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JTL COMPRESSOR PACK ITEM NUMBERS					EPSA CPSA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
<b>1. Jnet NETWORK IDENTIFICATION</b>						
0	Unit type	EPSA CPSA	Unit type			
19	Software version number					
1	Unit number				0.1 - 899.9	
<b>2. PRESSURES</b>						
<p>Note: From v0.00.8 on pressures can be displayed on the maintenance unit in psi, bar or kPa. The choice is made on item 79.  All setpoint ranges are shown in psi.  Average pressures are averaged over last hour and are updated every 4 minutes.</p>						
79	Pressure display unit choice (v0.00.8 on)	PSI bAr PASC	p.s.i. bar kPa		1 - 3	PSI
<b>2.1 LT SUCTION PRESSURE</b>						
21	Suction pressure					
42	High suction pressure alarm level			xxxC xxxO	10 - 30 30 - 60	20 50
41	Low suction pressure alarm level			xxxC xxxO	- 5 -15 15 - 40	0 20
28	Suction pressure transducer selection	OFF S.SEL	Disabled Enabled		0 - 1	S.SEL
26	Absolute suction pressure transducer selection	Su.GA Su.Ab	Gauge pressure Absolute pressure		0 - 1	Su.GA
<b>2.2 DISCHARGE PRESSURE</b>						
22	Discharge pressure					
52	High discharge pressure alarm level				150 - 300	250
51	Low discharge pressure alarm level				100 - 200	150
29	Discharge pressure transducer selection	OFF DS.En	Disabled Enabled		0 - 1	d.SEL

JTL COMPRESSOR PACK ITEM NUMBERS					EPSA CPSA	
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<b>3. TEMPERATURES</b>						
Note: From v0.00.8 on, temperatures can be displayed on the maintenance unit in degrees celsius or fahrenheit. The choice is made on item 78. All setpoint ranges are shown in celsius.						
78	Temperature display unit choice (v0.00.8 on)	CELS FAhr	Celsius Fahrenheit		0 - 1	CELS
31	Suction gas temperature					
103	Suction temperature sensor selection	OFF t1.En	Not selected Selected		0 - 1	t1.En
32	Discharge temperature					
104	Discharge temperature sensor selection	OFF t2.En	Not selected Selected		0 - 1	t2.En
57	Discharge temperature setpoint  <i>Note:-</i> When item 69 is set to "oil.t" this item is also used as the oil temperature setpoint				50 - 99	85
59	High discharge temperature alarm tolerance				10 - 30	20
33	Saturated gas temperature					
105	Saturated gas temperature sensor selection	OFF t3.En	Not selected Selected		0 - 1	t3.En
34	Oil temperature					
106	Oil temperature sensor selection	OFF t4.En	Not selected Selected		0 - 1	t4.En
<b>4. SUCTION PRESSURE CONTROL</b>						
40	Suction pressure setpoint			xxxC xxxO	0 - 20 20 - 50	8 30
43	Suction pressure deadband			xxxC xxxO	0 - 20 0 - 20	2 10
44	Suction pressure increase time constant				1 - 240	30
45	Suction pressure decrease time constant			xxxC xxxO	50 - 100 60 - 100	60 80
46	Suction pressure to hold off stage 2			xxxC xxxO	50 - 100 60 - 100	60 80
48	Minimum stage time				1 - 5	5
49	Oil flow switch delay time				0 - 30	20

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ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
<b>5. COMPRESSOR 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.						
<b>5.1 COMMON DATA</b>						
100	Number of compressors				0 - 4	2
101	Number of steps on load					
102	Forced number of steps				0 - 8	
<b>5.2 COMPRESSOR DATA</b>						
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 110-149 for compressors 1 - 4.						
1x0	Number of steps				0 - 4	4
1x1	Number of steps on load					
1x2	Running hours (in 10s of hours)				0 - 9999	
1x3	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) Oil.L (16) HP.LP (8) Th.Ft (4)  Ph.SE (2)  Oil.F	Running Ready to run (no faults). Motor overload. Oil level fault Pressure fault Motor thermistor fault Phase sequence fault Oil flow fault			
1x4	Compressor restart inhibit timer (Seconds)					
1x6	Compressor capacity in <u>effective</u> kW				10 - 1000	100
1x7	Forced number of compressor steps				0 - 4	
1x8	Force compressor off	CP.En  C.OFF	Compressor enabled to run Forced off		0 - 1	
1x9	Compressor number of starts per hour				4 - 20	6

JTL COMPRESSOR PACK ITEM NUMBERS					EPSA CPSA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
<b>6. DISCHARGE PRESSURE CONTROL</b>						
50	Discharge pressure setpoint				150 - 250	200
53	Discharge pressure deadband				0 - 20	5
54	Condenser control time constant				1 - 250	30
55	Discharge pressure to reduce capacity				200 - 320	300
<b>7. CONDENSER 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.						
190	Number of condenser steps (step control)				0 - 7	7
191	Number of condenser steps running					
192	Forced number of condenser steps				0 - no. of steps (item 190)	
196	<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 64 128	Condenser input 1 Condenser input 2 Condenser input 3 Condenser input 4 Condenser input 5 Condenser input 6 Condenser input 7 Heat reclaim input			
<b>8. OIL COOLER CONTROL</b>						
69	Oil temperature control sensor selection (v0.00.5 on)	diS.t oiL.t	Discharge temperature Oil temperature		0 - 1	diS.t
34	Oil temperature					
57	Oil temperature control setpoint				50 - 99	85
58	Oil temperature control deadband				2 - 5	3
<b>9. SATURATED GAS TEMPERATURE CONTROL</b>						
33	Saturated gas temperature					
56	Gas temperature to open regulator valve				25 - 40	30
62	Gas temperature regulator valve control (LN/LD-2)	OFF Gr.on	Valve closed Gas reg. valve open			

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ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
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<b>10. INPUTS AND OUTPUTS</b>						
20	Operating mode (v0.00.8 on)	oFF Auto	Manual Automatic			
70	Input states (v0.00.8 on)	iP - - iP 1 - iP - 2	No input Input 1 Input 2			
71	Auto/manual (IP-1)	OFF Auto	Manual (pack controller dormant) Auto mode			
72	Liquid level (IP-2)	CLr Lo.Li	Liquid o.k. Low liquid level			
75	Low level liquid alarm delay (minutes) (v0.00.8 on)				15 - 240	30
93	Heat reclaim input	OFF Hr.On	Heat reclaim off Heat reclaim on			
68	Differential or dump valve selection (v0.00.5 on)	diFF G.d	Differential valve control Gas dump valve control		0 - 1	diFF
63	Differential pressure output relief valve control (LN/LD-1) (item 68=d.FF)	dP dP.rl	Valve deenergised Valve energised			
61	Gas dump valve output (LN/LD-1) (Item 68=G.d)	OFF Gd.on	Off Gas dump valve on			
62	Gas regulator valve output (LN/LD-2)	OFF Gr.on	Off Gas regulator on			

JTL COMPRESSOR PACK ITEM NUMBERS					EPSA CPSA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
<b>11. DEFROST CONTROL</b>						
<b>11.1 COMMON DATA</b>						
200	Number of defrost systems				0 - 20	12
201	Maximum gas defrost duration Note: Off cycle defrosts as assumed to be longer than this setting				15 - 40	25
204	Maximum number of gas/electric defrosts allowed at any time				1 - 20	3
205	Evaporator inhibit defrost function selection	OFF En.El	Disable Inhibit enabled		0 - 1	OFF
206	Select defrost relay termination at beginning or end of drain down period	OFF  t.End.	Relay terminates at beginning of drain down Relay terminates at end of drain down		0 - 1	OFF
208	Drain (bleed) down interface selection	OFF  dd.On	Drain down interfaces not used. Drain down interfaces used for drain down control.		0 - 1	OFF
209	Stub defrost interfaces selection	OFF  Sb.On	Stub interfaces not used. Stub interfaces used for defrost control.		0 - 1	On
<b>11.2 DEFROST DATA</b>						
Time and defrost schedule can be automatically displayed as standard time or, from v0.00.8, 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".						
210	Start time for first daily defrost	SYSTEM			00:00 - 23:59	TIME
220		1				08:00
230		2				10:00
240		3				12:00
250		4				09:00
260		5				11:00
270		6				13:00
280		7				08:30
290		8				09:30
300		9				10:30
310		10				11:30
320		11				12:30
330		12				13:30
340		13				08:15
350		14				09:45
360		15				11:15
370		16				12:45
380		17				08:45
390		18				10:15
400		19				11:45
	20			13:15		

## JTL COMPRESSOR PACK ITEM NUMBERS

**EPSA  
CPSA**

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 300-399 and system 20 uses items 400-409.                      Forced functions remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged.</p>						
2x1	Defrost duration (mins)				5 - 60	20
2x2	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
2x3	Forced defrost	OFF Fd.on	No forced defrost Forced defrost on		0 - 1	
2x4	Forced refrigeration	OFF Fr.on	No forced refrig. Forced refrig. on		0 - 1	
2x5	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			
2x6	Drain down duration				0 - 15	5
2x8	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
2x9	No of JTL-controlled evaporators terminated					



JTL COMPRESSOR PACK ITEM NUMBERS					EPSA CPSA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
<b>12. DISPLAY FUNCTIONS</b>						
39	Display type selection	LEd.1 LEd.2	2 displays 4 displays		0 - 1	LEd.2
79	Pressure display unit choice (v0.00.8 on)	PSI bAr PASC	p.s.i. bar kPa		1 - 3	PSI
<b>13. CLOCK CALENDAR</b>						
Note, from v0.00.8 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 (v0.00.3 on)	Sun - Sat	0 = Sunday 1 = Monday etc			
4	Date (v0.00.3 on)				01:01 - 31:12	
5	Year (v0.00.3 on)				v0.00.3 - v0.00.7	
					00 - 99	
					v0.00.8 on	
					1992 - 2022	
18	Daylight saving enable (v0.00.8)	Stnd dAY.S	Standard time Daylight saving time		0 - 1	Stnd
<b>14. RESTORE FACTORY DEFAULTS</b>						
9	Set default values to values defined by the bitswitch settings. 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 (v0.00.8 on)	xxxC xxxO	LT compressor pack HT compressor pack	where C = CLOSED or ON O = OPEN or OFF x = Don't care  For unmarked switches C = dot visible O = dot not visible

JTL COMPRESSOR PACK ITEM NUMBERS					EPSA CPSA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
<b>15. SYSTEM ALARMS</b>						
80	Group alarm 81 - 88	0 1 - 255	No alarms Check 81 - 88			
81	Low suction pressure	CLr Lo.SP	No fault Fault			
82	High suction pressure	CLr Hi.SP	No fault Fault			
83	Low discharge pressure	CLr Lo.dP	No fault Fault			
84	High discharge pressure	CLr Hi.dP	No fault Fault			
85	Low level liquid	CLr Lo.Li	No fault Fault			
86	High discharge temperature	CLr Lo.Li	No fault Fault			
87	Oil cooler	CLr O.C.Ft	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			
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 fault	CLr HP.LP	No fault Fault			
95	Defrost interface card fault	CLr Stub	No fault Fault			
96	Compressor interface card fault	CLr CP.IF	No fault Fault			
97	Compressor fault	CLr CPr.F	No fault Fault			
98	Oil pressure fault	CLr OIL.F	No fault Fault			

JTL COMPRESSOR PACK ITEM NUMBERS					EPSA CPSA	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
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<b>16. DIAGNOSTIC &amp; TEST FUNCTIONS</b>						
6	JTL Network communications speed	4.8 38.4	Kilo Baud Kilo Baud			
7	Communications method	HALF	2 wire			
8	Bitswitch Setting	0 1	LT pack HT pack	xxxC xxxO		
89	Thermistor excitation value (Factory test)		Not used			
99	Test digital displays	CLr SEt	Not active Test active		0 - 1	
73	Test inputs (v0.00.8 on)	- - - - 1 - - - - 2 - -	No inputs Input 1 on Input 2 on			
66	Test relay outputs (v0.00.8 on)	clr SEt	Not active Active		0 - 1	
199	Power down time					
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			

<b>DISPLAY DATA</b>		<b>EPSA CPSA</b>	
<b>NORMAL DISPLAY</b>			
999.9	Pressure in psi		
--	Not selected		
<b>ALARM TEXT (in descending priority order)</b>			
Hi.dP	High discharge pressure		
Stub	Defrost interface fault		
rEF.L	Refrigerant loss		
CPr	Compressor fault		
FAn	Condenser fan problem		
Lo.SP	Low suction pressure		
Hi.SP	High suction pressure		
Oil.L	Oil cooler fault		
Hi.dt	High discharge temperature		
<b>OTHER TEXT</b>			
JTL	Start-up text		