JTL CABINET CONTROLLER ITEM NUMBERS						ECAS
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT** **4321**	**RANGE**	**ITEM 9 VALUE**
0	Unit type	ECAS00 - ECAS03 (v0.00.0 - 0.00.3)				
		EC	Unit type			
		ECAS04 on (v0.00.4 on)				
		ECAS	Unit type			
1	Unit number				0.1 - 899.9	
6	Communications speed	4800 600	Baud rate Baud rate			
8	Bitswitch Setting	ECAS01 on (v0.00.1 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					
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)					

JTL CABINET CONTROLLER ITEM NUMBERS						ECAS
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT** **4321**	**RANGE**	**ITEM 9 VALUE**
			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 xxCO xxOC xxOO	-30.0 to -15.0 -30.0 to -15.0 -5.0 to +10.0 -5.0 to +10.0	-20 -26 +1 +4
31	Air off setpoint (starting point and lower limit for item 28)			xxCC xxCO xxOC xxOO	-39.0 to -20.0 -39.0 to -20.0 -10.0 to +5.0 -10.0 to +5.0	-30 -36 -6 -4
32	Overtemperature alarm tolerance			xxCC xxCO xxOC xxOO	0 - 20 0 - 20 0 - 20 0 - 20	10 10 5 10
33	Cabinet temperature ratio (Item 20 calculated as value between Air off and Air on using this ratio)			xxCC xxCO xxOC xxOO	20 - 80 20 - 80 20 - 80 20 - 80	50 50 40 60
			PROBE SELECTION			
35	Termination probe	ECAS01 on (v0.00.1 on)				
	Selects Air off or Evaporator probe for defrost termination	OFF E.t.En	Air off Evaporator		0 - 1	OFF
36	Air on probe selection	OFF A.O.En	Disabled Enabled		0 - 1	A.O.En
37	Air off probe selection	OFF A.F.En	Disabled Enabled		0 - 1	A.F.En
38	Evaporator probe selection	OFF E.P.En	Disabled Enabled		0 - 1	E.P.En
39	Suction line probe selection	OFF S.P.En	Disabled Enabled		0 - 1	S.P.En

JTL CABINET CONTROLLER ITEM NUMBERS						ECAS
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT** **4321**	**RANGE**	**ITEM 9 VALUE**
			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	ECAS01 on (v0.00.1 on)				
		CU.In SL.In	Comms unit initiated Suction line temp initiated		0 - 1	SL.In
46	Network initiated defrost command status	ECAS00-ECAS02 (v0.00.0 to 0.00.2)				
		OFF CU.dF	No comms defrost Comms defrost command			
		ECAS03 on (v0.00.3 on)				
		0 P.dEF F.dEF	No command Pack on defrost Pack on forced defrost			
			MISCELLANEOUS SETTINGS			
47	Period over which averages are taken	up to ECAS04 (up to v0.00.4)				
					00:30 - 03:00	02:00
		ECAS05 on (v0.00.5 on)				
					00:30 - 03:00	01:00
48	Defrost valve type	ECAS01-ECAS03 (v0.00.1 - 0.00.3)				
	(normally open or normally closed valve)	n.o n.c	Normally open Normally closed		0 - 1	n.c
49	Liquid hold-off time	ECAS04 on (v0.00.4 on)				
	(Initiated by defrost contact input or comms defrost command)				00:00 - 00:10	00:00

JTL CABINET CONTROLLER ITEM NUMBERS						ECAS
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT** **4321**	**RANGE**	**ITEM 9 VALUE**
DEFROST SETPOINTS						
50	Defrost termination temperature (Air off or Evaporator probe)			xxCC xxCO xxOC xxOO	0 - 20 0 - 20 0 - 20 0 - 20	15 15 12 20
57	Defrost termination time limit			xxCC xxCO xxOC xxOO	00:05 - 00:40 00:05 - 00:40 00:10 - 01:00 00:10 - 01:00	00:20 00:20 00:20 00:40
58	Defrost initiation temperature (suction line probe)			xxCC xxCO xxOC xxOO	-5.0 to 20.0 -5.0 to 20.0 0 - 20 0 - 20	0 0 15 10
62	Communications controlled shut down selection	ECAS05 on (v0.00.5 on)				
		OFF Sh.dn	Disabled Enabled		0 - 1	0
63	Network command	ECAS05 on (v0.00.5 on)				
		run Sh.dn	Run Shutdown			
68	Defrost valve type (normally open or normally closed valve)	ECAS04 (v0.00.4)				
		n.o n.c	Normally open Normally closed		0 - 1	n.c
		ECAS05 on (v0.00.5 on)				
		n.o n.c	Normally open Normally closed		0 - 1	n.o
69	Number of defrosts expected per day	ECAS04 on (v0.00.4 on)				
		0 1-6	Disable alarm 94 Alarm enabled		0 - 6	3
MODES, INPUTS AND OUTPUTS						
70	Operating mode	rEFr dEFr dF.rc Li.Ho Sh.dn	Refrig. Defrost Defrost recovery Liquid hold off Shutdown			
71	Defrost input	ECAS03 on (v0.00.3 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	ECAS03 on (v0.00.3 on)				
		d.tEr d.con	Defrost termination Defrost control		0 - 1	d.tEr

JTL CABINET CONTROLLER ITEM NUMBERS						ECAS
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT** **4321**	**RANGE**	**ITEM 9 VALUE**
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	OFF Fd.on	Off Forced defrost on		0 - 1	
78	Forced refrigeration	OFF no.dF	Off No defrosts		0 - 1	
79	Forced refrigeration	OFF Fr.on	Off Forced refrigeration		0 - 1	
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	up to ECAS04 (up to v0.00.4)				
		CLr Un.CF	No fault Fault			
87	Unit shutdown by communications network command	ECAS05 on (v0.00.5 on)				
		CLr Sh.dn	No fault Shutdown			
88	All probes faulty, deselected or disconnected	CLr t.SEn	No fault Fault			
MISCELLANEOUS DATA						
89	Thermistor excitation value (Factory set)		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	ECAS04 on (v0.00.4 on)				
		CLr dEF.F	No fault Fault		0 - 6	3

JTL CABINET CONTROLLER ITEM NUMBERS						ECAS
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT** **4321**	**RANGE**	**ITEM 9 VALUE**
UTILITY						
99	Test digital display	CLr SEt	Not active Test active		0 - 1	
COMPRESSOR PACK DATA						
100	Associated compressor pack number	ECAS00-ECAS02 (v0.00.0 - 0.00.2)				
					0 - 899.9	0
101	Air off setpoint for compressor pack	ECAS02 on (v0.00.2 on)				
PROBE TYPE SELECTION ECAS on (v0.00.5 on)						
102	Probe type selection	0 2000 2200 nonE	Tempkey Elm CDK Unused		0 - 3	0
DISPLAY PUSHBUTTONS ECAS on (v0.00.5 on)						
121	Display pushbutton 1 Status	OFF P1.IP	Not released Button pressed			
122	Display pushbutton 2 Status		Not used			

BITSWITCH SETTINGS

4321
xxCC Frozen food
xxCO Ice cream
xx0C Chiller
xx00 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	ECAS
NORMAL DISPLAY	
-99^{c}	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
SOL	Unit shutdown