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SUCCEEDS® is the patented JTL algorithm for control of liquid injection into an evaporator using electronic expansion valves.

PREDICT® is the patented JTL pattern recognition algorithm for providing defrost on demand for the cabinets on a system

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
1. Jnet NETWORK IDENTIFICATION						
0	Unit type	UJcd	Unit type			
19	Software Version number					
1	Unit number				0.1 - 899.8	
2. TEMPERATURES						
Note: The 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	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 AF.En	Disabled Enabled		0 - 1	AF.En
23	Evaporator temperature					
38	Evaporator sensor selection	OFF EP.En	Disabled Enabled		0 - 1	EP.En
24	Suction line temperature					
39	Suction line sensor selection	OFF SP.En	Disabled Enabled		0 - 1	SP.En
25	Superheat (Evaporator temp - suction line temp)					
141	Termination sensor temperature					
147	Termination sensor selection	OFF tS.En			0 - 1	OFF
259	Saturated vapour temperature (dew)					
247	Site temperature (from broadcast)					
248	Site relative humidity (from broadcast)					
246	Site absolute humidity (from broadcast)					
9392	Temperature display unit choice	CELS FAhr	Celsius Fahrenheit		0 - 1	CELS

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
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	Coldstore overtemperature alarm tolerance	0.0	Disable HT alarm	0, 1, 3, 4 2, 5	0 - 20	10 5
480	Cabinet under temperature alarm tolerance	0.0	Disable LT alarm	0, 1, 4 2, 3, 5	0 to -40	-20.0 -5.0
481	Overtemperature warning time	00:00	Disable alarm	0, 1, 2, 4, 5 3	00:00 to 23.59	6:00 12:00
482	Cabinet overtemperature accumulated time in last 24 hours					
47	Period over which averages are taken				00:30 - 03:00	02:00
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 Coldroom	0 - 1	Cr.t
30	Coldstore temperature setpoint (target for item 21)			0, 4 1 2, 5 3	- 30 to -12 - 30 to -12 - 5 to +25 - 5 to +25	- 20 - 26 0 +4
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					

JTL COLDSTORE CONTROLLER ITEM NUMBERS						UJCD	
ITEM	DESCRIPTION	CODE		CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
5. ELECTRONIC EXPANSION VALVE CONTROL							
Note: Pressures can be displayed on the maintenance unit in psi, bar or kPa. The choice is made on item 9393. All setpoint ranges in this document are shown in psi.							
5.1 OPERATIONAL SUPERHEAT							
161	Superheat measurement method	1 2	2t Pt1	2 temperature Pressure transducer		1 - 2	Pt1
197	Current superheat method						
156	Operational Superheat (determined by strategy set on item 161)						
152	Suction line temperature						
151	Evaporator temperature						
155	Suction pressure (gauge)						
340	Local transducer enable	0 1	L.P.t.E L.P.t.d	Enabled Disabled		0 - 1	L.P.t.d
381	Suction pressure broadcast data set 1					0 - 9999	0
382	Suction pressure broadcast data set 2					0 - 9999	0
384	Suction pressure broadcast receive data set					0 - 9999	0
383	Received suction pressure from IP broadcast						
385	Unit section pressure recieved from						
158	Pressure transducer zero offset					-15.0 to +15.0	0.0
159	Auto zero pressure transducer offset						
175	Pressure transducer type (selected by refrigerant type item 157)	07 34 60		PTXV07 (-1 to 7 bar) PTXV34 (-1 to 34 bar) PTXV60G (0 to 60 bar)			
177	Pressure transducer calibration method Note: Auto zero adjustment is shown on item 159. Network zero adjustment is shown on item 206.	0 1 2	nonE A.Pt.O nEt.A	None Auto zero Network adjustment		0 - 2	nonE
178	Rate of fall of superheat to trigger auto zero sequence (°C/min)					1.0 - 10.0	3.0
341	Broadcast pressure 1 reading						
342	Broadcast pressure 2 reading						
348	Broadcast pressure timeout					30 - 240	60

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD		
ITEM	DESCRIPTION	CODE		CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
9393	Pressure display unit choice	0	MPa	MPa		0 - 4	PSI
		1	PSI	p.s.i.			
		2	bAr	bar gauge			
		3	PASC	kPa			
		4	bAr.A	Bar absolute			
157	Refrigerant type	3	404A	R404A	0	3 - 15	744
		4	407A	R407A	1	3 - 15	407A
		5	407b	R407B	2, 3	3 - 15	407A
		6	407A	R507A	4, 5		744t
		7	408A	R408A			
		8	Nh3	Ammonia (R717)			
		9	744	R744 (CO2)			
		10	744t	R744 (Transcritical CO2)			
		11	407F	R407F			
		12	290	Propane (R290)			
		13	407C	R407C			
5.2 Jnet NETWORK AUTOMATIC PRESSURE TRANSDUCER CALIBRATION							
204	Unadjusted suction pressure						
205	Jnet network zero adjustment status	FroZ		Adjustment frozen			
		LivE		Adjustment live			
206	Jnet network zero adjustment						
207	Average suction pressure over last hour at evaporator (defrosts are discounted)						
208	Average suction pressure from plant via network						
209	Suction line pressure drop				0, 1 2, 3	0.0 - 10.0	4.0 6.0
154	Force average pressure to current pressure	CLr		Off			
		F.Av.P		Force pressure			
5.3 ELECTRONIC EXPANSION VALVE CONTROL DATA							
188	Superheat control strategy	0	Succ	SUCCEEDS (Floating)	0, 1, 4	0 - 2	F-SH
		1	Suc.L	Enable upper limit	2, 3, 5		Succ
		2	F-SH	Fixed superheat			
279	Current superheat control strategy						
189	Superheat setpoint (for fixed and upper limit depending on item 279/188)					4 - 12	6
140	Temperature deadband Note: for use with fixed and limited superheat strategies					0.4 - 3.0	0.4
278	Temperature control error						
168	Current opening % (PI x modifier) OR override						
172	PI output (before modification) %						
277	Proportional output %						
276	Integral output %						

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
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 % (PI)				10 - 100	100
164	Minimum Valve opening % (PI) for pressure control strategy				0 - 50	0
187	Minimum valve opening % for 2 temperature control			0, 1, 4 2, 3, 5	5 - 50	5 10
166	Forced valve opening %				0 - 100	
167	Force valve shut	OFF F.Sht	Off Forced shut		0 - 1	
169	Current valve status	OFF PE.on	Off On			
173	Maximum time at minimum output	00:00	Not used		00:00 - 00:10	00:05
174	High suction pressure shutdown selection	OFF Hp.on	Disabled Enabled		0 - 1	HP.on
198	Evaporator temperature equalisation shutdown selection	OFF E.E.on	Disabled Enabled		0 - 1	OFF
260	Time since last awake message for equalisation backup operation (mins).				0 - 10	5
5.4 ELECTRONIC EXPANSION VALVE LOW SUPERHEAT STATE DETECTION DATA FOR SUCCEEDS OPERATION Note: This data is not used for fixed superheat operation.						
162	Minimum Superheat for pressure control				0 - 10.0	4.0
186	Minimum superheat for 2 temperature control			0, 1, 4 2, 3, 5	0 - 5.0	4.0 3.0
180	Low superheat status	OFF Or.on	Off Low superheat			
181	Time since last low superheat state (in hr:mn)					
182	Duration of last low superheat state (in secs)					
183	Duration of current low superheat state (in secs)					
184	Accumulated low superheat state time (in secs)					
243	PREDICT low superheat state current average (%)					

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
5.5 ELECTRONIC EXPANSION VALVE						
AUTOMATIC CONTROL MODIFICATION DATA FOR SUCCEEDS OPERATION						
Note: This data is not used for fixed superheat operation.						
185	Time since output last modified by low superheat state (in hr:mn)					
194	Average temperature error over past 5 mins					
190	Modifier value (%)					
191	Modifier error gain				1 - 100	20
192	Modifier error adjustment upper limit (%)				1 - 25	10
193	Time temperature above setpoint before modifier increased				00:01 - 00:20	00:02
195	Modifier increase time constant				1 - 100	10
196	Modifier integral term output					
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			
130	Input 1 selection	oFF door	Enable auto input Enable door input		0 - 1	OFF
71	Door closed (input 1) (from v0.00.1) (requires input open for "door open")	Door oFF	No input Input on			
249	Auto input (input 1)	OFF Auto	No input Input on			
273	EV override enable	nonE En.Po	Not used EV override	0, 4, 5	0 - 1	En.P.o
				1, 2, 3	0 - 1	nonE
274	Plant fault (input 2)	oFF P.o.on	Off EV override on			
138	Input 3 selection (from v0.00.1)	oFF trAP	Fans healthy Man trapped		0 - 1	oFF
280	Fans healthy (input 3)	F.Fit F.Hty	Fans faulty Fans healthy			
139	Man trapped (Input 3) (from v0.00.1) (requires input open for "Man trapped")	trAP oFF	No input Input on			
244	Shutdown input enable (from v0.00.2)	oFF E.S.Sd	Disabled Enabled		0 - 1	oFF
245	Shutdown (input 4)	OFF Sh.iP	No input Input on			

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
72	Defrost relay (output 3)	oFF dc.on	Relay deenergised Defrost control on			
74	Auxiliary heater and fan relays (outputs 1 & 2)	oFF Fn.on Hr.on Both	Off Fans on Heater on Both on			
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	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						UJCD	
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						
411 (107)	Defrost strategy	0 nonE 1 nonE 2 n.i.L.b 3 rt.in 4 nonE 5 Prdt 6 nonE 7 n.i.F.b 8 c.d.L.b 9 c.d.F.b	None Not used Network initiated (learned backup) Internal clock initiated Not used PREDICT defrost Not used Network initiated (fixed schedule backup) Co-ordinated defrost (learned backup) Co-ordinated defrost (fixed schedule backup)		0 - 9	0	
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 per day (Note, when the defrost strategy is set to PREDICT operation, this item is not used. When coordinated defrost is in operation 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					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
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, 4 1 2, 5 3	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, 4 1 2, 5 3	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
53	Defrost time 3	00:00 00:01 - 23:59	Defrost disabled Defrost enabled	0, 4 1 2, 5 3	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, 4 1 2, 5 3	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
60	Defrost schedule selection	24 hr 12 hr	24 hour schedule 12 hour schedule		0 - 1	24 hr
43	Time next defrost is due					
8.3 Jnet NETWORK INITIATED DEFROST						
46 (215)	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					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
8.4 COORDINATED DEFROST INITIATION						
This information is for use by defrost co-ordinators and for PREDICT defrost (8.5)						
69	No of defrosts required per day (Note, when the defrost strategy is set to PREDICT operation, this item is not used. 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	3
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	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 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 cct1
210	Electrical distribution Panel No.				0 - 7	0.0

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
215 (46)	Jnet network initiated defrost command status	P.dEF F.dEF nonE	Defrost Forced defrost No command			
217	Evaporator data to plant					
220	Defrost coordinator status	oFF cord	No defrost coordinator Defrost coordinator present on network			
8.5 JTL PREDICT DEFROST INITIATION See also information in 8.4						
225	Minimum time between defrosts (hours)				2 - 8	6
226	Maximum time between defrosts (hours)				6 - 72	24
8.5.1 PREDICT 1 OPERATION PREDICT 1 operation is associated with SUCCEEDS superheat control as set on Item 188						
242	PREDICT low superheat state initiation level (%)				0 - 100	25
243	PREDICT low superheat state current average (%)					
8.5.2 PREDICT 3 OPERATION PREDICT 3 operation is associated with fixed superheat control as set on Item 188						
227	Number of samples to discard from top & bottom of sorted list				0 - 3	1
228	PREDICT 3 volatility integral setpoint				2.0 - 12.0	6.0
229	PREDICT 3 volatility integral					
230	Current PREDICT 3 volatility					
231	Long run PREDICT 3 volatility					
232	Ratio of current PREDICT 3 volatility/long run volatility					
233	Mean value from PREDICT 3 sampling array					
234	Minimum value from PREDICT 3 sampling array					
235	Maximum value from PREDICT 3 sampling array					
236	Average reading in last complete PREDICT 3 sample (frame)					
237	Latest reading					
281 to 296	Array of superheat readings in current samples (frame)					

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
301 to 316	Array of average reading samples (frames)					
321 to 336	Sorted array of average reading samples (frames)					
8.6 DEFROST TERMINATION						
144 (413)	Termination method selection	1 2 3 4	EuAP A.OFF tEr tot	Evaporator sensor Air oFF sensor Termination sensor Time only	0, 1, 2, 4, 5 3	1 - 4 EuAP tot
141	Termination sensor temperature					
147	Termination sensor selection	OFF tS.En	Disabled Enabled		0 - 1	OFF
50	Defrost termination temperature (the sensor used is available on item 144)			0, 1, 3, 4 2, 5	0 - 30	20 15
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, 4, 5 3	00:05 - 00:59	00:20 00:40
59	Drain down duration			0, 1, 4 2, 5	00:00 - 00:20	00:10 00:05
49	Liquid hold oFF duration (starts when drain down completed)				00:00 - 00:10	00:00
8.7 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 (Note 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 COLDSTORE CONTROLLER ITEM NUMBERS						UJCD	
ITEM	DESCRIPTION	CODE		CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
9. FAN CONTROL							
108	Fan control	1	F.on	Fan runs always	0, 1, 4	1 - 2	F.oFF
		2	F.oFF	Fan oFF during defrost	2, 5	1 - 3	F.oFF
		3	oFF.E	Fans oFF during electric defrost	3	1 - 3	F.on
109	Fan delay after defrost	00:00		Use evap temp		00:00 - 01:00	00:00
10. DOOR MONITORING (from v0.00.1)							
130	Input 1 selection	oFF door		Enable auto input Enable door input		0 - 1	OFF
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, 1, 4 2, 5 3	00:00 - 00:30	00:15 00:05 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
11. 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		No command 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 and/or defrost in the event of a plant fault	0	Off	Disabled		0 - 3	OFF
		1	I n.d.r	Inhibit defrost & Refrigeration			
		2	I n.r F	Inhibit refrigeration			
		3	I n. dF	Inhibit defrost			
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 timer for shutdown control	0 1 - 8		Disabled Timer number		0 - 8	0
239	Shutdown command status	CLr t.S.dn		Normal Shutdown			
12. DISPLAY FUNCTIONS							
9392	Temperature display unit choice	0	CELS	Celsius		0 - 2	CELS
		1	FAhr	Fahrenheit			
		2	KELu	Kelvin			



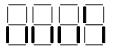


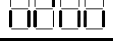
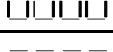
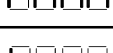
JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD		
ITEM	DESCRIPTION	CODE		CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
9393	Pressure display unit choice	0	MPA	MPa		0 - 4	PSI
		1	PSI	p.s.i.			
		2	bAr	bar gauge			
		3	PASC	kPa			
		4	bAr.A	Bar absolute			
199	Backlight control	0	B.oFF	Backlight off		0 - 3	
		1	BL.on	Backlight on			
		2	BL.F.F	Backlight off, flashes for alarm			
		3	BL.n.F	Backlight on, flashes for alarm			
13. LOAD SHEDDING							
600	Enable load shedding	0	off	Disabled		0 - 1	oFF
		1	L.S.En	Enabled			
601	Inhibit defrost	0		Disabled		0 - 8	0
		1 - 8		Global plant input no			
602	Inhibit refrigeration	0		Disabled		0 - 8	0
		1 - 8		Global plant input no			
603	Fans off	0		Disabled		0 - 8	0
		1 - 8		Global plant input no			
14. 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					2018 - 2099	
18	Daylight saving enable	Stnd dAY.S		Standard time Daylight saving time		0 - 1	Stnd
15. RESTORE FACTORY DEFAULTS							
To set the factory defaults into the memory of the controller, first set the virtual 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		Frozen food (CO2)			
		1		Frozen food (HFC)			
		2		Chiller			
		3		Produce (oFF cycle)			
		4		Frozen food (Transcritical CO2)			
		5		Chiller (Transcritical CO2)			
9	Set default values selected by Bitswitch	1234		Set default values			
	Note: Setting the bitswitches alone has no effect.	1066		Write to NVRAM			

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
16. RESTORE PARAMETERS FROM NETWORK						
<p>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.</p> <p>When all parameters are downloaded item 964 is cleared to 0.</p>						
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 d.in.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	
17. SYSTEM ALARMS						
80	Group alarm 81 - 88	Graphical	See display data			
81	Coldroom overtemperature	CLr C.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			
86	Non critical door open alarm (from v0.00.1)	OFF dO.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			
494	High pressure shutdown	CLr H.P.Sd	No fault High pressure shutdown			
495	Evaporator temperature equalisation shutdown	CLr E.E.Sd	No fault Evaporator equalisation shutdown			
90	Group alarm 91 - 98	Graphical	See display data			

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
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 (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			
95	Plant alarm	CLr AL.iP	No fault Fault			
96	Critical door open alarm (from v0.00.1)	OFF dO.Ft	No fault Fault			
97	Excessive Superheat fault	CLr Hi.Sh	No fault Fault			
98	Pressure Transducer fault	CLr Pt.FL	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			
257	Man trapped (from v0.00.1)	CLr trAP	No fault Man trapped			
258	Backup defrost strategy in operation	CLr d.bAc	No fault Backup defrost			

JTL COLDSTORE CONTROLLER ITEM NUMBERS					UJCD	
ITEM	DESCRIPTION	CODE	CODE MEANING	FACTORY DEFAULT	RANGE	ITEM 9 VALUE
18. DIAGNOSTIC & TEST FUNCTIONS						
44	Power off duration					
6	Communications speed (in kilo baud)	4.8	Baud rate			
973	Latest polling interval This time shows the polling interval between the last two untimed network broadcasts..	min:sec				
974	Time since last awake message	min:sec				
967	Latest unit number polled on zone					
8	Bitswitch setting	F.CO2 Fr.Fd Chil OFF.C F.tr.C C.tr.c	Frozen food (CO2) Frozen food (HFC) Chiller Produce (off cycle) Frozen food (Transcritical CO2) Chiller (Transcritical CO2)			
89	Sensor excitation value (Factory test)		Not used			
989	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	
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					
428	Temperature sensor open Circuit indication	0 1 2	No fault Sensor 5 Sensor 4			
429	Temperature sensor short Circuit indication	4 8 16	Sensor 3 Sensor 2 Sensor 1			
204	Unadjusted suction pressure					
10	Processor alarms (11 - 17)	Graphical	See display data			
16	NVRAM fault	CLr n.Ft	No fault Fault			

DISPLAY DATA		UJCD
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 coldroom temperature	
Lt	Low coldroom temperature	
AL.IP	Plant fault input	
ISOL	Unit shutdown	

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
	None	
	1	
	2	
	3	
	4	
	5	
	6	
	7	
8	