JTL CHILLER SEQUENCER ITEM NUMBERS | CH210

CONTENTS

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ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**DEFAULT SET**	**RANGE**	**ITEM 9 VALUE**
1. Jnet NETWORK IDENTIFICATION						
0	Unit type	CH210	Unit type			
19	Software version number					
1	Unit number				0.1 - 899.8	
2. 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
21	Flow temperature					
36	Flow temperature	OFF t1.En	Not selected Selected		0 - 1	t1.En
22	Return temperature					
37	Return temperature	OFF t2.En	Not selected Selected		0 - 1	t2.En
31	High flow temperature alarm level				0 to +30	+20
32	Low flow temperature alarm level				-30 to 0	-20
33	High return temperature alarm level				0 to +30	+20
34	Low return temperature alarm level				-30 to 0	-20
897	Site temperature (from broadcast)					
898	Site relative humidity (from broadcast)					
896	Site absolute humidity (from broadcast)					
899	Outside temperature (from broadcast)					
3. TEMPERATURE CONTROL						
40	Temperature control strategy	Flo rtn	Flow temperature Return temperature		0 - 1	Flo
41	Setpoint temperature (stage 1)				0 to -10	-4
45	Temperature deadband (stage 1)				1 to 5	2
42	Setpoint temperature (stage 2)				0 to -10	-3
46	Temperature deadband (stage 2)				1 to 5	3
49	Deadband for 2nd valve control				0 - 2	0.5

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4. CHILLER CONTROL Forced functions remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged.						
4.1 COMMON DATA						
200	Number of chillers					
205	Maximum number of chillers allowed	1 2	Allow 1 chiller only Allow both chillers		1 - 2	1
201	Lead chiller	1 2	Chiller 1 Chiller 2		1 - 2	1
202	Number of chillers running					
203	Number of stages required					
204	Forced number of chillers					
208	Minimum chiller stop time (seconds)					
209	Chiller number of starts per hour				4 - 20	20
330	Time to swap lead/lag chiller (hours) (v0.00.2 on)				12 - 240	168
331	Swap time for lag chiller (hours) (0.00.2 on)		0 = Swap disabled		0 - 24	6
332	Remaining swap time (v0.00.2 on)					
206	Chiller fault alarm delay (mins)					
158	Chiller fault repeat alarm delay	00:00	Function disabled		00:00 - 24:00	00:00
4.2 CHILLER DATA A general form of item numbers for chiller is shown below. The "x" shown in each item number should be replaced by the chiller number. This sequence covers item numbers 210-229 for chiller 1 - 2.						
2x5	Chiller isolation	0 ISOL 1 OPEr	Not in use In use		0 - 1	OPEr
2x6	Heat exchanger enable	0 OFF 1 H.E.En	Not in use Enabled		0 - 1	H.E.En
2x3	Chiller status	rdy 0	Ready to run (no faults) Off or chiller fault			
2x9	Chiller priority (v0.00.2 on)		0 = Highest			
45x	Chiller availabilty (451 for chiller 1 etc)	nA UL.rn FL.rn UL.r0 FL.r0	Not available Unloaded restart timer non zero Loaded restart timer non zero Unloaded restart timer zero Loaded restart timer zero			
2x1	Number of steps on load					
2x8	Force chiller off	CP.En C.OFF	Chiller enabled to run Forced off		0 - 1	
2x7	Forced number of chiller steps				0 - 1	
2x2	Total running hours (in 10s of hours)					
37x	Chiller run time last 24 hours (371 for 1 etc)					

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2x4	Chiller restart inhibit timer (seconds)					
35x	Average number of starts per hour last 24 hours (351 for chiller 1 etc)					
36x	Time since chiller stopped (v0.00.2 on) (361 for chiller 1 etc)					
4.3 CHILLER INPUT AND OUTPUT STATUS						
111	Chiller input status	Graphical	See display data			
113	Chiller output status	Graphical	See display data			
115	Chiller run status	Graphical	See display data			
5. INPUTS AND OUTPUTS						
20	Operating mode	oFF Auto	Manual Automatic			
171	Auto/manual (IP-1)	OFF Auto	Manual Auto mode			
172	Chiller 1 healthy	oFF rdy	Fault Ready to run			
173	Chiller 1 pump healthy	oFF rdy	Fault Ready to run			
174	Chiller 2 healthy	oFF rdy	Fault Ready to run			
175	Chiller 2 pump healthy	oFF rdy	Fault Ready to run			
161	Critical alarm output	Off Crt.A	Off Critical alarm			
163	Run chiller 1 & pump	Off run.1	Off Run chiller 1			
164	Run chiller 2 & pump	Off run.2	Off Run chiller 2			
165	Run chiller 1 PEV1	Off r.1.P1	Off Run PEV1			
166	Run chiller 1 PEV2	Off r.1.P2	Off Run PEV2			
167	Run chiller 2 PEV1	Off r.2.P1	Off Run PEV1			
168	Run chiller 2 PEV2	Off r.2.P2	Off Run PEV2			
6. DISPLAY FUNCTIONS						
178	Temperature display unit choice	CELS FAhr	Celsius Fahrenheit		0 - 1	CELS
189	Backlight control	0 B.oFF 1 BL.on 2 BL.F.F 3 BL.n.F	Backlight off Backlight on Backlight off, flashes for alarm Backlight on, flashes for alarm			B.oFF

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7. 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				2016 - 2038	
18	Daylight saving enable	Stnd dAY.S	Standard time Daylight saving time		0 - 1	Stnd
8. 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.						
966	Virtual bitswitch setting	0	Default			
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			
9. RESTORE PARAMETERS FROM NETWORK 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	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	
10. SYSTEM ALARMS						
80	Group alarm 81 - 88	Graphical	See display data			
81	High flow temperature	CLr Hi.Ft	No fault Fault			
82	Low flow temperature	CLr Lo.Ft	No fault Fault			
83	High return temperature	CLr Hi.rt	No fault fault			
84	Low return temperature	CLr Lo.rt	No fault Fault			
85	Flow sensor fault	CLr F.SEn	No fault Fault			

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86	Return sensor fault	CLr R.SEn	No fault Fault			
87	Sensor excitation fault	CLr PS.Ft	No fault Fault			
88	Plant fault	CLr P.FLt	No fault Fault			
90	Group alarm 91 - 98	Graphical	See display data			
91	Chiller 1 fault	CLr C1.Ft	No fault Fault			
92	Chiller 2 fault	CLr C2.Ft	No fault Fault			
93	Chiller 1 pump fault	CLr P1.Ft	No fault Fault			
94	Chiller 2 pump fault	CLr P2.Ft	No fault Fault			
	11. DIAGNOSTIC & TEST FUNCTIONS					
6	JTL Network communications speed	4.8	Kilo Baud			
7	Communications method	HALF	2 wire			
954	Current zone number					
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)			
977	Transmit control line status for the operation of the Jnet network communications.	Hi Lo	Transmit Receive			
89	ADC test value (factory test)		Factory test			
99	Test digital display	CLr SEt	Not active Test active		0 - 1	
100	Test inputs	Graphical	Set display data			
101	Test relay outputs	clr SEt	Not active Active		0 - 1	
411	Sensor 1 reading					
412	Sensor 2 reading					
10	Processor alarms (11 - 17)	Graphical	See display data			

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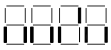
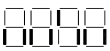
11	Static RAM fault	CLr rA.Ft	No fault Fault			
12	Program counter fault	CLr PC.Ft	No fault Fault			
13	Stack pointer fault	CLr SP.Ft	No fault Fault			
14	Background loop fault	CLr bL.Ft	No fault Fault			
15	PROM checksum fault	CLr Pr.Ft	No fault Fault			
16	NVRAM fault	CLr n.Ft	No fault Fault			
17	Instruction TRAP fault	CLr tP.Ft	No fault Fault			

DISPLAY DATA	CH210
NORMAL DISPLAY	
99.9	Control temperature
--	Not selected
ALARM TEXT (in descending priority order)	
P.FLd	Plant failed
Cx.Ft	Chiller x fault
Px.Ft	Chiller pump x fault
Hi.xt	High flow (f) or return (r) temperature
Lo.xt	Low flow (f) or return (r) temperature
x.SEn	Flow (f) or return (r) sensor fault
Crt.A	Critical alarm
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	Value
None		0
1		1
2		2
3		4
4		8
5		16
6		32
7		34
8		128

Note:
Where the data is shown as a decimal value the meaning is the sum of the associated value
e.g. bits 2 and 5 set would be displayed as 18 (16+2)