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JTL MDGS LEAK DETECTOR INTERFACE ITEM NUMBERS					RL290	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
<b>1. Jnet NETWORK IDENTIFICATION</b>						
0	Unit type	r290	Unit type			
19	Software Version number					
31	No of channels	0	8.Ch	8 channels		16ch
		1	16.Ch	16 channels		
		2	24 Ch	24 channels		
		3	31 Ch	31 channels		
					up to v0.00.1	
					0 - 1	
					from v0.00.2	
					0 - 3	

JTL MDGS LEAK DETECTOR INTERFACE ITEM NUMBERS					RL290	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
211	Channel 1		Note. Items 371 - 511 added from v0.00.2			
221	Channel 2					
231	Channel 3					
241	Channel 4					
251	Channel 5					
261	Channel 6					
271	Channel 7					
281	Channel 8					
291	Channel 9					
301	Channel 10					
311	Channel 11					
321	Channel 12					
331	Channel 13					
341	Channel 14					
351	Channel 15					
361	Channel 16					
371	Channel 17					
381	Channel 18					
391	Channel 19					
401	channel 20					
411	Channel 21					
421	Channel 22					
431	Channel 23					
441	Channel 24					
451	Channel 25					
461	Channel 26					
471	Channel 27					
481	Channel 28					
491	Channel 29					
501	Channel 30					
511	Channel 31					

JTL MDGS LEAK DETECTOR INTERFACE ITEM NUMBERS					RL290	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
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<b>2. GAS CONCENTRATIONS (ppm in intervals of 10ppm)</b> Note. Items 117 - 131 added from v0.00.2						
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					





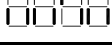

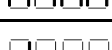

JTL MDGS LEAK DETECTOR INTERFACE ITEM NUMBERS					RL290	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
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<b>3. CHANNEL GAS DATA &amp; ALARMS</b> A general form of item numbers is shown below. Note. Channels 17 - 31 added from v0.00.2 The "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 these item numbers are 300 - 399 & 700 - 799. For channels 20 - 29 400 - 499 & 800 - 899 & channels 30 - 31 500 - 519 & 900 - 919						
2x0 3x0 4x0 5x0	Channel Selection	OFF on			0 - 1	on
2x3 3x3 4x3 5x3	MGDS Device No	0	disabled		1 - 99	as channel No.
2x7 3x7 4x7 5x7	Mode	0 rdy C.E.FL sh.dn C.C.FL	Unknown Ready MDGS sensor fault Shutdown MDGS communications fault			
2x6 3x6 4x6 5x6	MDGS status	run LO.AL SP.AL E.A.AL S.FLT	Ok Low level alarm Critical alarm Evacuation alarm Sensor fault			
2x2 3x2 4x2 5x2	Gas Concentration (10ppm)					
2x4 3x4 4x4 5x4	Average Gas Concentration (10ppm)					
2x5 3x5 4x5 5x5	Period over which averages taken				00:02 - 04:00	00:10
2x8 3x8 4x8 5x8	MGDS alarm delay (secs)					
2x9 3x9 4x9 5x9	Network command status	run sh.dn	Run Shutdown			
6x5 7x5 8x5 9x5	Gas concentration (sensor 1) (10ppm)					
6x6 7x6 8x6 9x6	Gas concentration (sensor 2) (10ppm)					

JTL MDGS LEAK DETECTOR INTERFACE ITEM NUMBERS					RL290	
ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE
				4321		
6x7 7x7 8x7 9x7	MGDS sensor fault	CLr Sn1 Sn2 Sn12	Sensor 1 fault Sensor 2 fault Sensor 1 & 2 fault			
6x0 7x0 8x0 9x0	MGDS leak alarm level (10ppm)					
6x1 7x1 8x1 9x1	MGDS spill alarm level (10ppm)					
6x2 7x2 8x2 9x2	MGDS evacuation alarm (10ppm)					
6x4 7x4 8x4 9x4	Sensor version no					
6x3 7x3 8x3 9x3	Sensor refrigerant type					
6x8 7x8 8x8 9x8	MGDS output state	Graphical	See display data			
6x9 7x9 8x9 9x9	MGDS channel alarm state	Graphical	See display data			
<b>4. MODBUS COMMUNICATIONS</b>						
39	Interface baud rate	0 1 2 3 4 5 6	600 Baud 1200 Baud 2400 Baud 4800 Baud 9600 Baud 19200 Baud 38400 Baud		0 - 6	9600
34	Delay between modbus requests(secs)				0 - 5	0
35	Delay before modbus retry requests (secs)				2 - 5	2
36	Inter-character timing multiplier		1=Standard modbus timing		1 - 10	4
<b>5. Jnet COMMAND FUNCTIONS</b>						
62	Network controlled Shutdown selection	oFF sh.dn	Disabled Enabled		0 - 1	oFF

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ITEM	DESCRIPTION	CODE	CODE MEANING	BIT	RANGE	ITEM 9 VALUE	
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<b>6. DISPLAY FUNCTIONS</b>							
189	Backlight control	0 1 2 3	B.off BL.on BL.F.F BL.n.F	Backlight off Backlight on Backlight off, flashes for alarm Backlight on, flashes for alarm		0 - 3	B.off
<b>7. CLOCK CALENDAR</b>							
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 - 2048	
18	Daylight saving enable	Stnd dAY.S	Standard time Daylight saving time			0 - 1	Stnd
<b>8. RESTORE FACTORY DEFAULT DATA</b>							
9	Set default values	1234 1066	Set default values Write to NVRAM without delay				
<b>9. RESTORE PARAMETERS FROM NETWORK</b>							
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	
<b>10. SYSTEM ALARMS</b>							
For channel alarms see channel data (section 3) items 2x6 & 3x6 where x is the channel number.							
80	Group alarm 81-88	Graphical	See display data				
88	Unit number corrupted/not set	CLr Un.CF	No fault Fault				

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<b>11. DIAGNOSTIC &amp; TEST FUNCTIONS</b>						
6	Jnet communications speed		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 untimed broadcast message.	min:sec				
974	Time since last awake message	min:sec				
8	Bitswitch setting		Not used			
99	Test digital display	CLr SEt	Not active Test active		0 - 1	
10	Processor alarms (11-17)	Graphical	See display data			
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			

<b>DISPLAY MESSAGES</b>		<b>RL290</b>
<b>NORMAL DISPLAY</b>		
R290	Unit type	
<b>ALARM TEXT (in descending priority order)</b>		
LL.AL	Low level alarm on channel xx	
SP.AL	High level alarm spill on channel xx	
E.E.AL	Evacuation level alarm	
C.E.FL	MDGS sensor fault	
C.C.FL	MDGS communications fault	
FAIL	JTL network communications failure	
<b>OTHER TEXT</b>		
JTL	Start-up message	

<b>GRAPHICAL DISPLAY OF BIT DATA</b>		
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	