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JTL CBISS LEAK DETECTOR INTERFACE ITEM NUMBERS					RL270/RL271	
ITEM	DESCRIPTION	CODE	CODE MEANING		RANGE	ITEM 9 VALUE
1. Jnet NETWORK IDENTIFICATION						
0	Unit type	rL27	Unit type			
19	Software Version number					
1.1 UNIT NUMBERS						
31	No of channels	0 1 2 3	8.Ch 16.Ch 24.Ch 31.Ch	8 channels 16 channels 24 channels 31 channels	0 - 3	16ch
211 221 231 241 251 261 271 281 291 301 311 321 331 341 351 361 371 381 391 401 411 421 431 441 451 461 471 481 491 501 511	Channel 1 Channel 2 Channel 3 Channel 4 Channel 5 Channel 6 Channel 7 Channel 8 Channel 9 Channel 10 Channel 11 Channel 12 Channel 13 Channel 14 Channel 15 Channel 16 Channel 17 Channel 18 Channel 19 Channel 20 Channel 21 Channel 22 Channel 23 Channel 24 Channel 25 Channel 26 Channel 27 Channel 28 Channel 29 Channel 30 Channel 31				0.1 - 899.7	
1.2 GLOBAL FAULT DATA						
32	Global fault data facility	0 1	Gd.En Gd.di	Enabled	0 - 1	Gd.di
40	CBISS system status	StoP run	Not running Running	Modbus Register 251		
41	CBISS sensor status	Hty FLt	Healthy Fault	Modbus Register 252		
42	No of days to next service			Modbus Register 253		

JTL CBISS LEAK DETECTOR INTERFACE ITEM NUMBERS				RL270/RL271	
ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
2. PRIMARY GAS CONCENTRATIONS (ppm x 10)					
Note: the data shown here is the gas concentration as selected by the primary gas type for the channel on items 6x4 to 9x4 in section 3 following.					
101	Channel 1				
102	Channel 2				
103	Channel 3				
104	Channel 4				
105	Channel 5				
106	Channel 6				
107	Channel 7				
108	Channel 8				
109	Channel 9				
110	Channel 10				
111	Channel 11				
112	Channel 12				
113	Channel 13				
114	Channel 14				
115	Channel 15				
116	Channel 16				
117	Channel 17				
118	Channel 18				
119	Channel 19				
120	Channel 20				
121	Channel 21				
122	Channel 22				
123	Channel 23				
124	Channel 24				
125	Channel 25				
126	Channel 26				
127	Channel 27				
128	Channel 28				
129	Channel 29				
130	Channel 30				
131	Channel 31				

JTL CBISS LEAK DETECTOR INTERFACE ITEM NUMBERS					RL270/RL271	
ITEM	DESCRIPTION	CODE	CODE MEANING		RANGE	ITEM 9 VALUE
3. CHANNEL GAS DATA & ALARMS A general form of item numbers is shown below. The "x" shown in each item number should be replaced by the channel number (1 - 9). This sequence covers item numbers 210-299 and 600 - 699. For channels 10 - 19 the item nos are 300 - 399 and 700 - 799, etc						
2x0 3x0 4x0 5x0	Channel Selection	OFF on			0 - 1	on
2x7 3x7 4x7 5x7	Mode	0 rdy C.E.FL sh.dn C.C.FL	Unknown Ready CBISS equipment fault Shutdown CBISS communications fault			
2x2 3x2 4x2 5x2	Primary Gas Concentration (ppm x 10)					
2x4 3x4 4x4 5x4	Primary Average Gas Concentration (ppm x 10)					
2x5 3x5 4x5 5x5	Period over which averages taken				00:02 - 04:00	00:10
2x6 3x6 4x6 5x6	CBISS	1 2 4 8	Flo.F L1.AL L2.AL L3.AL	Flow fault L1 level alarm L2 level alarm L3 level alarm	Modbus Registers 151 -182	
2x9 3x9 4x9 5x9	Network command status L1 alarm	run sh.dn	Run Shutdown			
6x4 7x4 8x4 9x4	Primary Gas type	1 2 3	Co2 HFC1 HFC2		1 - 3	1
6x5 7x5 8x5 9x5	Gas concentration (gas 1) (ppm x 10)		Modbus Registers 1 - 31			
6x6 7x6 8x6 9x6	Gas concentration (gas 2) (ppm x 10)		Modbus Registers 51 - 82			
6x7 7x7 8x7 9x7	Gas concentration (gas 3) (ppm x 10)		Modbus Registers 101 - 131			

JTL CBISS LEAK DETECTOR INTERFACE ITEM NUMBERS				RL270/RL271	
ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
4. MODBUS COMMUNICATIONS					
39	Interface baud rate	0	600 Baud	up to v0.00.1	19.2
		1	1200 Baud	0 - 5	
		2	2400 Baud	from v0.00.2	
		3	4800 Baud	0 - 6	
4	9600 Baud				
5	19200 Baud				
6	38400 Baud				
30	CBISS unit address			1 - 247	1
34	Delay between modbus requests (secs) (from v0.00.3)			0 - 5	0
35	Delay before modbus retry requests (secs) (from v0.00.3)			2 - 5	2
38	Communications Hardware fitted	485	RS485		
		232	RS232		
5. Jnet COMMAND FUNCTIONS					
62	Network controlled Shutdown selection	oFF sh.dn	Disabled Enabled	0-1	oFF
6. 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 - 2042	
18	Daylight saving enable	Stnd dAY.S	Standard time Daylight saving time	0 - 1	Stnd
7. RESTORE FACTORY DEFAULT DATA					
9	Set default values	1234 1066	Set default values Write to NVRAM without delay		
8. RESTORE PARAMETERS FROM NETWORK					
To restore the data from the network first set 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 the parameter 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	

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ITEM	DESCRIPTION	CODE	CODE MEANING	RANGE	ITEM 9 VALUE
9. SYSTEM ALARMS					
80	Group alarm 81-88 (see display data)				
81	CBISS equipment fault	CLr C.E.FL	No Fault Fault		
83	CBISS communications failure	CLr C.C.FL	No Fault Fault		
88	Unit number corrupted/not set	CLr Un.CF	No fault Fault		
10. DIAGNOSTIC & TEST FUNCTIONS					
6	Jnet communications speed	4.8	kilo baud rate		
7	2 wire communications	HALF	2 wire		
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		
8	Bitswitch setting		Not used		
99	Test digital display	CLr SEt	Not active Test active	0 - 1	
10	Processor alarms (11-17) (see display data)	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		

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16	NVRAM fault	CLr n.Ft	No fault Fault		
17	Instruction TRAP fault	CLr tP.Ft	No fault Fault		

DISPLAY MESSAGES		RL270/RL271
NORMAL DISPLAY		
RL27	Unit type	
ALARM TEXT (in descending priority order)		
L1.nn	L1 level alarm where nn is channel number	
L2.nn	L2 level alarm where nn is channel number	
L3.nn	L3 level alarm where nn is channel number	
C.E.FL	CBISS equipment fault	
C.C.FL	CBISS communications fault	
FAIL	JTL network communications failure	
OTHER TEXT		
JTL	Start-up message	

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	□□□□ □□□□