

**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.

The plant inputs are electrically isolated. A line voltage should be connected for signal present. The terminal marked **COM** should be connected to the supply voltage neutral.

**NOTE:** The line voltage MUST BE on the same phase as the unit supply.

**CE Conformance**

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

**Inputs and Temperatures**

Inputs (connector 5)                      Temperatures (connector 1)

- |                         |                     |
|-------------------------|---------------------|
| 1 Defrost channel 1     | 1 Air on channel 1  |
| 2 Defrost channel 2     | 2 Air off channel 1 |
| 3 Not used              | 3 Air on channel 2  |
| 4 Not used              | 4 Air off channel 2 |
| 5 Plant alarm channel 1 |                     |
| 6 Plant alarm channel 2 |                     |
| 7 Not used              |                     |
| 8 Not used              |                     |

**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 press: **ITEM** **2** **1** **ENTER**

To set item 30 to -20.0 press:

**ITEM** **3** **0** **ENTER** **SET** **-** **2** **0** **0** **ENTER**

To correct errors press: **CANCEL**

To select next or previous items press: **+** and **-**

**JTL Network Communications**

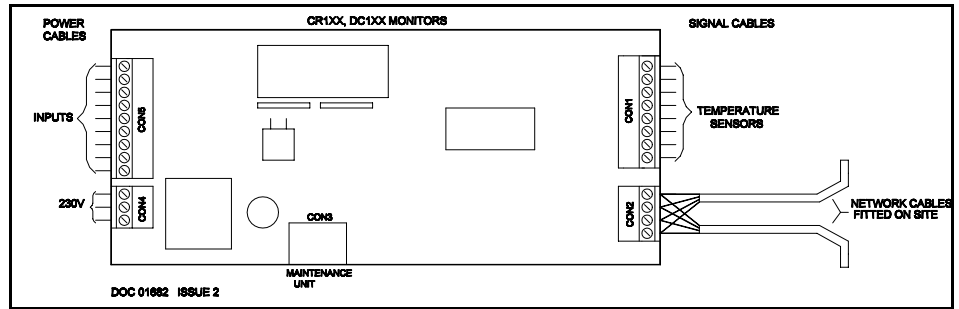
The JTL network port (connector 2) can be arranged for 2 wire (half duplex) or 4 wire (full duplex) communications. The wiring of the port is:

	2 wire	4 wire
1	-	Rx-
2	+	Rx+
3		Tx-
4		Tx+

Note all network products must be connected in parallel without cross connections. The Rx connections must be connected to the Tx connections at the network controller.

The choice of 2 or 4 wire is made using the item 7.

The communications rate is automatically selected for 4800 or 38400 baud (earlier issues 600 and 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 1. 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 numbers for the JTL communications network should be set on items 101 (channel 1) and 201 (channel 2).

**Defrost**

The defrost sequence can be initiated in 2 ways, by command from the JTL communications network, or by contact input. Selection is on item 107 (earlier issues item 45).

Defrost is terminated on time, or when the network or contact command is removed, whichever is sooner.

**Defrost Recovery**

When the defrost is ended the monitor enters defrost recovery.

**Alarms**

The cabinet temperatures are monitored continually. The cabinet temperature is computed from the air on and air off temperatures. A factor is used to proportion the air on and air off temperatures. The cabinet temperatures are averaged over the period set on item 47. If the average cabinet temperature exceeds the alarm level then an alarm is given which is given on the JTL alarm system.

High temperature alarms are cancelled during defrost and defrost recovery.

**Plant Alarms**

A plant alarm facility is provided when a plant alarm signal is given to the monitor, an alarm is available after a 30 second delay on the JTL Network.

**Network Shutdown**

This monitor supports the JTL Network shutdown facility. When this facility is enabled if a channel shutdown command is received over the JTL Network, the channel alarms are disabled. The high temperature alarm sequence is initialised.

**Item Numbers**

The DC120 monitor is a dual channel unit. The 2 channels are completely independant. Items 0 - 99 are common items 100 - 199 are for channel 1 and items 200 - 299 are for channel 2.

ADJUSTABLE PARAMETERS			
Item	Function	Range	Units
7	JTL Network (half or duplex)	0=half (2 wire) 1=full (4 wire)	
47	Alarm averaging time	00:30 to 03:00	hr:mn
62	Enable network shutdown command	0=off 1=on	
65	Invert defrost inputs	0=no 1=yes	
66	Invert plant alarm inputs	0=no 1=yes	
69	Number of defrosts expected	0 to 6	
101,201	Channel unit number	0.1 to 899.9	
105,205	Enable channel	0=off 1=on	
107,207	Defrost strategy selection	0=none 1=network 2=contact	
130,230	Cabinet temperature setpoint	-35 to +10	°C
132,232	Overtemperature tolerance	0 to +20	°C
133,233	Cabinet temperature factor	20 to 80	
136,137,236,237	Sensor selections	0=off 1=on	
157,257	Defrost termination time	00:05 to 01:00	hr:mn

OTHER USEFUL ITEMS			
Item	Function	Item	Function
120,220	Cabinet temperature	146,246	Network defrost command state
121,221	Air on temperature	163,263	Network shutdown command state
122,222	Air off temperature	170,270	Operating mode
140,240	Duration of last defrost	171,271	Defrost input state
141,241	Time since end of last defrost	172,272	Plant alarm input state
142,242	Duration of this defrost		

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 6 VA maximum

Inputs 2 mA maximum



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

#### Applicable Documentation

Item Numbers	Doc No. 01664
Software Variations	Doc No. 01666
Wiring Diagrams	Doc No. 01669
Evaporator Manual	Doc No. 01923
Installation Requirements	Doc No. 01676
Outline Details	Doc No. n/a