

CONTENTS

1. Jnet NETWORK IDENTIFICATION	2
2. PRESSURES	2
2.1 LT SUCTION PRESSURE	2
2.2 HT SUCTION PRESSURE	2
2.3 DISCHARGE PRESSURE	2
3. TEMPERATURES	3
4. SUCTION PRESSURE CONTROL	4
4.1 LT SUCTION PRESSURE CONTROL	4
4.2 HT SUCTION PRESSURE CONTROL	5
5. COMPRESSOR CONTROL	6
5.1 COMMON DATA	6
5.2 COMPRESSOR DATA	6
5.3 COMPRESSOR INPUT AND OUTPUT STATUS CONTROL	7
6. INVERTER DATA	8
7. DISCHARGE PRESSURE CONTROL	9
8. CONDENSER CONTROL	9
8.1 CONDENSER INPUT & OUTPUT STATUS	9
9. INPUTS AND OUTPUTS	10
10. DISPLAY FUNCTIONS	10
11. CLOCK CALENDAR	10
12. RESTORE FACTORY DEFAULTS	10
13. SYSTEM ALARMS	11
14. DIAGNOSTIC & TEST FUNCTIONS	12
DISPLAY DATA	13

JTL COMPRESSOR PACK ITEM NUMBERS					EPID	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
1. Jnet NETWORK IDENTIFICATION						
0	Unit type	EPid	Unit type			
19	Software Version number					
1	Unit number				0.1 - 899.9	
2. PRESSURES						
<p>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. Pressures are averaged over last hour (the average is updated every 4 minutes)</p>						
179	Pressure display unit choice	1 2 3	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 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

JTL COMPRESSOR PACK ITEM NUMBERS					EPID	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
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					
141	LT suction superheat					
131	LT suction temperature	OFF t1.En	Not selected Selected		0 - 1	t1.En
32	HT suction gas temperature					
142	HT suction superheat					
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	Sensor 4 temperature					
134	Temperature sensor 4	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	Temperature sensor 6	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
144	Minimum superheat	0.0	Alarm disabled		0.0 - 20.0	0.0
157	Refrigerant type	3 404 4 407A 5 407B 6 507	R404 R407A R407B R507		3 - 6	R404A

JTL COMPRESSOR PACK ITEM NUMBERS					EPID	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
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
195	Enable low suction pressure safety (v0.00.2 on)	Off LP.En	Disabled Enabled		0 - 1	Off
4.1 LT SUCTION PRESSURE CONTROL						
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
48	LT suction 1st stage hold on				- 8 to +20	0
191	Integrated LT pressure error					
41	No of LT suction steps loaded					
196	Low LT suction pressure safety shutdown level (v0.00.2 on)				-5 to 10	0
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 - 30	
101	Maximum number of LT compressors allowed				1 - 6	6
102	Number of LT compressors running					

JTL COMPRESSOR PACK ITEM NUMBERS					EPID	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
4.2 HT SUCTION PRESSURE CONTROL						
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	Integrated HT pressure error					
197	Low HT suction pressure safety shutdown level (v0.00.2 on)				10 - 40	20
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 - 30	
103	Maximum number of HT compressors allowed				1 - 6	6
104	Number of HT compressors running					

JTL COMPRESSOR PACK ITEM NUMBERS					EPID		
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 - 6	6	
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	
158	Compressor fault repeat alarm delay time (v0.00.2 on)	00:00	Feature disabled		00:00 -24:00	00:00	
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 210-269 for compressors 1 -6							
2x0	Compressor leading method	Compressor 1, 4-6					
		0	none	not controller		0 - 1	1.StP
		1	1.StP	1 step			
		Compressor 2 and 3					
		0	none	not controlled		0 - 2	2.StP
		1	1.StP	1 step			
		2	2.StP	2 steps			
2x1	Number of steps on load						
2x2	Running hours (in 10s of hours)				0 - 9999		
2x3	Compressor status	rdy 0	Ready to run (no fault). Off or compressor interface fault.				
2x4	Compressor restart inhibit timer (Seconds)						
2x5	Compressor function	0 1 2	nonE Lt.C Ht.C	Not in use LT HT	0 - 2	Lt.C	
2x6	Compressor capacity in <u>effective</u> kW				1 - 100	10	
2x7	Forced number of compressor steps				0 - 1		
2x8	Force compressor off	CP.En C.OFF	Compressor enabled to run Compressor forced off		0 - 1		
2x9	Compressor number of starts per hour				4 - 20	10	
351-360	Average number of starts per hour last 24 hours (351 for compressor 1 etc)						

JTL COMPRESSOR PACK ITEM NUMBERS					EPID		
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE	
				4321			
371-380	Compressor run time last 24 hours (371 for compressor 1 etc)						
5.3 COMPRESSOR INPUT AND OUTPUT STATUS Note 1. If combinations of input or output are present then the value displayed is added up from the individual input/output values as follows: 1 Input/Output 1 2 Input/Output 2 4 Input/Output 4 8 Input/Output 5 16 Input/Output 6 32 Input/Output 6 64 Input/Output 7 128 Input 8							
167	Compressor output configuration (Note: When compressor 1 is set for 50% unloader then the inverter is disabled)	1	CF-1	Compressor 2 50% unload		up to v0.00.1	CF-1
		2	CF-2	Compressors 2 and 3 50% unload		1 - 2	
		3	CF-3	Compressor 1 50% unload		up to v0.00.2	CF-1
		4	CF-4	Compressor 1 and 2 50% unload		1 - 5	
		5	CF-5	Compressor 1 to 3 50% unload			
111	Compressor input status interface 1						
112	Compressor input status interface 2						
113	Compressor output status interface 1						
114	Compressor output status interface 2						

JTL COMPRESSOR PACK ITEM NUMBERS					EPID	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
6. INVERTER DATA (COMPRESSOR 1)						
330	Select inverter control	OFF In.1S	Not selected Inverter selected		0 - 1	0
334	Inverter assigned to selected suction line	0 nonE 1 Lt.C 2 Ht.C	Not in use LT HT		0 - 2	Ht.C
347	Suction pressure error (V0.00.1 on)					
344	Inverter capacity loaded in effective kW					
341	Minimum cut out pressure				- 8 to +40	0
340	Time constant				1 - 240	30
339	Speed gain				1-250	100
345	Current proportional term					
346	Current Integral term					
331	Number of steps on load	0 127	Off Maximum			
332	Inverter run hours (in 10's of hours)				0 - 9999	
333	Inverter status	rdy 0	ready to run (no faults)			
343	Minimum steps allowed				1 -63	1
342	Maximum steps allowed				64 - 127	127
335	Inverter capacity at minimum speed in effective kW				1 - 100	5
336	Inverter capacity at maximum speed in effective kW				1 - 100	10
337	Forced no. of steps				0 - 127	
338	Force inverter off	CP.En C.OFF	Enabled to run Inverter forced off		0 - 1	
55	Discharge pressure to reduce capacity				140 - 320	300

JTL COMPRESSOR PACK ITEM NUMBERS					EPID	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
7. DISCHARGE PRESSURE CONTROL						
60	Discharge pressure setpoint				100 - 250	150
394	Condenser control selection (see manual for sequence)	1 2 3 4	A.LOG CS-A CS-b CS-C	Analogue control Sequence A Sequence B Sequence C	1 - 4	CS-A
63	Discharge pressure deadband				0 - 20	5
395	Analog 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					
8. 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				0 - 14	7
397	Number if condenser steps in backup analogue mode				0 - 99	99
61 (391)	Number of condenser steps running					
392	Forced number of condenser steps			Step	0 - no. of steps (item 390)	
				Analog		
8.1 CONDENSER INPUT & OUTPUT STATUS						
Note 1. If combinations of input or output are present then the value displayed is added up from the individual input/output values as follows:						
1 Input/Output 1 2 Input/Output 2 4 Input/Output 4 8 Input/Output 5 16 Input/Output 6 32 Input/Output 6 64 Input/Output 7						
Note 2. The normal combinations are displayed as shown below.						
				Input/output		
389	Output status interface 1	1		1 on		
		1 - 2		1 & 2 on		
388	Output status interface 2	1 - 3		1, 2 & 3 on		
		1 - 4		1, 2, 3 & 4 on		
396	Input status interface 1	1 - 5		1, 2, 3, 4 & 5 on		
		1 - 6		1, 2, 3, 4, 5 & 6 on		
387	Input status interface 2	1 - 7		1, 2, 3, 4, 5, 6 & 7 on		
		1.7		1 & 7 on		
		1 - 2.7		1, 2 & 7 on		
		1 - 3.7		1, 2, 3 & 7 on		
		1 - 4.7		1, 2, 3, 4 & 7 on		
		1 - 5.7		1, 2, 3, 4, 5 & 7 on		

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				4321		
9. INPUTS AND OUTPUTS						
20	Operating mode	oFF Auto	Manual Automatic			
170	Input status	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			
10. DISPLAY FUNCTIONS						
179	Pressure display unit choice	1 PSI 2 bAr 3 PASC	p.s.i. bar kPa		1 - 3	PSI
11. 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				2004 - 2034	
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			

JTL COMPRESSOR PACK ITEM NUMBERS					EPID	
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			
85	Low liquid level	Clr Lo.Li	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	Low suction superheat	Clr Lo.Sh	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	Inverter fault	Clr In.FL	No fault Fault			

JTL COMPRESSOR PACK ITEM NUMBERS					EPID	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
14. DIAGNOSTIC & TEST FUNCTIONS						
6	Communications speed	4.8 38.4	Kilo baud rate Kilo baud rate			
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	- - - - 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		EPID
NORMAL DISPLAY		
999.9	Pressure in psi	
--	Not selected	
ALARM TEXT (in descending priority order)		
P.Fld	Plant failed	
Hi.dP	High discharge pressure	
Hi.Lt	High LT suction pressure	
Hi.Ht	High HT suction pressure	
rEF.L	Low level liquid	
Lo.Sh	Low suction superheat	
CPr	Compressor fault	
FAn	Condenser fan problem	
OTHER TEXT		
JTL	Start-up text	
Lt	LT suction pressure follows this text	
Ht	HT suction pressure follows this text	