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JTL COMPRESSOR PACK ITEM NUMBERS					EPST CPST	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
1. Jnet NETWORK IDENTIFICATION						
0	Unit type	EPSt CPSt	Unit type			
19	Software version number					
1	Unit number				0.1 - 899.9	
2. PRESSURES						
Note: from v0.00.3 on, pressures can be displayed on the maintenance unit in psi, bar or kPa. The choice is made on item 179. All setpoint ranges are shown in psi.						
Average pressures are averaged over last hour and are updated every 4 minutes.						
179	Pressure display unit choice (v0.00.3 on)	PSI bAr PASC	p.s.i. bar kPa		1 - 3	PSI
2.1 LT SUCTION PRESSURE						
21	LT suction pressure					
42	High LT suction pressure alarm level				10 - 50	20
121	LT pressure transducer selection	OFF Lt.En	Disabled Enabled		0 - 1	Lt.En
126	Absolute LT suction pressure transducer selection	Lt.GA Lt.Ab	Gauge pressure Absolute pressure		0 - 1	Lt.GA
2.2 HT SUCTION PRESSURE						
22	HT suction pressure					
52	High HT suction pressure alarm level				15 - 80	60
122	HT pressure transducer selection	OFF Ht.En	Disabled Enabled		0 - 1	Ht.En
2.3 SATELLITE SUCTION PRESSURE						
24	Satellite suction pressure					
72	High Satellite suction pressure alarm level				20 - 80	50
124	Satellite pressure transducer selection	OFF St.En	Disabled Enabled		0 - 1	St.En
129	Absolute Satellite suction pressure transducer selection	St.GA St.Ab	Gauge pressure Absolute pressure		0 - 1	St.GA
2.4 DISCHARGE PRESSURE						
23	Discharge pressure					
62	High discharge pressure alarm level				140 - 300	250
123	Discharge pressure transducer selection	OFF DS.En	Disabled Enabled		0 - 1	DS.En

JTL COMPRESSOR PACK ITEM NUMBERS					EPST CPST	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
3. TEMPERATURES						
Note: from v0.00.3 on, temperatures can be displayed on the maintenance unit in degrees celsius or fahrenheit. The choice is made on item 178. All setpoint ranges are shown in celsius.						
178	Temperature display unit choice (v0.00.3 on)	CELS FAhr	Celsius Fahrenheit		0 - 1	CELS
31	LT suction gas temperature					
131	LT suction temperature	OFF t1.En	Not selected Selected		0 - 1	t1.En
32	HT suction gas temperature					
132	HT suction temperature	OFF t2.En	Not selected Selected		0 - 1	t2.En
33	Discharge temperature					
133	Discharge temperature	OFF t3.En	Not selected Selected		0 - 1	t3.En
34	Satellite suction gas temperature					
134	Satellite suction temperature	OFF t4.En	Not selected Selected		0 - 1	t4.En
35	Subcooled liquid temperature					
135	Subcooled liquid temperature	OFF t5.En	Not selected Selected		0 - 1	t5.En
36	Saturated gas temperature					
136	Saturated gas temperature	OFF t6.En	Not selected Selected		0 - 1	t6.En
37	Plant room temperature					
137	Plant room temperature	OFF t7.En	Not selected Selected		0 - 1	t7.En

JTL COMPRESSOR PACK ITEM NUMBERS					EPST CPST	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
4. SUCTION PRESSURE CONTROL						
4.1 LT SUCTION PRESSURE CONTROL						
Note, LT suction control is enabled only when there are LT compressors selected in section 5.2 using item 2x5.						
40	LT suction pressure setpoint				- 5 to + 20	4
43	LT suction pressure deadband				0 - 5	2
44	LT suction pressure increase time constant				1 - 60	30
45	LT suction pressure decrease time constant				1 - 60	15
48	LT suction 1st stage hold on				- 8 to +20	0
41	No of LT suction steps loaded					
49	LT suction total capacity loaded (in kW)					
181	LT suction increase next step (kW)					
182	LT suction decrease next step (kW)					
204	Forced number of LT suction stages					
4.2 HT SUCTION PRESSURE CONTROL						
Note, HT suction control is enabled only when there are HT compressors selected in section 5.2 using item 2x5.						
50	HT suction pressure setpoint				5 - 60	25
53	HT suction pressure deadband				0 - 10	5
54	HT suction pressure increase time constant				1 - 60	30
55	HT suction pressure decrease time constant				1 - 60	15
58	HT suction 1st stage hold on				2 - 60	10
51	No of HT suction steps loaded					
59	HT suction total capacity loaded (in kW)					
183	HT suction increase next step (kW)					
184	HT suction decrease next step (kW)					
205	Forced number of HT suction stages					

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ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
4.3 SATELLITE SUCTION PRESSURE CONTROL						
Note, Satellite suction control is enabled only when there are satellite compressors selected in section 5.2 using item 2x5.						
70	Satellite suction pressure setpoint				-5 to + 50	2
73	Satellite suction pressure deadband				0 - 10	2
74	Satellite suction pressure increase time constant				1 - 60	30
75	Satellite suction pressure decrease time constant				1 - 60	30
78	Satellite suction 1st stage hold on				- 5 to + 50	0
71	No of Satellite suction steps loaded					
79	Satellite suction total capacity loaded (in kW)					
187	Satellite suction increase next step (kW)					
188	Satellite suction decrease next step (kW)					
207	Forced number of satellite suction stages					

JTL COMPRESSOR PACK ITEM NUMBERS					EPST CPST	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
5. COMPRESSOR CONTROL						
Forced functions remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged.						
5.1 COMMON DATA						
200	Number of compressors				0 - 10	10
201	Number of steps on load					
203	Total capacity loaded (in kW)					
208	Minimum compressor stop time (seconds)				0 - 240	30
5.2 COMPRESSOR DATA						
A general form of item numbers for compressors is shown below. The "x" shown in each item number should be replaced by the compressor number. This sequence covers item numbers 210-299 for compressors 1 - 9 and 300 - 309 for compressor 10.						
2x0	Compressor capacity in <u>effective</u> kW at minimum output				10 - 500	10
2x1	Number of steps on load					
2x2	Running hours (in 10s of hours)				0 - 9999	
2x3	Compressor status <u>Note:-</u> If more than one input is present, the numbers shown in brackets are added together and displayed instead.	run (128) rdy (64) O.L. (32) Lo.Pr (16) Hi.Pr (8) Oil.F (4) th.Ft (2) 0	Running. Ready to run (no faults). Motor overload. Low pressure fault. High pressure fault. Oil pressure failure. Motor thermistor fault. Off or compressor interface fault.			
2x4	Compressor restart inhibit timer (Seconds)					
2x5	Compressor function	0 Lt.C Ht.C SAt.C	Not in use LT HT Satellite		0 - 3	Lt.C
2x6	Compressor capacity in <u>effective</u> kW				10 - 1000	100
2x7	Forced number of compressor steps				0 - 127	
2x8	Force compressor off	CP.En C.OFF	Compressor enabled to run Forced off		0 - 1	
2x9	Compressor number of starts per hour				4 - 20	10

JTL COMPRESSOR PACK ITEM NUMBERS					EPST CPST	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
6. DISCHARGE PRESSURE CONTROL						
60	Discharge pressure setpoint				150 - 250	150
394	Analogue/stepped condenser control selection	StEP A.LOG	Step control Analogue control		0 - 1	StEP
63	Discharge pressure deadband				0 - 20	5
395	Analogue fan speed gain				1 - 25	10
64	Condenser control time constant				1 - 250	30
65	Discharge pressure to reduce capacity				140 - 320	300
7. CONDENSER CONTROL						
Forced functions remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged.						
390	Number of condenser steps (step control)				0 - 7	7
61 (391)	Number of condenser steps running					
392	Forced number of condenser steps		Step Analogue		0 - no. of steps (item 390) 0 - 99	
396	<u>Note:-</u> If more than one input is present, the numbers shown in brackets are added together and displayed instead.	1 2 4 8 16 32 64	Condenser input 1 Condenser input 2 Condenser input 3 Condenser input 4 Condenser input 5 Condenser input 6 Condenser input 7			
8. INPUTS AND OUTPUTS						
20	Operating mode (v0.00.3 on)	oFF Auto	Manual Automatic			
170	Input states (v0.00.3 on)	iP - - iP 1 - iP - 2	No input Input 1 Input 2			
171	Auto/manual (IP-1)	OFF Auto	Manual (pack controller dormant) Auto mode			
172	Liquid level (IP-2)	CLr Lo.Li	Liquid o.k. Low liquid level			
175	Low level liquid alarm delay (minutes) (v0.00.3 on)				15 - 240	30
160	Watchdog output (LN/LD-2)	OFF On	Watchdog fail Watchdog healthy			
163	Differential pressure output relief valve control (LN/LD-1)	Gd no.Gd	Gas defrost (Diff. pressure) No gas defrost (Diff. pressure relief)			

JTL COMPRESSOR PACK ITEM NUMBERS					EPST CPST	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
9. DEFROST CONTROL						
9.1 COMMON DATA						
400	Number of defrost systems				0 - 28	28
401	Maximum gas defrost duration Note: Off cycle defrosts as assumed to be longer than this setting				15 - 40	25
404	Maximum number of gas/electric defrosts allowed at any time				1 - 28	3
9.2 DEFROST DATA						
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".						
410	Start time for first daily defrost	SYSTEM			00:00 - 23:59	TIME
420		1				08:00
430		2				08:30
440		3				09:00
450		4				09:30
460		5				10:00
470		6				10:30
480		7				11:00
490		8				11:30
500		9				12:00
510		10				12:30
520		11				13:00
530		12				13:30
540		13				08:15
550		14				08:45
560		15				09:15
570		16				09:45
580		17				10:15
590		18				10:45
600		19				11:15
610		20				11:45
620		21				12:15
630		22				12:45
640		23				13:15
650		24				13:45
660		25				08:00
670		26				09:00
680		27				10:00
	28			11:00		

JTL COMPRESSOR PACK ITEM NUMBERS					EPST CPST	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
<p>A general form of item numbers for defrost systems is shown below. The "x" shown in each item number should be replaced by the system number up to system 9. Systems 10-19 use items 500-599 and systems 20-28 use items 600-689. Forced functions remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged.</p>						
4x1	Defrost duration (mins)				5 - 60	20
4x2	Defrost pattern	0 1 - 6 7 8	No defrosts. Number of equally spaced daily defrosts. 3 defrosts per day, but the 3rd is missing. 4 defrosts per day, but the 4th is missing.		0 - 8	4
4x3	Forced defrost	OFF Fd.on	No forced defrost Forced defrost on		0 - 1	
4x4	Forced refrigeration	OFF Fr.on	No forced refrig. Forced refrig. on		0 - 1	
4x5	Defrost mode	0 deF dr.dn F.dEF F.rEF d.inH FAIL	Refrig. Defrost Drain down Forced defrost Forced refrig. Defrost inhibited Defrost interface fail			
4x6	Drain down duration				0 - 15	5
4x7	Compressor group associated with this defrost system	0 Lt.C Ht.C Sat.C	No association Lt compressor group Ht compressor group Satellite compressor group		0 - 3	0
4x8	No of evaporators on this defrost system	0 1 - 10	Defrost terminated on time only. JTL units terminate defrost on temp. and inform pack.		0 - 10	0
4x9	No of JTL-controlled evaporators terminated					

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				4321		
10. DISPLAY FUNCTIONS (v0.00.3 on)						
177	JTL numbering on systems on defrost display Note: Depends on unit no setting on item 1.	oFF J.no	System no. range 1- 28 System no. range x01 - x28		0 - 1	oFF
179	Pressure display unit choice	PSI bAr PASC	p.s.i. bar kPa		1 - 3	PSI
11. CLOCK CALENDAR						
Note,from v0.00.3 on, 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
12. RESTORE FACTORY DEFAULTS						
9	Set default values To set the factory defaults into the memory of the controller, 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.	1234 1066	Load default settings Write to NVRAM immediately (v0.00.3 on)			

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ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
13. SYSTEM ALARMS						
80	Group alarm 81 - 88	0 1 - 255	No alarms Check 81 - 88			
81	High LT suction pressure	CLr Hi.Lt	No fault Fault			
82	High HT suction pressure	CLr Hi.Ht	No fault Fault			
83	High discharge pressure	CLr Hi.dP	No fault Fault			
84	High Satellite suction pressure	CLr Hi.St	No fault Fault			
85	Low liquid level	CLr Lo.Li	No fault Fault			
86	Motor thermistor fault	CLr Th.Ft	No fault Fault			
87	Motor overload fault	CLr OL	No fault Fault			
88	Condenser fault	CLr Fn.Ft	No fault Fault			
90	Group alarm 91 - 98	0 1 - 255	No alarms Check 91 - 98			
91	Pressure transducer fault	CLr Pt.Ft	No fault Fault			
92	Thermistor fault	CLr th.Ft	No fault Fault			
93	Thermistor excitation voltage	CLr PS.Ft	No fault Fault			
94	High or low pressure switch fault	CLr HP.LP	No fault Fault			
95	Defrost interface card fault	CLr Stub	No fault Fault			
96	Compressor interface card fault	CLr CP.F	No fault Fault			
97	Compressor fault OR Auto input not present	CLr CPr.F	No fault Fault			
98	Oil pressure fault	CLr OIL.F	No fault Fault			

JTL COMPRESSOR PACK ITEM NUMBERS					EPST CPST	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
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14. DIAGNOSTIC & TEST FUNCTIONS						
6	JTL Network communications speed	4.8 38.4	Kilo Baud Kilo Baud			
7	Communications method	HALF	2 wire			
8	Bitswitch Setting		Unused			
89	Thermistor excitation value (Factory test)		Not used			
99	Test digital displays	CLr SEt	Not active Test active		0 - 1	
100	Test inputs (v0.00.3 on)	- - - - 1 - - - - 2 - -	No inputs Input 1 on Input 2 on			
199	Test relay outputs (v0.00.3 on)	clr SEt	Not active 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		EPST CPST
NORMAL DISPLAY		
999.9	Pressure in psi	
--	Not selected	
ALARM TEXT (in descending priority order)		
P.Fld	Plant failed	
Hi.dP	High discharge pressure	
rEF.L	Refrigerant loss	
CPr	Compressor fault	
FAn	Condenser fan problem	
Hi.Lt	High LT suction pressure	
Hi.Ht	High HT suction pressure	
Hi.St	High satellite suction pressure	
Hi.dt	High discharge temperature	
OTHER TEXT		
JTL	Start-up text	
Lt	LT suction pressure follows this text	
Ht	HT suction pressure follows this text	
SAt	Satellite suction pressure follows this text	