CONTENTS

1. Jnet NETWORK IDENTIFICATION 2
2. TEMPERATURES 2
3. TEMPERATURE ALARMS 2
4. TEMPERATURE CONTROL 3
5. COMPRESSOR CONTROL 4
6. INPUTS & OUTPUTS 4
7. DEFROST CONTROL 5
7.1 DATA & STRATEGIES 5
7.2 REAL TIME INITIATED DEFROST TIMES 6
7.3 Jnet NETWORK INITIATED DEFROST 6
7.4 COORDINATED DEFROST INITIATION 7
7.5 DEFROST TERMINATION 8
7.6 DEFROST FORCING FUNCTIONS 8
8. FAN CONTROL 9
9. DRAWER MONITORING 9
10. Jnet COMMAND FUNCTIONS 9
11. LOAD SHEDDING 10
12. DISPLAY FUNCTIONS 10
13. CLOCK CALENDAR 10
14. RESTORE FACTORY DEFAULTS 11
15 RESTORE PARAMETERS FROM NETWORK 11
16. SYSTEM ALARMS 12
17. DIAGNOSTIC & TEST FUNCTIONS 13
DISPLAY DATA 14
GRAPHICAL DISPLAY DATA 15

JTL CABINET CONTROLLER ITEM NUMBERS					UBIA	
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
1. Jnet NETWORK IDENTIFICATION						
0	Unit type	UBIA	Unit type			
19	Software Version number					
1	Unit number				0.1 - 899.8	
2. TEMPERATURES Note: Temperatures can be displayed on the maintenance unit in degrees Celsius or Fahrenheit. The choice is made on item 9392. All setpoint ranges in this document are shown in Celsius.						
20	Estimated cabinet temperature (calculated from Air on and Air off temperatures)					
33	Cabinet temperature ratio (Item 20 calculated as value between Air off and Air on using this ratio)				20 - 80	50
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 AF.EN	Disabled Enabled		0 - 1	AF.EN
247	Site temperature (from broadcast)					
248	Site humidity (from broadcast)					
246	Site absolute humidity (from broadcast)					
9392	Temperature display unit choice	CELS FAhr	Celsius Fahrenheit		0 - 1	CELS
3. TEMPERATURE ALARMS						
26	Average cabinet temperature error					
32	Cabinet overtemperature alarm tolerance - frozen	0.0	Disable Ht alarm		0 - 20	10.0
377	Alternative cabinet over temperature alarm tolerance - chilled				0 - 10	5
480	Cabinet under temperature alarm tolerance - frozen	0.0	Disable LT alarm		0 to -40	-10.0
378	Alternative under temperature alarm tolerance - chilled				0 to -20	-5
481	Over temperature warning time	00:00	Disable alarm		00:00 to 23.59	6:00
482	Cabinet over temperature warning time accumulated in last 24 hours					
27	Average air off temperature error					

JTL CABINET CONTROLLER ITEM NUMBERS						UBIA	
ITEM	**DESCRIPTION**	**CODE**		**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
34	Air off over temperature tolerance - frozen	0.0		Disable Ht alarm		0 - 30	10.0
379	Alternative air off over temperature tolerance - chilled					0 - 30	5
47	Period over which averages are taken					00:30 - 03:00	01:00
4. TEMPERATURE CONTROL							
30	Current cabinet temperature setpoint (target for item 20) (See items 123 & 127)						
123	Temperature setpoint selection	1 2 3	E.2.SP Fr.Fd Ch.Fd	Display switch selectable Frozen only Chilled only		1 - 3	E.2.SP
124	Cabinet temperature setpoint - primary - Frozen (target for item 20)					-30 to -15	- 20
125	Alternative cabinet temperature setpoint - secondary - chilled					-5 to 10	2
126	Selected setpoint in operation	Fr.Fd Ch.Fd		Frozen food setpoint (item 124) Chilled food setpoint (item 125)			
31	Air off setpoint (used in fault situations) - frozen					- 39 to -20	- 27
376	Alternative Air off setpoint - chilled					-10 to +5	-6
140	Temperature deadband					1.0 - 3.0	2.0
48	Max starts/hour (Anti-shortcycling timer when using liquid valve relay to control a condensing unit)	0 1 2 3 4	unLm 10.PH 15.PH 20.PH 6.PH	Unlimited 10 starts per hour 15 starts per hour 20 starts per hour 6 starts per hour		0 - 4	6.PH
240	Compressor run time percentage for last sample period						
241	Average compressor run time percentage over data logging interval period						

JTL CABINET CONTROLLER ITEM NUMBERS						UBIA	
ITEM	**DESCRIPTION**	**CODE**		**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
5. COMPRESSOR CONTROL							
363 (48)	Max starts/hour (Anti-shortcycling timer when using liquid valve relay to control a condensing unit)	0 1 2 3 4	unLm 10.PH 15.PH 20.PH 6.PH	Unlimited 10 starts per hour 15 starts per hour 20 starts per hour 6 starts per hour		0 - 4	6.PH
364	Compressor restart times (secs)						
366	Compressor minimum off time (secs)					15 - 180	30
368 (71)	Compressor input	C.FL.t C.Hty		No input Compressor healthy			
369 (73)	Compressor output	nonE C.run		No output Compressor running			
6. INPUTS & OUTPUTS							
70	Operating mode	rEFr dEFr dF.rc dr.dn Sh.dn		Refrigeration Defrost Defrost recovery Drain down Shutdown			
71	Compressor healthy input (DI1)	C.FLt C.Hty		Fault Compressor healthy			
371	Drawer open input (DI2)	dr.cL dr.oP		Closed Open			
73	Compressor output (DQ1)	OFF C.run		Off Compressor running			
74	Fans output (DQ2)	oFF Fn.on		Off Trim heater on			
72	Defrost output (DQ3)	oFF dF.on		Relay deenergised Defrost control on			

JTL CABINET CONTROLLER ITEM NUMBERS						UBIA	
ITEM	**DESCRIPTION**	**CODE**		**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
7. DEFROST CONTROL							
7.1 DATA & STRATEGIES							
40	Duration of last defrost						
41	Time since end of last defrost						
42	Duration of current defrost						
107 (411)	Defrost strategy	0 1 2 3 4 5 6 7 8 9	nonE nonE n.i.L.b rt.in none n.i.F.b c.d.L.b c.d.F.b	None None Network initiated (learned backup) Internal clock initiated None Not used Not used Network initiated (fixed schedule backup) Coordinated defrost (learned backup) Coordinated defrost (fixed schedule backup)		0 - 9	rt.in
412	Current defrost initiation strategy in operation	nonE JnEt rt.in		None Jnet network initiated Internal clock initiated			
219	Jnet network defrost arrangement	nonE cord dEF.S		None Defrost co-ordinator present on network Timed defrost scheduler present			
69	No of defrosts required per day (Note, When coordinated defrost is in operation this item sets the number of defrosts a day that are required.)	0 1 - 12		Function disabled No of defrosts		0 - 12	4

JTL CABINET CONTROLLER ITEM NUMBERS					UBIA	
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
7.2 REAL TIME INITIATED DEFROST TIMES 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		00:00 - 23:59	01:00
52	Defrost time 2	00:00 00:01 - 23:59	Defrost disabled Defrost enabled		00:00 - 23:59	07:00
53	Defrost time 3	00:00 00:01 - 23:59	Defrost disabled Defrost enabled		00:00 - 23:59	13:00
54	Defrost time 4	00:00 00:01 - 23:59	Defrost disabled Defrost enabled		00:00 - 23:59	19:00
55	Defrost time 5	00:00 00:01 - 23:59	Defrost disabled Defrost enabled		00:00 - 23:59	00:00
56	Defrost time 6	00:00 00:01 - 23:59	Defrost disabled Defrost enabled		00:00 - 23:59	00:00
60	Defrost schedule selection	24 hr	24 hour schedule		0 - 1	24 hr
43	Time next defrost is due					
7.3 Jnet NETWORK INITIATED DEFROST						
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 CABINET CONTROLLER ITEM NUMBERS						UBIA	
ITEM	**DESCRIPTION**	**CODE**		**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
7.4 COORDINATED DEFROST INITIATION							
69	No of defrosts required per day (Note, When coordinated defrost is in operation this item sets the number of defrosts a day that are required.)	0 1 - 12		Function disabled No of defrosts		0 - 12	4
224	Time since the start of last defrost						
216	Defrost requirement to defrost coordinator						
223	Defrost requirement priority					1 - 8	1
211	Evaporator suction group	none		Not used			
214 (414)	Defrost heater choice	0 1 2 3 4 5 6	brn blac GrEY 3 - Ph oFF.C	Electric brown phase Electric black phase Electric Grey phase Electric 3 phase Not used Not used Off cycle		0 - 6	3-Ph
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		1 - 31	1
210	Electrical distribution Panel No.					0 - 7	0
215 (46)	Jnet network initiated defrost command status (repeats item 46)	P.dEF F.dEF nonE		Defrost Forced defrost No command			

JTL CABINET CONTROLLER ITEM NUMBERS					UBIA	
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
217	Evaporator data to plant					
220	Defrost coordinator status	oFF cord	No defrost coordinator Defrost coordinator present on network			
321 to 336	Sorted array of average reading samples (frames)					
7.5 DEFROST TERMINATION						
144	Termination method Selection	A.OFF tot	Air off sensor Time only			A.OFF
50	Defrost termination temperature				0 - 20	5
145	Minimum defrost duration (Defrost heater cycles on termination temperature (item 50) as required during this time)				00:00 - 00:30	00:15
57	Maximum defrost duration				00:05 - 00:40	00:45
59	Drain down duration				00:00 - 00:10	00:05
7.6 DEFROST 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 (When item 412 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			

JTL CABINET CONTROLLER ITEM NUMBERS						UBIA	
ITEM	**DESCRIPTION**	**CODE**		**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
8. FAN CONTROL							
108	Fan control Note: When "Fan runs always" is selected the fans DO NOT stop during or after defrost.	0 1 2	nonE F.on F.oFF	Not controlled Fan runs always Fan off during defrost		0 - 2	F.oFF
109	Fan delay after defrost	00:00				00:00 - 00:10	00:00
74	Fans output (DQ2)	oFF Fn.on		Off Trim heater on			
9. DRAWER MONITORING							
374	Time drawer presently open						
375	Total time drawer has been open in last 24hrs						
372	Drawer open compressor stop delay (mins)					1 - 15	5
373	Drawer open alarm delay time	00:00		Alarm disabled		00:00 - 00:30	00:15
371	Drawer open input (DI2)	dr-cL dr-oP		Closed Open			
10. Jnet COMMAND FUNCTIONS							
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			
238	Select times for shutdown control	0 1 - 8		Disabled Timer number		0 - 8	**0**
239	Shutdown command status	CLr t.S.dn		Normal Shutdown			

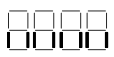
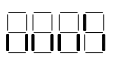
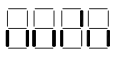
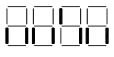
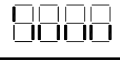
JTL CABINET CONTROLLER ITEM NUMBERS						UBIA	
ITEM	**DESCRIPTION**	**CODE**		**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
11. LOAD SHEDDING							
600	Enable load shedding	0 1	off L.S.En	disabled enabled		0 - 1	oFF
601	Inhibit defrost	0 1 - 8		disabled Global plant input no		0 - 8	0
602	Inhibit refrigeration	0 1 - 8		disabled Global plant input no		0 - 8	0
603	Fans off	0 0 - 8		disabled Global plant input no		0 - 8	0
12. DISPLAY FUNCTIONS							
9392	Temperature display unit choice	CELS FAhr		Celsius Fahrenheit		0 - 1	CELS
136	Enable fans only operation from display switches	Off E.d.Fo		Disable Enable		0 - 1	Off
138	Enable Shutdown from display switches	OFF E.d.Sd		disable Enable		0 - 1	Off
121	Display switch status	Si - - Si1 - Si- 2 Si12		OFF Position 1 Position 2 Both			
199	Backlight control	0 1 2 3	B.oFF BL.on BL.F.F BL.n.F	Backlight off Backlight on Backlight off, flashes for alarm Backlight on, flashes for alarm			
13. CLOCK CALENDAR 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					2015 - 2099	
18	Daylight saving enable	Stnd dAY.S		Standard time Daylight saving time		0 - 1	Stnd

JTL CABINET CONTROLLER ITEM NUMBERS					UBIA	
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
14. RESTORE FACTORY DEFAULTS 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	0	Unused			
9	Set default values	1234	Set default values			
		1066	Write to NVRAM without delay			
15. RESTORE PARAMETERS FROM NETWORK To restore the data from the network first restore factory defaults and set 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	Parameters restore progress	rdy dnl.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 CABINET CONTROLLER ITEM NUMBERS					UBIA	
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
16. SYSTEM ALARMS						
80	Group alarm 81 - 88	Graphical	See display data			
81	Cabinet overtemperature	CLr C.Ht	No fault Fault			
82	Air off overtemperature	CLr A.Ht	No fault Fault			
83	Air on sensor fault	CLr AO.Pr	No fault Fault			
84	Air off sensor fault	CLr AF.Pr	No fault Fault			
85	Sensor reference fault	CLr PS.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			
490	Group alarms 491 - 498	Graphical	See display data			
491	Low temperature	CLr C.Lt	No fault Fault			
492	Overtemperature warning	CLr C.I.Ht	No fault Fault			
493	Overtemperature warning timeout	CLr C.I.to	No fault Fault			
90	Group alarm 91 - 98 (see display data)	Graphical	See display data			
94	Expected defrosts have not been detected (Note, This alarm normally depends on the setting in item 69.	CLr dEF.F	No fault Fault			
250	Group alarms 251 - 258	Graphical	See display data			
251	Forced defrost activated	CLr F.dEF	No fault Forced defrost			
252	Network communications failure	CLr FAIL	No fault Comms failure			
258	Backup defrost strategy in operation	CLr d.bAc	No fault Backup defrost			
580	Group alarms 581 - 588	Graphical	See display data			
582	Compressor fault	CLr CP1.F	No fault Fault			
584	Drawer open alarm	CLr dr.oP	No fault Fault			

JTL CABINET CONTROLLER ITEM NUMBERS					UBIA	
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**FACTORY DEFAULTS**	**RANGE**	**ITEM 9 VALUE**
17. DIAGNOSTIC & TEST FUNCTIONS						
44	Power off duration					
6	Communications speed (in kilo baud)	4.8	Baud rate			
7	Communications (Half duplex)	HALF	2 wire			
967	Latest unit no polled on zone					
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				
8	Bitswitch setting		Not used			
89	Sensor excitation value (Factory test)		Not used			
99	Test digital display	CLr SEt	Not active Test active		0 - 1	
100	Input test	Graphical	see display data			
101	Test output relays	Clr SEt	Not active Test active		0 - 1	
121	Display switch status	Si - - Si1 - Si- 2 Si12	OFF Position 1 Position 2 Both			
421	Temperature sensor 1 reading					
422	Temperature sensor 2 reading					
428	Temperature sensor open circuit indication	0 1 2	No fault Sensor 1 Sensor 2			
429	Temperature sensor short circuit indication					
10	Processor alarms (11 - 17)	Graphical	See display data			
16	NVRAM fault	CLr n.Ft	No Fault Fault			

DISPLAY DATA	UBIA
GRAPHICS DISPLAY	
	Fans running
	Defrost recovery
	Defrost
	Fault condition
NORMAL DISPLAY	
- 99^{c}	Cabinet temperature (item 20 rounded)
dEF	Defrost (with graphics above)
dEF	Defrost recovery (with graphics above)
Off	Unit Shutdown or fans only mode (indicated by fan symbol)
–	Display data error
ALARM TEXT (in descending priority order)	
SEn	All sensors faulty, deselected or disconnected
Ht	High cabinet temperature
Lt	Low cabinet temperature
ISOL	Unit shutdown
OTHER TEXT	
jtl	Start-up text
Lo	Switched to primary setpoint
Hi	Switched to secondary setpoint

GRAPHICAL DISPLAY OF BIT DATA				
Graphical display of bit data used on items where the data was shown previously as a decimal value	bit	Graphic	Value	
	None		0	
	1		1	
	2		2	
	3		4	
	4		8	
	5		16	
	6		32	
	7		34	
	8		128	