

### 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 610

A line voltage should be connected for signal present. The terminal marked **C** should be connected to the supply voltage neutra.

#### Model 611

An on board isolated 15Vac supply is present on the 'C' terminal. This voltage for the desital inputs. Inputs are plus energised via a volt free contact connecting 'C' to the appropriate 'I' terminal. **ON NO ACCOUNT MUST AN EXTERNAL SUPPLY BE USED FOR INPUTS.**

**NOTE:** Unit not suitable for 60 Hz operation.

### CE Conformance

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

### Inputs

Inputs (CON 4)

13	Plant alarm 1	9	Plant alarm 5
12	Plant alarm 2	8	Plant alarm 6
11	Plant alarm 3	7	Plant alarm 7
10	Plant alarm 4	6	Plant alarm 8
14	COMMON		

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: **ITEM** **4** **1** **ENTER**

To set item 30 to 10 press:

**ITEM** **3** **0** **ENTER** **SET** **1** **0** **ENTER**

To correct errors press: **CANCEL**

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

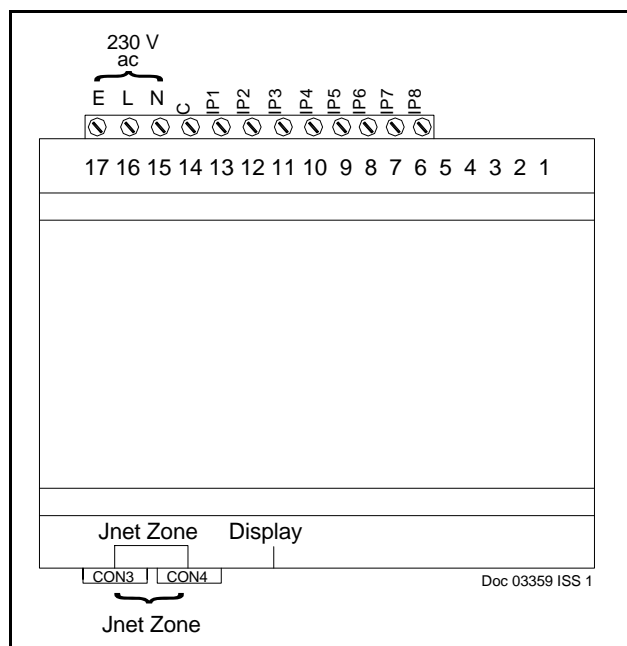
### JTL Jnet Communications

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.



configured by assigning alarm message text to each of the eight inputs available on the board. First an alarm list containing appropriate alarm messages is chosen and set on item 30 (see table overleaf). Individual messages must then be assigned to the inputs on item 51 - 58. A value of 0 in this item means that alarms are disabled for this input.

Alarms are reported on the network after an adjustable delay set on item 4n (where n=input number). The default strategy for monitoring is that a signal present on the input means an alarm condition is present. However, if a lack of input constitutes an alarm condition, the logic can be inverted (individually for each input) on item 6n.

Item 3n determines whether the alarm is reported as critical on the JTL network.

Note: Each time a new critical alarm occurs a new event is reported on the network. In order for critical alarms to dial-out correctly, the new critical alarm present period (item 49) must exceed the dial-out delay set in the network controller.

### Alarms


The monitor is designed to be as versatile as possible. It is

ADJUSTABLE PARAMETERS			
Item	Function	Range	Units
1	Unit number	0.1 to 899.8	mins mins
30	Alarm text selection list number (see below)	1 - 10	
41-48	Alarm delay	0 - 120	
49	New critical alarm present period	10 - 120	
51 - 58	Alarm function	0 - 24	
31 - 38	Alarm critical selection	0 - 1	
61 - 68	Invert input	0 - 1	
* Input 1 is on 31, 41, 51 and 61. Input 2 is on 32, 42, 52 and 62 etc.			

OTHER USEFUL ITEMS	
Item	Function
71,100	Inputs physical and logical 0 - 255
78	Force inputs to read value 0 - 31 (0 = unforced)
** input 1 has value 1, input 2 value 2, input 3 value 4, input 4 value 8, input 5 value 16 If more than 1 input present then the displayed value is the summ of the individual input values. eg. if input 1 and 5 present then 17 (1 + 16) will be displayed.	

ALARM TEXT SELECTION LISTS (Item 30)					
1 (TYPE 180)		2 (TYPE 181)	3 (TYPE 182)	4 (TYPE 183)	5 (TYPE 184)
1	High suction pressure	Electrical supply fault	Man trapped * (See note 1)	Suction pressure fault	Phase 1 fault
2	Low suction pressure	Electrical supply OK	Severe refrigerant gas leak * (see Note 1)	Discharge pressure fault	Phase 2 fault
3	Oil pressure fault	Generator fault	Door heater fault	Low liquid level	Phase 3 fault
4	Motor thermistor fault	Generator running	Drain heater fault	Condenser fault	-
5	low liquid level	Low pressure	Drain heater 1 fault	Plant controller fault	-
6	Backup system fault	High pressure	Drain heater 2 fault	Plant fault	-
7	Plant controller fault	Low level alarm	Threshold heater fault	Control voltage fault	-
8	Liquid pump fault	High level alarm	Refrigerant gas leak	Compressor inverter fault	-
9	Gas leak detection fault	Pump 1 fault	Gas leak caution	-	-
10	Severe refrigerant leak	Pump 2 fault	Gas leak detector fault	-	-
11	Phase failure	Air filter blocked	-	-	-
12	High discharge	-	-	-	-
13	pressure	-	-	-	-
14	Condenser fault	-	-	-	-
15	Condenser override on	-	-	Compressor 1 fault	-
16	Plant fault	-	-	Compressor 2 fault	-
17	Oil filter blocked	-	-	Compressor 3 fault	-
18	Compressor fault	-	-	Compressor 4 fault	-
19	Condensing unit fault	-	-	Compressor 5 fault	-
20	-	-	-	Compressor 6 fault	-
21	-	-	-	Compressor 7 fault	-
22	-	-	-	Compressor 8 fault	-

\* Note 1. "MAN TRAPPED" and "SEVERE REFRIGERANT GAS LEAK" are regarded as critical on the network regardless of settings on items 31 - 35.

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

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

#### Supply Requirements

**PA610** 230 V ac 48-62 Hz

**PA610/611-24** 24 V ac 48 -62 Hz

Supply 1 VA maximum

Inputs PA610 2 mA maximum

#### Applicable Documentation

Item Numbers

Firmware Variations

Connection diagram for PA610

Connection diagram for PA611

Doc No. 03096

Doc No. 03372

Doc No. 03358

Doc No. 03354