered Cover for Thin Filter			X		X	X	X		X	X	X
	F4	Painted Louvered Cover + 2" Filter			X		X	X	X	X	X	X	X
	F41	SS Louvered Cover + 2" Filter			X		X	X	X	X	X	X	X
	F42	Aluminum Louvered Cover + 2" Filter			X		X	X	X	X	X	X	X
	F5	Flat Filter for TM								X			
	F6	Std Painted Filter Hood for Thin Filter + Condenser Hood					X						
	F61	SS Filter Hood for Thin Filter + Condenser Hood					X						
F62	Aluminum Filter Hood for Thin Filter + Condenser Hood					X							
Controller Programing	G1	Celsius	X	X	X	X	X	X	X	X	X	X	X
	G2	Special	X	X	X	X	X	X	X	X	X	X	X
Heater	H1	350 W	X										
	H2	500 W			X		X		X	X	X	X	X
	H3	1000 W					X		X	X	X	X	X
	H4	1500 W									X	X	X
	H5	External Heater Control	X		X	X	X		X	X	X	X	X
	H6	350 W with Hygrostat Connection	X										
	H7	500 W with Hygrostat Connection			X		X		X	X	X	X	X
	H8	1000 W with Hygrostat Connection					X		X	X	X	X	X
	H9	1500 W with Hygrostat Connection								X	X	X	X
Hazardous Location	J4	NEC: Class I, Div 2, Groups A, B, C, D			X		X		X	X	X	X	X
Open Door Kill Switch	K1	1 - Std 7 ft Cable Length - Use for CS1	X										
	K15	15 ft Cable Length							X	X		X	
	K2	7 ft cable + Chatsworth brackets, Secondary Redundant Unit							X			X	
	K3	7 ft cable + Chatsworth brackets, Primary Redundant Unit							X			X	
	K5	1 Open Door Prox Sens, Dtch Cbl.							X			X	
	K6	2 Open Door Prox Sens, Dtch Cbl.							X			X	
	K4	1 Door, 1AC, 7 ft. Cable	X	X	X	X	X	X	X	X	X	X	X
K7	Low Voltage Switch Wires Only		X	X	X	X	X	X	X	X	X	X	

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Housing Material	L1	316 SS (115/230 V)	X		X	X	X	X	X	X	X	X	X
	L2	316 SS (460 V)						X	X	X	X	X	X
	L3	316 SS (48 VDC)		X				X					
	L4	Aluminum, Mill Finish (115/230 V)	X	X	X	X	X		X	X	X	X	X
	L5	Aluminum, Mill Finish (460 V)						X		X	X	X	X
	L6	Aluminum, Mill Finish (48 VDC)						X					
Finish	M1	Custom Paint	X	X	X	X	X	X	X	X	X	X	X
	M2	Passivated	X	X	X	X	X	X	X	X	X	X	X
	M3	Anodized	X	X	X	X	X	X	X	X	X	X	X
	M13	RAL 7035 115/230 V	X	X	X	X	X	X	X	X	X	X	X
	M14	RAL 7035 460 V	X	X	X	X	X	X	X	X	X	X	X
Extended Temperature Probe	P1	with 12 ft. Cable	X	X	X	X	X	X	X	X	X	X	X
Remote Control/Monitor	R1	Modbus-RTU) (Enclosure mounted controller required for CS2)	X	X	X	X	X	X	X	X	X	X	X
	R2	EtherNet/IP	X		X	X	X		X	X	X	X	X
	R3	EtherNet/IP without 24 VDC Power Supply	X		X	X	X		X	X	X	X	X
	R4	Modbus RTU for Redundant Option with Enclosure Controller, Primary			X	X	X		X	X	X	X	X
	R5	Modbus RTU for Redundant Option with Enclosure Controller, Secondary			X	X	X		X	X	X	X	X
	R6	Modbus with Cat 5 Cable							X				
Hard Start Kit	S1	1 = Hard Start Relay									X	X	
Replacement AC w/ Power Cord	T1	1 = Power Cord Equipped	X			X	X		X		X	X	X
Imperfect	U1	Scratch & Dent	X	X	X	X	X	X	X	X	X	X	X
	U2	Refurbished	X	X	X	X	X	X	X	X	X	X	X
Vibration Resistant	V1						X	X	X	X	X	X	X
Custom Build	WZZ	Other	X	X	X	X	X	X	X	X	X	X	X
Diagnostics	X1	1 = HMI Only, Redundant Systems			X	X		X	X	X	X	X	X
	X2	2 = Diagnostic Sensors, Redundant Systems			X	X		X	X	X	X	X	X
	X3	3 = Sensors with HMI, Redundant Systems			X	X		X	X	X	X	X	X
	X4	4 = Diagnostic Sensors (Incl. PLR), Single Systems			X	X		X	X	X	X	X	X
	X5	5 = Sensors with HMI (Incl. PLR), Single Systems			X	X		X	X	X	X	X	X

Rules & Exceptions:

1. **Hazardous Location** units are only available with the following options.
 - a. Corrosion Protection (All C option codes are available)
 - b. Low Ambient (All A codes are available)
 - c. Remote Controller (B1 and B21 only)
 - d. Dry Contact, Normally Open (D1-D5 available on all models except CS1. CS1 D1-D3 only due to relay space requirements)
 - e. Special Controller Programming (All G code option codes are available)
 - f. External heater control (H5 only for HazLoc enclosure heaters)
 - g. All Filter Options (All F option codes available)
 - h. Extended Temperature Probe (P1)
 - i. Vibration Resistant (All V option codes available)
 - j. Finish (M1 only)
2. All CS011 air conditioners with **Heater** option **may not** include Remote Controller option, Modbus-RTU, Ethernet/IP, or Redundant System.
3. C-Level corrosion protection is strongly recommended for 316 stainless steel air conditioners.

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