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CO2 LIQUID PRESSURE CONTROLLER ITEM NUMBERS					HP370	
ITEM	DESCRIPTION	CODE	CODE MEANING	DEFAULT SET	RANGE	ITEM 9 VALUE
1. Jnet NETWORK IDENTIFICATION						
0	Unit type	HP37	Unit type			
19	Software version number					
1	Unit number				0.1 - 899.8	
190	Unit number 2 for heat exchanger (up to v0.01.4)				0.1 - 899.8	
2. PRESSURE 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.						
9393	Pressure display unit choice	1 2 3 4	PSI bAr PASC bara	p.s.i. bar gauge kPa bar absolute	1 - 4	PSI
2.1 LIQUID PRESSURE						
22	Liquid pressure					
5019	Liquid sub cooling					
5020	Refrigerant boiling point					
147	Average liquid pressure over 1 hour					
5001	High liquid pressure alarm level				550 - 900	620
5002	Low liquid pressure alarm level				400 - 750	500
5003	Liquid pressure alarm delay (mins)				0 - 20	0
122	Liquid pressure transducer selection	OFF L.t.En	Disabled Enabled		0 - 1	L.t.En
422	Full scale transducer value (at 20mA)				500 - 2200	870
103	Liquid pressure Tx data set 1 (Note before v0.01.5 there may be incompatibility with other JTL products)		0 - unused		0 - 9999	0
104	Liquid pressure Tx data set 2 (Note before v0.01.5 there may be incompatibility with other JTL products)		0 - unused		0 - 9999	0
2.2 SUCTION PRESSURE						
21	Suction pressure					
146	Average suction pressure over 1hr					
121	Suction pressure transducer selection	OFF S.t.E.n	Disabled Enabled		0 - 1	St.En
421	Full scale transducer value (at 20mA)				500 - 2200	870
101	Suction pressure data set 1 (Note before v0.01.5 there may be incompatibility with other JTL products)		0 - unused		0 - 9999	0
102	Suction pressure data set 2 (Note before v0.01.5 there may be incompatibility with other JTL products)		0 - unused		0 - 9999	0

CO2 LIQUID PRESSURE CONTROLLER ITEM NUMBERS					HP370	
ITEM	DESCRIPTION	CODE	CODE MEANING	DEFAULT SET	RANGE	ITEM 9 VALUE
24	Interstage suction pressure from broadcast (from v0.01.5)					
111	Interstage suction pressure Rx data set (from v0.01.5)		0 - unused		0 - 9999	0
112	Interstage suction pressure received from (from v0.01.5)					
3. TEMPERATURE & HUMIDITY 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.						
9392	Temperature display choice	CELS FAhr	Celsius Fahrenheit		0 - 1	CELS
31	Suction gas temperature					
131	Suction temperature	OFF t1.En	Not selected Selected		0 - 1	t1.En
32	Liquid temperature					
132	Liquid temperature sensor selection	Off t2.En	Disabled Enabled		0 - 1	t2.En
144	Minimum superheat alarm level	0.0	Alarm disabled		0.0 - 20.0	0.0
141	Suction superheat					
897	Site temperature (from broadcast)					
898	Site relative humidity (from broadcast)					
896	Site absolute humidity (from broadcast)					
899	Outside temperature (from broadcast)					
4. LIQUID PRESSURE CONTROL						
5000	liquid pressure control	OFF L.C.On	Disabled Enabled		0 - 1	L.C.On
5016	Liquid pressure setpoint				400 - 750	560
5023	Liquid pressure setpoint (min)				400 - 750	600
5024	Liquid pressure setpoint (max)				500 - 800	725
5027	High liquid pressure safety level (from v0.00.5)				700 - 1000	800
5028	High liquid pressure safety level delay (minutes) (from v0.00.5)				0 - 10	up to v0.01.0
						5
						from v0.01.1
						0
5025	Optimised pressure setpoint					
5026	Current pressure setpoint					
113	Optimised pressure Rx data set (Note before v0.01.5 there may be incompatibility with other JTL products)		0 - unused		0 - 9999	0
114	Optimised data received from unit number (from v0.01.2)					

CO2 LIQUID PRESSURE CONTROLLER ITEM NUMBERS						HP370	
ITEM	DESCRIPTION	CODE		CODE MEANING	DEFAULT SET	RANGE	ITEM 9 VALUE
5022	Valve output smoothing	0		Disabled		0 - 5	0
5010	Valve control proportional gain					0 - 99.99	2.0
5011	Valve control integral gain					0 - 99.99	0.10
5013	Current proportional (P) term						
5014	Current integral (I) term						
5017	Liquid pressure error						
5018	Flash gas valve output (%)						
5008	Forced valve output (%)					0 - 100.0	0
5009	Force valve shut	OFF F.Sht		oFF Forced shut		0 - 1	
5. HEAT EXCHANGER CONTROL DATA Forced functions remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged.							
140	Superheat control strategy	2 3 4	ShLG F-Sh oFF	Superheat monitoring Superheat control Superheat off		up to v0.00.4	
						2 - 3	F-Sh
						from v0.00.5	
						2 - 4	F-Sh
141	Suction superheat						
72	Current superheat setpoint (from v0.01.5)						
142	Superheat setpoint					4 - 12	6.0
73	Superheat float (from v0.01.5)	0.0		Disabled		0 to 10.0	10.0
74	Superheat float integral gain (from v0.01.5)					1 - 99.99	1.00
145	Superheat control in manual (from v0.01.3)	0 1	oFF On	in auto only Always		0 - 1	oFF
50	Valve control proportional gain					0 - 99.99	10.0
51	Valve control integral gain	0		Integral disabled		up to v0.01.4	
						0 - 1.00	0.1
						from v0.01.5	
						0 - 99.99	10.0
52	Rate of charge of output (%/sec)					1 - 20	10
143	Minimum Superheat					0 - 5.0	0
55	Maximum Valve opening %					10 - 100	100
56	Minimum Valve opening %					0 - 50	0
57	Current valve opening %						
148	Valve output smoothing	0		Disabled		0 - 5	0
53	Proportional output (P term)						
54	Integral output (I term)						

CO2 LIQUID PRESSURE CONTROLLER ITEM NUMBERS					HP370	
ITEM	DESCRIPTION	CODE	CODE MEANING	DEFAULT SET	RANGE	ITEM 9 VALUE
75	Stop subcooling when interstage capacity is 0kW (from v0.01.5)	run StoP	Run always Stop on 0kW		0 - 1	run
76	Interstage capacity (from v0.01.5)					
77	Interstage capacity Rx data set (from v0.01.5)				0 - 9999	0
78	Interstage capacity received from (from v0.01.5)					
58	Forced valve opening %				0 - 100.0	
59	Force valve shut	OFF F.Sht	Off Forced shut		0 - 1	
162	Current valve status	OFF En.H.E	Output off Output on			
6. LIQUID SUBCOOLING CONTROL						
70	Liquid subcooling control strategy	0 1 2	oFF L.S.S.C L.S.t.L	Monitoring only Superheat control Temperature control		L.S.S.C
5019	Liquid subcooling					
71	Liquid subcooling setpoint				0 to -10.0	-7.0
7. INPUTS AND OUTPUTS						
20	Operating mode	oFF Auto	Manual Automatic			
170	Inputs	Graphical	See display data bit1 =output 1			
171	Auto/manual (IP-1)	OFF Auto	Manual (pack controller dormant) Auto mode			
172	Plant ok (IP-2)	P.Hty PL.ft	Healthy Fault			
173	Unload Heat exchanger (IP-3)	Ld.H.E Un.H.E	Load Heat exchanger Unload Heat exchanger			
160	Outputs	graphical	See display data bit1 = output1			
162 upto v0.01.1	Enable Heat exchanger (LN/LD-1)	clr En.H.E	oFF Heat exchanger enable			
161 from v0.01.2						
161 upto v0.01.1	Enable liquid control (LN/LD-2)	clr En.L.C	oFF Enable valve			
162 from v0.01.2						
163	Watchdog (LN/LD3)	clr hty	Fault Healthy			

CO2 LIQUID PRESSURE CONTROLLER ITEM NUMBERS					HP370	
ITEM	DESCRIPTION	CODE	CODE MEANING	DEFAULT SET	RANGE	ITEM 9 VALUE
164	High liquid pressure (LN/LD4) (from v0.00.5)	Clr Hi.L.P	Off High liquid pressure			
8. DISPLAY FUNCTIONS						
9393	Pressure display unit choice	1 2 3 4	PSI bar PASC bara	p.s.i. bar gauge kPa bar absolute	1 - 4	PSI
9392	Temperature display unit choice	0 1 2	Cels Fahr kelv	Celsius Fahrenheit Kelvin	0 - 2	Cels
189	Backlight control	0 1 2 3	B.off BL.on BL.FF BL.n.F	Backlight off Backlight on Backlight off, flashes for alarm Backlight on, flashes for alarm	0 - 3	
9. 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				2019 - 2099	
18	Daylight saving enable	Stnd dAY.S	Standard time Daylight saving time		0 - 1	Stnd
10. RESTORE FACTORY DEFAULTS						
To set the factory defaults into the memory of the controller, first set the virtual bitswitch as shown, then 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.						
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			

CO2 LIQUID PRESSURE CONTROLLER ITEM NUMBERS					HP370	
ITEM	DESCRIPTION	CODE	CODE MEANING	DEFAULT SET	RANGE	ITEM 9 VALUE
11. RESTORE PARAMETERS FROM NETWORK To restore the data from the network first restore factory defaults and set the appropriate unit number on item 1. Then check item 965 to see if this facility is available on the network. The information on item 965 is received from a network broadcast every few minutes. If the restore parameter facility is available and operational then item 965 will be set to a non zero number e.g. 2. To request restore parameters set item 964 to 1234. Item 963 displays parameters restore progress. When all parameters are downloaded item 964 is cleared to 0.						
965	Master database port	0 1 - 4	Not in use NC port no			
964	Set restore parameters from network	1234	Request restore			
963	Parameter restore progress	rdy dnl.r din.p dnl.c FAIL	Restore function possible Restore requested Restore in progress Restore complete Restore fault			
959	Requested template	0 1-9999	As commissioned Template number		0 - 9999	
12. SYSTEM ALARMS						
80	Group alarm items 81 - 88	Graphical	See display data			
84	High liquid pressure	CLr Hi.L.P	No fault Fault			
87	Low liquid pressure	CLr Lo.L.P	No fault Fault			
90	Group alarm items 91 - 98	Graphical	See display data			
91	Liquid Pressure transducer fault	CLr Pt.Ft	No fault Fault			
92	Liquid Temperature sensor fault	CLr th.Ft	No fault Fault			
900	Group alarm 901-908	Graphical	See display data			
901	Suction pressure transducer fault	CLr Pt.Ft	No fault Fault			
902	Suction temperature sensor fault	CLr th.Ft	No fault Fault			
904	Low superheat	CLr Lo.Sh	No fault Fault			
910	Group alarm items 911 - 918	Graphical	See display data			
915	Plant fault	CLr PL.Ft	No fault Fault			

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ITEM	DESCRIPTION	CODE	CODE MEANING	DEFAULT SET	RANGE	ITEM 9 VALUE
13. DIAGNOSTIC & TEST FUNCTIONS						
6	JTL Network communications speed	4.8	Kilo Baud			
7	Communications method	HALF	2 wire			
967	Latest unit no polled on zone					
973	Latest polling interval This time shows the polling interval between the last two untimed network broadcasts.	min:sec				
974	Time since last awake message	min:sec				
89	ADC test value (factory test)					
989	Test digital display	CLr SEt	Not active Test active		0 - 1	
100	Test inputs (1 - 8)	Graphical	See display data			
199	Test relay outputs Energise outputs 1-8 in turn Set to 1 to start test	0 1 - 8	Not active Output on		0 - 1	
411	Pressure 1 reading					
421	Pressure 2 reading					
431	Temperature 1 reading					
431	Temperature 2 reading					
438	Temperature sensor open-circuit faults A high segment = alarm present	Graphical	See display data			
439	Temperature sensor short-circuit faults A high segment = alarm present	Graphical	See display data			
10	Processor alarms (11 - 17)	Graphical	See display data			
14	Background loop fault	CLr BL.Ft	No fault Fault			
16	NVRAM fault	CLr n.Ft	No fault Fault			

DISPLAY DATA		HP370
NORMAL DISPLAY		
999.9	Liquid pressure in psi	
--	Not selected	
ALARM TEXT (in descending priority order)		
P.Flt	Plant fault	
Pt.Ft	Pressure sensor fault	
TS.Ft	Temperature sensor fault	
OTHER TEXT		
JTL	Start-up text	

Graphical Display of Bit Data			
Graphical display of bit data used on items where the data was shown previously as a decimal value.	Bit	Graphic	
	None		
	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		