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| JTL CPC LEAK DETECTOR INTERFACE ITEM NUMBERS |                         |      |              |      | RL120     |                    |
|----------------------------------------------|-------------------------|------|--------------|------|-----------|--------------------|
| ITEM                                         | DESCRIPTION             | CODE | CODE MEANING | BIT  | RANGE     | ITEM<br>9<br>VALUE |
|                                              |                         |      |              | 4321 |           |                    |
| 1. Jnet NETWORK IDENTIFICATION               |                         |      |              |      |           |                    |
| 0                                            | Unit type               | rL12 | Unit type    |      |           |                    |
| 19                                           | Software Version number |      |              |      |           |                    |
| 1.1 UNIT NUMBERS                             |                         |      |              |      |           |                    |
| 211                                          | Channel 1               |      |              |      | 0 - 899.9 |                    |
| 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              |      |              |      |           |                    |

| JTL CPC LEAK DETECTOR INTERFACE ITEM NUMBERS |             |      |              |      | RL120 |                    |
|----------------------------------------------|-------------|------|--------------|------|-------|--------------------|
| ITEM                                         | DESCRIPTION | CODE | CODE MEANING | BIT  | RANGE | ITEM<br>9<br>VALUE |
|                                              |             |      |              | 4321 |       |                    |
| 2. GAS CONCENTRATIONS (ppm)                  |             |      |              |      |       |                    |
| 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  |      |              |      |       |                    |

| JTL CPC LEAK DETECTOR INTERFACE ITEM NUMBERS                                                                                                                              |                                                                                  |                                       |                                                                                    |      | RL120         |                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------|------|---------------|--------------------|
| ITEM                                                                                                                                                                      | DESCRIPTION                                                                      | CODE                                  | CODE MEANING                                                                       | BIT  | RANGE         | ITEM<br>9<br>VALUE |
|                                                                                                                                                                           |                                                                                  |                                       |                                                                                    | 4321 |               |                    |
| 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 For channels 10-16 the item nos are 300-369 |                                                                                  |                                       |                                                                                    |      |               |                    |
| 2x0<br>3x0                                                                                                                                                                | Channel Selection                                                                | OFF<br>on                             |                                                                                    |      | 0 - 1         | on                 |
| 2x7<br>3x7                                                                                                                                                                | Mode                                                                             | 0<br>rdy<br>C.E.FL<br>sh.dn<br>C.C.FL | Unknown<br>Ready<br>CPC equipment fault<br>Shutdown<br>CPC communications<br>fault |      |               |                    |
| 2x3<br>3x3                                                                                                                                                                | Flow fault alarm<br>Indication disabled for selected<br>channel (v0.00.2 on)     | Lo.FL<br><br>oFF                      | Alarm enabled<br><br>Alarm disabled                                                |      | 0 - 1         | Lo.FL              |
| 2x6<br>3x6                                                                                                                                                                | CPC alarm indication                                                             | 0<br>caut<br>crit<br>Lo.FL            | No Alarm<br>Caution<br>Critical alarm<br>Flow fault                                |      |               |                    |
| 2x2<br>3x2                                                                                                                                                                | Gas Concentration (ppm)                                                          |                                       |                                                                                    |      |               |                    |
| 2x4<br>3x4                                                                                                                                                                | Average Gas Concentration (ppm)                                                  |                                       |                                                                                    |      |               |                    |
| 2x5<br>2x5                                                                                                                                                                | Period over which averages taken                                                 |                                       |                                                                                    |      | 00:02 - 04:00 | 00:10              |
| 2x8<br>3x8                                                                                                                                                                | Display command status                                                           | run<br>sh.dn                          | Run<br>Shutdown                                                                    |      |               |                    |
| 2x9<br>3x9                                                                                                                                                                | Network command status                                                           | run<br>sh.dn                          | Run<br>Shutdown                                                                    |      |               |                    |
| 4. CPC COMMUNICATIONS                                                                                                                                                     |                                                                                  |                                       |                                                                                    |      |               |                    |
| 30                                                                                                                                                                        | CPC unit address                                                                 |                                       |                                                                                    |      | 1 - 248       | 1                  |
| 5. OUTPUTS                                                                                                                                                                |                                                                                  |                                       |                                                                                    |      |               |                    |
| 72<br>(22)                                                                                                                                                                | Alarm relay (LN1/NO1) (Contacts closed if<br>any critical alarm present on unit) | OFF<br>AL.on                          | Alarm off<br>Alarm on                                                              |      |               |                    |
| 73<br>(21)                                                                                                                                                                | Siren relay (LN2/NO2)<br>(On when critical alarm occurs)                         | OFF<br>Sn.on                          | Siren off<br>Siren on                                                              |      |               |                    |
| 74                                                                                                                                                                        | Watchdog relay<br>(LN3/NO3)<br>(contacts closed when healthy)                    | OFF<br>hty                            | Faulty<br>healthy                                                                  |      |               |                    |
| 28                                                                                                                                                                        | Alarm lamp selection                                                             | OFF<br>LP.EN                          | Disabled<br>Alarm lamp enable                                                      |      |               |                    |
| 6. Jnet COMMAND FUNCTIONS                                                                                                                                                 |                                                                                  |                                       |                                                                                    |      |               |                    |
| 62                                                                                                                                                                        | Network controlled<br>Shutdown selection                                         | oFF<br>sh.dn                          | Disabled<br>Enabled                                                                |      | 0-1           | oFF                |

| JTL CPC LEAK DETECTOR INTERFACE ITEM NUMBERS                                                                                                                                                                                                                                                                         |                                                                        |               |                                                       |      | RL120         |              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------|-------------------------------------------------------|------|---------------|--------------|
| ITEM                                                                                                                                                                                                                                                                                                                 | DESCRIPTION                                                            | CODE          | CODE MEANING                                          | BIT  | RANGE         | ITEM 9 VALUE |
|                                                                                                                                                                                                                                                                                                                      |                                                                        |               |                                                       | 4321 |               |              |
| 7. DISPLAY FUNCTIONS                                                                                                                                                                                                                                                                                                 |                                                                        |               |                                                       |      |               |              |
| 27                                                                                                                                                                                                                                                                                                                   | Display controlled Shutdown selection                                  | OFF<br>dcS.E  | Disabled<br>Enabled                                   |      | 0 - 1         | OFF          |
| 25                                                                                                                                                                                                                                                                                                                   | Select local mute enable                                               | OFF<br>AC.En  | Local mute disable<br>Local mute enable               |      | 0 - 1         | AC.En        |
| 23                                                                                                                                                                                                                                                                                                                   | "Function" pushbutton input status                                     | OFF<br>Pb.1   | Off<br>Button pressed                                 |      |               |              |
| 24                                                                                                                                                                                                                                                                                                                   | "Scroll" pushbutton input status                                       | OFF<br>Pb.2   | Off<br>Button pressed                                 |      |               |              |
| 29                                                                                                                                                                                                                                                                                                                   | "Enter" pushbutton input status                                        | OFF<br>Pb.3   | Off<br>Button pressed                                 |      |               |              |
| 8. RESTORE FACTORY DEFAULT DATA                                                                                                                                                                                                                                                                                      |                                                                        |               |                                                       |      |               |              |
| 9                                                                                                                                                                                                                                                                                                                    | Set default values                                                     | 1234<br>1066  | Set default values<br>Write to NVRAM<br>without delay |      |               |              |
| 9. 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<br>1 = Monday etc                          |      |               |              |
| 4                                                                                                                                                                                                                                                                                                                    | Date                                                                   |               |                                                       |      | 01:01 - 31:12 |              |
| 5                                                                                                                                                                                                                                                                                                                    | Year                                                                   |               |                                                       |      | 1992 - 2022   |              |
| 18                                                                                                                                                                                                                                                                                                                   | Daylight saving enable                                                 | Stnd<br>dAY.S | Standard time<br>Daylight saving time                 |      | 0 - 1         | Stnd         |
| 10. SYSTEM ALARMS                                                                                                                                                                                                                                                                                                    |                                                                        |               |                                                       |      |               |              |
| Note: for channel alarms see channel data (section 3) items 2x5 & 2x6, 3x5 & 3x6 where x is the channel number.                                                                                                                                                                                                      |                                                                        |               |                                                       |      |               |              |
| 80                                                                                                                                                                                                                                                                                                                   | Group alarm 81-88                                                      | 0<br>1-255    | No alarms<br>Check 81-88                              |      |               |              |
| 81                                                                                                                                                                                                                                                                                                                   | CPC equipment fault                                                    | CLr<br>C.E.FL | No Fault<br>Fault                                     |      |               |              |
| 82                                                                                                                                                                                                                                                                                                                   | Mute button pressed (alarm is cleared when read by network controller) | CLr<br>AC.Pr  | No alarm<br>Button pressed                            |      |               |              |
| 83                                                                                                                                                                                                                                                                                                                   | CPC communications failure                                             | clr<br>C.C.FL | No Fault<br>Fault                                     |      |               |              |
| 84                                                                                                                                                                                                                                                                                                                   | CPC low flow fault (up to v0.00.1)                                     | clr<br>Lo.FL  | No fault<br>Fault                                     |      |               |              |
| 87                                                                                                                                                                                                                                                                                                                   | Unit number corrupted/not set                                          | CLr<br>Un.CF  | No fault<br>Fault                                     |      |               |              |

| JTL CPC LEAK DETECTOR INTERFACE ITEM NUMBERS |                                                                                                                                                         |                                                     |                                                                   |      | RL120 |                    |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------|------|-------|--------------------|
| ITEM                                         | DESCRIPTION                                                                                                                                             | CODE                                                | CODE MEANING                                                      | BIT  | RANGE | ITEM<br>9<br>VALUE |
|                                              |                                                                                                                                                         |                                                     |                                                                   | 4321 |       |                    |
| 11. DIAGNOSTIC & TEST FUNCTIONS              |                                                                                                                                                         |                                                     |                                                                   |      |       |                    |
| 6                                            | Jnet communications speed                                                                                                                               | 4.8                                                 | kilo baud rate                                                    |      |       |                    |
| 7                                            | 2 wire communications                                                                                                                                   | HALF                                                | 2 wire                                                            |      |       |                    |
| 8                                            | Bitswitch setting                                                                                                                                       |                                                     | Not used                                                          |      |       |                    |
| 99                                           | Test digital display                                                                                                                                    | CLr<br>SEt                                          | Not active<br>Test active                                         |      | 0 - 1 |                    |
| 71                                           | Pushbutton status<br><br>NOTE:<br>If more than one button is pressed the numbers shown in brackets are added together and displayed instead of the text | Pb-1<br>(4)<br>Pb-2<br>(64)<br>Pb-3<br>(128)        | Function p/b<br><br>Scroll p/b<br><br>Enter p/b                   |      |       |                    |
| 78                                           | Test inputs                                                                                                                                             | - - - -<br>1 - - -<br>- 2 - -<br>- - 3 -<br>- - - 4 | No inputs<br>Input 1 on<br>Input 2 on<br>Input 3 on<br>Input 4 on |      |       |                    |
| 79                                           | Test output relays                                                                                                                                      | CLr<br>SEt                                          | Not active<br>Active                                              |      | 0 - 1 |                    |
| 10                                           | Processor alarms (11-17)                                                                                                                                | 0<br>1-255                                          | No alarms<br>Check 11-17                                          |      |       |                    |
| 11                                           | Static RAM fault                                                                                                                                        | CLr<br>rA.Ft                                        | No fault<br>Fault                                                 |      |       |                    |
| 12                                           | Program/counter fault                                                                                                                                   | CLr<br>PC.Ft                                        | No fault<br>Fault                                                 |      |       |                    |
| 13                                           | Stack pointer fault                                                                                                                                     | CLr<br>SP.Ft                                        | No fault<br>Fault                                                 |      |       |                    |
| 14                                           | Background loop fault                                                                                                                                   | CLr<br>bL.Ft                                        | No fault<br>Fault                                                 |      |       |                    |
| 15                                           | PROM checksum fault                                                                                                                                     | CLr<br>Pr.Ft                                        | No fault<br>Fault                                                 |      |       |                    |
| 16                                           | NVRAM fault                                                                                                                                             | CLr<br>n.Ft                                         | No fault<br>Fault                                                 |      |       |                    |
| 17                                           | Instruction TRAP fault                                                                                                                                  | CLr<br>tP.Ft                                        | No fault<br>Fault                                                 |      |       |                    |

| DISPLAY MESSAGES                          |                                           | RL120 |
|-------------------------------------------|-------------------------------------------|-------|
| NORMAL DISPLAY                            |                                           |       |
| RL12                                      | Unit type                                 |       |
| ALARM TEXT (in descending priority order) |                                           |       |
| C-xx                                      | Caution on channel xx                     |       |
| L-xx                                      | Gas leak on channel xx                    |       |
| C.E.FL                                    | CPC equipment fault                       |       |
| C.C.FL                                    | CPC communications fault                  |       |
| Lo.FL                                     | CPC low flow fault                        |       |
| FAIL                                      | JTL network communications failure        |       |
| OTHER TEXT                                |                                           |       |
| JTL                                       | Start-up message                          |       |
| Ch.xx                                     | Channel JTL unit number follows this text |       |
| GAS.C                                     | Gas concentration data follows this text  |       |
| AL.St                                     | Channel alarm status follows this text    |       |
| nonE                                      | No alarm present                          |       |
| cAut                                      | Caution alarm                             |       |
| crit                                      | Critical alarm                            |       |
| Func                                      | Display function mode                     |       |
| dAtA                                      | Display data mode                         |       |
| or                                        | Overrange reading                         |       |