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JTL COLDSTORE CONTROLLER ITEM NUMBERS					UACU	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
1. Jnet NETWORK IDENTIFICATION						
0	Unit type	UACU	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 122. All setpoint ranges in this document are shown in celsius.						
20	Coldroom temperature					
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 temperature					
147	Termination sensor selection	OFF tS.En			0 - 1	OFF
247	Site temperature (from broadcast)					
248	Site relative humidity (from broadcast)					
246	Site absolute humidity (from broadcast)					
122	Temperature display unit choice	CELS FAhr	Celsius Fahrenheit		0 - 1	CELS
3. TEMPERATURE ALARMS						
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 1 2 3	0 - 20 0 - 20 0 - 20 0 - 20	10 10 5 10
480	Under temperature alarm tolerance	0.0	Disable LT alarm	0, 1 2, 3	0 to -40 0 to -40	-20.0 -5.0
481	Overtemperature warning time	00.00	Disable alarm	0 - 2 3	00:00 to 23.59 00:00 to 23.59	6:00 12:00
482	Overtemperature accumulated time in last 24 hours					
47	Period over which averages are taken			0, 1 2, 3	00:30 - 03:00	02:00

JTL COLDSTORE CONTROLLER ITEM NUMBERS						UACU	
ITEM	DESCRIPTION	CODE		CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
4. TEMPERATURE CONTROL							
67	Isolate coldroom	run ISOL		Normal operation Coldroom isolated		0 - 1	run
275	Control temperature	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 1 2 3	- 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
28	Current Air off 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						
5. FLOW							
160	Flow valve control	oFF F.C.E.n		Disabled Enabled		0 - 1	F.C.E.n
278	Temperature control error						
204	Flow reading %						
168	Current opening %						
172	PI output (before modification)						
277	Proportional output (P)						
276	Integral output (I)						
170	Valve control gain (proportional term)					0 - 100	20
171	Valve control time constant (integral term)	0 1 - 250		Integral disabled Time constant		0 - 250	20
163	Maximum valve opening %					10 - 100	100
164	Minimum valve opening %					0 - 50	0
166	Forced valve opening %					0 - 100	
167	Force valve shut	OFF F.Sht		Off Forced shut		0 - 1	

JTL COLDSTORE CONTROLLER ITEM NUMBERS						UACU	
ITEM	DESCRIPTION	CODE		CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
6. INPUTS & OUTPUTS							
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 2 state	OFF F.hty		No input Fan healthy			
139	Input 3 state	Off PLt.F		No input Plant fault			
274	Input 4 state	Off Auto		No input Auto input			
74	Auxiliary heater and fan relays (outputs 1 & 2)	oFF Fn.on Hr.on Both		Off Fans on Heater on Both on			
72	Defrost relay (output 3)	oFF dc.on		Relay deenergised Defrost control on			
73	Liquid solenoid relay (output 4)	OFF LS.on		Off Demanding refrig.			
7. SUCTION PRESSURE OPTIMISATION							
200	Disable suction pressure optimisation for this unit	En.SO di.SO		Enable Disable		0 - 1	En.SO
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 Frain down Liquid hold off Pump down Shutdown			
217	Plant data to network (binary value interpreted on item 211)						

JTL COLDSTORE CONTROLLER ITEM NUMBERS						UACU	
ITEM	DESCRIPTION	CODE		CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
8. DEFROST CONTROL							
8.1 DATA & STRATEGIES							
40	Duration of last defrost						
41	Time since end of last defrost						
42	Duration of current defrost						
107 (411)	Defrost initiation strategy	0 1 2 3 4 5 6 7 8 9	nonE nonE n.i.L.b rt.in none none nonE n.i.F.b c.d.L.b c.d.F.b	None Not used 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)		0 - 9	nonE
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 PrEd		None Defrost co-ordinator present on network Timed defrost scheduler present on network Predict co-ordinator present on network			
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
8.2 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	0 1 2 3	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	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 1 2 3	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	0 1	E.dEF oFF.C	Electric defrost Off Cycle defrost		0 - 1	E.dEF

JTL COLDSTORE CONTROLLER ITEM NUMBERS						UACU	
ITEM	DESCRIPTION	CODE		CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
53	Defrost time 3	00:00 00:01 - 23:59		Defrost disabled Defrost enabled	0 1 2 3	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	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 1 2 3	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	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	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	0 1	E.dEF oFF.C	Electric defrost Off Cycle defrost		0 - 1	E.dEF
8.3 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)						
8.4 COORDINATED DEFROST INITIATION 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 start of last defrost						
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 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	brn

JTL COLDSTORE CONTROLLER ITEM NUMBERS						UACU	
ITEM	DESCRIPTION	CODE		CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
213	Elextric circuit choice (depends on item 214)	1	cct1	Circuit 1		1 - 31	cct1
		2	cct2	Circuit 2			
		3	cct3	Circuit 3			
		4	cct4	Circuit 4			
		5	cct5	Circuit 5			
		6	cct6	Circuit 6			
		7	cct7	Circuit 7			
		8	cct8	Circuit 8			
		9	cct9	Circuit 9			
		10	cc10	Circuit 10			
		11	cc11	Circuit 11			
		12	cc12	Circuit 12			
		13	cc13	Circuit 13			
		14	cc14	Circuit 14			
		15	cc15	Circuit 15			
		16	cc16	Circuit 16			
		17	cc17	Circuit 17			
		18	cc18	Circuit 18			
		19	cc19	Circuit 19			
		20	cc20	Circuit 20			
		21	cc21	Circuit 21			
		22	cc22	Circuit 22			
		23	cc23	Circuit 23			
		24	cc24	Circuit 24			
		25	cc25	Circuit 25			
		26	cc26	Circuit 26			
		27	cc27	Circuit 27			
		28	cc28	Circuit 28			
		29	cc29	Circuit 29			
		30	cc30	Circuit 30			
		31	cc31	Circuit 31			
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			
217	Evaporator data to plant						
219	Jnet network defrost arrangement	nonE cord dEF.S PrEd		None Defrost co-ordinator present on network Timed defrost scheduler present on network Predict co-ordinator present on network			
220	Defrost coordinator status	oFF cord		No defrost coordinator Defrost coordinator present on network			

JTL COLDSTORE CONTROLLER ITEM NUMBERS						UACU	
ITEM	DESCRIPTION	CODE		CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
8.5 DEFROST TERMINATION							
144 (413)	Termination method Selection	2	A.OFF tEr tot	Air off sensor Termination sensor Time only	0, 1 2	2 - 4	tEr
		3 4			3	2 - 4	tot
141	Termination sensor temperature						
147	Termination sensor selection	OFF tS.En				0 - 1	tS.En
50	Defrost termination temperature (the sensor used is item 144)				0 1 2 3	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 1 2 3	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 1 2 3	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
8.6 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 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			
9. FAN CONTROL							
108	Fan control	1	F.on F.oFF oFF.E	Fan runs always Fan off during defrost Fans off during electric defrost	0, 1	1 - 2	F.on
		2 3			2, 3	1 - 3	
109	Fan delay after defrost					00:00 - 00:10	00:00

JTL COLDSTORE CONTROLLER ITEM NUMBERS						UACU	
ITEM	DESCRIPTION	CODE		CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
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			
133	Enable plant to override temperature control and run refrigeration regardless of the temperature setpoint	Off nrc.E		Disabled Enabled		0 - 1	Off
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			
238	Select times for shutdown control	0 1-8		Disabled Time number		0 - 8	0
239	Shutdown command status	CLr t.s.dn		Normal Shutdown			
11. DISPLAY FUNCTIONS							
122	Temperature display unit choice	CELS FAhr		Celsius Fahrenheit		0 - 1	CELS
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		0 - 3	
12. 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 info		0 - 8	0
602	Inhibit refrigeration	0 1-8		Disabled Global plant input info		0 - 8	0
603	Fans off	0 0-8		Disabled Global plant input info		0 - 8	0

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UACU	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
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				2016 - 2046	
18	Daylight saving enable	Stnd dAY.S	Standard time Daylight saving time		0 - 1	Stnd
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 1 2 3	Frozen food Ice cream Chiller Produce (off cycle)			
9	Set default values selected by Bitswitch Note: Setting the bitswitches alone has no effect.	1234	Set default values	0 1 2 3	Frozen food Ice cream Chiller Produce (off cycle)	
		1066	Write to NVRAM without delay			
15. RESTORE PARAMETERS FROM NETWORK						
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 dnl.r din.p dnl.c FAIL	Restore function possible Restore requested Restore in progress Restore complete Restore fault			
959	Requested template		As commissioned Template number		0 - 9999	

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UACU	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
16. SYSTEM ALARMS						
80	Group alarm 81 - 88 (see display data)	Graphical	See display data			
81	Coldstore overtemperature	CLr C.Ht	No fault Fault			
82	Plant fault	CLr PLt.F	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			
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			
91	Termination sensor fault	CLr dt.Pr	No fault Fault			
94	Expected defrosts have not been detected	CLr dEF.F	No fault Fault			
250	Group alarms 251 - 258 (see display data)	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			
254	Evaporator fan fault	CLr FAn.F	No fault Fan fault			
258	Backup defrost strategy in operation	CLr d.bAc	No fault Backup defrost			

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UACU	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
17. DIAGNOSTIC & TEST FUNCTIONS						
44	Power off duration					
6	Communications speed (in kilo baud)	600 4800	Baud rate 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				
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	0 1 2 3	Frozen food Ice cream Chiller Produce (off cycle)			
99	Test digital display	Clr SEt	Not active Test active		0 - 1	
100	Test inputs	- - - - 1 - - - - 2 - - - - 3 - - - - 4	No inputs Input 1 on Input 2 on Input 3 on Input 4 on			
101	Test output relays	Clr SEt	Not active Test active		0 - 1	
421	Temp. sensor 1 reading					
422	Temp. sensor 2 reading					
423	Temp. sensor 3 reading					
428	Temperature sensor open Circuit indication	0 1 2	No fault Sensor 1 Sensor 2			
429	Temperature sensor short Circuit indication	4	Sensor 3			
10	Processor alarms (11 - 17) (see display data)	Graphical	See display data			

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UACU	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
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			

DISPLAY DATA		UACU
NORMAL DISPLAY		
- 99°	Coldroom temperature (item 20 rounded)	
dEF	Defrost	
dEFr	Defrost recovery	
OFF	Shutdown	
FAnS	Fans only	
--	Display data error	
JTL	Start-up text	
ALARM TEXT (in descending priority order)		
t.SEn	All sensors faulty, deselected or disconnected	
Ht	High cabinet or air off temperature	
Lt	Low coldroom temperature	

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	Note: Where the data is shown as a decimal value the meaning is the sum of the associated value e.g. bits 2 and 5 set would be displayed as 18 (16+2)
	None		0	
	1		1	
	2		2	
	3		4	
	4		8	
	5		16	
	6		32	
	7		34	
	8		128	