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 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 Evaporator 1
3 Door input 1	3 Air on channel 2
4 Door input 2	4 Evaporator 2
5 Plant alarm 1 channel 1	
6 Plant alarm 1 channel 2	
7 Plant alarm 2 channel 1	
8 Plant alarm 2 channel 2	

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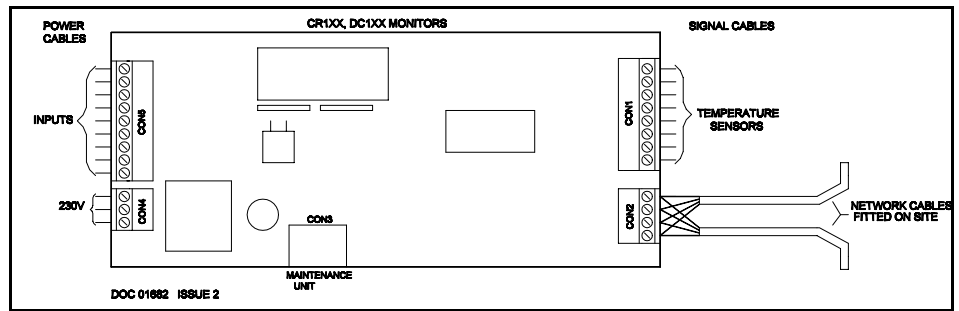
To select next or previous items press: [+] and [–]

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.

CR1XX, DC1XX MONITORS
POWER CABLES — INPUTS — 230V — CON5 — CON4 — CON3 — MAINTENANCE UNIT
SIGNAL CABLES — TEMPERATURE SENSORS — CON1 — CON2 — NETWORK CABLES FITTED ON SITE
DOC 01682 ISSUE 2

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.

If a JTL communications network is connected to the monitor then the unit numbers for both channels should be set on items 101 and 201.

Defrost

The defrost sequence can be initiated in 2 ways, by command from the JTL communications network, or by contact input. Defrost is terminated on time.

Defrost Recovery

When the termination time is reached the monitor enters defrost recovery.

Alarms

The air temperatures are monitored continually. The temperatures are averaged over the period set on item 47. If the average air temperature exceeds the alarm level then an alarm is given on the JTL alarm system.

High air temperature alarms are NOT cancelled during defrost and defrost recovery.

Coldstore Door Functions

The time that the door has currently been open and the time that it has been open in the last 24 hours is recorded. If the door remains open for a time longer than set on item 33 then an alarm is given.

Plant Alarms

2 plant alarm facilities are 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 CR120 monitor is a dual channel unit. 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)	
45	Enable network initiated defrost	0=on 1=off	
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	
130,230	Air temperature setpoint	-35 to +10	°C
132,232	Overtemperature tolerance	0 to +20	°C
133,233	Door open alarm delay	00:00 to 00:30	hr:mn
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
121, 221	Air temperature	146,246	Network defrost command state
123, 223	Evaporator temperature	163,263	Network shutdown command state
133, 233	Door open alarm delay	170,270	Operating mode
134, 234	Time door has been open	171,271	Defrost input state
135, 235	Time door open in last 24 hours	172, 272	Door input state
140, 240	Duration of last defrost	173,273	Plant alarm 1 input state
141, 241	Time since end of last defrost	174, 274	Plant alarm 2 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

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

Applicable Documentation
Item Numbers   Doc No. 01665
Software Variations   Doc No. 01667
Wiring Diagrams   Doc No. 01668
Evaporator Manual   Doc No. 01923
Installation Requirements Doc No. 01676
Outline Details   Doc No. n/a

CR120.wpd Issue 2 Jan 2015 Doc No 01694

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