DISCHARGE PRESSURE CONTROLLER CO2 PACK ITEMS NUMBERS

HP230 HP240

CONTENTS

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ITEM	DESCRIPTION	CODE		CODE MEANING	RANGE	ITEM 9 VALUE
1. Jnet NETWORK IDENTIFICATION						
0	Unit type	hP23 hp24		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	1 2 3	PSI bAr PASC	p.s.i. bar kPa	1 - 3	PSI
2.1 HEAT EXCHANGER 1 PRESSURE						
21	Heat exchanger 1					
121	Heat exchanger 1 Transducer selection	OFF S.1.En			0 - 1	S.1.En
421	Full scale transducer value (at 20mA)				100 - 200	101.5
426	Zero scale transducer value (4mA)				-15 - 0	-15.0
2.2 HEAT EXCHANGER 2 PRESSURE						
22	Heat exchanger 2					
122	Heat exchanger 2 Transducer selection	OFF S.2.En			0 - 1	S.2.En
421	Full scale transducer value (at 20mA)				100 - 200	101.5
426	Zero scale transducer value (4mA)				-15 - 0	-15 - 0
3. DISCHARGE PRESSURE						
23	Discharge pressure					
148	Average discharge pressure over 1 hour					
72	High discharge pressure alarm level				450 - 580	507.5
71	Low discharge pressure alarm level				250 -350	300
123	Discharge pressure transducer selection	OFF d.t.En		Disabled Enabled	0 - 1	Dt.En
423	Full scale transducer value (at 20mA)				550 - 900	870
428	Zero scale transducer value (at 4mA)				-15 - 0	0.0

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	4. TEMPERATURES Note. The temperatures can be displayed on the maintenance unit in degrees Celsius or Fahrenheit. The choice is made on item 122. All setpoint ranges in this document are shown in celsius.					
122	Temperature display unit choice	CELS FAhr		Celsius Fahrenheit	0 - 1	CELS
157	Refrigerant type	3 4 5 6 7	404A 407A 407B 507 408	404A 407A 407B 507 R408A	up to v0.00.1 3 - 6 from v0.00.2 3 - 7	 R407A
	4.1 HEAT EXCHANGER 1					
31	Suction line temperature					
131	Suction line sensor selection	OFF t1.En		Disabled Enabled	0 - 1	t1.En
50	Superheat from pressure & temperature					
	4.2 HEAT EXCHANGER 2					
32	Suction line temperature					
132	Suction line sensor selection	OFF t2.En		Disabled Enabled	0 - 1	t2.En
60	Superheat from pressure & temperature					
	5. ELECTRONIC EXPANSION VALVE CONTROL DATA Forced functons remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged.					
40	Superheat control strategy	0 1 2 3	nonE StG ShLG F-Sh	none Staged control Superheat monitoring Superheat control	0 - 3	F-Sh
41	Superheat setpoint				4 - 12	6 .0
45	Valve control gain (proportional term)				0 - 100	20
46	Valve control time constant (integral term)	0 1 - 250		Integral disabled Time constant	0 - 250	25
47	Rate of discharge of output (%/sec) (v0.00.3 on)				1 - 20	10
42	Minimum Superheat				0 - 5.0	0
43	Maximum Valve opening % (PI)				10 - 100	100
44	Minimum Valve opening % (PI)				0 - 50	0

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ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**RANGE**	**ITEM 9 VALUE**
5.1 HEAT EXCHANGER 1 EXPANSION VALVE					
51	Current opening %				
52	Proportional output				
53	Integral output				
54	Forced Valve opening %			0 - 100	
55	Force valve shut	OFF F.Sht	Off Forced shut	0 - 1	
165	Current Valve status	OFF PE.on	off on		
5.2 HEAT EXCHANGER 2 EXPANSION VALVE					
61	Current opening %				
62	Proportional output				
63	Integral output				
64	Forced Valve opening %			0 - 100	
65	Force valve shut	OFF F.Sht	Off Forced shut	0 - 1	
166	Current Valve status	OFF PE.on	off on		
6. DISCHARGE PRESSURE CONTROL					
70	Discharge pressure setpoint (2^{nd} stage)			350 - 550	440.0
73	Discharge pressure deadband (2^{nd} stage)			0 - 20	10.0
79	Discharge pressure to run first stage			300 - 350	320
74	Cooler control time constant			1 - 250	30
77	Cooler stage delay			10 - 60	10
75	Discharge pressure to reduce refrigeration capacity			465 - 550	487.5
193	Integrated discharge pressure error				
7. CONDENSER CONTROL Forced functions remain forced if the Maintenance Unit remains unplugged. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged.					
391	Number of cooling stages running				
390	Number of cooling stages			0 - 3	2
392	Forced number of cooling stages	0	Not forced	0 - 3	

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		8. INPUTS AND OUTPUTS			
20	Operating mode	oFF Auto	Manual Automatic		
171	Auto/manual (IP-1)	OFF Auto	Manual controller dormant Auto mode		
172	Gas cooler fault (IP-2) (v0.00.3 on)	Clr G.C.Ft	No fault Fault input present		
161	High discharge pressure (LN/LD-1)	clr Hi.dP	Discharge pressure ok High discharge pressure		
162	Enable external valve control (v0.00.03 on) LN/LD-2	oFF E.Sh.C	Output off Enable external valve control		
163	Watchdog LN/LD-3	oFF on	Output off Output on		
164	Enable Gas Cooler (LN/LD-4)	OFF En.G.C	Output off Enable gas cooler		
165	Pulsed valve 1 (LN/LD-5)	OFF on	Output off Output on		
166	Pulse valve 2 (LN/LD-6)	OFF on	Output off Output on		
		9. DISPLAY FUNCTIONS			
179	Pressure display unit choice	1 PSI 2 bAr 3 PASC	p.s.i. bar kPa	1 - 3	PSI
122	Temperature display unit choice	CELS FAhr	Celsius Fahrenheit	0 - 1	CELS
		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			2004 - 2034	
18	Daylight saving enable	Stnd dAY.S	Standard time Daylight saving time	0 - 1	Stnd
		11. RESTORE FACTORY DEFAULTS			
966	virtual bitswitch setting	0	Default set		
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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12. RESTORE PARAMETERS FROM NETWORK (from v0.00.1) To restore the data from the network first set the virtual bitswitch on item 966 and 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	Parameters restore progress	rdy dnl.r din.P dnl.C FA.IL	Restore function possible Restore requested Restore in progress Restore complete Restore fault		
959	Requested template	0 1-9999	As commissioned Template number	0 - 9999	
13. SYSTEM ALARMS					
80	Group alarm 81 - 88				
83	Low discharge pressure	CLr Lo.dP	No fault Fault		
84	High discharge pressure	CLr Hi.dP	No fault Fault		
88	Gas cooler fault (v0.00.3 on)	Clr G.C.Ft	No fault Fault		
90	Group alarm 91 - 98				
91	Pressure transducer fault	CLr Pt.Ft	No fault Fault		
92	Temperature sensor fault	CLr th.Ft	No fault Fault		
14. DIAGNOSTIC & TEST FUNCTIONS					
6	JTL Network communications speed	4.8	Kilo Baud		
7	Communications method	HALF	2 wire		
954	Current zone no				
967	Latest unit no polled on zone				
973	Latest polling interval This time shows the polling interval between the last two successful network awake messages to this unit.	min:sec			
974	Time since last awake message	min:sec			
975	Network receive timer Each time a message is read correctly the timer is set to 10 it counts down. If the timer reaches 0 then the communications module is reset.	seconds	(counts down to 0)		
976	Network receive bad character counter. The counter counts down from a preset number. When the counter reaches 0 the communications module is reset.		(counts down to 0)		

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ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**RANGE**	**ITEM 9 VALUE**
977	Transmit control line status for the operation of the Jnet network communications.	Hi Lo	Transmit Receive		
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	
431	Temperature sensor 1 reading (v0.00.3 on)				
432	Temperature sensor 2 reading (v0.00.3 on)				
438	Temperature sensor open circuit indication (v0.00.3 on)	0 1 2 4 8	No fault Sensor 4 Sensor 3 Sensor 2 Sensor 1		
439	Temperature sensor short circuit indication (v0.00.3 on)				
411	Pressure sensor 1 reading (v0.00.3 on)				
412	Pressure sensor 2 reading (v0.00.3 on)				
413	Pressure sensor 2 reading (v0.00.3 on)				
10	Processor alarms (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	HP230/240
NORMAL DISPLAY	
999.9	Pressure in psi
--	Not selected
ALARM TEXT (in descending priority order)	
Hi.dP	High discharge pressure
OTHER TEXT	
JTL	Start-up text