

JTL CABINET CONTROLLER ITEM NUMBERS					EC ECCN ECRB ECLS ECDM	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
0	Unit type	EC20 on (v0.02.0 on)				
		EC Eccn Ecrb ECLS	Unit type			
1	Unit number	EC00 - EC04 (v0.00.0 - 0.00.4)				
					0.1 - 199.9	
		EC05 on (v0.00.5 on)				
					0.1 - 899.9	
6	Communications speed	EC13 on (v0.01.3 on)				
		4800 600	Baud rate Baud rate			
8	Bitswitch Setting	EC19 on (v0.01.9 on)				
9	Set default values selected by Bitswitch				0 - 1	
PROCESSOR ALARMS						
10	Processor alarms (11 - 17)	0 1 - 255	No alarms Check 11 - 17			
11	Static RAM fault	CLr rA.Ft	No fault Fault			
12	Program/counter fault	CLr PC.Ft	No fault Fault			
13	Stack pointer fault	CLr SP.Ft	No fault Fault			
14	Background loop fault	CLr bL.Ft	No fault Fault			
15	PROM checksum fault	CLr Pr.Ft	No fault Fault			
16	NVRAM fault	CLr n.Ft	No fault Fault			
17	Instruction TRAP fault	CLr tP.Ft	No fault Fault			
MISCELLANEOUS DATA						
19	Software Version number					

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TEMPERATURES						
20	Estimated cabinet temperature (calculated from Air on and Air off temperatures)					
21	Air on temperature					
22	Air off temperature					
23	Evaporator temperature					
24	Suction line temperature					
25	Superheat (Evaporator temp - suction line temp)					
AVERAGE ERRORS						
26	Average cabinet temperature error					
27	Average Air off temperature error					
AUTOMATICALLY ADJUSTED SETPOINTS						
28	Current Air off temperature setpoint (calculated by controller)					
29	Current Evaporator temperature setpoint (calculated by controller)					
PRIMARY TEMPERATURE SETPOINTS						
30	Cabinet temperature setpoint (target for item 20)			xxCC	-30.0 to -15.0	-20
				xxCO	-30.0 to -15.0	-26
				xxOC	-5.0 to +10.0	+1
				xxOO	-5.0 to +10.0	+4
31	Air off setpoint (starting point and lower limit for item 28)			xxCC	-39.0 to -20.0	-30
				xxCO	-39.0 to -20.0	-36
				xxOC	-10.0 to 5.0	-6
				xxOO	-10.0 to 5.0	-4
32	Overtemperature alarm tolerance			xxCC	0 - 20	10
				xxCO	0 - 20	10
				xxOC	0 - 20	5
				xxOO	0 - 20	10
33	Cabinet temperature ratio (Item 20 calculated as value between Air off and Air on using this ratio)	EC02 - EC03 (v0.00.2 - 0.00.3)				
					20 - 80	66
		EC04 - EC16 (v0.00.4 - 0.01.6)				
				xxCC	20 - 80	50
				xxCO	20 - 80	50
				xxOC	20 - 80	66
				xxOO	20 - 80	66
		EC17 on (v0.01.7 on)				
		xxCC	20 - 80	50		
		xxCO	20 - 80	50		
		xxOC	20 - 80	40		
		xxOO	20 - 80	60		

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PROBE SELECTION						
36	Air on probe selection	EC07 on (v0.00.7 on)				
		OFF AO.En	Disabled Enabled		0 - 1	AO.En
37	Air off probe selection	EC07 on (v0.00.7 on)				
		OFF AF.En	Disabled Enabled		0 - 1	AF.En
38	Evaporator probe selection	EC07 on (v0.00.7 on)				
		OFF EP.En	Disabled Enabled		0 - 1	EP.En
39	Suction line probe selection	EC07 on (v0.00.7 on)				
		OFF SP.En	Disabled Enabled		0 - 1	SP.En
DEFROST INFORMATION						
40	Duration of last defrost					
41	Time since end of last defrost					
42	Duration of current defrost					
45	Suction line or Comms initiated defrost selection	EC17 on (v0.01.7 on)				
		CU.In SL.In	Comms unit initiated Suction line temp initiated		0 - 1	SL.In
46	Comms unit initiated defrost command status	EC17 - EC21 (v0.01.7 - 0.02.1)				
		OFF CU.dF	No comms defrost Comms defrost command			
		EC22 on (v0.02.2 on)				
		P.dEF F.dEF 0	Pack on defrost Pack on forced defrost Pack not on defrost			

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MISCELLANEOUS SETTINGS						
47	Period over which averages are taken	EC17 on (v0.01.7 on)				
					00:30 - 03:00	01:00
48	Max starts/hour (Anti-shortcycling timer when using liquid valve relay to control a condensing unit)	EC24 on (v0.02.4 on)				
		0 10.PH 15.PH 20.PH	No limit 10 starts per hour 15 starts per hour 20 starts per hour		0 - 3	0
49	Liquid hold-off time (Initiated by the voltage free contact input - Item 71 or the comms defrost command)	EC25 on (v0.02.5 on)				
					00:00 - 00:10	00:00
DEFROST SETPOINTS						
50	Defrost termination temperature (Air off probe)			xxCC	0 - 20	15
				xxCO	0 - 20	15
				xxOC	0 - 20	12
				xxOO	0 - 20	20
57	Defrost termination time limit			xxCC	00:05 - 00:40	00:20
				xxCO	00:05 - 00:40	00:20
				xxOC	00:10 - 01:00	00:20
				xxOO	00:10 - 01:00	00:40
58	Defrost initiation temperature (Suction line probe)	EC00 - EC03 (v0.00.0 - 0.00.3)				
				xxCC	-5.0 to 20.0	0
				xxCO	-5.0 to 20.0	-5
				xxOC	0 - 20	5
				xxOO	0 - 20	10
		EC04 - EC13 (v0.00.4 - 0.01.3)				
				xxCC	-5.0 to 20.0	0
				xxCO	-5.0 to 20.0	0
				xxOC	0 - 20	15
				xxOO	0 - 20	15
		EC14 on (v0.01.4 on)				
				xxCC	-5.0 to 20.0	0
		xxCO	-5.0 to 20.0	0		
		xxOC	0 - 20	15		
		xxOO	0 - 20	10		
59	Drain down time	EC00 - EC02 (v0.00.0 - 0.00.2)				
					00:00 - 00:05	00:02
69	Number of defrosts expected per day	EC25 on (v0.02.5 on)				
		0 1 - 6	Disable alarm 94 Alarm enabled		0 - 6	3

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MODES, INPUTS AND OUTPUTS						
70	Operating mode	rEFr dEFr dF.rc	Refrig. Defrost Defrost recovery			
71	Defrost input	EC20 on (v0.02.0 on)				
		OFF dF.IP	No defrost Defrost contacts closed			
72	Defrost relay	OFF dt.on	Contacts open Contacts closed			
73	Liquid solenoid relay	OFF LS.on	Off Demanding refrig.			
75	Defrost relay mode selection	EC21 (v0.02.1)				
		GAS.d ELEC	Gas defrost Electric defrost		0 - 1	GAS.d
		EC22 on (v0.02.2 on)				
		d.tEr d.con	Defrost termination Defrost control		0 - 1	d.tEr
FORCING FUNCTIONS						
Forced functions remain forced if the Maintenance unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance unit is unplugged.						
77	Forced defrost	EC03 on (v0.00.3 on)				
		OFF Fd.on	Off Forced defrost on		0 - 1	
78	Forced refrigeration	EC03 on (v0.00.3 on)				
		OFF no.dF	Off No defrosts		0 - 1	

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SYSTEM ALARMS						
80	Group alarm 81 - 88	0 1 - 255	No alarms Check 81 - 88			
81	Cabinet overtemperature	CLr C.Ht	No fault Fault			
82	Air off overtemperature	CLr A.Ht	No fault Fault			
83	Air on probe fault	CLr AO.Pr	No fault Fault			
84	Air off probe fault	CLr AF.Pr	No fault Fault			
85	Thermistor power supply fault	CLr PS.Ft	No fault Fault			
87	Unit number corrupted/not set	CLr Un.CF	No fault Fault			
88	All probes faulty, deselected or disconnected	EC14 on (v0.01.4 on)				
		CLr t.SEn	No fault Fault			
MISCELLANEOUS DATA						
89	Thermistor excitation value (Factory test)	EC11 on (v0.01.1 on)				
			Not used			
SYSTEM ALARMS						
90	Group alarm 91-98	0 1 - 255	No alarms Check 91 - 98			
92	Evaporator probe fault	CLr EP.Pr	No fault Fault			
93	Suction line probe fault	CLr SL.Pr	No fault Fault			
94	Expected defrosts have not been detected	EC25 on (v0.02.5 on)				
		CLr dEF.F	No fault Fault			
UTILITY						
99	Test digital display	EC03 on (v0.00.3 on)				
		CLr SEt	Not active Test active		0 - 1	

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COMPRESSOR PACK DATA						
100	Associated compressor pack number	EC03 - EC06 (v0.00.3 - 0.00.6)				
				xxCC	0 - 8	1
				xxCO	0 - 8	1
				xxOC	0 - 8	2
				xxOO	0 - 8	2
EC07 - EC22 (v0.00.7 - 0.02.2)						
					0 - 899.9	0
101	Air off setpoint for compressor pack	EC03 on (v0.00.3 on)				
PROBE TYPE SELECTION (ECCN and ECRB only)						
102	ECCN probe type selection	5000 2000	Tempkey Elm		0 - 1	2000
103	ECRB probe type selection	5000 2200	Tempkey CDK		0 - 1	2200

BITSWITCH SETTINGS

4321
xxCC Frozen food
xxCO Ice cream
xxOC Fresh meat
xxOO Dairy produce

where C = CLOSED or ON
O = OPEN or OFF
x = Don't care

Note 1: For unmarked switches
C = dot visible
O = dot not visible

Note 2: Setting the bitswitches alone has no effect.
Use ITEM 9 to set the default values after the switches are set.

DISPLAY DATA		EC ECCN ECRB ECLS ECDM	
NORMAL DISPLAY			
-99°	Cabinet temperature (item 20 rounded)		
dEF	Defrost		
dEFr	Defrost recovery		
--	Display data error		
ALARM TEXT (in descending priority order)			
t.SEn	All probes faulty, deselected or disconnected		
Ht	High cabinet or air off temperature		
OTHER TEXT			
JTL	Start-up text		
SEtP	Cabinet setpoint data follows this text		
A.On	Air on temperature follows this text		
A.oFF	Air off temperature follows this text		
EVAP	Evaporator temperature follows this text		
Suct	Suction line temperature follows this text		
t.dIF	Temperature difference (Superheat) follows this text		
L.dEF	Time since end of last defrost follows this text		