

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.

Model 691

An on board isolated 15Vac supply is present on the 'C' terminal. This provides voltage for the alarm inputs. Inputs are energised via volt free contacts connecting 'C' to the appropriate 'IP' terminal. ON NO ACCOUNT MUST AN EXTERNAL SUPPLY BE USED FOR INPUTS.

CE Conformance

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

Inputs

| | | | |
|-----|---------------|-----|---------------|
| C | COMMON | | |
| IP1 | Plant alarm 1 | IP5 | Plant alarm 5 |
| IP2 | Plant alarm 2 | IP6 | Plant alarm 6 |
| IP3 | Plant alarm 3 | IP7 | Plant alarm 7 |
| IP4 | Plant alarm 4 | IP8 | Plant alarm 8 |

Note: See relevant connections diagram for wiring details

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 41 press:

To set item 30 to 10 press:

To correct errors press:

To select next or previous items press: and

JTL Jnet Communications

Note all network products must be connected in parallel without cross connections. The unit is designed to be connected in a "daisy-chain" fashion using CON3 & 4 RJ8 connectors.

Initial Commissioning

The monitor has a set of data built in to its program for use during commissioning. This can be accessed by 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 Jnet communications should be set on item 1.

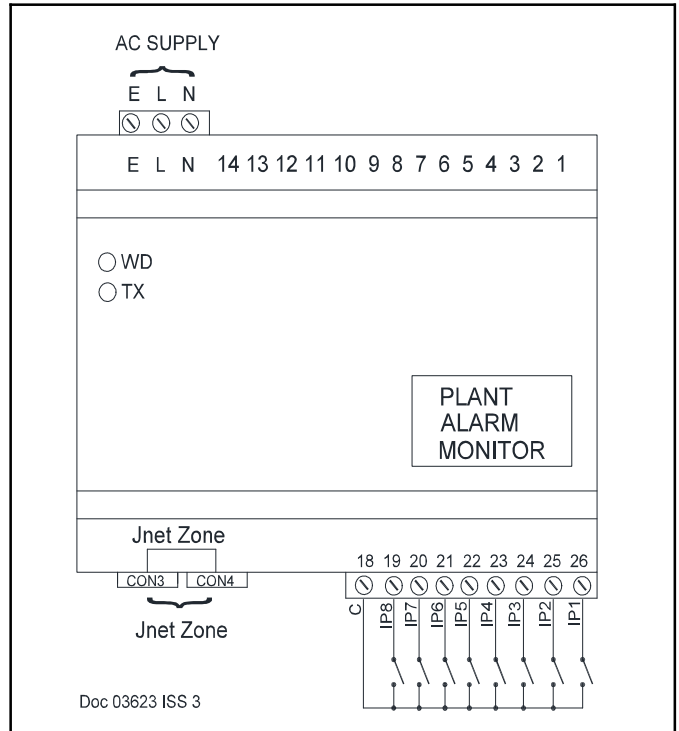
Plant Fault

The plant fault is reported on the network immediately.

The plant fault is reported as critical, on the JTL network.

There are 8 inputs all of which will initiate a plant fault when the input contact is open.

Note: All inputs including unused inputs MUST be closed to enable normal plant operation.



Alarms

The monitor is designed to be as versatile as possible. It is configured by assigning event message text to each of the eight inputs available on the board. Individual messages must be assigned to the inputs on item 51 - 58. (see table overleaf).

The lack of input constitutes an alarm condition, this is NOT selectable to ensure fail safe operation.

Therefore, as noted in the previous section, all unused inputs must be closed (wired to 'c' on terminal 18).

Alarms System

Any input will create a critical alarm on the site alarm system.

Each new input will create a new critical alarm on the site alarm network. This alarm is maintained for a maximum duration set on item 49. This allows for new alarms to trigger new critical alarms when existing alarms are present.

In order for critical alarms to dial-out correctly, the new critical alarm present period must exceed the dial-out delay set in the network controller.

Evaporator Shutdown

Any of the alarms send a command to associated evaporator controllers to stop refrigeration to prevent 'flood back' to the compressors.

| ADJUSTABLE PARAMETERS | | | |
|-----------------------|--|--------------|-------|
| Item | Function | Range | Units |
| 1 | Unit number | 0.1 to 899.8 | mins |
| 30 | Alarm text selection list number (see below) | 1 - 10 | |
| 49 | New critical alarm period | 10 - 120 | |
| 51 | Input 1 | | |
| 52 | Input 2 | | |
| 53 | Input 3 | | |
| 54 | Input 4 | | |
| 55 | Input 5 | | |
| 56 | Input 6 | | |
| 57 | Input 7 | | |
| 58 | Input 8 | | |

* Input 1 is on 51. Input 2 is on 52

| OTHER USEFUL ITEMS | |
|--------------------|---|
| Item | Function |
| 71,100 | Inputs physical and logical 0 - 255 |
| 78 | Force inputs to read value 0 - 255 (0 = unforced) |


** input 1 has value 1, input 2 value 2, input 3 value 4, input 4 value 8, input 5 value 16 etc.
If more than 1 input present then the displayed value is the sum of the individual input values. eg. if input 1 and 5 present then 17 (1 + 16) will be displayed.

| EVENT TEXT SELECTION LIST | |
|---------------------------|--------------------------|
| 1 | High suction pressure |
| 2 | Low suction pressure |
| 3 | Oil pressure fault |
| 4 | Motor thermistor fault |
| 5 | Low liquid level |
| 6 | Backup system fault |
| 7 | Primary controller fault |
| 8 | Liquid pump fault |
| 9 | Refrigerant Leak |
| 10 | Severe refrigerant leak |
| 11 | Phase failure |
| 12 | High discharge pressure |
| 13 | Condenser/Cooler fault |
| 14 | Condenser override on |
| 15 | General plant fault |
| 16 | Oil filter blocked |
| 17 | Compressor fault |
| 18 | Condensing unit fault |
| 19 | Evaporator Shutdown |
| 20 | HT compressor fault |
| 21 | LT compressor fault |
| 22 | Low oil level |

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

Supply Requirements

PA691 230 V ac 48-62 Hz
PA691-24 24 V ac 48 -62 Hz
 Supply 1 VA maximum

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

Applicable Documentation

| | |
|------------------------------|---------------|
| Item Numbers | Doc No. 04377 |
| Firmware Variations | Doc No. 04378 |
| Connection diagram for PA691 | Doc No. 03450 |