JTL PLANT INTERFACE ITEM NUMBERS	IF69

CONTENTS

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ITEM	**DESCRIPTION**	**CODE**	**CODE MEANING**	**BIT** **4321**	**RANGE**	**ITEM 9 VALUE**
1. NETWORK IDENTIFICATION						
0	Unit type	IF69	Unit type			
19	Firmware version number					
30	Modbus device address (see user guide)	1 - 254	Modbus address (0=invalid)		0 - 254	
1.1 LEGACY NETWORK IDENTIFICATION **Note:** These items are only relevant with JTL plant protocol (Item 37 = J.PL.1 or J.PL.2) see user guide.						
31	Channel 1 interface type NOTE: Interface type must be configured according to intended function.	4 7	Condenser and defrost control Compressor control with analogue output		0 - 15	
30	Channel 1 interface number	0 1	Condenser control (item 31=4) Compressor boards		0 - 254	
41	Channel 2 secondary interface type	4 7	Condenser and defrost control Compressor control with analogue output		0 - 15	
40	Channel 2 secondary interface number	0 1	Condenser control (item 41=4) Compressor boards		0 - 9	
2. INTERFACE PARAMETERS						
37	Communication protocol	0 b.ASC 1 J.PL.1 2 J.PL.2 3 b.rtu	Modbus ASCII JTL plant zone - channel 1 only JTL plant zone - channel 1 & 2 Modbus RTU		0 - 3	b.rtu
36	Communication speed	1 1.2 2 2.4 3 4.8 4 9.6 5 19.2	1200 baud 2400 baud 4800 baud 9600 baud 19200 baud		1 - 5	9.6

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	3. INPUTS & OUTPUTS Where segment patterns are shown, the vertical segments of the LCD display are used to represent visually the states of the inputs or outputs. Input/Output 1 is always on the right. Low segments mean de-energised high segments mean energised.					
32	Channel 1 analogue output backup	0 - 100	%		0 - 100	0
33	Channel 2 analogue output backup	0 - 100	%		0 - 100	0
35	Relay state during backup Binary sum of energised. Example: To energise relays 1 & 4 during backup set value of 9.	0 - 15	Relay 1=1 Relay 2=2 Relay 3=4 Relay 4=8		0 - 15	0
61	Relay Outputs (Segment pattern indicates state where up is energised. Outputs number RIGHT to LEFT ie output 1 is right-most segments).	0 1 2 4 8	*(segment patterns)*			
62	Digital Intputs (Segment pattern indicates state where up is energised. Inputs number RIGHT to LEFT ie Input 1 is right-most segments).	0 1 2 4 8	*(segment patterns)*			
111	Channel 1 temperature	-45.0 to +150.0	Temperature in degrees C			
121	Channel 2 temperature	-45.0 to +150.0	Temperature in degrees C			
131	Channel 3 temperature	-45.0 to +150.0	Temperature in degrees C			
141	Channel 4 temperature	-45.0 to +150.0	Temperature in degrees C			
	3.1 LEGACY OUTPUT DATA					
34	Number of steps for analogue output to be 100%	99 - 127	Number of steps for 100% of output		99 - 127	99
38	Channel 1 secondary relay switch off threshold	0 - 100	% of full analogue output		0 - 100	0
39	Channel 1 secondary relay switch on threshold	0 - 100	% of full analogue output		0 - 100	80
48	Channel 2 secondary relay switch off threshold	0 - 100	% of full analogue output		0 - 100	0
49	Channel 2 secondary relay switch on threshold	0 - 100	% of full analogue output		0 - 100	80

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4. RESTORE FACTORY DEFAULTS						
9	Set default values	1234	Load default settings			
5. DIAGNOSTIC & TEST FUNCTIONS						

Forced functions remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged.

Physical and logical inputs are normally the same except when inputs are forced. In this case the physical inputs report inputs that are physically present, and the logical inputs report the forced input value.

Physical and logical outputs are normally the same except when outputs are forced. In this case the physical outputs report the outputs forced value (ie, which relays are actually turned on) and the logical outputs reports the unforced command state. Note: If more than one input or output is present the numbers in brackets are added and displayed instead.

ITEM	DESCRIPTION	CODE	CODE MEANING	BIT 4321	RANGE	ITEM 9 VALUE
100	Input status physical	Segment patterns as item 62				
71	Input status logical					
73	Relay output status physical	Segment patterns as item 61				
72	Relay output status logical					
101	Test relay outputs	0 1	Normal operation Test in progress		0 - 1	
78	Force inputs (See item 100)	0 1 - 15	Not forced Force inputs to read value		0 - 15	
79	Force relay outputs (See item 73)	0 1 - 15 128	Not forced Force outputs to read value All outputs off		0 - 128	
10	Processor Alarms	0 32	No alarms NVRAM fault			
51	Channel 1 DAC data	0 - 4095	DAC raw value			
52	Channel 2 DAC data	0 - 4095	DAC raw value			
53	Channel 1 Analogue output	0 - 100.0	% of full analogue output		0 -100.0	
54	Channel 1 Analogue output	0 - 100.0	% of full analogue output		0 -100.0	
21	Channel 1 RAW ADC Value	0 - 4095				
22	Channel 2 RAW ADC Value	0 - 4095				
23	Channel 3 RAW ADC Value	0 - 4095				
24	Channel 4 RAW ADC Value	0 - 4095				

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colspan	**5.1 LEGACY NETWORK DIAGNOSTIC & TEST FUNCTIONS**					
81	Channel 1 command JTL Plant Zone Protocol (received from plant controller)	0 - 127				
82	Channel 1 relay JTL Plant Zone Protocol (sent to plant controller)	0 - 255				
83	Channel 2 command JTL Plant Zone Protocol (received from plant controller)	0 - 127				
84	Channel 2 relay JTL Plant Zone Protocol (sent to plant controller)	0 - 255				