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JTL SUCTION PRESSURE OPTIMISER ITEM NUMBERS					OP112 OP124 OP148	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
1. Jnet NETWORK IDENTIFICATION						
0	Unit type	OP11 OP12 OP14	OP112 OP124 OP148			
19	Firmware version number					
1	Unit number				0.1 - 899.9	
2. OPTIMISER SETUP						
140	Disable optimiser (v0.00.1 on)	0.En 0.dIS	Enabled Disabled		0 - 1	0.En
400	No of evaporators included in optimisation				OP112	
					1 - 12	12
					OP124	
					1 - 24	24
					OP148	
					1 - 48	48
150	Enable override	Off Or.En	Disabled Enabled		0 - 1	Off
157	Refrigerant type	0 22 502 404A 407A 407B 507A 408A nH3	None R22 R502 R404A R407A R407B R507A R408A Amonia (R717)		0 - 8	R404A
178	Temperature display unit choice (v0.00.4 on)	CELS FAhr	Celsius Fahrenheit		0 - 1	CELS
179	Pressure display unit choice (v0.00.4 on)	0 or none PSI bAr PASC	Not selected (kPa) p.s.i bar kPa		0 - 3	PSI

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3. PRESSURE CONTROL						
Note, from v0.00.4 pressure can be displayed in p.s.i, bar or kPa. This function is set on item 179. Also from v0.00.4 temperature can be displayed in Celsius or Fahrenheit, this function is set on item 178.						
Forced functions remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged.						
3.1 LT SYSTEMS						
151	Current optimised pressure setpoint					
152	Maximum optimised pressure setpoint				5.0 to 20.0	10.0
40	Minimum optimised pressure setpoint (initial value)				-5.0 to 20.0	4.0
43	Error deadband temperature (°C)				0.0 - 2.0	1.0
44	Optimising time constant				1 - 240	30
141	Current active optimising evaporator temperature error					
142	Current active optimising evaporator unit number					
402	Current number of evaporators optimising					
401	Number of "worst" evaporators to discard (up to v0.00.2)				0 - 4	OP112
						1
						OP124
						2
						OP148
						4
405	Number of "worst" evaporators to discard (v0.00.3 on)				0 - 12	OP112
						1
						OP124
						2
						OP148
						4
162	Activate forced pressure setpoint	Off F.On	Inactive Active		0 - 1	
161	Forced pressure setpoint				item 40 to item 152	

JTL SUCTION PRESSURE OPTIMISER ITEM NUMBERS					OP112 OP124 OP148	
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3.2 HT SYSTEMS						
153	Current optimised pressure setpoint					
154	Maximum optimised pressure setpoint				upto v0.00.4	50.0
					15.0 to 60.0	
					from v0.00.5	
					15 to 70.0	
50	Minimum optimised pressure setpoint (initial value)				-5.0 - 60.0	40.0
53	Error deadband temperature (°C)				0.0 - 2.0	0.5
54	Optimising time constant				1 - 240	30
143	Current active optimising evaporator temperature error					
144	Current active optimising evaporator unit number					
403	Current no of evaporators optimising					
401	Number of "worst" evaporators to discard (up to v0.00.2)				0 - 4	OP112
						1
						OP124
						2
						OP148
						4
406	Number of "worst" evaporators to discard (v0.00.3 on)				0 - 12	OP112
						1
						OP124
						2
						OP148
						4
164	Activate forced pressure setpoint	Off F.On	Inactive Active		0 - 1	
163	Forced pressure setpoint				item 50 to item 154	

JTL SUCTION PRESSURE OPTIMISER ITEM NUMBERS					OP112 OP124 OP148	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
3.3 SATELLITE SYSTEMS						
155	Current optimised pressure setpoint					
156	Maximum optimised pressure setpoint				5.0 to 50.0	10.0
70	Minimum optimised pressure setpoint (initial value)				-5.0 to 50.0	2.0
73	Error deadband temperature (°C)				0.0 to 2.0	1.0
74	Optimising time constant				1 - 240	30
145	Current active optimising evaporator temperature error					
146	Current active optimising evaporator unit number					
404	Current number of evaporators optimising					
401	Number of "worst" evaporators to discard (up to v0.00.2)				0 - 4	OP112
						1
						OP124
						2
						OP148
						4
407	Number of "worst" evaporators to discard (v0.00.3 on)				0 - 12	OP112
						1
						OP124
						2
						OP148
						4
166	Activate forced pressure setpoint	Off F.On	Inactive Active		0 - 1	
165	Forced pressure setpoint				item 70 to item 156	

JTL SUCTION PRESSURE OPTIMISER ITEM NUMBERS					OP112 OP124 OP148	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
4. SORTED EVAPORATOR TEMPERATURE ERRORS						
Note, from v0.00.4 temperature can be displayed in Celsius or Fahrenheit, this function is set on item 178.						
4.1 LT SYSTEMS						
111	Worst current temperature error					
112	Worst error unit number					
113	2nd worst current error					
114	2nd worst unit number					
115	3rd worst current error					
116	3rd worst unit no					
117	4th worst current error					
118	4th worst unit number					
4.2 HT SYSTEMS						
121	Worst current temperature error					
122	Worst error unit number					
123	2nd worst current error					
124	2nd worst unit number					
125	3rd worst current error					
126	3rd worst unit number					
127	4th worst current error					
128	4th worst unit number					
4.3 SATELLITE SYSTEMS						
131	Worst current temperature error					
132	Worst error unit number					
133	2nd worst current error					
134	2nd worst unit number					
135	3rd worst current error					
136	3rd worst unit number					
137	4th worst current error					
138	4th worst unit number					

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				4321		
5. PERFORMANCE & ALARMS (v0.00.1 on)						
Note, from v0.00.4 pressure can be displayed in p.s.i, bar or kPa. This function is set on item 179.						
199	Initialise averaging arrays (v0.00.3 on)				1234 only	
197	Date arrays flushed (v0.00.3 on)					
198	Year arrays flushed (v0.00.3 on)					
5.1 LT SYSTEMS						
41	Low optimising pressure rise alarm tolerance				0.0 - 5.0	1.0
45	Average hourly pressure rise (psi)					
46	Average daily pressure rise (psi)					
47	Average weekly pressure rise (psi)					
48	Average monthly pressure rise (psi) (4 weeks)					
49	Average quarterly pressure rise (psi) (12 weeks)					
5.2 HT SYSTEMS						
51	Low optimising pressure rise alarm tolerance				0.0 - 5.0	1.0
55	Average hourly pressure rise (psi)					
56	Average daily pressure rise (psi)					
57	Average weekly pressure rise (psi)					
58	Average monthly pressure rise (psi) (4 weeks)					
59	Average quarterly pressure rise (psi) (12 weeks)					
5.3 SATELLITE SYSTEMS						
71	Low optimising pressure rise alarm tolerance				0.0 - 5.0	1.0
75	Average hourly pressure rise (psi)					
76	Average daily pressure rise (psi)					
77	Average weekly pressure rise (psi)					
78	Average monthly pressure rise (psi) (4 weeks)					
79	Average quarterly pressure rise (psi) (12 weeks)					

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				4321		
6. EVAPORATOR FUNCTION & CHOICE Note: up to 48 evaporator systems can be selected for optimisation. These are selected for LT, HT and Satellites by the JTL unit number. "xx" is in the range 01 - 12 OP112 01 - 24 OP124 01 - 48 OP148 The JTL unit nos can be any unit no that is valid in the JTL evaporator unit no system, eg, 123.4 which is evaporator 4 on system 23 on pack controller 100.0.						
2xx	Evaporator unit no (JTL numbering is mandatory)				0 .0 - 899.9	0.0
3xx	Evaporator suction group	0 Lt Ht SAT	Not selected LT HT Satellite		0 - 3	0
7. OPTIMISING EVAPORATOR DATA The data from all the attached evaporators appears in the following data items. This data is unsorted and appears in the zone order of the network controller. The data is in blocks of 10 items starting at item 410 - 415 for the first associated evaporator the next evaporator is in items 420 - 425 up to the maximum of 48 evaporators on OP148 items 880 - 895						
4x0	Evaporator unit number					
4x1	Evaporator suction group (from date programmed into optimiser items 2xx and 3xx)	Lt Ht SAT	LT HT Satellite			
4x2	Evaporator mode (current data from evaporator)	rEFr dEFr drdn Li.Ho Df.rc Pu.dn Sh.dn	Refrigerating Defrost Drain down Liquid hold off Defrost recovery Pump down Shut down			
4x3	Evaporator setpoint (current data from evaporator)					
4x4	Evaporator temperature (current data from evaporator)					
4x5	Evaporator temperature error (Temperature - Setpoint)					
8. CLOCK CALENDAR Note, from version 0.00.4 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				upto v0.00.4	
					1992 - 2022	
					from v0.00.5	

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ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
					2004 - 2034	
18	Daylight saving enable (from v0.00.4 on)	Stnd dAY.S	Standard time Daylight saving time		0 - 1	Stnd
9. RESTORE FACTORY DEFAULTS						
9	Set default values selected by Bitswitch	1234	Set default values			
		1066	Write to NVRAM without delay (from v0.00.4)			
10. SYSTEM ALARMS						
80	Group alarm 81 - 88	0 1 - 255	No alarms Check 81 - 88			
81	Override on	CLr Or.On	Off Override on			
82	Optimiser disabled (v0.00.1 on)	CLr O.dIS				
83	Low LT optimising pressure alarm (v0.00.1 on)	CLr Lo.Lt				
84	Low HT optimising pressure alarm (v0.00.1 on)	CLr Lo.Ht				
85	Low Satellite optimising pressure alarm (v0.00.1 on)	CLr Lo.St				
88	Unit number corrupted or not set (v0.00.1 on)	CLr Un.CF	Clear Fault			
11. DIAGNOSTIC & TEST FUNCTIONS						
6	Communications speed	4.8 38.4	Kilo baud rate Kilo baud rate			
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	Bit switch setting not used					

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99	Test digital display	CLr SEt	Not active Test active		0 - 1	
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			

DISPLAY DATA		OP112, 124, 148	
NORMAL DISPLAY			
999.9	Pressure in psi		
--	Not selected		
ALARM TEXT (in descending priority order)			
FAIL	JTL Network communications failure		
oFF	Unit disabled		
Or	Override on		
OTHER TEXT			
JTL	Start-up text		
Lt	LT suction optimised pressure setpoint follows this text		
Ht	HT suction optimised pressure setpoint follows this text		
SAt	Satellite suction optimised pressure setpoint follows this text		
Func	Function mode		
data	Data mode		