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JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE
<b>1. Jnet NETWORK IDENTIFICATION</b>						
0	Unit type	LAct	Unit type			
19	Software Version number					
1	Unit number				0.1 - 899.8	
<b>2. TEMPERATURES</b>						
Note: Temperatures can be displayed on the maintenance unit in degrees Celsius or Fahrenheit. The choice is made on item 122. All setpoint ranges in this document are shown in celsius.						
20	Coldroom temperature					
38	Coldroom temperature sensor selection	OFF Ct.En	Disabled Enabled		0 - 1	Ct.En
21	Air on temperature					
36	Air on sensor selection	OFF AO.En	Disabled Enabled		0 - 1	AO.En
22	Air off temperature					
37	Air off sensor selection	OFF AO.En	Disabled Enabled		0 - 1	AO.En
141	Termination sensor 1 temperature					
147	Termination sensor 1 selection	OFF ts.1.E			0 - 1	ts.1.E
142	Termination sensor 2 temperature					
148	Termination sensor 2 selection	OFF ts.2.E	Disabled Enabled		0 - 1	ts.2.E
143	Termination sensor 3 temperature					
149	Termination sensor 3 selection	OFF ts.3.E	Disabled Enabled		0 - 1	ts.3.E
144	Termination sensor 4 temperature					
150	Termination sensor 4 selection	OFF ts.4.E	Disabled Enabled		0 - 1	ts.4.E
247	Site temperature (from broadcast)					
248	Site humidity (from broadcast)					
122	Temperature display unit choice	CELS FAhr	Celsius Fahrenheit		0 - 1	CELS
<b>3. TEMPERATURE ALARMS</b>						
127	High temperature alarm inhibited selection	OFF A.inh	Alarms enabled always Alarms inhibited during defrost		0 - 1	OFF
26	Average coldstore temperature error					
32	Overtemperature alarm tolerance	0.0	Disable Ht alarm	0 (CC) 1 (CO) 2 (OC) 3 (OO)	0 - 20 0 - 20 0 - 20 0 - 20	10 10 5 10
47	Period over which averages are taken			0, 1 (Cx) 2, 3 (Ox)	00:30 - 03:00	02:00

JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE
<b>4. TEMPERATURE CONTROL</b>						
275	Control temperature (from v0.00.3) Note: upto v0.00.2 control is on air off	0 1	A.oFF Cr.t	Air off temperature Coldroom temperature		0 - 1 A.oFF
30	Current coldstore temperature setpoint (target for item 21)				0 (CC) 1 (CO) 2 (OC) 3 (OO)	- 30 to -12 - 30 to -12 - 5 to +25 - 5 to +25 - 20 - 26 0 +4
140	Temperature deadband					0.4 - 3.0 0.4
48	Max starts/hour (Anti-shortcycling timer when using liquid valve relay to control a condensing unit)	0 1 2 3	unLm 10.PH 15.PH 20.PH	Unlimited 10 starts per hour 15 starts per hour 20 starts per hour		0 - 3 unLm
28	Current Air off temperature setpoint (calculated by controller)					
29	Current Evaporator temperature setpoint (calculated by controller)					
240	Liquid line valve open percentage for last sample period					
241	Average liquid line valve open percentage over data logging interval period					
<b>5. INPUTS &amp; OUTPUTS</b>						
70	Operating mode	rEFr dEFr dF.rc dr.dn Li.Ho Pu.dn Sh.dn	Refrigeration Defrost Defrost recovery Drain down Liquid hold off Pump down Shutdown			
71	Input 1 state	oFF door	Input off Door open			
139	Input 2 state	oFF trAP	No input Man trapped			
72	Liquid solenoid relay (RL1)	OFF LS.on	Off Demanding refrig.			
73	Fan relay (RL2)	oFF Fn.on	Off Fans on			
143	Defrost relays (RL3-6)	- - - - 1 - - - - 2 - - - - 3 - - - - 4	None energised RL3 energised RL4 energised RL5 energised RL6 energised			

JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE
<b>6. SUCTION PRESSURE OPTIMISATION</b>						
200	up to v0.00.1 Disable suction pressure optimisation for this unit when both air sensors are faulty	En.SO di.SO	Enable Disable		0 - 1	En.SO
	from V0.00.2 Disable suction pressure optimisation for this unit . Note: Suction pressure optimisation is disabled when both air sensors are faulty regardless of this setting.					
201	Exclude evaporator from suction pressure optimisation (Data to network)	OFF in.SO	Off Inhibit from suction optimisation			
203	Related suction line from plant controls (Data from network)	nonE Lt Ht SAT	Not selected Low temperature High temperature Satellite			
202	Raw network data for optimiser from plant (Binary data interpreted on item 203)					
211	Evaporator suction group - Required by Mark 2 optimisers (Data to network)	0 1 2 3	nonE Lt Ht SAT	Not selected Low temperature High temperature Satellite	0 - 3	nonE
212 (70)	Operating mode	rEFr dEFr dF.rc dr.dn Li.Ho Pu.dn Sh.dn	Refrigeration Defrost Defrost recovery Drain down Liquid hold off Pump down Shutdown			
217	Plant data to network (binary value interpreted on item 211)					

JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE
<b>7. DEFROST CONTROL</b>						
<b>7.1 DATA &amp; STRATEGIES</b>						
76	No of evaporators controller (v0.00.1 on)				1 -4	4
40	Duration of last defrost					
41	Time since end of last defrost					
224	Time since start of last defrost (v0.00.2 on)					
42	Duration of current defrost					
411 (107)	Defrost initiation strategy	2 3 4 5 6 7  8 9	n.i.L.b rt.in nonE nonE nonE n.i.F.b  c.d.L.b c.d.F.b	Network initiated (learned backup) Internal clock initiated Not used Not used Not used Network initiated (fixed schedule backup) Coordinated defrost (learned backup) Coordinated defrost (fixed schedule backup)	2 - 9	n.i.L.b
412	Current defrost initiation strategy in operation	nonE JnEt  rt.in	None Jnet network initiated Internal clock initiated			
69	No of defrosts required per day (Note, When the defrost strategy is set to coordinated defrost this item sets the number of defrosts a day that are required.)	0 1 - 6	Function disabled No of defrosts		0 - 6	3
61	Pump down time				00:00 - 00:10	00:00

JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE
<b>7.2 REAL TIME INITIATED DEFROST TIMES</b>						
When a 12 hour schedule is selected (item 60) the defrosts repeat on a 12 hour cycle ie., if 08:00 is selected then a 2nd defrost occurs at 20:00 (and vice versa)						
Daylight saving operation. Time and defrost schedule can be automatically displayed as standard time or daylight saving (summer) time if desired. When daylight saving is operational the displayed schedule is automatically adjusted so that defrost still occur at the same "standard time".						
51	Defrost time 1	00:00 00:01 - 23:59	Defrost disabled Defrost enabled	0 (CC) 1 (CO) 2 (OC) 3 (OO)	00:00 - 23:59 00:00 - 23:59 00:00 - 23:59 00:00 - 23:59	01:00 02:00 03:00 04:00
351	Defrost method for defrost time 1 (from v0.00.4)	0 1	E.dEF off.C	Electric defrost Off Cycle defrost		0 - 1 E.dEF
52	Defrost time 2	00:00 00:01 - 23:59	Defrost disabled Defrost enabled	0 (CC) 1 (CO) 2 (OC) 3 (OO)	00:00 - 23:59 00:00 - 23:59 00:00 - 23:59 00:00 - 23:59	07:00 08:00 09:00 10:00
352	Defrost method for defrost time 2 (from v0.00.4)	0 1	E.dEF off.C	Electric defrost Off Cycle defrost		0 - 1 E.dEF
53	Defrost time 3	00:00 00:01 - 23:59	Defrost disabled Defrost enabled	0 (CC) 1 (CO) 2 (OC) 3 (OO)	00:00 - 23:59 00:00 - 23:59 00:00 - 23:59 00:00 - 23:59	13:00 14:00 15:00 16:00
353	Defrost method for defrost time 3 (from v0.00.4)	0 1	E.dEF off.C	Electric defrost Off Cycle defrost		0 - 1 E.dEF
54	Defrost time 4	00:00 00:01 - 23:59	Defrost disabled Defrost enabled	0 (CC) 1 (CO) 2 (OC) 3 (OO)	00:00 - 23:59 00:00 - 23:59 00:00 - 23:59 00:00 - 23:59	19:00 20:00 21:00 22:00
354	Defrost method for defrost time 4 (from v0.00.4)	0 1	E.dEF off.C	Electric defrost Off Cycle defrost		0 - 1 E.dEF
55	Defrost time 5	00:00 00:01 - 23:59	Defrost disabled Defrost enabled		00:00 - 23:59	00:00
355	Defrost method for defrost time 5 (from v0.00.4)	0 1	E.dEF off.C	Electric defrost Off Cycle defrost		0 - 1 E.dEF
56	Defrost time 6	00:00 00:01 - 23:59	Defrost disabled Defrost enabled		00:00 - 23:59	00:00
356	Defrost method for defrost time 6 (from v0.00.4)	0 1	E.dEF off.C	Electric defrost Off Cycle defrost		0 - 1 E.dEF
60	Defrost schedule selection	24 hr 12 hr	24 hour schedule 12 hour schedule		0 - 1	24 hr
43	Time next defrost is due					
<b>7.3 Jnet NETWORK INITIATED DEFROST</b>						
46	Jnet Network initiated defrost command status	P.dEF F.dEF nonE	Defrost Forced defrost No command			
261 to 272	Defrost schedule (12 times starting at item 261 through to 272)					

JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT		
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE	
<b>7.4 COORDINATED DEFROST INITIATION</b> This information is for use be defrost schedulers.							
69	No of defrosts expected per day (Note, When the defrost strategy is set to coordinated defrost this item sets the number of defrosts a day that are required.)	0 1 - 6	Function disabled No of defrosts		0 - 6	3	
224	Time since the start of last defrost (v0.00.2 on)						
216	Defrost requirement to defrost coordinator						
223	Defrost requirement priority				1 - 8	1	
211	Evaporator suction group	0 1 2 3	nonE Lt Ht SAt	Not selected Low temperature High temperature Satellite		0 - 3 nonE	
214 (414)	Defrost heater choice	0 1 2 3 4 5 6	brn or rEd blac or YELL GrEY or bluE 3 - Ph oFF.C	Electric brown phase Electric black phase Electric Grey phase Electric 3 phase Not used Not used Off cycle		0 - 6 brn	
213	Electric circuit choice (depends on item 214)	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	cct1 cct2 cct3 cct4 cct5 cct6 cct7 cct8 cct9 cc10 cc11 cc12 cc13 cc14 cc15 cc16 cc17 cc18 cc19 cc20 cc21 cc22 cc23 cc24 cc25 cc26 cc27 cc28 cc29 cc30 cc31	Circuit 1 Circuit 2 Circuit 3 Circuit 4 Circuit 5 Circuit 6 Circuit 7 Circuit 8 Circuit 9 Circuit 10 Circuit 11 Circuit 12 Circuit 13 Circuit 14 Circuit 15 Circuit 16 Circuit 17 Circuit 18 Circuit 19 Circuit 20 Circuit 21 Circuit 22 Circuit 23 Circuit 24 Circuit 25 Circuit 26 Circuit 27 Circuit 28 Circuit 29 Circuit 30 Circuit 31		up to v0.00.4  1 - 7  from v0.00.5  1 - 15  from v0.00.7  1 - 31	cct1
210	Electrical distribution Panel No. (from v0.00.5)				0 - 7	0.0	
215 (46)	Jnet network initiated defrost command status (repeats item 46)	P.dEF F.dEF nonE	Defrost Forced defrost No command				

JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE
217	Evaporator data to plant					
219	Jnet network defrost arrangement	nonE cord  dEF.S	None Defrost co-ordinator present on network Timed defrost scheduler present on network			
220	Defrost coordinator status	oFF cord	No defrost coordinator Defrost coordinator present on network			
<b>7.5 DEFROST TERMINATION</b>						
141	Termination sensor 1 temperature					
147	Termination sensor selection	OFF tS.1.E			0 - 1	tS.1.E
142	Termination sensor 2 temperature					
148	Termination sensor 2 selection	OFF tS.2.E			0 - 1	tS.2.E
143	Termination sensor 3 temperature					
149	Termination sensor 3 selection	OFF tS.3.E			0 - 1	tS.3.E
144	Termination sensor 4 temperature					
150	Termination sensor 4 selection	OFF tS.4.E			0 - 1	tS.4.E
50	Defrost termination temperature			0 (CC) 1 (CO) 2 (OC) 3 (OO)	0 - 20 0 - 20 0 - 20 0 - 20	15 15 12 20
145	Minimum defrost duration (Defrost heater cycles on termination temperature (item 50) as required during this time)				00:00 - 00:30	00:10
57	Maximum defrost duration			0 (CC) 1 (CO) 2 (OC) 3 (OO)	00:05 - 00:59 00:05 - 00:59 00:05 - 00:59 00:05 - 00:59	00:20 00:20 00:20 00:40
59	Drain down duration			0 (CC) 1 (CO) 2 (OC) 3 (OO)	00:00 - 00:20 00:00 - 00:20 00:00 - 00:05 00:00 - 00:05	00:10 00:10 00:05 00:02
49	Liquid hold off duration (starts when drain down completed)				00:00 - 00:10	00:00



JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT		
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE	
<b>7.6 DEFROST FORCING FUNCTIONS</b>							
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 (When item 107 is indicating Jnet network initiated defrost then forced defrost sends the command to the plant for action. It is NOT actioned locally)	OFF Fd.on	Off Forced defrost on		0 - 1		
78	Inhibit defrost	OFF no.dF	Off No defrosts		0 - 1		
79	Forced refrigeration	OFF Fr.on	Off Forced refrigeration		0 - 1		
222	Enable forced defrost requirement to defrost coordinator	oFF F.r.En	Disabled Enabled		0 - 1	0	
221	Forced defrost requirement to defrost coordinator (requires item 222 set to 1)	0 - 63	Forced value				
<b>8. FAN CONTROL</b>							
108	Fan control	1	F.on	Fan runs always Fan off during defrost Fans off during electric defrost	0, 1 (CX)	1 - 2	F.on
		2	F.off		2, 3 (OX)	1 - 3	
		3	oFF.E				
109	Fan delay after defrost	00:00	Fans cycle on evap temperature		00:00 - 00:10	00:00	
<b>9. DOOR FUNCTIONS</b>							
128	Select door functions	OFF d.iP.E	Disabled Enabled		0 - 1	d.iP.E	
34	Time door presently open						
35	Total time door has been open in last 24 hours						
64	Door open refrigeration delay time			0 (CC) 1 (CO) 2 (OC) 3 (OO)	00:00 - 00:15 00:00 - 00:15 00:00 - 00:30 00:00 - 00:30	00:05 00:05 00:00 00:00	
33	Door open alarm delay time				00:00 - 00:30	00:15	
126	Coldstore door open critical alarm selection	non.C Crit	Alarm non critical Alarm critical		0 - 1	non.C	

JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE
<b>10. Jnet COMMAND FUNCTIONS</b>						
62	Jnet network controlled Shutdown selection	oFF Sh.dn	Disabled Enabled		0 - 1	oFF
63	Jnet network command for shutdown	nonE Sh.dn FAn.S	No command Shutdown Fans only shutdown			
134	Enable Jnet network command to cut off refrigeration in event of plant fault	Off	Disabled		0 - 1	Off
135	Display Jnet network commands	nonE O.S.df  PL.Ft P.C.Ft	No command Other associated systems on defrost Plant fault Plant comms fault			
<b>11. DISPLAY FUNCTIONS</b>						
129	Display type (v0.00.3 on)	0 1	LEd5 LED1	LED5 display Backlit LCD display	0 - 1	LEd5
121	Display pushbutton status	Pb - - Pb1 - Pb - 2 Pb12	OFF Button 1 pressed Button 2 pressed Both buttons pressed			
<b>12. CLOCK CALENDAR</b>						
Note, the time and date can be displayed as standard or daylight saving (summer) time. This choice is made on item 18. When daylight saving is chosen and the controller is connected to a JTL Network Controller supporting daylight saving operation, the change is made automatically to the current EU directive.						
2	Time of day				00:00 - 23:59	
3	Day of week	Sun - Sat	0 = Sunday 1 = Monday etc			
4	Date				01:01 - 31:12	
5	Year				2004 - 2034	
18	Daylight saving enable	Stnd dAY.S	Standard time Daylight saving time		0 - 1	Stnd

JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE
<b>13. RESTORE FACTORY DEFAULTS</b>						
To set the factory defaults into the memory of the controller, first set the bitswitches as shown, then set item 9 to the set default value of "1234". This should be done on initial commissioning of the unit or when the unit is being installed as a replacement part.						
966	Virtual bitswitch setting From version 0.00.5 the physical bitswitches have been replaced by virtual bitswitches. Set this item in place of using the bitswitches which are redundant.	0 1 2 3	Frozen food Ice cream Chiller Produce (off cycle)	0 1 2 3		
9	Set default values selected by Bitswitch  Note: Setting the bitswitches alone has no effect.	1234	Set default values	0 (CC) 1 (CO) 2 (OC) 3 (OO)	Frozen food Ice cream Chiller Produce (off cycle)  where C = CLOSED or ON O = OPEN or OFF x = Don't care  For unmarked switches C = dot visible O = dot not visible	
		1066	Write to NVRAM without delay			
<b>14. RESTORE PARAMETERS FROM NETWORK (from v0.00.5)</b>						
To restore the data from the network first set the virtual bitswitch on item 966 and the appropriate unit number on item 1. Then check item 965 to see if this facility is available on the network. The information on item 965 is received from a network broadcast every few minutes. If the restore parameter facility is available and operational then item 965 will be set to a non zero number e.g. 2. To request restore parameters set item 964 to 1234. Item 963 displays parameters restore progress. When all parameters are downloaded item 964 is cleared to 0.						
965	Master database port	0 1 - 4	Not in use NC port no			
964	Set restore parameters from network	1234	Request restore			
963	Parameter restore progress	rdy  nl.r din.p dnl.c FAIL	Restore function possible Restore requested Restore in progress Restore complete Restore fault			
959	Requested template	0 1-9999	As commissioned Template number		0 - 9999	

JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE
<b>15. SYSTEM ALARMS</b>						
80	Group alarm 81 - 88	0 1 - 255	No alarms Check 81 - 88			
81	Coldstore overtemperature	CLr C.Ht	No fault Fault			
82	Coldstore temperature sensor fault	CLr Ct.Sn	No fault Fault			
83	Air on sensor fault	CLr AO.Sn	No fault Fault			
84	Air off sensor fault	CLr AF.Sn	No fault Fault			
85	Sensor power supply fault	CLr PS.Ft	No fault Fault			
86	Non critical door open alarm	CLr d0.Ft	No fault Fault			
87	Shutdown alarm	CLr Sh.dn	No fault Fault			
88	All sensors faulty, deselected or disconnected	CLr t.SEn	No fault Fault			
90	Group alarm 91 - 98	0 1 - 255	No alarms Check 91 - 98			
91	Termination 1 sensor fault	CLr t1.Sn	No fault Fault			
92	Termination 2 sensor fault	CLr t2.Sn	No fault Fault			
93	Termination 3 sensor fault	CLr t3.Sn	No fault Fault			
94	Termination 4 sensor fault	CLr t4.Sn	No fault Fault			
96	Critical door open alarm	CLr d0.Ft	No fault Fault			
97	Expected defrosts have not been detected Note, This alarm normally depends on the setting in item 69. When the defrost initiation strategy is set to PREDICT, the alarm occurs 3 hours after the defrost requirement has been set when no defrost has occurred.	CLr dEF.F	No fault Fault			
250	Group alarms 251 - 258	0 1 - 255	No alarms Check 251 - 258			
251	Forced defrost activated	CLr F.dEF	No fault Forced defrost			
252	Network communications failure	CLr FAIL	No fault Comms failure			
257	Man trapped	CLr traP	No fault Man trapped			
258	Backup defrost strategy in operation	CLr d.bAc	No fault Backup defrost			

JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE
<b>16. DIAGNOSTIC &amp; TEST FUNCTIONS</b>						
44	Power off duration					
6	Communications speed (in kilo baud)	4800	Baud rate			
7	Communications (Half duplex)	HALF	2 wire			
967	Latest unit number polled on zone (from v0.0.5)					
973	Latest polling interval  This time shows the polling interval between the last two successful network awake messages to this unit.	min:sec				
974	Time since last awake message	min:sec				
975	Network receive timer  Each time a message is read correctly the timer is set to 10 it counts down. If the timer reaches 0 then the communications module is reset.	seconds	(counts down to 0)			
976	Network receive bad character counter  The counter counts down from a preset number. When the counter reaches 0 the communications module is reset.		(counts down to 0)			
977	Transmit control line status for the operation of the Jnet network communications.	Hi Lo	Transmit Receive			
8	Bitswitch setting	Fr.Fd (0) ICE.C (1) Chil (2) oFF.C (3)	Frozen food Ice cream Chiller Produce (off cycle)			
89	Sensor excitation value (Factory test)		Not used			
99	Test digital display	CLr SEt	Not active Test active		0 - 1	
100	Test inputs	iP - - iP1 - iP - 2 iP12	No inputs Input 1 on Input 2 on Both inputs on			
101	Test output relays	CLr SEt	Not active Test active		0 - 1	
121	Display pushbutton status	Pb - - Pb1 - Pb - 2 Pb12	OFF Button 1 pressed Button 2 pressed Both buttons pressed			
421	Temp. sensor 1 reading					
422	Temp. sensor 2 reading					
423	Temp. sensor 3 reading					
424	Temp. sensor 4 reading					
425	Temp. sensor 5 reading					
426	Temp. sensor 6 reading					

JTL COLDSTORE CONTROLLER ITEM NUMBERS					LACT	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULTS	RANGE	ITEM 9 VALUE
427	Temp. sensor 7 reading					
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			

<b>DISPLAY DATA</b>		<b>LACT</b>
<b>NORMAL DISPLAY</b>		
- 99°	Cabinet temperature (item 20 rounded)	
dEF	Defrost	
dEFr	Defrost recovery	
OFF	Shutdown	
FAnS	Fans only	
--	Display data error	
JTL	Start-up text	
<b>ALARM TEXT (in descending priority order)</b>		
t.SEn	All sensors faulty, deselected or disconnected	
Ht	High cabinet or air off temperature	
AL.IP	External alarm input	
door	Door open alarm	
ISOL	Unit shutdown	
<b>OTHER TEXT (only available with LED5 display)</b>		
tt1	Termination temperature 1 follows this text	
tt2	Termination temperature 2 follows this text	
tt3	Termination temperature 3 follows this text	
tt4	Termination temperature 4 follows this text	
A.on	Air on temperature follows this text	
A.oFF	Air off temperature follows this text	
Ct	Coldroom temperature follows this text	
L.dEF	Time since last defrost follows this text	
n.dEF	Time of next defrost follows this text	
SEt.P	Coldstore temperature setpoint follows this text	