quick start guide

E2 and XM679 Installation, Replacement, and Quick Start Guide

PART 1: Device Setup

This Quick Start Guide is intended for XM setup using the most commonly utilized parameters, default settings, and adaptive control. To simplify setup and installation, the most commonly used parameters are visible and default values are provided. The adaptive algorithm is on by default to eliminate the need for manual PI tuning. For custom control configurations, or PI tuning, check the **Show Advanced** parameter box and refer to the XM679 manual (*P/N 026-1218*) for a complete listing of parameters. For device wiring and network connections, please refer to **Appendix A: XM679 Device Wiring Diagram**.



Setting the Address on XM679

- 1. Press == + Z at the same time for 5 seconds to open the first level of programming. The display will stop flashing and **EEU** appears once it has entered the programming mode.
- 2. Navigate through the parameters by pressing 🗹 or 🔼 until **Adr** is displayed.
- 3. Press 💷 and assign the corresponding address for the device by pressing 🗹 or 🔼 .
- 4. Press **SET** to save changes.
- 5. To exit, press = + or wait for a few seconds without pressing any key; the display will start flashing.

E2 Serial Port Setup

- 1. Log on to the E2 controller by pressing the button.
- 2. Enter USER in the **Username** field and press .
- 3. Enter PASS in the **Password** field and press .





- 5. Press F2 twice to move to the C3: Serial tab.
- 6. Press the down arrow to highlight the **COM2 Connection** value (if COM2 is being used, select other available COM port).
- 7. Press [4] (LOOK UP) and select **MODBUS-1** (if MODBUS-1 is being used, select **MODBUS-2** or **MODBUS-3** connection).
- 8. Press to set configuration.
- 9. Press **F4** to select options and **E** to set configuration.
- 10. Set the **MODBUS** connection as follows:
 - COM2 Baud: 9600 baud
 - COM2 Data Size: 8
 - COM2 Parity: None
 - COM2 Stop Bits: 1

JSe	CTFI-A TO SE	Tect	6.6				SETUR		1.05		FULL		*HLHKN*
<u>C1:</u>	General	C2:	Eng	Units	C3: S	erial	C4:	TCP/IP	C5:	Peer	Netwrk	ADVISORY	SUMMARY
		67.	syst	Genera	l Setup	: GENER	AL SERU	J	100.	HUNE		Fails Alarms Notices	16 17 26
	Serial COM1 Connec COM2 Baud COM2 Baud COM2 Baud COM3 Connec COM4 Baud COM4 Baud COM4 Baud COM4 Parity COM4 Stop E	tion tion tion tion size		Value Serial 115.2 IONet- 19.2 K No Mod MODBUS 9600 b None	Kbaud 1 baud em -1 aud 8							NETWORK (IONet-1 MODBUS- ⁻ Echelon	DVERUIEW 1 •
	COM6 Connec	tion	:	Not Us	ed							E2 Unit0 Rev 4.066 IP 10.212	1 833 2.239.5
0								0.0111				English-U	20
SCP	F1: PREV TAB	xc/P	Fev	2: NEX	TAB		F3: ED		F4:	LOOK	UP	F5: 0	ANCEL
					Fiar	ire 2	- F2 9	Serial	Setur)			

- 7. Press 🖘 to save changes.
- 8. Press to go back to the *Home* screen.

Note: When selecting the XM679 in E2, check if the version number shown matches the version number of the device. For example, if the device is XM679 version 3.4, select **XM679_34** in E2.

PART 2: Adding the XM679 Controller in E2

- 1. Press (1, 2, 2, 2) (Connected I/O Boards and Controllers).
- 2. Press **F2** once to move to the *C3: ECT* tab. Highlight the **XM679** application and enter the desired number of devices under **Quantity**.

Note: When selecting the XM679 application in E2, check if the version number shown matches the version of the device. For example, if the device is XM679 version 3.4, select **XM679_34** in E2.



- 3. Press **S** to save changes.
- 4. Press **(D)** to go back to the *Home* screen.

Note: The XM Circuit has native support for the XM679 version 3.4. If you have an open 3.4 description file loaded on your E2, it should be deleted to take advantage of the native XM Circuit

91-16-14 🍬 🥝 💷		CX-400 Unit 1 CX DEV SUMMARY	
HVAC CONTROL Inside RH N Ahu001 spa	REFRIGERATI	ON	ADVISORY SUMMARY Fails 15 Alarms 21
FAN OFF State UNOCC Dehum Inactu Ahu002 Spa Fan Off State UNOCC Dehum Inactu	SERVICE ACTI 1. System Resets 2. Binding Table 3. System Logs and Sta 4. System Tests	INS	Notices 30 NETWORK OUERUIEW IONet-1 HODBUS-1 Echelon
LIGHTING LIGHT LEUEL NON NAME BYP LIGHTS001 OF LIGHTS002 OF LIGHTS003 OF LIGHTS003 OF LIGHTS005 OF	5. Dial-Out Status 6. USB Operations 7. Description File Re	port	E2 Unit01 Rev 4.06833 IP 10.212.239.5
Press menu number (or scroll to selection	I	English-US
	Figure 4 - E	Description File I	Report

PART 3: Commissioning the XM679 Controller

- 2. Highlight the **XM679** controller to be commissioned by pressing the down arrow, then press **F**⁴ (*COMMISSION*).

08-14-13 🔹 🥳 🗓	M)	CX-400 U Network S	nit 1 Summary	<u>الم</u>	16:22:01 *ALARM*
Name	Туре	Network Address	Rev	Status	ADVISORY SUMMARY Fails 13
E2 Unit01 CC L1QUID 001 16A1_001 880_001 880_001 880_001 880_003 880_003 880_005 880_005 880_005 880_005 880_005 880_005 880_005 880_005 880_005 880_005	CX400 C-Store CC100-Liquid CC100-Liquid 16A1 8R0 8R0 8R0 8R0 8R0 8R0 8R0 8R0 8R0 8R0	Ethernet: 000702129200: 10Net-1: 10Net-1: 10Net-1: 10Net-1: 10Net-1: 10Net-1: 10Net-1: HODBUS-1: HODBUS-1:	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	This Controller Online Offline No Port No Port No Port No Port No Port No Port No Port Online No Port	HJarms 17 Notices 23 NETWORK OVERVIEW 10Net-1 0 HODBUS-1 0 Echelon 0
					E2 Unit01 Rev 4.06623 IP 10.212.239.5 English-US
F1: DELETE RO	RD F2: STA	TUS F3: NET	STATUS	F4: COMMISSION	F5: SETUP
	Figur	e 5 - Network	Summar	ry Screen	

3. Select an (unused) address for the device and press .

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Note: The device address selected in the E2 must match the address assigned to the XM device using the XC660 remote display; please refer to **Figure 1- CX660 Keyboard**.

23-01-12 🔹 🥳 🖞	M	RX-400 Un Network Su	it 1 mmary	b Full	12:30:06
Name 	Type RX400-Refri 16AI 8R0 8R0 4A0 CT Drive PM 800_test XM679K XR75CX Case RX400-Refri	Motures Odderes MODBUS-1 Devices 1. [Unused] 2. (Unused) 3. (Unused) 4. (Unused) 5. (Unused) 7. (Unused) 8. (Unused) 10. (Unused) 11. (Unused) 12. (Unused) 13. (Unused) 14. (Unused) 15. (Unused) 15. (Unused) 16. (Unused) 17. (Unused) 18. (Unused) 18. (Unused)	Reu 4.02815 6.00 6.00 6.00 6.00 8.00 8.00 8.00 8.00 9.00 9.00 4.02819 ↓.02819	Status This Controller No Port No Port No Port No Port No Port No Port Offline No Port Online	ADUISORY SUMMARY Fails 3 Alarms 6 Notices 197 NETWORK OVERUIEW 10Net 6 MODBUS-1 0 MODBUS-2 0 THIS CONTROLLER Model: RX-400 00 Unit: 1 IP: 10.161.200.32 F/W Rev: 4.02815
Press menu num	ber or scroll	to selection		,	F5: CANCEL
	Figure	e 6 - MODBUS Dei	vice Add	lress Selectio	ח

- 4. Press 🐨 to save the assigned address.
- 5. Press 🛈 to return to the *Home* screen.
- 6. Press (1), 2, 2, 1 to open the Network Summary screen.
- 7. The **XM679** should appear **Online** after a few minutes.

18-14-13 🔶 🥳 🗓		CX-400 U Network S	lnit 1 Summary	ă	16:22:01 *ALARM*
Nane	Туре	Network Address	Rev	Status	ADVISORY SUMMARY Fails 13
E2 Unit01	CX400 C-Store	Ethernet:	1 4.06B23	This Controller	Notices 23
CC LIQUID_001	CC100-Liquid	000702129200:	2 2.01B01	Online	
CC LIQUID_002	CC100-Liquid		3 0.00		
16AI_001	16AI	IONet-1:	1 0.00	No Port	NETWORK OVERVIEW
16AI_002	16AI	IONet-1:	2 0.00	No Port	IONet-1 🔶
8R0_001	8R0	IONet-1:	1 0.00	No Port	MODBUS-1 🔶
8R0_002	8R0	IONet-1:	2 0.00	No Port	Echelon 🔶
8R0_003	8R0	IONet-1:	3 0.00	No Port	
8R0_004	8R0	IONet-1:	4 0.00	No Port	
8R0_005	8R0	IONet-1:	5 0.00	No Port	
XM679K_34001	XM679K_34	MODBUS-1:	1 3.04-00	Online	
XM679K_34002	XM679K_34	MODBUS-1:	0 0.00	No Port	
					E2 Unit01
					Rev 4.06B23 IP 10.212.239.5
					English-US
F1: DÉLETE RO	RD F2: STA	TUS F3: NET	STATUS	F4: COMMISSION	F5: SETUP
Fic	ure 7 - MOE	BUS Device A	ddress S	hould Appea	r Online

8. Repeat the process for other XM devices.

Note: If an **Out of Sync** status appears under the **Status** column, allow the E2 to synchronize with the XM679 controller until the status shows **Online** in green.

PART 4: Setting Up Parameters on the XM679

1. From the *Network Summary* screen, select the **XM679** device and press **F5** (SETUP).

Note: On the General tab, the **Show Advanced** parameter is set to **No** by default. The basic XM setup uses default parameters and adaptive control to simplify and speed up installation. If you want to use more advanced parameters for custom applications or PI tuning, enter **Y** for **Show Advanced** or refer to the XM679 manual (P/N 026-1218) for the list of all available XM device parameters.

Ctrl-X to Sele	ct CX Tabs	67-	SETUP	FULL	*ALARM*
General C2 Regulation C7	: Inputs : Defrost XH679	C3: Outputs C8: Fan PK_34: NM679K_3	C4: Alarm Out C9: Alarm Cfg 4001	C5: Valve C0: MORE	ADUISORY SUMMARY Fails 14 Alarms 21
General EU Selector Device Name Device Addres Route CfgSyn Action Initial Sync Show Advanced FW Revision FW Release Da Associated ParentCellTup	Value : DDF : NH679K : : HODBUS : Send E2 : No : No : 3.042-01 te : 06-08-2 : Yes : 32	.34001 1 1 2 CFg to Device 9 2012 20			Notices 28 NETWORK OVERUIEW IONet-1 0 HODBUS-1 0 Echelon 0
					E2 Unit01 Rev 4.06833 IP 10.212.239.5 English-US
ter State: Y=Y F1: PREV TAB	ES: N=NO SI	TAB	roperties F3: EDIT	F4: STATUS	F5: CANCEL
PT: PREV THB	Figure 8	3 - <i>XM</i> 679	Setup Scree	n General Ta	ib

Note: On the General tab, **CfgSync Action** is set to send the E2 configuration to the XM device by default. Any parameter change made in the E2 will be sent down to the XM. This is an appropriate setting if you are using the E2 as the supervisory controller. Every 12 hours the E2 synchronizes settings by sending the configuration to the XM device. This is to ensure that settings on the controller are not changed or lost. If the user makes any changes to the settings on the XC660 remote display during the normal 12 hour synchronization, those changes are overwritten by the settings in the E2.

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2. Press **F2** four times to go to the *C5: Valve* tab to continue with the basic parameter setup.

13-13 • 🕝 📟	lect CX Ta	hs		CX-400 Un	it 1			17:11:
Ceneral Conservation	C2. Input	s C3	• Autoute	s Ch.	Alara O	ut IB	5. Ilalue	
Regulation	C7: Defro	st C8	: Fan	C9:	Alarm C	fa C	0: MORE	Eails 12
		XM679K_3	4: XM679	K_34001				Alarns 17
Valve	U	alue						Notices 22
Refg Type	: 4	04						
SUPERHEAT SE	•	9.00						NETWORK OVERVIEW
Max Value %	Mau .	100.00						IUNEt-1
rres Aducer	nax :	100.00						Fcbalop
								E2 Unit01
								Rev 4.06B23 IP 10.212.239.5
								English-US
roll using Nex	kt/Prev ke	ys Fty	- Refri	igerant ty	pe			
F1: PREV TAB	F2	: NEXT TA	B	F3: ED	IT	F	4: LOOK UP	F5: CANCEL

Note: The default refrigerant type is **404**. To select a different refrigerant type, press **F4** and use the arrow to highlight the appropriate refrigerant type, then press **E**

3. Press F2 to go to the C6: Regulation tab.

13-13 0 🕜 📟 Ctrl-X to Select CX Tabs	CX-	400 Unit 1 SETUP	۵.	17:13:1 *AL ARM
: General C2: Inputs Regulation C7: Defrost XH6	C3: Outputs C8: Fan 79K_34: XH679K_3	C4: Alarm Out C9: Alarm Cfg 4001	C5: Ualve C0: NORE	ADVISORY SUMMARY Fails 13 Alarms 17
Regulation Value Case SP Offline 35 Hy/TR 4 Temp Unit F Pressure Unit PSI	- 6 8 - 015			Notices 22 NETWORK OVERVIEW IONet-1 0 HODBUS-1 0 Echelon 0
				E2 Unit01 Rev 4.06823
				E2 Unit01 Rev 4.06823 IP 10.212.239.5 English-US

Note: To simplify and speed up installation, adaptive control is enabled by default. If you wish to disable adaptive control and manually tune the system, return to the General tab, enter **Yes** in the

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Show Advanced field and refer to the XM679 manual (P/N 026-1218) for all available XM parameters.

4. The temperature and pressure units are Fahrenheit and PSI by default. To change the engineering units, highlight the **Temp Unit** or **Pressure Unit** field and press **F4** (*LOOK UP*). Then select the desired unit and press **to** continue.

Note: If the XM679 controller is associated to an XM Circuit, do not enter Case SP Offline duration. The XM Circuit will send the value for Stand Alone Time when the circuit is associated with the XM device.

e Ctrl-X to S	elect	CX Tabs		CX-	400 Unit 1 SETUP			17:15:2
: General : Regulation	C2: C7: 0	Inputs Defrost XM	C3: C8:	Outputs Fan : XM679K 3	C4: Alarm Ou C9: Alarm Cf 4001	t C5: g C0:	Valve MORE	ADVISORY SUMMARY Fails 13 Alarms 17
Defrost Defrost Ty Defrost Te Offline De Defr Durat Defr Start Defr Drip	pe rm A f Int ion Dly Time	Valu : in : 4 : 1 : 1	e 6.40 4.00 0.00 2.00 0					Notices 22 NETWORK OVERVIEW IONet-1 HODBUS-1 Echelon
								E2 Unit01 Rev 4.06823 IP 10.212.239.5

5. Press F2 to go to the C7: Defrost tab.

Note: If the XM679 controller is associated to an XM Circuit, do not enter a defrost type duration. The XM Circuit will send the appropriate defrost setpoint, number of defrosts per day, and defrost duration when the appropriate case type is selected in the XM Circuit. Also, by default, the XM Circuit defrost type is Electric.

6. Press F2 to go to the C8: Fan tab.

-13- e Ci	-13 • 🕝 🛄 trl-X to So	elect CX Tabs	C	X-400 Unit 1 SETUP		۵	17:16:4
1: G	eneral	C2: Inputs	C3: Outputs	C4: Alarm	Out	C5: Valve	ADUISORY SUMMARY
5: R	egulation	C7: Defrost	C8: Fan	C9: Alarm	Cfg	CO: MORE	Fails13
		хм	679K_34: XH679K	_34001			Alarns 17
ī	Fan	Valu	e				HULILES 22
1	Fan Mode	<u>C</u> -n					
F	Fan Dly De	fr : 1	0.00				NETWORK OVERVIEW
1	Fan Stop To	enp : 3	6.00				IONet-1
							MODBUS-1
							Echelon
							E2 Unit01
							Pou h 86922
							IP 10 212 220 5
							11 10.212.239.3
							English-US
crol	11 using N	ext/Prev keus	I EnC - Ean on	erating mode			
F1	: PREU TAR	F2: N	EXT TAB	F3: EDIT		FA: LOOK UP	ES: CANCEL
					\sim	Loon of	
			12 144		~		
		1.0.0			6660	on lan la	

By default, the fan mode is set to **C-n**. The fan runs during refrigeration and turn off during defrost. The fan delay (Fan Dly Defr) is 10 minutes. The fan starts 10 minutes after defrost ends. To change the default values, use the up and down arrows to highlight the parameter and press [F4] (LOOK UP). Enter your change into the fields and press to continue.

7. Press **F2** to go to the C9: Alarm Configuration tab.

Ctrl-X to Select	CX Tabs	CX-	-400 Unit 1 SETUP		17:15:
General C2: Regulation C7:	Inputs C3 Defrost C8 XM679K 3	: Outputs : Fan A: XM679K (C4: Alarm Out C9: Alarm Cfg 34001	C5: Valve C0: MORE	ADUISORY SUMMARY Fails 13 Alarms 17
Defrost Defrost Type Defrost Tern A Offline Def Int Defr Duration Defr Start Dly Defr Drip Time	Ualue = in = 46.40 = 46.40 = 10.00 = 2.00 = 0		I		Notices 22 NETWORK OUERUIEW IONet-1 0 HODBUS-1 0 Echelon 0
					E2 Unit01 Rev 4.06823 IP 10.212.239.5 English-US
roll using Next/Pr	ev keys tdf	- Defrost	Туре		

Figure 13 - XM6/9 Setup Screen Alarm Configuration Tab

By default, temperature alarms are configured to **Ab** or absolute setpoint alarming. The default setting is appropriate for the majority of applications. To change the default to

rE or relative setpoint alarming, use the arrow button to highlight the parameter and press **F4** (*LOOK UP*). Highlight your change and press to continue.

NOTE: If the XM679 is associated to an XM Circuit, do not set the alarm setpoints. If using Electric defrost, the XM Circuit will send the appropriate high and low alarm setpoints and alarm delay when the appropriate case type is selected in the XM Circuit.

8. Press F2 to go to the *C0: MORE* tab for digital input configuration for Door Alarm.

-13-13 🔍 🥱 📟 e Ctrl-X to Se	lect CX Tabs		CX-400 Unit 1 SETUP	ä	17:18:5
I: General 5: Regulation	C2: Inputs C7: Defrost XH6	C3: Outputs C8: Fan 79K_34: XM679	5 C4: Alarn Out C9: Alarn Cfg K_34001	C5: Value C0: MORE	ADVISORY SUMMARY Fails 13 Alarms 17
Dig In Cfg DI 1 Polari DI 1 Config DI 1 Delay Door Open 0 Door Alm Cf	Value : CL : dor : 15 pt : F-C g : 30	. 89 . 89			Notices 22 NETWORK OVERVIEW IONet-1 MODBUS-1 Echelon
					E2 Unit01 Rev 4.06823 IP 18.212.239.5

By default, **DI 1 Config** is configured as the door alarm, see *Appendix A: XM679 Device Wiring Diagram* for the wiring illustration. The default value for door alarm delay (**DI 1 Delay**) is set to 15 minutes. Door open operation mode (**Door Open Opt**) is set to **F-C** and Fan and Compressor to off when the door is open. **Door Alm Cgf** is the amount of time the fan and compressor remains off while the door is open.

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9. Press 🐑 to save the changes and return to the *Network Summary* screen. Highlight the **XM679** device installed previously and press **F2** to view the *Status* screen of the XM679 device.

8-13-13 🔹 🌈 🛅	CX-400 Unit 1 💿 XM679K	18:08:22
XM679K Case Controller Nam XM679K_34001	e: Case Circuit :	ADVISORY SUMMARY Fails 13 Alarms 17 Notices 23
Temp : 0	LOADS Comp/Solenoid : ON Case Fan : ON Defrost : OFF Light : ON ASV % Out : 100.0	NETWORK OVERVIEW IONet-1 HODBUS-1 Echelon
Defrost Tern 1 : 0 Probe 1 Tenn : NONE	EVAP Pb5 Evap Pressure : 0 Superheat: 0 [9. Pb6 Coil Out Temp : NONE Valve % : 50.00 Refg Type : 404 Defrost State : OFF	.00] .E2 Unit01
Probe 2 Tenp : 0 Probe 3 Tenp : 0 Probe 3 Tenp : 0 Probe 4 Tenp : NONE	GEN STATUS Alarn : ON Digital In 1 : (DFF Rev 4.06B23 IP 10.212.239.5 English-US
Press enter for a list of F1: AHU F2:	actions. LIGHTINGF3: CIRCUITS	F5: SETUP

PART 5: Creating an XM Circuit

- 1. Press (1, 1, 1, to open the Add Application screen.
- 2. Press F4 (LOOK UP).
- 3. Scroll down and highlight **30. XM Circuit** and press

07-24-13 • (3 ····	ADD APPLICAT	TON FULL	=ALARM=
	Add Application		ADVISORY SUMMARY
Se	Select Application Type	n er".	Alarns 13 Notices 17
+ Type : + How many ? No Results	 Flexible Combiner HVAC Simulation HUAC Zone HUAC Zone Heat/Cool Control Holiday Schedule Irrigation Lighting Control Log Group Loop/Sequence Ctrl Onboard 10 Polse Accumulation 	ded	NETWORK OVERVIEW IOHet-1 0 HODBUS-1 0 Echelon 0
	25. Rack Simulation 26. Standard Circuit 27. Suction Control 28. TO Control 29. Time Schedule 30. KH Circuit	•	E2 Unit01 Rev 4.06823 IP 10.212.239.5 English-US
Press menu number or	croll to selection		
			F5: CANCEL
	Figure 16 - Add App	lication Screen	

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- 4. Enter the desired number of XM Circuit applications to add and press
- 5. A message appears asking if you want to edit the newly added application. Press **Y** for yes and the setup screen opens.

37-24-13 🔹 🕜 📖	CX-400 Unit 1 ADD APPLICATION	FULL	15:25:33 *ALARH*
	Add Application		ADVISORY SUMMARY
	Select an application type to add, then enter the number to add and press "Enter".		Alarms 13 Notices 17
+ Type	: XM Circuit		
+ How many	? 1		NETWORK OVERVIEW IONet-1 MODBUS-1
	Note: Only applications that can be added will be displayed.		Echelon 🗕
Results			
			E2 UnitØ1
			Rev 4.06823 IP 10.212.239.5
			English-US
Enter 1 to 24 Enl	ter number of applications. Press ENTER to ADD.		
	LLL	/	F5: CANCEL
Fig	gure 17 - Enter the Number of XM C	ircuit to	Add

6. Under the *General* tab, enter an appropriate name for the XM Circuit application.

e Ctrl-X to S	🔟 Gelect CX Tabs	CX-	400 Unit 1 SETUP	۵	15:31:4
1: General 6: Outputs	C2: Setpoints C7: Alarms Circuits (XM)	C3: Defrost C8: Advanced): XM CIRCUITØ0	C4: Defr Tim C9: M-XM Circuit	co: More	ADUISORY SUMMARY Fails 13 Alarms 13
General Name Long Name Case Type Case Comb Fan Mode	Value : XM CIR : XM C	CUIT001 cuit ndefined E uto; Defr Off			Notices 19 NETWORK OUERUIEW IONet-1 0 HODBUS-1 0 Echelon 0
Les paring	g Defr : UFF				
	<u>) nett. : ntt</u>				E2 Unit#1
	<u>, nett. : ntt</u>				E2 Unit01 Rev 4.06823 IP 10.212.239.5 English-US

- 7. Highlight the **Case Type** then press **F4** (LOOK UP).
- 8. A list of different types of cases appears. Select the appropriate case type for your application. For example, **RIFF Reach-in frz food** is a low temp cooler that has reach-in doors. In order to reduce setup time, each case type has appropriate default settings for

setpoint, Hi/Low alarm, alarm delay, number of defrosts, and defrost time for the type of case. These default setpoints are sent down to the XM device when the XM Circuit is associated with that XM device. There are 70 case types to choose from. Press to see the list of the default settings of each case type or refer to **Appendix B: Default Setpoints for Case Types**.

07-24-13 🔹 🧑 💷)	CX OPT	400 Unit 1 ION LOOKUP		à	FULL	16:19:41 *ALARM*
C1: General C6: Outputs	C2: Setpoints C7: Alarms	C3: Defrost C8: Advanced	C4: Defr C9:	Tines	C5: Inpu C0: MORE	ts	ADVISORY SUNMARY Fails 13
General Nane Long Nane Case Type Case Comb M Fan Mode Lts During	Op Heth Descrip Def SDFJ-Sg HDFJ-H1 R11C-RC ICBX-1c: SDFF-Sg R1FJ-RC FBX-Fr; FBX-Fr; HDF-H1 F28K-H1 R1FF-RC	tion List Select Select: tion tDk Ice Cream IDk Frz Juice tDk Frz Juice tDk Frz Juice Cream Frz Box IDk Frz Food h-In Frz Juice Dzen Food Box Dzen Fish Box Dzen Fish Box Dzen Fish Box Dzen Food Box frz Food tDk Frz bakery h-in Frz Food	ion Select 2 3 4 5 6 7 8 9 9 10 11 12 13 14				Alarms 13 Notices 21 NETWORK OUERUIEW IONet-1 HODBUS-1 Echelon E2 Unit01 Rev 4.06823 IP 10.212.239.5 Fnolish-US
Use Up-Down Arr	ov keys or fund	tion keys to se	Lect entry.	Pres	5 BACK.		
F1: SELECT		F3:	BEGINNING		F4: EN)	F5: CANCEL
	Figu	re 19 - Case	Type Se	electi	on Scr	een	

9. Press 🐨 to save changes, then press 🛈 to return to the *Home* screen.

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PART 6: Associating the XM Device to the XM Circuit Application

The XM Circuit is used to share alarms, defrost, and setpoints to all XM devices associated to the circuit. Connecting the XM Circuit and the XM device is called "associating." To associate the XM device with the XM Circuit application:

7-24-13 🔍 🎲 📖		CX-400 Unit 1 CX DEV SUMMARY	FULL	17:18:27 *ALARM*
HVAC CONTROL	REFRIGER	ATION		ADVISORY SUMMARY
INSIDE RH NONE AHU001 SPA	Sontroller As	Sociations		Fails 13 Alarms 13
FAN OFF STATE UNOCC	1. Case Cont	rol Circuit		Notices 21
DEHUM INACTU	2. XM Circui	t		NETWORK OVERVIEW
AHU002 SPA				IONet-1 • MODBUS-1 • Echelon •
FAN OFF State Unocc Denum Ingctu				
LIGHT LEVEL NON				
LIGHTS001 OF				
LIGHTS002 OF				E2 Unit01
LIGHTS003 OF				Rev 4.06823
LIGHTS005 OF				IP 10.212.239.5
				English-US
Proce monu number or c	croll to selectio	n		
rress menu number or s				ES: CANCEL
	/		⁄	TST SHIDEE

2. Highlight the XM679 device and press F4 (LOOK UP).

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3. Highlight the XM Circuit application that was created in *Part 3: Creating an XM Circuit*, then press **E**

07-24-13 🔹 🌈 🖮	CX-400 Unit 1 CELL LOOKUP	<u>©</u> FULL	17:05:50
Cas	e Controller <> XM Circuit Associa	tion	ADVISORY SUMMARY Fails 13
Applicati		t _	Alarns 13 Notices 21
ХМ679К_34 ХМ679К_34	Application Selection		
_	Appl/Point Type		NETWORK OVERVIEW
	XM CIRCUIT001 XM Circuit		MODBUS-1
			E2 Unit01
			Rev 4.06B23 IP 10.212.239.5
L			English-US
Use Up-Down Arrow key	s or function keys to select entry.	Press BACK.	
F1: SELECT	F3: BEGINNING	F4: END	F5: CANCEL
 Figu	ıre 21 - XM Device and XM	Circuit Associa	tion

4. Repeat steps 2 and 3 to associate other XM devices to the XM Circuit.

7-24-13 🔹 🥱 💷	H		CX-40 XM CIF	00 Unit 1 RCUIT ASSOC	🖄 FULL	17:06:58 *ALARM
	Case Con	troller <>	XM Circu	uit Association		ADVISORY SUMMARY Fails 13
App:	lication	Bus	Node	Case Ctrl Circ	uit	Alarms 13
XM6	79K_34001	MODBUS	1	XM CIRCUIT001		
XM6	79K_34002	MODBUS	2			NETWORK OVERVIEW IONet-1 MODBUS-1 Echelon
						E2 Unit01
						Rev 4.06B23 IP 10.212.239.5
						English-US
Scroll applica	tions with N	EXT/PREV key	s or use	LOOK-UP to selec	t	
F1: SETUP AP	PP F2:	SETUP CKT			F4: LOOK UP	F5: CANCEL
Scroll applica F1: SETUP AP	Figl	<u>ext/preu key</u> setup ckt ure 22 - >	XM Cir	cuit Associat	t LOOK UP	F5: CANCE

5. Press 🐨 to save changes, then press 🐨 to return to the *Home* screen.

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To View the Circuit Summary Screen of the XM Circuit

1. Press (1), 5, then highlight **3. Circuits** and press .

87-24-13 🔍 🧭 📖	CX-488 CX DEU	Unit 1 🔅 SUMMARY	17:11:55
HVAC CONTROL Inside RH None * Ahu801 Space:	REFRIGERATION	те темр с Е	ADVISORY SUMMARY Fails 13 Alarms 13
FAN OFF State UNOCC Dehum Inactu Ahu002 Space: Fan OFF State UNOCC Dehum Inactu	1. Suction Groups 3. Gircuits 6. Air Handlers (AH 10. Lighting Control 16. Logging Groups 90. Global Data 293. CC-100L 400. XH679K_34	S US)	Notices 21 NETWORK OUERUIEW IONet-1 6 HODBUS-1 6 Echelon 6
LIGHTING LIGHT LEVEL NOME FTC NAME BYPASS OUT LIGHTS001 OFF OF LIGHTS002 OFF OF LIGHTS003 OFF OF LIGHTS004 OFF OF LIGHTS005 OFF OF	19UT 17 17 17 17 17		E2 Unit01 Rev 4.06823 IP 10.212.239.5 English-US
Press menu number or scro	oll to selection		F5: CANCEL
	Figure 23 - Circu	it Summary Scr	een

2. Highlight the previously created XM Circuit. Press to open the *XM Circuit* status screen.

Note: The Circuit Summary Screen shows all the circuits in the system.

-07-13 🔹 🍞 📖		CX-4 S	100 Unit UMMARY	1		A	FULL		12:38:0 *ALARM
Summary For Circui	its (Standard) and	Circuits	(Case C	trl) an	d Circu	uits (XM)	ADVISORY	SUMMARY
Nane	State	Tenp	Setpt	Alarm	Refr	Defr		Alarms	21
STD CIRCUIT	Refrigeration	NONE	NONE		ON	OFF		Notices	30
CC100 CKT1	Off -	NONE	33.9	8	ON	OFF			
XM CIRCUIT001	Refrigeration		0 -14.9	8	ON	OFF			
XM CIRCUIT002	OFF	NONE	20.0		ON	OFF		NETWORK	OVERVIEW
XM CKT TEST	Off	NONE	-9.9	4	ON	OFF		IONet-1	
								MODBUS-	1 😐
								Echelon	
								E2 Unite	
								Bou h 04	D 22
								Re0 4.00	B33
								IP 10.21	2.239.5
								English-	US
ess enter on desi	ired application f	or status.							
F1: AHU	F2: LIGHTING			Ţ			J	F5:	SETUP
	5 :	Cinquit		Iabla	:		-		
	1 1 4 1 6 4 7 7								

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To View the XM Devices on the XM Circuit

1. From the XM Circuit status screen, highlight the XM Circuit then press Note: The XM Circuit Status screen shows all XM devices on the selected XM Circuit.

8-13-13 🔍 🦪 🛄	CX-400 Unit 1 💮 XH679K	18:08:22
XM679K Case Controller Nam XM679K_34001	e: Case Circuit :	ADUISORY SUMMARY Fails 13 Alarms 17 Notices 23
Temp: 0 [-15.]	LOADS Comp/Solenoid : ON Case Fan : ON Defrost : OFF Light : ON	NETWORK OVERVIEW IOHet-1 HODBUS-1 Echelon
Defrost Tern 1 : 0	EUAP Pb5 Evap Pressure : 0 Superheat: 0 Pb6 Coil Out Tenp : NONE Valve % : 50.1 Refg Type : 404 Defrost State : 0FF	0 [9.00] 00
Probe 1 Temp : NONE Probe 2 Temp : 0 Probe 3 Temp : 0 Probe 4 Temp : NONE	GEN STATUS Alarn : ON Digital In 1 :	E2 Unit@1 : OFF Rev 4.06823 IP 10.212.239.5 English-US
Press enter for a list of	ACTIONS.	F5: SETUP

To View Details of the XM Device

1. From the XM Circuit status screen, highlight the XM Device, then press

Note: Review the setpoints that are sent to the XM during the association in the previous steps.

10-22-13 🔍 🖅 🛄 lise Ctrl-X to Select	CX Tabs	נא-400 UNIC 1 Setup		FILL	13141147
C1: General C2: C6: Regulation C7:	Inputs C3: Defrost C8: XM679K_34	Outputs C4: Alar Fan C9: Alar +: NM679K_34001	m Out C5: Valve m Cfg C0: MORE	TOLL	ADVISORY SUMMARY Fails 14 Alarms 21
General EU Selector Device Name Long Name Device Address Route CfgSyn Action Initial Sync Show Advanced FW Revision FW Release Date	Value : DDF : NH679K_3401 : 1 : H0DBUS-1 : Send E2 Cfg : No : No : 3,04-00 : 06-08-2012)1 g to Device			Notices 28 NETWORK OVERVIEW IOHet-1 ∳ HODBUS-1 ∳ Echelon ∳
Associated ParentCellType	: Yes : 399				E2 Unit01 Rev 4.06B33 IP 10.212.239.5 English-US
Enter State: Y=Yes F1: PREV TAB	: N=NO Show (F2: NEXT TAB	dvanced Properties	F4: STATU	ls l	F5: CANCEL
	Figure	26 - XM Circuit	Setup Scree	n)

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Appendix A: XM679 Device Wiring Diagram

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1 UL Ratings

	Ratings	Terminal		
	Evaporator Fan: 120/240V, 50/60 Hz, 1/4 HP, 30k cycles 125V, 50/60 Hz, 1/3 HP, 6k cycles 250V, 50/60 Hz, 1/2 HP, 30k cycles	Terminals 9 and 10		
	Compressor: 120 V/240V, D300 Pilot Duty, 30k cycles	Terminals 11 and 12		
	Auxiliary (not populated in XM66 series): 120/240V, 50/60 Hz, 5A, General Purpose, 6k cycles 120/240V, 50/60 Hz, 3A, Resistive, 100k cycles	Terminals 18 and 17		
Relay Outputs UL Ratings	Light: 120V, 50/60 Hz, 5A, General Purpose, 6k cycles, 120 VAC, 1000 W Tungsten, 6k cycles 240 VAC, 1400 W Tungsten, 6k cycles	Terminals 16 and 15		
	Defrost: 120/240V, 50/60 Hz, 10A, Resistive, 30k cycles 120/240V, 50/60 Hz, C300, Pilot Duty, 30k cycles	Terminals 14 and 13		
	Alarm (not populated on XM66 series): 120/240V, 50/60 Hz, 5A, General Purpose, 6k cycles 120/240V, 50/60 Hz, 3A, Resistive, 100k cycles	Terminals 1, 2 and 3		
	Pulse Valve (not populated on XM66 series) : 230V, 30 Watt	Terminals 4, 5 and 6		

Table 1 - XM679 UL Ratings

Appendix B: Default Setpoints for Case Types

The table below (**Table 2 -Default Setpoints for Case Types**) lists the sixty-four default case types that may be used in Standard Circuit or Case Control Circuit applications along with the recommended defaults for each case type.

When one of these sixty-four case types is selected, the E2 automatically enters the following information from the table into the Circuit application:

- The setpoint
- The number of defrosts per day and the defrost time length from the **Elec (DEF)** column under Defrost types

For example, if you select #14 RIFF (Reach-in frozen food), the E2 sets the circuit's setpoint at -10, the number of defrosts at 1, and the defrost time at 60 minutes.

The other columns in this table, such as the **High Alarm**, **Low Alarm**, and **Delay** columns and the **Hot Gas**, **Rev. Air**, and **Timed** columns, are suggested values that are not automatically entered into the Circuit application.

High Alarm, Low Alarm, and Delay

The High Alarm, Low Alarm, and Delay columns are the suggested high and low case temperature alarm setpoints and the report delay.

To set up the alarm setpoints and delays:

- 1. Locate the Case Temperature control input and select the **Generic Alarm Setup** action from the Actions Menu.
- 2. Enter the High and Low setpoints in the **Normal Hi** and **Normal Low** fields.
- 3. Enter the Delay in the **Report Delay** field.

Defrost Type

The E2 assumes by default that all cases have electric defrost. If this is not the case, new values need to be entered for the **Number of Defrosts** and the **Defrost Time** in the circuit. The suggested defaults are listed under the **Hot Gas**, **Elec (DEF)**, **Rev. Air**, and **Timed** columns. The number to the left of the slash indicates the suggested number of Defrost Times Per Day, and the number to the right of the slash indicates the recommended Defrost Time Length.

							Defrost Type			
Туре	Abbr.	Description	Setpoint	High Alarm	Low Alarm	Delay	Hot Gas	Elec. (DEF)	Rev. Air	Timed
0	* * * *	Undefined								
1	SDIC	Single deck ice cream	-25	-5°	-30°	01:00	2/18	1/45	1/60	1/60
2	MDIC	Multi-deck ice cream	-25	-5°	-30°	01:00	3/22	3/45	2/60	2/60
3	SDFJ	Single deck freezer juice	-18	0°	-30°	01:00	2/18	1/45	1/60	1/60
4	MDFJ	Multi-deck freezer juice	-10	5°	-25°	01:00	3/22	3/45	2/60	2/60
5	RIIC	Reach-in ice cream	-15	-5°	-25°	01:00	2/22	1/45	1/60	1/60
6	ICBX	Ice cream freezer box	-20	-5°	-30°	01:00	3/20	2/45	2/60	2/60
7	SDFF	Single deck freezer food	-15	5°	-25°	01:00	2/18	1/60	1/60	1/60
8	RIFJ	Reach-in freezer juice	-15	-5°	-20°	00:15	2/22	1/45	1/60	1/60
9	FRBX	Frozen food box	-12	-5°	-20°	00:15	3/18	3/45	2/60	2/60
10	FFBX	Frozen fish box	-12	-5°	-20°	00:15	3/18	3/45	2/60	2/60
11	FJBX	Frozen juice box	-12	-5°	-25°	01:00	3/18	3/45	2/60	2/60
12	MDFF	Multi-deck freezer food	-10	0°	-20°	01:00	2/22	1/45	2/60	2/60
13	FZBK	Multi-deck freezer bakery	-10	0°	-20°	01:00	2/22	1/45	2/60	2/60
14	RIFF	Reach-in freezer food	-10	5°	-15°	01:00	1/20	1/60	1/60	1/60
15	SDMT	Single deck meat	22	32°	12°	01:00	3/18	3/45	3/60	3/60
16	SDPF	Single deck pre- pared	22	32°	12°	01:00	3/18	3/45	3/60	3/60

Table 2 - Default Setpoints for Case Types

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17	PZZA	Single deck pizza	22	32°	12°	01:00	3/18	3/45	3/60	3/60
18	KOSH	Single deck kosher	22	32°	12°	01:00	3/18	3/45	3/60	3/60
19	SDFH	Single deck fish	22	32°	12°	01:00	3/18	3/45	3/60	3/60
20	MDM T	Multi-deck meat	23	34°	18°	01:00	4/18	4/45	4/60	4/60
21	MDPO	Multi-deck poul- try	23	34°	18°	01:00	4/18	4/45	4/60	4/60
22	MDFH	Multi-deck fish	23	34°	18°	01:00	4/18	4/45	4/60	4/60
23	RIMC	Reach-in meat	25	35°	15°	01:00	2/18	2/45	2/60	2/60
24	SVMT	Service meat	22	35°	15°	01:00	2/18	2/45	2/60	2/60
25	SVFH	Service fish	22	35°	15°	01:00	2/18	2/45	2/60	2/60
26	MTBX	Meat cooler	30	42°	22°	01:00	3/18	3/45	2/60	2/60
27	HDBX	Meat holding box	30	44°	22°	01:00	3/18	3/45	2/60	2/60
28	DYCS	Multi-deck dairy	35	44°	24°	01:00	4/20	4/45	2/60	4/60
29	RFDY	Rear load dairy	28	38°	18°	01:00	4/20	4/45	2/60	4/45
30	RIDY	Reach-in dairy	30	40°	20°	01:00	4/20	4/45	2/60	2/60
31	DYBX	Dairy cooler	34	44°	24°	01:00	2/22	2/45	2/60	2/60
32	BKBX	Bakery Cooler	36	46°	26°	01:00	2/22	2/45	2/60	2/60
33	PRBX	Produce cooler box	36	50°	30°	01:00	2/22	2/45	2/60	2/60
34	MILK	Milk case	34	40°	20°	01:00	4/20	4/45	2/60	2/60
35	PKDL	Packaged deli	32	38°	18°	01:00	4/20	4/45	2/60	2/60
36	DLDS	Deli display case	34	38°	18°	01:00	4/20	4/45	2/60	2/60
37	CHEZ	Cheese case	34	40°	20°	01:00	3/18	3/45	2/45	2/60
38	POBX	Poultry box	36	42°	22°	01:00	4/20	4/45	2/45	2/60
39	BEER	Beer/Beverage	34	44°	24°	01:00	2/18	2/45	2/45	2/60
40	BVCS	Beverage case	34	44°	24°	01:00	2/18	2/45	2/45	2/60

Table 2 - Default Setpoints for Case Types

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41	DLBX	Deli cooler box	36	46°	26°	01:00	3/18	3/45	2/45	2/60
42	FHBX	Fish cooler box	36	46°	26°	01:00	3/18	3/45	2/45	2/60
43	SVDL	Service deli	32	42°	22°	01:00	2/16	2/45	2/60	1/40
44	PRCS	Produce case	35	45°	25°	01:00	2/16	2/45	2/60	3/40
45	ISPR	Produce case (island)	35	45°	25°	01:00	2/16	2/45	2/60	1/60
46	SALD	Salad table	36	50°	30°	01:00	2/16	2/45	2/60	1/60
47	FLBX	Flower cooler box	40	54°	34°	01:00	2/16	2/45	2/60	2/40
48	FLWR	Flower cooler	40	54°	34°	01:00	2/16	2/45	2/60	2/40
49	СТВХ	Controlled temp box	50	75°	40°	00:15	2/16	2/45	2/60	2/45
50	SDPO	Single deck poul- try	24	38°	18°	01:00	2/16	2/45	2/45	2/60
51	CAKE	Bakery cake case	40	55°	35°	01:00	2/16	2/45	2/45	2/60
52	BART	Bakery retarder	35	60°	40°	01:00	2/16	2/45	2/45	2/60
53	RTDR	Bakery retarder	35	60°	40°	01:00	2/16	2/45	2/45	2/60
54	МТРК	Meat packaging room	45	60°	40°	01:00	2/16	2/45	2/45	2/90
55	MTCU	Meat cutting room	45	60°	40°	01:00	2/16	2/45	2/45	2/90
56	MTPR	Meat prep room	45	60°	40°	01:00	2/16	2/45	2/45	2/90
57	MTW R	Meat wrapping room	45	60°	40°	01:00	2/16	2/45	2/45	2/90
58	FHPR	Fish prep room	45	60°	40°	01:00	2/16	2/45	2/45	2/90
59	SBCL	Subcooler	55	60°	45°	00:15	2/16	2/45	2/60	2/45
60	PRPR	Produce prep room	55	65°	45°	01:00	2/16	2/45	2/45	2/90
61	SDFM	Single deck freezer meat	-10	0°	-20°	01:00	2/18	2/40	1/35	1/45

Table 2 - Default Setpoints for Case Types

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62	RIFM	Reach-in freezer meat	-10	2°	-18°	01:00	2/18	2/40	1/35	1/45
63	MDF M	Multi-deck freezer meat	-10	0°	-20°	01:00	2/18	2/40	2/60	1/45
64	BKFZ	Bakery freezer box	-12	-2°	-22°	01:00	2/18	2/30	2/60	1/45

Table 2 - Default Setpoints for Case Types

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