

JTL COMPRESSOR PACK ITEM NUMBERS					CPCS	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
0	Unit type	CPCS				
1	Unit number				0.1 - 899.9	
2	Time of day				00:00 - 23:59	
6	Communications speed	4800 600	Baud rate Baud rate			
8	Bitswitch Setting					
9	Set default values selected by Bitswitch				1234 only	
PROCESSOR ALARMS						
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			
MISCELLANEOUS DATA						
19	Software Version number					
PRESSURE TRANSDUCERS						
21	Suction pressure					
22	Discharge pressure					
26	Absolute suction pressure transducer selection	Su.GA Su.Ab	Gauge pressure Absolute pressure		0 - 1	Su.GA
28	Suction pressure transducer selection	OFF S.SEL	Not selected Selected		0 - 1	S.SEL
29	Discharge pressure transducer selection	OFF d.SEL	Not selected Selected		0 - 1	d.SEL

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TEMPERATURE PROBES						
31	Suction gas Temperature					
32	Discharge gas Temperature					
33	Saturated gas Temperature					
34	Condenser air on temperature					
35	Condenser air off temperature					
36	Hot water temperature					
37	Plant room temperature					
39	Display type selection	LEd.1 LEd.2	2 displays 4 displays		0 - 1	LEd.2
SUCTION PRESSURE CONTROL						
40	Suction pressure setpoint			xxxC xxxO	- 4 to +20 20 - 50	6 35
41	Low suction pressure alarm level			xxxC xxxO	- 5 to +15 5 - 40	0 20
42	High suction pressure alarm level			xxxC xxxO	10 - 30 30 - 60	20 50
43	Suction pressure deadband			xxxC xxxO	0 - 5 0 - 10	2 5
44	Suction pressure increase time constant				1 - 60	30
45	Suction pressure decrease time constant				1 - 60	15
46	Suction pressure to hold off stage 2			xxxC xxxO	50 - 100 60 - 100	60 80
47	Suction pressure to hold off stage 3			xxxC xxxO	30 - 100 50 - 100	40 60
48	Suction pressure offset during gas defrost			xxxC xxxO	0 - 10 0 - 15	0 0
DISCHARGE PRESSURE CONTROL						
50	Discharge pressure setpoint				150 - 250	200
51	Low discharge pressure alarm level				100 - 200	150
52	High discharge pressure alarm level				150 - 300	250
53	Discharge pressure deadband				0 - 20	5
54	Condenser control time constant				1 - 250	30
55	Discharge pressure to reduce capacity				200 - 320	300
56	Gas temperature to open regulator valve				25 - 40	30
57	Discharge pressure offset during gas defrost				0 - 50	0

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OUTPUT STATES						
60	Watchdog status	OFF On	Not used			
61	Dump valve control	OFF Du.on	Not used			
62	Gas temperature regulator valve control (LN/LD-2)	OFF Gr.on	Valve closed Gas reg. valve open			
63	Differential pressure relief valve control (LN/LD-1)	dp dP.rl	Diff. pressure Diff. pressure relief			
64	Cool gas valve control	OFF CG.on	Not used			
INPUT STATES						
71	Auto/manual (IP-1)	OFF Auto	Manual (pack controller dormant) Auto mode			
72	Liquid level (IP-2)	Clr Lo.Li	Liquid level o.k Low liquid level			
73	Refrigerant leak	Clr rEF.L	Not used			
74	Plant failed (IP-1)	Clr P.Fld	No failure Plant failed			
SYSTEM ALARMS						
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	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			

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MISCELLANEOUS DATA						
89	Thermistor excitation value (Factory test)		Not used			
SYSTEM ALARMS						
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	Unit number corrupted	Clr Un.CF	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			
UTILITY						
99	Test digital displays	Clr SEt	Not active Test active		0 - 1	
COMMON COMPRESSOR DATA						
100	Number of compressors				0 - 8	8
101	Number of steps on load					
102	Forced number of steps				0 - 24	
TEMPERATURE PROBE SELECTION						
103	Suction temperature	OFF t1.En	Disabled Enabled		0 - 1	t1.En
104	Discharge temperature	OFF t2.En	Disabled Enabled		0 - 1	t2.En
105	Saturated gas temperature	OFF t3.En	Disabled Enabled		0 - 1	t3.En
106	Condenser air on temperature	OFF t4.En	Disabled Enabled		0 - 1	t4.En
107	Condenser air off temperature	OFF t5.En	Disabled Enabled		0 - 1	t5.En
108	Hot water temperature	OFF t6.En	Disabled Enabled		0 - 1	t6.En
109	Plant room temperature	OFF t7.En	Disabled Enabled		0 - 1	t7.En

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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 110 - 189.						
1x0	Number of steps				0 - 3	1
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) 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.			
1x4	Compressor restart inhibit timer (mins)					
1x7	Forced number of compressor steps				0 - 3	
1x8	Force compressor off				0 - 1	
CONDENSER CONTROL						
190	Number of condenser steps				0 - 7	7
191	Number of condenser steps running					
192	Forced number of condenser steps		Step Analog		0 - 7 0 - 99	
MISCELLANEOUS DATA						
193	Heat reclaim input	OFF Hr.On	Heat reclaim on Heat reclaim off			
194	Analog/stepped condenser control selection	StEP A.LOG	Step control Analog control		0 - 1	StEP

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COMMON DEFROST CONTROL DATA							
200	Number of defrost systems				0 - 28	28	
201	Maximum gas defrost duration (any defrost duration set less than or equal to this time is assumed to be a gas or electric defrost system, all others are assumed to be off-cycle systems)				15 - 40	25	
202	Time before gas defrosts due				0 - 10	0	
203	Time before end of gas defrosts				0 - 5	0	
204	Maximum number of gas/electric defrosts allowed	CPCS02 on (v0.00.2 on)					
						1 - 28	3
205	Diff pressure relief (liquid line) valve type	CPCS02 on (v0.00.2 on)					
		n.c n.o	Normally closed Normally open			0 - 1	n.c
209	Defrost interfaces selection	OFF On	Defrost interfaces not used Defrost interfaces used for defrost control		0 - 1	On	
DEFROST DATA							
210	Start time for first daily defrost	STUB			00:00 - 23:59	TIME	
220		1				08:00	
230		2				08:30	
240		3				09:00	
250		4				09:30	
260		5				10:00	
270		6				10:30	
280		7				11:00	
290		8				11:30	
300		9				12:00	
310		10				12:30	
320		11				13:00	
330		12				13:30	
340		13				08:15	
350		14				08:45	
360		15				09:15	
370		16				09:45	
380		17				10:15	
390		18				10:45	
400		19				11:15	
410		20				11:45	
420		21				12:15	
430		22				12:45	
440		23				13:15	
450		24				13:45	
460		25				08:00	
470		26				09:00	
480		27				10:00	
	28			11:00			

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<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 systems 20 - 28 use items 400 - 489.</p>						
2x1	Duration of defrost (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 refig. Forced refig. on		0 - 1	
2x5	Defrost mode	0 dEF dr.dn F.dEF F.rEF d.inh FAIL	Refrig. Defrost Drain down Forced defrost. Forced refig. Defrost inhibited (see item 204) Defrost interface fail			
2x6	Drain down time				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	2
2x9	No of JTL-controlled evaporators terminated					

BITSWITCH SETTINGS

4321

xxx**C** LT compressor pack
xxx**O** HT compressor pack

where **C** = CLOSED or ON
O = OPEN or OFF
x = Don't care

Note 1: For unmarked switches
C = dot visible
O = dot not visible

Note 2: Setting the bitswitches alone has no effect.
Use **ITEM 9** to set the default values after the switches are set.