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JTL CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
<b>1. Jnet NETWORK IDENTIFICATION</b>						
0	Unit type	SdPA	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	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)			CC CO OC OO	20 - 80 20 - 80 0 - 80 0 - 80	50 50 40 60
21	Air on temperature					
36	Air on sensor selection	OFF AO.En	Disabled Enabled		0 - 1	AO.En
22 (405)	Air off temperature Note: The data shown here is calculated depending on the setting on item 408 and on the selection on item 37.					
37 (409)	Air off sensor selection	0 1 2 3 4 5 6 7	none S 1 - - S - 2 - S - - 3 S 1 2 - S 1 - 3 S - 2 3 S 1 2 3	none selected Sensor 1 Sensor 2 Sensor 3 Sensor 1 & 2 Sensor 1 & 3 Sensor 2 & 3 Sensor 1, 2 & 3		0 - 7 S 1 2 3
401	Air off 1 temperature					
402	Air off 2 temperature					
403	Air off 3 temperature					
408	Overall air off calculation method	0 1 2 3 4 5 6	none Lo.rd Nd.rd Hi.rd A.All A.Lo A.Hi	Lowest air off reading Middle air off reading Highest air off rdng Average air off Average of lowest 2 Average of highest 2		1 - 6 Nd.rd
23	Evaporator temperature					
38	Evaporator sensor selection Note, requires item 37 set to none or 1 only	OFF EP.En	Disabled Enabled		0 - 1	OFF
24	Suction line temperature					
39	Suction line sensor selection Note, requires item 37 set to none or 1 only	OFF SP.En	Disabled Enabled		0 - 1	OFF
141	Termination sensor temperature					
147	Termination sensor selection	OFF tS.En			0 - 1	OFF
247	Site temperature (from broadcast)					
248	Site humidity (from broadcast)					

JTL CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
246	Site absolute humidity (from broadcast) (from v0.00.4)					
122	Temperature display unit choice	CELS FAhr	Celsius Fahrenheit		0 - 1	CELS
<b>3. TEMPERATURE ALARMS</b>						
26	Average cabinet temperature error					
32	Cabinet overtemperature alarm tolerance	0.0	Disable Ht alarm	CC CO OC OO	0 - 20 0 - 20 0 - 20 0 - 20	10 10 5 10
27	Average Air off temperature error					
34	Air off over temperature tolerance	0.0	Disable Ht alarm	CX OX	0 - 30 0 - 30	15 10
431	Average air off temperature 1 error					
432	Average air off temperature 2 error					
433	Average air off temperature 3 error					
47	Period over which averages are taken			Cx Ox	00:30 - 03:00	01:30 01:00

JTL CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
<b>4. TEMPERATURE CONTROL</b>						
275	Control temperature (from v0.00.4 on) Note: upto v0.00.3 control is on air off	1 2	A.oFF Cab.t	Air off Cabinet		0 - 1  Cab.t
30	Current cabinet temperature setpoint (target for item 20) (See items 123 & 127)					
123	Enable 2nd setpoint	oFF E.2SP	Disabled Enabled		0 - 1	oFF
124	Cabinet temperature setpoint - primary (target for item 20)			CC CO OC OO	-30 to -15 -30 to -15 -5 to +10 -5 to +10	-20 -26 +1 +4
125	Alternative cabinet temperature setpoint - secondary Note: Always use this setpoint as the higher of the 2 setpoints.			CC CO OC OO	-30 to -15 -30 to -15 0 to 10 0 to 10	-20 -26 5 10
126	Selected setpoint in operation	Lo  Hi	Main setpoint (item 124) Alternative setpoint (item 125)		0 - 1	Lo
31 (407)	Air off setpoint (starting point and lower limit for item 28)			CC CO OC OO	- 39 to -20 - 39 to -20 - 10 to +5 - 10 to +5	- 27 - 33 - 6 - 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 (406)	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					

JTL CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
<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	Defrost input	oFF dF.iP	Input off Input on			
65	Invert defrost input	no YES	Input=defrost No input=defrost		0 - 1	no
72	Defrost relay	oFF dc.on	Relay deenergised Defrost control on			
68	Defrost relay type	n.o n.c	normally open normally closed		0 - 1	n.o
73	Liquid solenoid relay	OFF LS.on	Off Demanding refrig.			
75	Defrost relay mode selection	d.tEr d.Con	Defrost termination Defrost control		0 - 1	d.Con
118	Lighting contactor type selection (shown for lights-on state)	n.o n.c	normally open normally closed		0 - 1	n.c
<b>6. SUCTION PRESSURE OPTIMISATION</b>						
200	up to v0.00.0 Disable suction pressure optimisation for this unit when both air sensors are faulty  from V0.00.1 Disable suction pressure optimisation for this unit . Note: Suction pressure optimisation is disabled when both air sensors are faulty regardless of this setting.	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)	0 or 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	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			

JTL CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
217	Plant data to network (binary value interpreted on item 211)					
<b>7. DEFROST CONTROL</b>						
<b>7.1 DATA &amp; STRATEGIES</b>						
40	Duration of last defrost					
41	Time since end of last defrost					
42	Duration of current defrost					
107 (411)	Defrost strategy	0 nonE 1 SL.in 2 n.i.L.b 3 rt.in 4 iP.in 5 - 6 - 7 n.i.F.b 8 c.d.L.b 9 c.d.F.b	None Suction initiated Network initiated (learned backup) Internal clock initiated External clock initiated 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 SL.in JnEt rt.in iP.in	None Suction initiated Jnet network initiated Internal clock initiated External clock initiated			
68	Defrost relay type	n.o n.c	normally open normally closed		0 - 1	n.o
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 - 12	Function disabled No of defrosts		0 - 12	3
61	Pump down duration				00:00 - 00:10	00:00

JTL CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
<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	CC CO OC 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
52	Defrost time 2	00:00 00:01 - 23:59	Defrost disabled Defrost enabled	CC CO OC 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
53	Defrost time 3	00:00 00:01 - 23:59	Defrost disabled Defrost enabled	CC CO OC 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
54	Defrost time 4	00:00 00:01 - 23:59	Defrost disabled Defrost enabled	CC CO OC 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
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 12 hr	24 hour schedule 12 hour schedule		0 - 1	24 hr
43	Time next defrost is due					
<b>7.3 SUCTION INITIATED DEFROST</b>						
58	Defrost initiation temperature (suction line sensor)			CC CO OC OO	-5 to +20 -5 to +20 0 - 20 0 - 20	0 0 +15 +10
<b>7.4 CONTACT INITIATED DEFROST</b>						
65	Invert defrost input	no YES	Input=defrost No input=defrost		0 - 1	no
<b>7.5 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 CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
<b>7.6 COORDINATED DEFROST INITIATION</b>						
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 - 12	Function disabled No of defrosts		0 - 12	3
224	Time since the start of last defrost (v0.00.0 on)					
216	Defrost requirement to defrost coordinator					
223	Defrost requirement priority				1 - 8	1
211	Evaporator suction group	0 nonE 1 Lt 2 Ht 3 SAT	Not selected Low temperature High temperature Satellite		0 - 3	nonE
214 (414)	Defrost heater choice	0 rEd 1 YELL 2 bLUe 3 3 - Ph 4 GAS.2 5 GAS.3 6 OFF.C	Electric red phase Electric yellow phase Electric blue phase Electric 3 phase 2 pipe gas 3 pipe gas Off cycle		0 - 6	rEd
213	Electric circuit choice (depends on item 214)	1 cct1 2 cct2 3 cct3 4 cct4 5 cct5 6 cct6 7 cct7	Circuit 1 Circuit 2 Circuit 3 Circuit 4 Circuit 5 Circuit 6 Circuit 7		1 - 7	1
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 CABINET CONTROLLER ITEM NUMBERS					SDPA		
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE	
				21			
<b>7.7 DEFROST TERMINATION</b>							
144 (413)	Termination method Selection	2 3 4	A.OFF tEr tot	Air off sensor Termination sensor Time only	Cx OC	2 - 4	EuAP
					OO	2 - 4	tot
141	Termination sensor temperature						
147	Termination sensor selection	OFF tS.En			0 - 1	OFF	
50	Defrost termination temperature (the sensor used is item 144)			CC CO OC 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			CC CO OC OO	00:05 - 00:40 00:05 - 00:40 00:05 - 00:59 00:05 - 00:59	00:20 00:20 00:20 00:40	
59	Drain down duration				00:00 - 00:10	00:05	
49	Liquid hold off duration (starts when drain down completed)				00:00 - 00:10	00:00	
<b>7.8 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				




JTL CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
<b>8. Jnet NETWORK LIGHTING CONTROL</b>						
Forced functions remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged.						
110	Select Jnet network lighting control	OFF LC.on	off Lighting control function selected		0 - 1	LC.on
113	Lights and blinds	on L.OFF	Lights on and blinds up Lights off and blinds down			
111	Jnet network lighting unit network command	LU.Co nonE	Lighting off command No command			
118	Lighting contactor type selection (shown for lights-on state)	n.o n.c	normally open normally closed		0 - 1	n.c
119	Lights off during shutdown selection	OFF En.L.S	Off Lights off during shutdown		0 - 1	Off
114	Force lights on	OFF L.on	Off Lights on		0 - 1	
115	Force lights off	OFF L.OFF	Off Lights off		0 - 1	
<b>9. 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	No command 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>10. DISPLAY FUNCTIONS</b>						
122	Temperature display unit choice	CELS FAhr	Celsius Fahrenheit		0 - 1	CELS
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			

JTL CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
<b>11. 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				1992 - 2022	
18	Daylight saving enable	Stnd dAY.S	Standard time Daylight saving time		0 - 1	Stnd
<b>12. 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.						
9	Set default values selected by Bitswitch  Note: Setting the bitswitches alone has no effect.	1234	Set default values	CC CO OC OO	Frozen food Ice cream Chiller Produce (off cycle)	
		1066	Write to NVRAM without delay		where C = CLOSED or ON O = OPEN or OFF x = Don't care  For unmarked switches C = dot visible O = dot not visible	

JTL CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
<b>13. SYSTEM ALARMS</b>						
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 1 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 power supply 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			
90	Group alarm 91 - 98	0 1 - 255	No alarms Check 91 - 98			
91	Termination sensor fault	Clr dt.Pr	No fault Fault			
92	Evaporator sensor fault	Clr EP.Pr	No fault Fault			
93	Suction line sensor fault	Clr SL.Pr	No fault Fault			
94	Expected defrosts have not been detected	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			
253	Air off 2 overtemperature	Clr A2.Ht				
254	Air off 3 overtemperature	Clr A3.Ht				
255	Air off 1 sensor fault	Clr A1.Sn				
256	Air off 2 sensor fault	Clr A2.Sn				
257	Air off 3 sensor fault	Clr A3.Sn				
258	Backup defrost strategy in operation	Clr d.bAc	No fault Backup defrost			

JTL CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
<b>14. DIAGNOSTIC &amp; TEST FUNCTIONS</b>						
44	Power off duration					
6	Communications speed (baud rate)	4.8	Kilo baud			
7	Communications (Half duplex)	HALF	2 wire			
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)	CC CO OC OO		
89	Sensor excitation value					
99	Test digital display	Clr SEt	Not active Test active		0 - 1	
100	Test input	iP - - iP1 -	No input Input on			
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					
423	Temperature sensor 3 reading					
424	Temperature sensor 4 reading					
425	Temperature sensor 5 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			

JTL CABINET CONTROLLER ITEM NUMBERS					SDPA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				21		
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		SDPA
<b>GRAPHICS DISPLAY</b>		
	Defrost recovery	
	Defrost	
	Fault condition	
<b>NORMAL DISPLAY</b>		
- 99 <sup>c</sup>	Cabinet temperature (item 20 rounded)	
dEF	Defrost & defrost recovery (see Graphics above)	
Off	Unit Shutdown mode	
--	Display data error	
<b>ALARM TEXT (in descending priority order)</b>		
SEn	All sensors faulty, deselected or disconnected	
Ht	High cabinet or air off temperature	
ISOL	Unit shutdown	
<b>OTHER TEXT</b>		
jtl	Start-up text	
Lo	Switched to primary setpoint	
Hi	Switched to secondary setpoint	