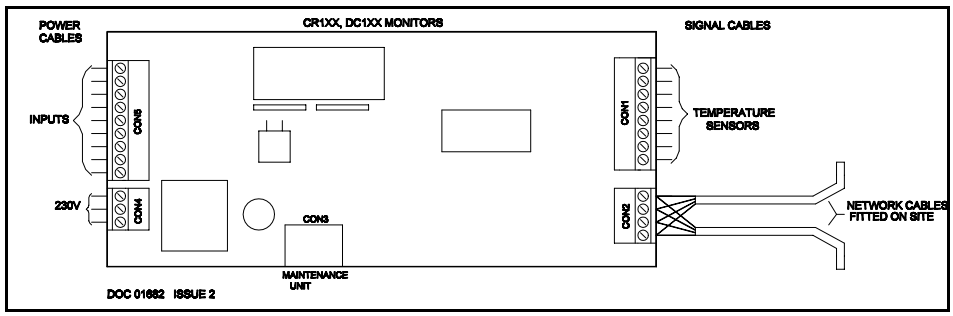
Electrical Installation Requirements

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 Not used	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 Not used	
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.

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 number for the JTL communications network should be set on item 1.

Defrost

The defrost sequence can be initiated in 3 ways, by command from the JTL communications network by air off temperature, or by contact input. Selection is on item 107.

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 DC110 monitor is a dual channel unit where the 2 channels defrost as a pair. Items 0 - 119 are common items 120 - 139 are for channel 1 and items 220 - 239 are for channel 2.

ADJUSTABLE PARAMETERS			
Item	Function	Range	Units
1	Channel unit number	0.1 to 899.9	
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
57	Defrost termination time	00:05 to 01:00	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	
107	Defrost strategy selection	0=none 2=network 4=contact 6=air off	
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	

OTHER USEFUL ITEMS			
Item	Function	Item	Function
40	Duration of last defrost	71	Defrost input state
41	Time since end of last defrost	72	Plant alarm input state
42	Duration of this defrost	120,220	Cabinet temperature
46	Network defrost command state	121,221	Air on temperature
63	Network shutdown command state	122,222	Air off temperature
70	Operating mode		

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

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

Applicable Documentation

Item Numbers	Doc No. 01720
Software Variations	Doc No. 01721
Wiring Diagrams	Doc No. 01670
Evaporator Manual	Doc No. 01923
Installation Requirements	Doc No. 01676
Outline Details	Doc No. n/a

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