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JTL COMPRESSOR PACK ITEM NUMBERS						EP6A
ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT 4321**	**RANGE**	**ITEM 9 VALUE**
1. Jnet NETWORK IDENTIFICATION						
0	Unit type	EP6A	Unit type			
19	Software version number					
1	Unit number				0.1 - 899.9	
2. PRESSURES Note: 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	PSI bAr PASC	p.s.i. bar kPa		1 - 3	PSI
2.1 LT SUCTION PRESSURE						
21	LT suction pressure					
146	Average 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					
147	Average 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					
149	Average 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

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2.4 DISCHARGE PRESSURE						
23	Discharge pressure					
148	Average 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
3. TEMPERATURES Note: 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	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	Sensor 6 temperature					
136	Sensor 6 temperature	OFF t6.En	Not selected Selected		0 - 1	OFF
37	Plant room temperature					
137	Plant room temperature	OFF t7.En	Not selected Selected		0 - 1	t7.En

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4. SUCTION PRESSURE CONTROL If suction pressure optimisation is selected then the suction pressure setpoints as set in item 40, 50 and 70 can be adjusted upwards to the maximum by a JTL optimisation unit connected to the network. If there is no JTL optimisation unit on the network then the setpoint remains at the original set value. In the event of network failure the setpoints revert to the original set value after a time delay of 15 minutes.						
150	Select network optimised suction pressure control	oFF OPt.E	Not added Selected		0 - 1	oFF
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
151	Optimised LT suction setpoint					
152	Optimised LT suction setpoint upper limit				5 - 20	10
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
46	Suction pressure to hold off stage 2				50 - 100	80
47	Suction pressure to hold off stage 3				30 - 100	60
48	LT suction 1st stage hold on				- 8 to +20	0
191	Integrated LT pressure error					
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				0 - 40	
101	Maximum number of LT compressors allowed				1 - 10	10
102	Number of LT compressors running					

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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
153	Optimised HT suction setpoint					
154	Optimised HT suction setpoint upper limit				15 - 60	40
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
192	HT suction					
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				0 - 40	
103	Maximum number of HT compressors allowed				1 - 10	10
104	Number of HT compressors running					

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ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT** 4321	**RANGE**	**ITEM 9 VALUE**
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
155	Optimised satellite suction setpoint					
156	Optimised Satellite suction setpoint upper limit				5 - 50	10
73	Satellite suction pressure deadband				0 - 10	5
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
194	Satellite suction					
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				0 - 40	
105	Maximum number of satelite compressors allowed				1 - 10	10
106	Number of satelite compressors running					

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ITEM	DESCRIPTION	CODE	CODE MEANING	BIT 4321	RANGE	ITEM 9 VALUE
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
206	Compressor fault alarm delay (mins)				0 - 10	0
209	Bias loading towards base machine selection	OFF bASE	Disable Enable bias		0 - 1	OFF
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	Number of steps				0 - 4	4
2x1	Number of steps on load					
2x2	Running hours (in 10s of hours)				0 - 9999	
2x3	Compressor status Note:- 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 effective kW				1 - 100	10
2x7	Forced number of compressor steps				0 - 4	
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	8
351-360	Average number of starts per hour last 24 hours (351 for compressor 1 etc)					
371-380	Compressor run time last 24 hours (371 for compressor 1 etc)					

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ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT** 4321	**RANGE**	**ITEM 9 VALUE**
6. DISCHARGE PRESSURE CONTROL						
60	Discharge pressure setpoint				100 - 250	200
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				5 - 50	10
64	Condenser control time constant				1 - 250	30
65	Discharge pressure to reduce capacity				140 - 320	300
193	Integrated discharge pressure error					
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 - 13	7
397	Number of condenser steps in backup analogue mode				0 - 99	99
61 (391)	Number of condenser steps running					
392	Forced number of condenser steps		Step Analogue		0 -no. of steps (item 390) 0 - 99	
396	Note:- 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	oFF Auto	Manual Automatic			
170	Input states	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)				15 - 240	30
160	Watchdog output (LN/LD-2)	OFF On	Watchdog fail Watchdog healthy			

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9. DISPLAY FUNCTIONS						
179	Pressure display unit choice	PSI bAr PASC	p.s.i. bar kPa		1 - 3	PSI
10. 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				1992 - 2022	
18	Daylight saving enable	Stnd dAY.S	Standard time Daylight saving time		0 - 1	Stnd
11. 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			

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ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT**	**RANGE**	**ITEM 9 VALUE**
				4321		
12. 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	Refrigerant loss	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	Temperature sensor fault	CLr th.Ft	No fault Fault			
93	Temperature sensor excitation voltage fault	CLr PS.Ft	No fault Fault			
94	High or low pressure switch fault	CLr HP.LP	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			

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ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT** 4321	**RANGE**	**ITEM 9 VALUE**
13. DIAGNOSTIC & TEST FUNCTIONS						
6	JTL Network communications speed	4.8	Kilo Baud			
7	Communications method	HALF	2 wire			
8	Bitswitch Setting		Unused			
89	Temperature sensor excitation value (Factory test)		Not used			
99	Test digital displays	CLr SEt	Not active Test active		0 - 1	
100	Test inputs	- - - - 1 - - - - 2 - -	No inputs Input 1 on Input 2 on			
199	Test relay outputs	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	EP6A
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