Overview

This document will guide you through setting up and commissioning the XC1011D MODBUS device in the E2 controller.

STEP 1: Upload the description file to the E2 controller.

- 1. From UltraSite, connect to your E2 controller.
- 2. Right click on the E2 icon and select **Description File Upload**.
- 3. Browse to the location where the description file is saved and click **Upload**.
- 4. After uploading, reboot the E2 controller.

E2	Description File Upload
To	delete a file, first select from the list
	5270372.dsc
	FILE - Click Browse to select the file to upload Browse
	Upload Remove Close
	Figure 1 - E2 Description File Menu

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STEP 2: Once the description file is loaded, add the device to the E2 controller.

- 1. Press (System Configuration), (Network Setup), (Connected I/O Boards & Controllers).
- 2. Press (NEXT TAB) to go to the C3: *ECT* tab. The device list appears on the screen. Enter the number of devices to add and press the D button to save your changes.

:1: This Unit	C2:	IO Network	C3: ECT	0	4: Third	Partu	C5: E	ichel	n
:6:	C7:		C8:	C	9:		C0:		
		Num Net	work Ctrls	: NetSe	tup				
ſ	ECT	Boar	d Type		Quantity	Max	1		
		#1 : CC T	-Stat		9	64	T		
		#2 : CT D	rive		5	16			
		#3 : Core	Sense Comm	1	5	31			
		#4 : Ctrl	Link ACC		9	16			
		#5 : Ctrl	Link CD		5	99			
		#6 : Ctrl	Link RSC		9	99			
		#7 : Disc	us		9	63			
		#8 : Ener	gy Meter		8	30			
		#9 : ISD-	1.0		8	64			
		#10 : ISD-	2.0		9	63			
		#11 : K5 H	et Scroll		8	31			
		#12 : MRLU	5		0	24			
		#13 : Perf	HIEFE		0	03			
		#14 : KLUS	uc Dicolou		0	15			
		#15 : Stat	US VISPIAY		-1	10			
		#10 . ACTE	20		_ <u>'</u>	00	¥		
		#17 - AEVI	20		0				
Lo									
Entor 0 to 10	I Ente	er desired m	umber of t	hese bo	ards				

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STEP 3: Assign the MODBUS port.

- 1. Press , f(System Configuration), (Remote Communications), (CCP/IP).
- 2. Press **F1** to go to the C3:*Serial* tab.

: General	C2: Eng Unit	s C3: Serial	C4: TCP/IP	C5: Peer Ne	twr
: Web Server	C7: System	C8:	C9:	C0:	
	Gene	eral Setup: GEN	ERAL SERV		
Serial	Value				
COM1 Conne	ction: Not Use	ed			
COM2 Conne	ction: MODBUS-	-1			
COM2 Baud	: 9600 ba	bue			
COM2 Data	Size :	8			
COM2 Parit	y :None	-			
COM2 Stop	Bits :	2			
COM3 Conne	ction: Modem	4			
COM3 Baud	: 115.2	Kbaud			
CUM3 Modem	Port: No Mode	2M			
CUM3 Modem	Type: CPC 33.	.ok Internal			
COM3 Modem	INIC: HIEDUT	50=1510=40GDZGU	5 \N0%C 0&K 0&Y 0&W0		
COM2 DIME	NIC : HIVIED:	50=1510=40a52GQ: 00	> \ N 0%C OGK OGY OGWO		
COM2 Pauso					
cons rause	var .	2			
croll using N	ext/Prev keys	Connection	Type for COM1		
1. DDCII TAD	E2. NEXT TO			ES: CANCE	

3. Select the COM port where the device is connected, press [F4] (LOOK UP) and select the appropriate MODBUS selection.

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C1:	General	C2:	Ena Units	C3: Serial	C4: TCP	/1P	C5: Peer	Netwrk
C6:	Web Server	C7:	System	C8:	C9:		C0:	
	Serial COM1 Connec COM2 Connec COM2 Baud COM2 Data S COM2 Parity COM2 Stop E COM3 Connec COM3 Baud COM3 Modem COM3 Modem COM3 Hoden COM3 Fax In COM3 DTMF D COM3 DTMF D	tio ize its fits Ini Ini Dur	Opt Descript Not Used IONet ISD1.0 Lennox MODBUS-7 MODBUS-7 MODBUS-3 CMTL	tion List Sel Select: tion	ection Select 13 16 19 22 23 24 33	t		
use E	UP-DOWN HPP	00 1	ceys or func	CION REUS CO		END	5 BHCK.	NCEL
F	I. SELEGI			A Pat BEGIN	<u>1 ma / F4:</u>		L 15: U	INCEL

4. Set the Baud rate for the chosen port. Press **F4** to look up the appropriate speed.

STEP 4: Commission the device.

- 1. Press , 🛱 (System Configuration), 🛱 (Network Setup), 🗄 (Network Summary).
- 2. Highlight the device name using the UP and DOWN arrow key on the front panel and press [F4] (COMMISSION). Select the MODBUS port where you will assign the device, and then select the MODBUS device address.

09-25-12 🔹 🤇	3 🔟	CX-400 Network	Unit 1 Summary	NAMES FULL
Name E2 Unit01 XC1011D_150	Type CX400 C-Stor 301 XC10110_15	Notwork Oddrocc Select Network 1. MODBUS-1 2. MODBUS-2	Rev 1 4.04810 1 1.05-00	Status This Controller Online
Press menu	number or scroll	to selection		
	Figure	5 - Modbus Device A	ddress	

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99-25-12 🔹 🥳 🔟			۲	CX-400 Network	Unit Summa	1 ry	ł	AMES	FULL
Nane	Тиро	Nat	work 6	XC1011	D_1500	1 Pou	\$tatu/		
E2 Unit01 XC1011D_15								ntro]	ller
	Setting Ph	ysical Ac	ldress	for:	XC101	1D_15001			
	Specify Ph	ysical Ad	Idress	Of Con	itrolle	r			
	HO	aress:	1						
Enter value and	Press ENTER	to Set A	iddress	5					
	Figure	e 7 - Phys	ical A	ddress	Settir	ng			

3. Once the device is addressed and wired properly, the device should come online.

Step 5: Setting up the MODBUS address and wiring the XC1011D.

1. From the front display user interface, press the **PARAM** key to enter the parameter screen.



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2. Press the **Pr1** key to enter the parameter groups.



3. In the parameter group screen, press the up arrow in the far left to display the other (OT-OT9) parameter group.

Set point (SETC1 -SETF2) Compressor rack set up (C0-C1 Regulation (C37-C44)	(8,C34-C36)
Display(C45-C46)	1 EXIT
	EXIT

- 4. Press the **SET** key to enter the other (OT-OT9) parameter group.
- 5. Scroll down to view the OT7 parameter. This is the parameter for MODBUS address. Change the address to the desired number.
- 6. When wiring the RS485 com wire from the device to the E2 make sure to:
- Connect pin 60 (+ RS485) of the XC1011D to the (-) RS485 side of E2
- Connect pin 61 (- RS485) of the XC1011D to the (+) RS485 side of E2

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Parameter Quick start Guide

This is a quick start parameter list to program the device. It will help you set up your setpoint, outputs and inputs. For any additional configuration settings and information, please refer to the XC1011D manual.

Setpoint parameter definitions:

SETC1: setpoint for suction group 1

SETF1: setpoint for delivery (condenser group) 1

SETC2: setpoint for suction group 2

Compressor Rack Setup Parameters

This section defines and sets up your output.

CO, Kind of plant: it sets the kind of plant.

The following table shows the kind of plant can be set and which probes have to be used:

C0	Kind of Plant	Pb1	Pb2	Pb3	Pb4
0A1d	Only condenser fan			Delivery 1	
1A0d	Only compressors	Suction 1			
1A1d	Compressors and fans 1 circuit	Suction 1		Delivery 1	
0A2d	Fans of circuit 1 and 2			Delivery 1	Delivery 2
2A0d	Compressors of circuit 1 and 2	Suction 1	Suction 2		
2A1d	Compressors of cir- cuit 1 and 2 - 1 condenser	Suction 1	Suction 2	Delivery 1	
2A2d	Compressors of cir- cuit 1 and 2 - Fans of circuit 1 and 2	Suction 1	Suction 2	Delivery 1	Delivery 2

Table 1 - Plant Parameters Definitions

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C1 C11 Relay 111 configuration	By means of parameter C0 and C1C11 the plant can be dimensioned according to the number and type of compressors and/or fans and the number of steps for each one.
Each relay acco can work as:	ording to the configuration of the C(i) parameter
Frq1	frequency compressor circuit 1
Frq2	frequency compressor circuit 2
CPr1	compressor circuit 1
CPr2	compressor circuit 2
Screw1	screw compressor – circuit 1
Screw2	screw compressor – circuit 2
StP	step of the previous compressor
FrqF1	inverter fan circuit 1
FrqF2	inverter fan circuit 2
FAn1	fan circuit 1
FAn2	fan circuit 2
ALr	alarm
ALr1	alarm 1
ALr2	alarm 2
AUS1	auxiliary output 1
AUS2	auxiliary output 2
AUS3	auxiliary output 3
AUS4	auxiliary output 4
onF	on / off relay
nu	relay not used

Table 2 - Relay Parameters Definitions

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Plant with 2 suction groups and 1 delivery (Condenser group):	By means of parameter C0 and C1C11 the plant can be dimensioned according to the number and type of compressors and/or fans and the number of steps for each one.
Suction Group 1:	2 compressor without valves (unloader), 1 compressor with 1 valve.
Delivery 1:	3 fans
Suction Group 2:	4 compressors
Set parameters:	
C0 =	2A1d
C1 =	CPr1
C2 =	CPr1
C3 =	CPr1
C4 =	Stp
C5 =	Fan1
C6 =	FAn1
C7 =	FAn1
C8 =	Cpr2
C9 =	Cpr2
C10 =	Cpr2
C11 =	Cpr2

Table 3 - Relay Parameters Definitions

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C17	 Valve output polarity - circuit 1: valve polarity: polarity of the outputs for capacity valves. It determines the state of the relays associated with the capacity valves: P = valve enabled with open contact cl = valve enabled with closed contact
C18	 Valve output polarity - circuit 2: valve polarity: polarity of the outputs for capacity valves. It determines the state of the relays associated with the capacity valves: oP = valve enabled with open contact cL = valve enabled with closed contact
C34	Kind of gas: set the kind of freon used in the plant • r22 = R22 • r404 = R404A • 507 = R507 • 134 = 134 • r717 = r717 (ammonia) • co2 = CO2 • 410 = r410

Table 4 - Additional Output Parameter Definitions

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	 Kind of probe of P1 & P2: it sets the kind of probes for suction sections: Cur = 4 to 20 mA probe
AI1	• Ptc = Ptc probe
	 ntc = NTC probe
	 rAt = rathiometric probe (0 to 5V)
AI2	Adjustment of read out for the probe 1 at 4mA/0V: (-1.00 to AI3 bar; -15 to AI3 PSI, -100 to AI3 KPA)
AI3	Adjustment of read out for the probe 1 at 20mA/5V: (Al2 to 100.00 bar; Al2 to 750 PSI; Al2 to10000 KPA)
AI5	Adjustment of read out for the probe 2 at 4mA/0V: (-1.00 to Al6bar; -15 to Al6 PSI)
AI6	Adjustment of read out for the probe 2 at 20mA/5V: (AI5 to 51.00 bar; AI5 to 750 PSI)
	Kind of probe of P3 & P4: it sets the kind of probes for delivery sections:Cur = 4 to 20 mA probe
AI8	Ptc = Ptc probe
	 ntc = NTC probe
	rAt = rathiometric probe (0 to 5V)
AI9	Adjustment of read out for the probe 3 at 4mA/0V: (-1.00 to Al10bar; -15 to Al10 PSI; -100 to Al10 KPA)
AI10	Adjustment of read out for the probe 3 at 20mA/5V: (AI9 to 100.00 bar; AI9 to 750 PSI; AI9 to10000 KPA)
AI12	Adjustment of read out for the probe 4 at 4mA/0V: (-1.00 to Al13bar; -15 to Al13 PSI; -100 to Al13 KPA)
AI13	Adjustment of read out for the probe 4 at 20mA/5V: (AI12 to 100.00 bar; AI12 to 750 PSI; AI12 to10000 KPA)

Table 5 - Inputs Parameter Definitions



NOTE: After configuring or changing a parameter through E2, the E2 will reboot the XC1011D device to save and committed changes.

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