**Electrical Installation Requirements**
Care should be taken to separate the power and signal cables to prevent electrical interference and possible damage due to inadvertent connection.

**CE Conformance**
This unit conforms with the relevant EU standards when installed according to the JTL Installation Requirements for this product.

**Humidity and Temperature Inputs**
CON5
+1          Positive supply for sensor 1
A1          RH sensor input
+2          Positive supply for sensor 2
A2          Temperature sensor input

**Use of Maintenance Unit**
The monitor can be checked and the operation adjusted using a JTL portable maintenance unit which plugs into the monitor. Each item of information has an item number. The more important items are listed in the tables overleaf. Examples:

To read item 21        [ITEM] [2] [1] [ENTER] press:

To set item 33 to -20.0 press:

[ITEM] [3] [3] [ENTER] [SET] [-] [2] [0] [0] [ENTER]

To correct errors press:        [CANCEL]

To select next or previous items press:        [+]   and   [-]

**JTL Network Communications**
Connection to the Jnet zone should be made via a CAB60 into CON2 and CON3. Units may be daisy chained together.

Two wire screw terminal connectors (CON8) are also provided as an alternative means of connecting to the Jnet zone. Terminal designation is as follows:

Terminal 1          negative (-) (nearest bottom edge of pcb)
Terminal 2          positive (+)

All Jnet networked products must be connected in parallel without cross connections.

Communications speed is set automatically for 4800 baud.

**Initial Commissioning**
The monitor has a set of data built in to its program for use during commissioning. This can be accessed setting item 9 to 1234. This loads into the monitor a standard set of data. Adjustments should then be made as necessary. The range over which the settings can be adjusted shown overleaf
.
The unit number for the JTL communications network should be set on item 1.



DOC 03266 ISS 2
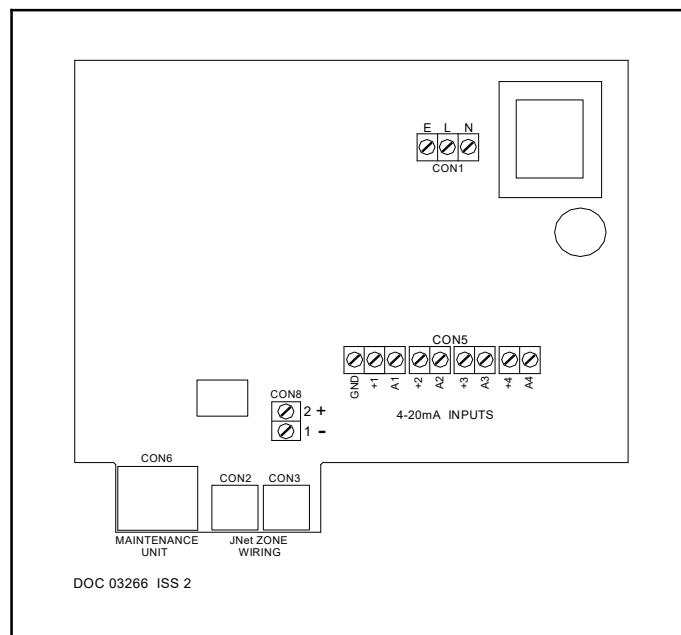
**Function**
Inputs to the unit are typically from a combined RH/Temperature sensor with 4-20 mA outputs. The unit continually monitors the relative humidity (item 20) and temperature (item 22) and also calculates the absolute humidity (item 21) from these two values. The maximum and minimum values for the RH sensor are set on item 41 (4 mA value) and item 42 (20 mA, full scale). The maximum and minimum values for the temperature sensor are found on item 43 (4 mA value) and item 44 (20 mA, full scale). Reported values of RH and temperature are derived by linear interpolation of the limit values.

If more than one monitor is present on a site, a number should be set on item 47 to reflect its location1 - 4 are designated for frozen food sensors 5-8 as chilled food sensors, and 11 is designated as external sensor, other values are reserved. A separate average value is calculated from the frozen food sensors which are used on the Jnet network.

**Alarms**
If the sensor current strays more than 2 mA outside the 4-20 mA range, the sensor is deemed faulty and a critical alarm is signalled on the Jnet network.

Alarms are also generated if so configured by a low RH reading (threshold on item 31), a high RH reading (threshold on item 32) a low temperature reading (threshold on item 33) or a high temperature reading (threshold on item 34). All of these alarms may be designated as critical or non-critical on item 51 - 54 respectively. They default to non-critical.

Humidity and temperature alarms appear on the network after an adjustable delay set on items 37 and 38 respectively.

| ADJUSTABLE PARAMETERS | | | |
|---|---|---|---|
| Item | Function | Range | Units |
| 1 | Jnet unit number | 0.1 - 899.9 | |
| 31 | RH low alarm threshold | 0.0 - 99.0 | % |
| 32 | RH high alarm threshold | 1.0 - 100.0 | % |
| 33 | Temperature low alarm threshold | -20.0 to +50.0 | °C |
| 34 | Temperature high alarm threshold | -20.0 to +50.0 | °C |
| 37 | RH alarm delay | 0 - 120 | mins |
| 38 | Temperature alarm delay | 0 - 120 | mins |
| 41 | RH sensor minimum value (4 mA) | 0.0 - 30.0 | % |
| 42 | RH sensor maximum value (20 mA) | 70.0 - 100.0 | % |
| 43 | Temperature sensor minimum value (4 mA) | -50.0 to +50.0 | °C |
| 44 | Temperature sensor maximum value (20 mA) | 0.0 - 100.0 | °C |
| 47 | Humidity monitor function | 1 - 4 =Frozen food sensor 1 - 4<br>5 - 8=Chilled food sensor 1 -4<br>11=Outside sensor<br>9, 10 & 15=reserved | |
| 51 | Low RH critical | 0=yes 1=no | |
| 52 | High RH critical | 0=yes 1=no | |
| 53 | Low temperature critical | 0=yes 1=no | |
| 54 | High temperature critical | 0=yes 1=no | |

| OTHER USEFUL ITEMS | |
|---|---|
| Item | Function |
| 20 | Relative humidity |
| 21 | Absolute humidity |
| 22 | Temperature |

Full operating manuals and item number information can be obtained from your supplier or JTL Systems.

**Supply and Input Requirements**
230 V ac 48-62 Hz
Supply 2 VA maximum

C E  This unit conforms with the relevant EU standards when fitted in accordance with its installation instructions.

**Applicable Documentation**
Item Numbers              Doc No. 03256
Firmware Variations       Doc No. 03257
Connections Diagram       Doc No. 03246
Installation Requirements  Doc No. 03259
Application Drawing        Doc No. 03245

Doc No. 03258  TH110.wpd  Issue 3 Sept 2019

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