

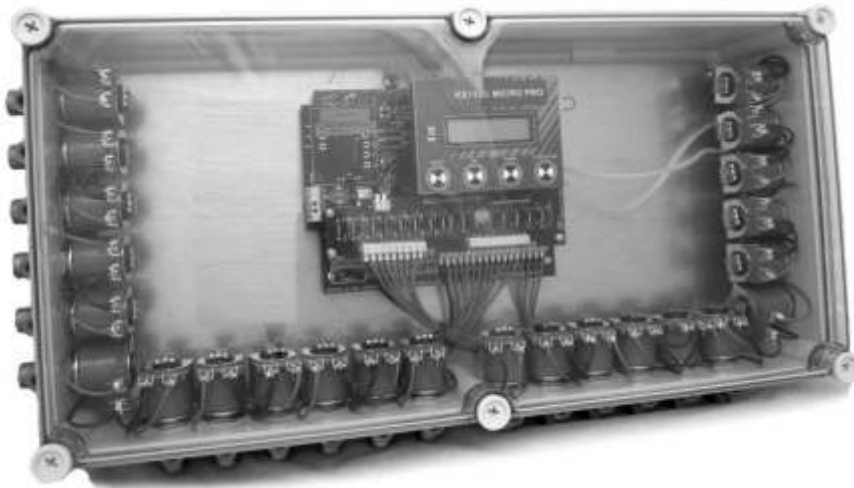


dust filter controls

Product Data Sheet

KX74322

Up To 32-way Valve Controller



OVERVIEW

- *The **KX** range is designed to serve reverse jet dust extraction systems and formulated specifically to address their needs. The **KX74322 Valve Controller** is a fully self-contained solution to multi-valve control incorporating differential pressure sensing. This unit offers the latest in Microprocessor technology in a compact enclosure, affording unparalleled levels of user friendliness, system flexibility and tamper-proof operation.*
- *The **KX74322 Valve Controller** takes care of system control. Using just four pushbuttons and the high resolution LCD Display, all aspects of system operation can easily be programmed for optimum performance. The **KX74322** is offered as a naked PCD assembly or housed in a robust IP65 rated plastic enclosure - as a reverse jet.*



dust filter controls

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CCT REV XC/04.02.2015

Features

ADVANCED MICRO-PROCESSOR CONTROL .

- Operating at over a million instructions per second the onboard micro-processor provides ease of use and a level of control which was virtually impossible with old plc or Cmos systems.

ONBOARD EPROM MEMORY

- Ensures system settings are retained during power failure or whilst power is turned off.

EASY TO USE 4 BUTTON CONTROL

- **MODE:** Move forward through options
- **UP:** Increases values selected by mode
- **DOWN:** Decreases values selected by mode
- **START/STOP:** Run or halt the system

HIGH RESOLUTION LCD DISPLAY

- Easily view and adjust system setup.
- Displays pressure readings in real time.
- Monitor system status

BUILT-IN DIFFERENTIAL PRESSURE SENSOR

- The KX74322 has it's own internal differential pressure sensor which allows the unit to clean only when needed. This also dispenses with the need for additional external devices.

REAL TIME SYSTEM MONITORING

- While the system is running, Differential Pressure and system status can be monitored in real time. Differential pressure is displayed constantly whenever the Controller is running along with the number of the current valve to be fired during the cleaning sequence. One quick glance at the display will tell the operator the current state of the system and the current position in the cleaning cycle.

BUILT-IN OUTPUT AMPLIFIERS AND POWER SUPPLY

- The unit has it's own internal power supply. Power output to solenoid valves is provided directly from the controller using the internal power amplifiers .

HIGH/LOW PRESSURE ALARMS

- The KX74322 has two relay outputs. These are activated when the differential pressure in the system reaches the user defined settings for a high alarm or low alarm situation.
- The relay outputs may be used to trigger any amount of external events and allow the system malfunction to be handled immediately and effectively. The dual relay system means that high and low pressure events may be handled differently and trigger a separate chain of events to warn of, and handle the situation.
- The units LCD display will carry a warning message if high or low pressure alarm levels are reached.

SEPARATE CLEANING CYCLE FOR SYSTEM FAN STOP

- A separately programmable cleaning cycle is provided for optimum filter performance. This operates whilst the main system fan is not running and can be set to operate for a set number of cycles. It can also be disabled by setting the number of cycles to 0.

Features - contd.

4-20 MILLIAMP OUTPUT

- The unit features a 4-20mA output which may be used to send pressure information to other devices or system controllers. This feature enables the KX74322 to communicate with any device that will accept this type of input and allow integration into virtually any application.

REMOTE CONTROL

- The KX74322 has the facility for remote start/stop. It can be remotely started/stopped via the 5v and REM terminals. The unit is arranged so that the pulsing will start as soon as an open circuit is established across 5v and REM. If the controller is in DP Sensor mode, the remote start/stop facility still functions in conjunction with the Differential Pressure (DP) set points.



dust filter controls

Technical Specifications - KX74322-G10

CONTROLLER:	Part Number KX74322-G10.
INPUT SUPPLY:	24 VDC \pm 10%.
INPUT FUSE:	F3 Axial 2 Amp (T) Time Lag.
INPUT CONNECTIONS:	3-Way 1.5mm 10 Amp side entry plug and socket insulated terminal block which is marked: 0V, 24 VDC.
MAINS FAILURE:	In the event of mains failure, the unit will operate to specification as soon as the voltage level comes within the above limits.
OUTPUT VOLTAGE:	24V DC, regulation as input.
OUTPUT LOAD PER OUTLET:	36W continuous, 44W pulsed into solenoid valves.
I.O. CONNECTIONS:	1.5mm 10 Amp side entry plug and socket insulated terminal block which is marked: 4/20 - 0V, OUT <i>alarms</i> : marked: USER - RL1, RL2 <i>control inputs</i> : marked: CONTROL INPUTS - FAN, REM, 5V, FLO, 5V, <i>valve outputs</i> : marked: VALVE OUTPUTS - COM and 1-32.
DP PRESSURE CONNECTIONS:	2 x 5mm (outside diam) pneumatic compression connectors suitable to accept nylon hose.
START UP SEQUENCE:	The unit is arranged so that it will always start at output 1.
PRESSURE SCALE:	0 - 700mmWG.
CONSTRUCTION:	Solid state microprocessor components mounted onto a double-sided glass fibre P.C.B. with component mask.
INDICATION:	Valve Numbers 1- 32 will be displayed as each output is energised in sequence.
AMBIENT TEMPERATURE AT BOARD SURFACE:	0 to +45 deg.C. Storage Temperature: -10 to +60 deg.C.
VIBRATION SPEC:	Not greater than BEAMA Group 2.
CONDUCTING MATERIALS:	Standard P.C.B's can be supplied with their surfaces coated with a layer of Parylene C, a material that is to MOD standard 59-47/4, and MIL-1-460C. This treatment reduces the risk of damage through moisture.
MICRO-PRO SEQUENCER:	Polycarbonate box with clear Lid. Size 360 x 200 x 150 (E3).

CCT reserve the right to change product specifications at any time with out prior notification and as a consequence of on-going product development.

Technical Specifications - KX74322-G15

CONTROLLER:	Part Number KX74322-G15.
INPUT SUPPLY:	115 - 230 V +10% -15% @ 50/60HZ.
INPUT FUSE:	Fuse 1: 1 Amp 230 V HBC 20mm .
VALVE OUTPUT FUSE:	Fuse 2: 2 Amp 24 V (T) Time Lag.
INPUT CONNECTIONS:	3-Way 1.5mm 10 Amp side entry plug and socket insulated terminal block which is marked: 230, 115, Neut.
MAINS FAILURE:	In the event of mains failure, the unit will operate to specification as soon as the voltage level comes within the above limits.
OUTPUT VOLTAGE:	24V DC, regulated.
OUTPUT LOAD PER OUTLET:	36W continuous, 44W pulsed into solenoid valves.
I.O. CONNECTIONS:	1.5mm 10 Amp side entry plug and socket insulated terminal block which is marked: 4/20 - 0V, OUT <i>alarms:</i> marked: USER - RL1, RL2 <i>control inputs:</i> marked: CONTROL INPUTS - FAN, REM, 5V, FLO, 5V, <i>valve outputs:</i> marked: VALVE OUTPUTS - COM and 1-32.
DP PRESSURE CONNECTIONS:	2 x 5mm (outside diam) pneumatic compression connectors suitable to accept nylon hose.
START UP SEQUENCE:	The unit is arranged so that it will always start at output 1.
PRESSURE SCALE:	0 - 700mmWG.
CONSTRUCTION:	Solid state microprocessor components mounted onto a double-sided glass fibre P.C.B. with component mask.
INDICATION:	Valve Numbers 1- 32 will be displayed as each output is energised in sequence.
AMBIENT TEMPERATURE AT BOARD SURFACE:	0 to +45 deg.C. Storage Temperature: -10 to +60 deg.C.
VIBRATION SPEC:	Not greater than BEAMA Group 2.
CONDUCTING MATERIALS:	Standard P.C.B's can be supplied with their surfaces coated with a layer of Parylene C, a material that is to MOD standard 59-47/4, and MIL-1-460C. This treatment reduces the risk of damage through moisture.
MICRO-PRO SEQUENCER:	Polycarbonate box with clear Lid. Size 360 x 200 x 150 (E3).

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Technical Specifications - KX74322-G4

CONTROLLER:	Part Number KX74322-G4.
INPUT SUPPLY:	115 - 230 V +10% -15% @ 50/60HZ.
INPUT FUSE:	Fuse 1: 1 Amp 230 V HBC 20mm .
VALVE OUTPUT FUSE:	Fuse 2: 1 Amp 110 V HBC 20mm.
INPUT CONNECTIONS:	3-Way 1.5mm 10 Amp side entry plug and socket insulated terminal block which is marked: 230, 115, Neut.
MAINS FAILURE:	In the event of mains failure, the unit will operate to specification as soon as the voltage level comes within the above limits.
OUTPUT VOLTAGE:	110Vac.
OUTPUT LOAD PER OUTLET:	36W continuous, 44W pulsed into solenoid valves.
I.O. CONNECTIONS:	1.5mm 10 Amp side entry plug and socket insulated terminal block which is marked: 4/20 - 0V, OUT <i>alarms:</i> marked: USER - RL1, RL2 <i>control inputs:</i> marked: CONTROL INPUTS - FAN, REM, 5V, FLO, 5V, <i>valve outputs:</i> marked: VALVE OUTPUTS - COM and 1-32.
DP PRESSURE CONNECTIONS:	2 x 5mm (outside diam) pneumatic compression connectors suitable to accept nylon hose.
START UP SEQUENCE:	The unit is arranged so that it will always start at output 1.
PRESSURE SCALE:	0 - 700mmWG.
CONSTRUCTION:	Solid state microprocessor components mounted onto a double-sided glass fibre P.C.B. with component mask.
INDICATION:	Valve Numbers 1- 32 will be displayed as each output is energised in sequence.
AMBIENT TEMPERATURE AT BOARD SURFACE:	0 to +45 deg.C. Storage Temperature: -10 to +60 deg.C.
VIBRATION SPEC:	Not greater than BEAMA Group 2.
CONDUCTING MATERIALS:	Standard P.C.B's can be supplied with their surfaces coated with a layer of Parylene C, a material that is to MOD standard 59-47/4, and MIL-1-460C. This treatment reduces the risk of damage through moisture.
MICRO-PRO SEQUENCER:	Polycarbonate box with clear Lid. Size 360 x 200 x 150 (E3).

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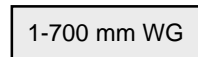
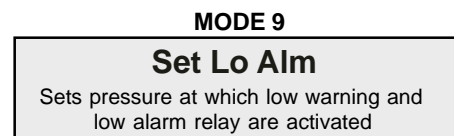
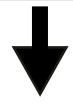
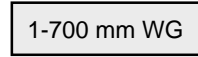
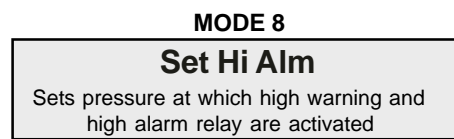
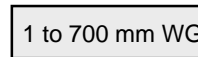
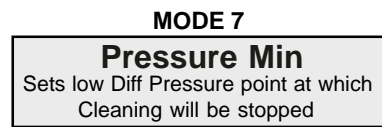
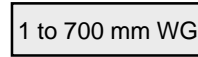
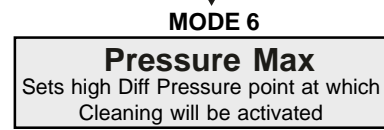
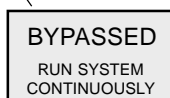
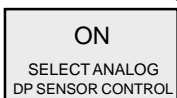
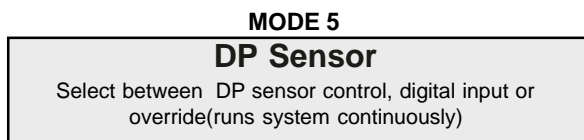
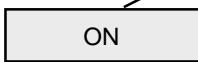
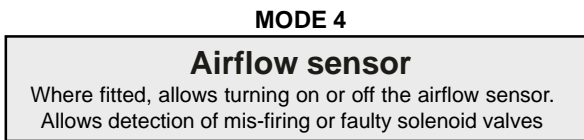
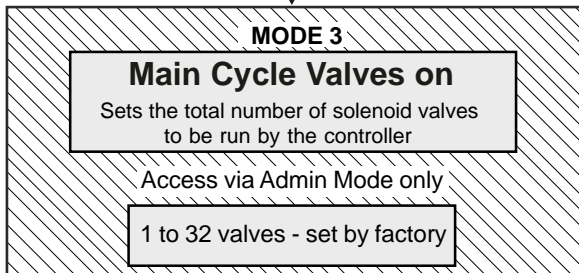
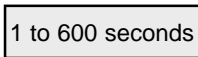
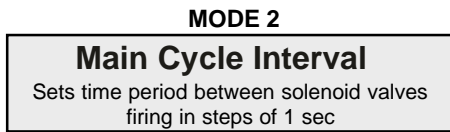
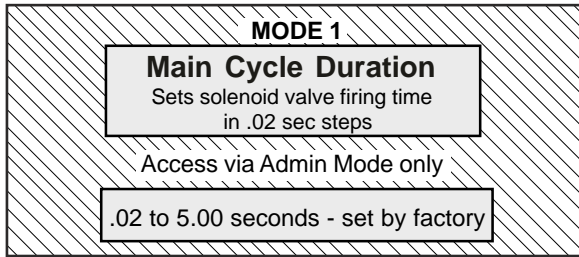
Technical Specifications - KX74322-G31

CONTROLLER:	Part Number KX74322-G31.
INPUT SUPPLY:	115 - 230 V +10% -15% @ 50/60HZ.
INPUT FUSE:	Fuse 1: 1 Amp 230 V HBC 20mm .
VALVE OUTPUT FUSE:	Fuse 2: 2 Amp 24 V HBC 20mm.
INPUT CONNECTIONS:	3-Way 1.5mm 10 Amp side entry plug and socket insulated terminal block which is marked: 230, 115, Neut.
MAINS FAILURE:	In the event of mains failure, the unit will operate to specification as soon as the voltage level comes within the above limits.
OUTPUT VOLTAGE:	24Vac.
OUTPUT LOAD PER OUTLET:	36W continuous, 44W pulsed into solenoid valves.
I.O. CONNECTIONS:	1.5mm 10 Amp side entry plug and socket insulated terminal block which is marked: 4/20 - 0V, OUT <i>alarms</i> : marked: USER - RL1, RL2 <i>control inputs</i> : marked: CONTROL INPUTS - FAN, REM, 5V, FLO, 5V, <i>valve outputs</i> : marked: VALVE OUTPUTS - COM and 1-32.
DP PRESSURE CONNECTIONS:	2 x 5mm (outside diam) pneumatic compression connectors suitable to accept nylon hose.
START UP SEQUENCE:	The unit is arranged so that it will always start at output 1.
PRESSURE SCALE:	0 - 700mmWG.
CONSTRUCTION:	Solid state microprocessor components mounted onto a double-sided glass fibre P.C.B. with component mask.
INDICATION:	Valve Numbers 1- 32 will be displayed as each output is energised in sequence.
AMBIENT TEMPERATURE AT BOARD SURFACE:	0 to +45 deg.C. Storage Temperature: -10 to +60 deg.C.
VIBRATION SPEC:	Not greater than BEAMA Group 2.
CONDUCTING MATERIALS:	Standard P.C.B's can be supplied with their surfaces coated with a layer of Parylene C, a material that is to MOD standard 59-47/4, and MIL-1-460C. This treatment reduces the risk of damage through moisture.
MICRO-PRO SEQUENCER:	Polycarbonate box with clear Lid. Size 360 x 200 x 150 (E3).

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Programmable features

The following is a flow chart of the programmable settings available on the KX74322 Valve Controller. The options available in each mode are explained in an easy to follow format.



MODES CONTINUE
ON PAGE 9



dust filter controls

Programmable features - contd.

MODE 10

Fan Rundown Cycle Num Cycles

Sets the total number of cleaning cycles initiated by a fan stop period

0 to 15 cycles

MODE 11

Fan Rundown Cycle Interval

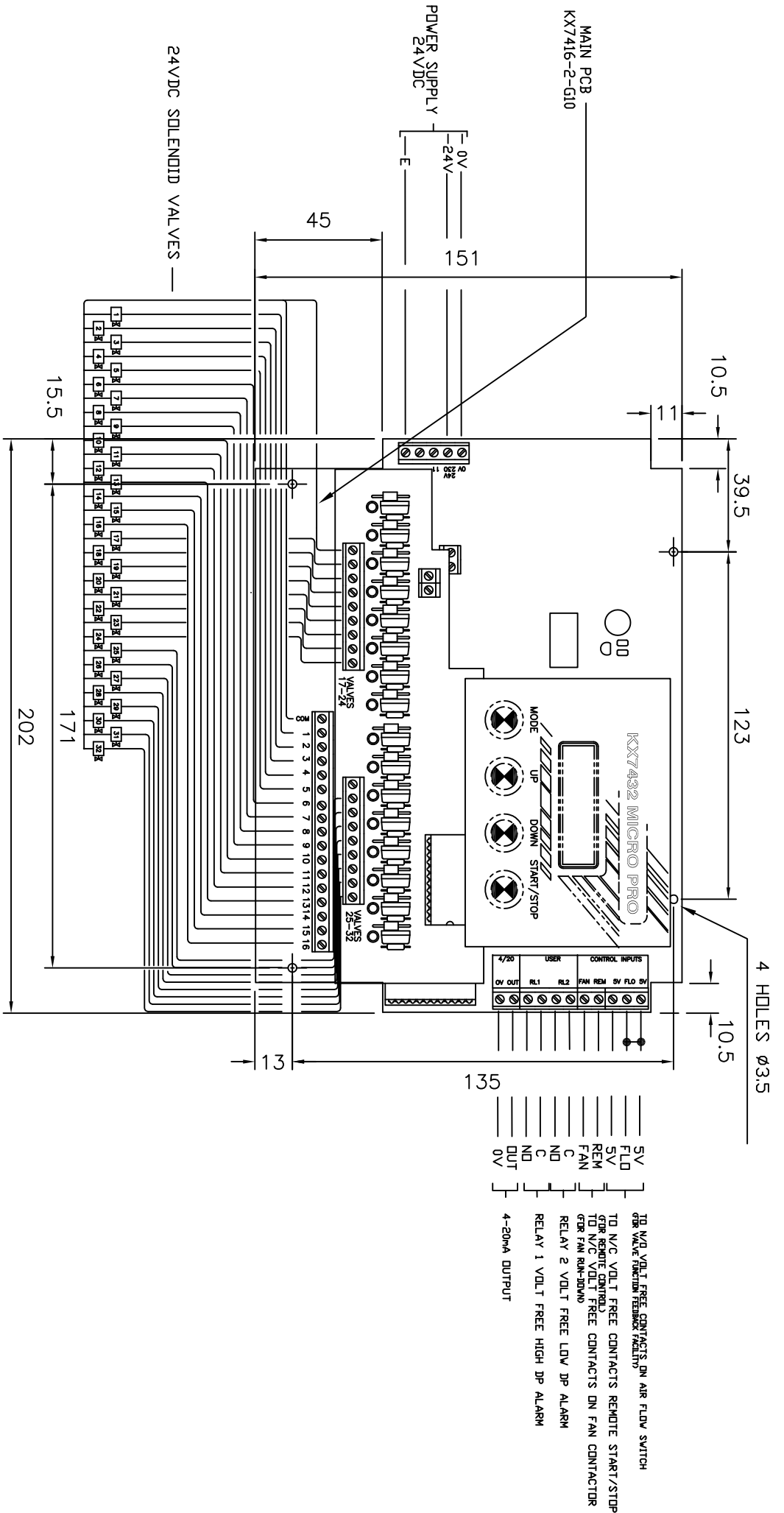
Sets time period between solenoid valves firing in steps of 1 sec

1 to 600 seconds



dust filter controls

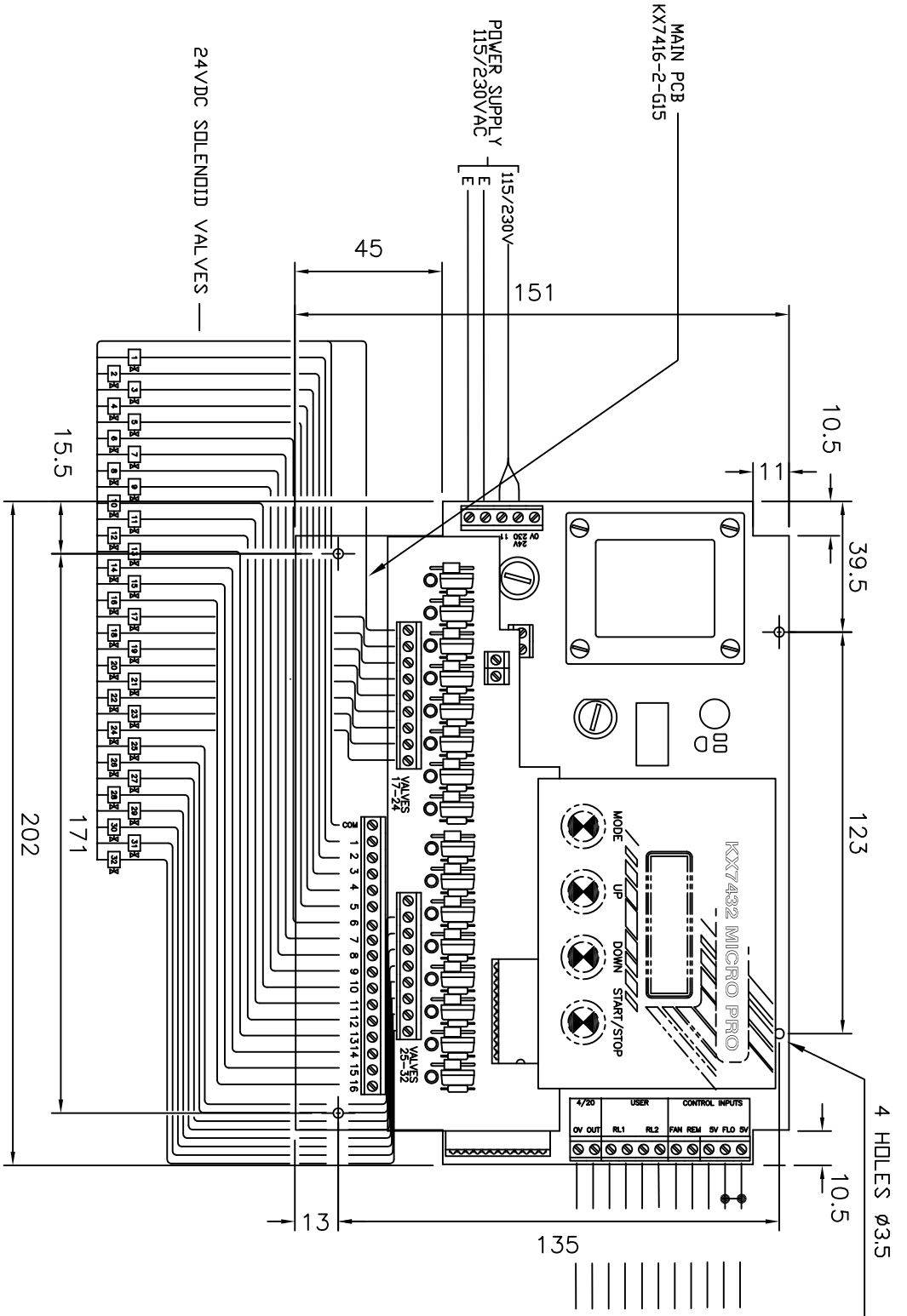
KX74322-G10 Wiring Diagram



ALL DIMENSIONS IN MILLIMETRES

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Part No:	KX47322-G10	
Title:	32 WAY MICROPRO SEQUENCE CONTROLLER WIRING DIAGRAM	
Issue	Description	Date
B	INPUT TERMINALS CHANGED	15.10.14
A	REDRAWN FROM KX74160A	11.07.12
Drwn.	LOF	11.07.12
Chkd.	/	/
Appd.	/	/
CADFile:	SC0\KX74PCB\KX7432210WD	Plot Date: 11.07.12
Dwg. No.	KX7432210WD	Rev. B
Sheet 1 of 1		

KX74322-G15 Wiring Diagram



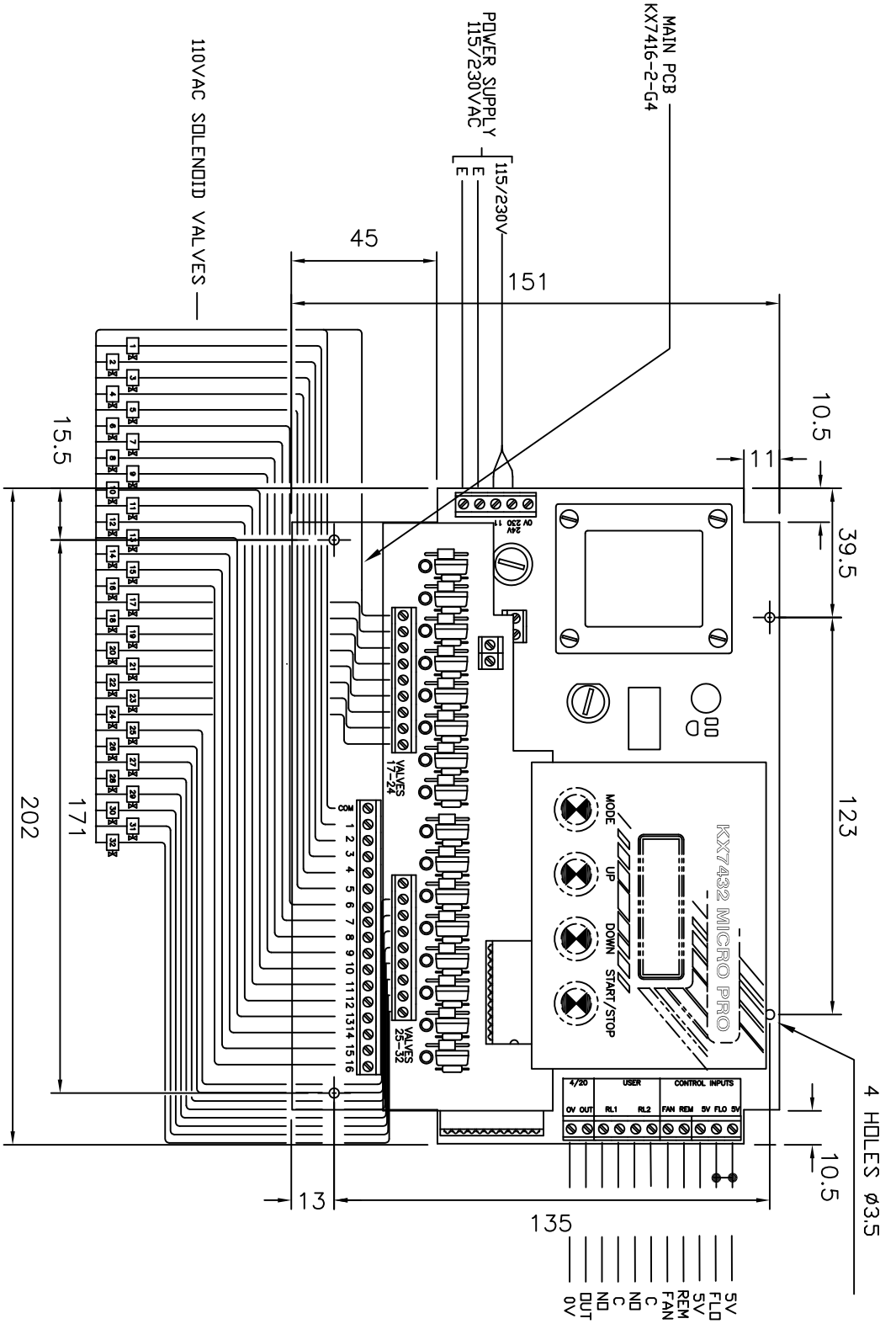
5V FLD
 5V REM
 FAN
 C
 ND
 ND
 DUT
 0V

TO N/C VOLT FREE CONTACTS ON AIR FLOW SWITCH
 FOR VALVE FUNCTION FEEDBACK FACILITY
 TO N/C VOLT FREE CONTACTS REMOTE START/STOP
 FOR REMOTE CONTROL
 TO N/C VOLT FREE CONTACTS ON FAN CONTACTOR
 FOR FAN RUN-DOWN
 RELAY 1 VOLT FREE LDM DP ALARM
 RELAY 2 VOLT FREE HIGH DP ALARM
 4-20mA OUTPUT

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Part No:	KX47322-G15	
Title:	32 WAY MICROPRO SEQUENCE CONTROLLER WIRING DIAGRAM	
Issue	Description	Date
B	INPUT TERMINALS CHANGED	10.07.14
A	REDRAWN FROM KX74160A	11.07.12
Drwn.	LOF	11.07.12
Chkd.	/	/
Appd.	/	/
CADFile:	SC0\KX74160B\KX7432215WD	Plot Date: 11.07.12
Dwg. No.	KX7432215WD	Rev. B
Sheet 1 of 1		

KX74322-G4 Wiring Diagram



TO N/O VOLT FREE CONTACTS ON AIR FLOW SWITCH
FOR VALVE FUNCTION FEEDBACK FACILITY

TO N/C VOLT FREE CONTACTS REMOTE START/STOP
FOR REMOTE CONTROL

TO REMOTE CONTROL FREE CONTACTS ON FAN CONTACTOR
(FOR FAN RUN-STOP)

RELAY 2 VOLT FREE LOW DP ALARM

RELAY 1 VOLT FREE HIGH DP ALARM

4-20mA OUTPUT

ALL DIMENSIONS IN MILLIMETRES

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Part No: **KX47322-G4**

Title: **32 WAY MICROPRO SEQUENCE CONTROLLER WIRING DIAGRAM**

Issue	Description	Date
B	INPUT IDENT CHANGED	15.10.14
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Drwn.	LOF	11.07.12
Chkd.	/	/
Appd.	/	/

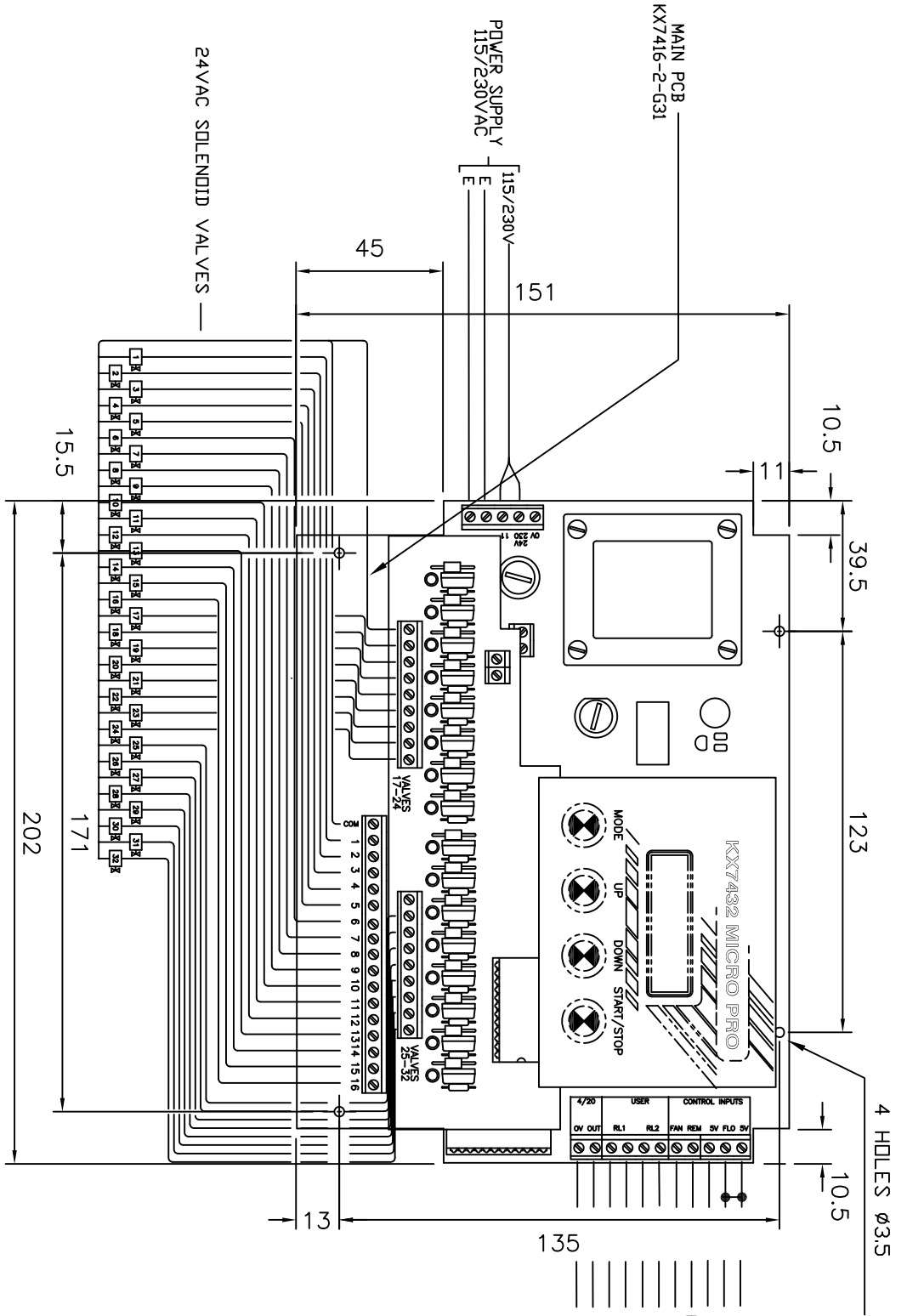
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CADFile: soc\KX74\F08\KX7432204WD Plot Date: 11.07.12

Dwg. No. **KX7432204WD** Rev. **B**

Sheet 1 of 1

KX74322-G31 Wiring Diagram

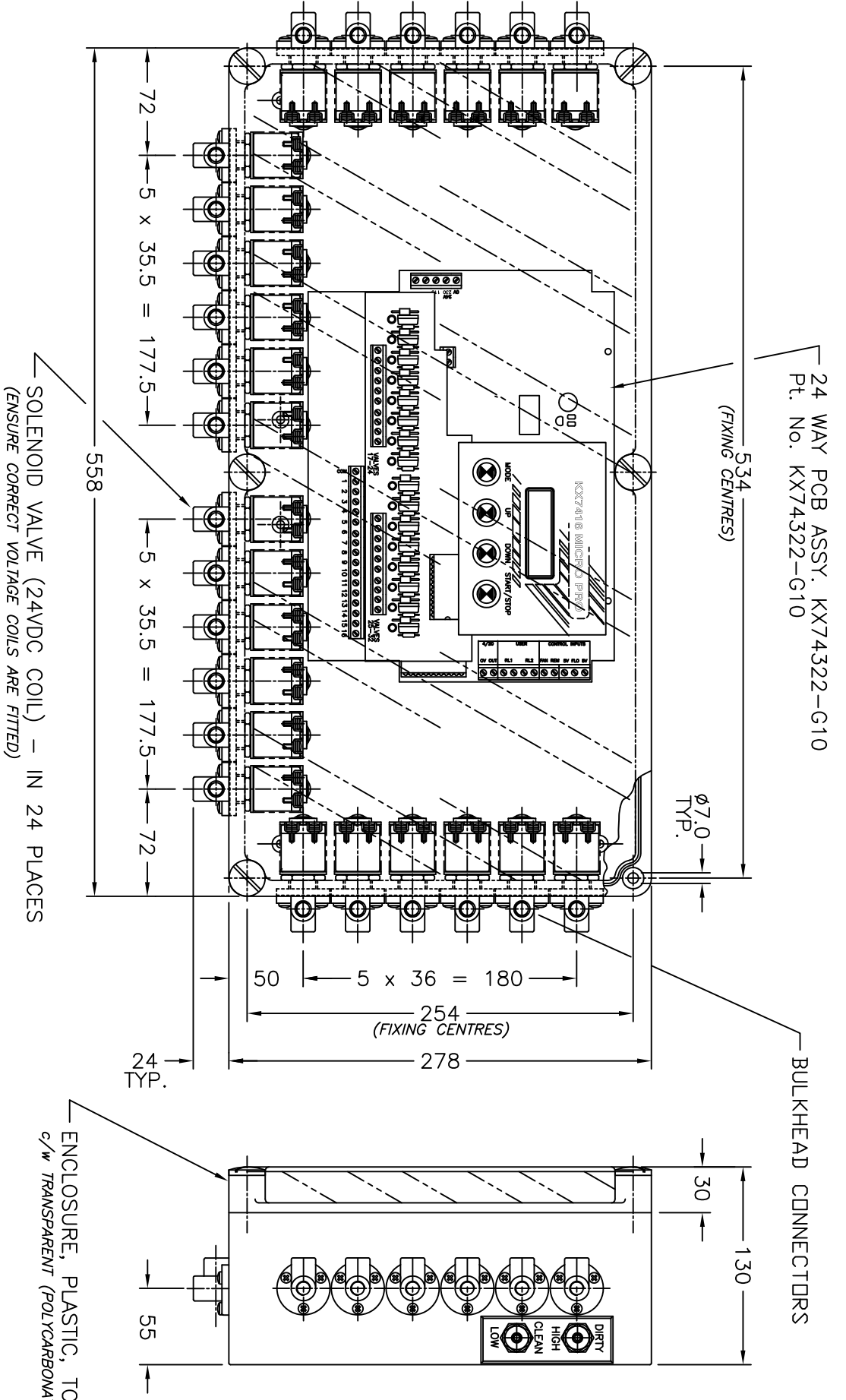


- 5V FLD
 - 5V REM
 - FAN C
 - ND C
 - ND DUT
 - 0V
- TO N/C VOLT FREE CONTACTS ON AIR FLOW SWITCH
FOR VALVE FUNCTION FEEDBACK FACILITY
- TO N/C VOLT FREE CONTACTS REMOTE START/STOP
FOR REMOTE CONTROL
- TO N/C VOLT FREE CONTACTS ON FAN CONTACTOR
FOR FAN RUN-DOWN
- RELAY 1 VOLT FREE LOW DP ALARM
- RELAY 2 VOLT FREE HIGH DP ALARM
- 4-20mA OUTPUT

ALL DIMENSIONS IN MILLIMETRES

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Part No:	KX47322-G31	
Title:	32 WAY MICROPRO SEQUENCE CONTROLLER WIRING DIAGRAM	
Issue	Description	Date
B	INPUT TERMINALS CHANGED	10.07.14
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Drwn.	LOF	11.07.12
Chkd.	/	/
Appd.	/	/
CADFile:	SC0\KX74160A\KX7432231WD	Plot Date: 11.07.12
Dwg. No.	KX7432231WD	Rev. B
Sheet 1 of 1		

KX74322 - As A Reverse Jet Station



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BEAUMONT LEYS, LEICESTER, LE4 1AA
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Part No: **24W KX743222-G10/R3/E8**

Title: **24 VALVES/KX74322-G10/E8
REV JET STATION
GENERAL ARRANGEMENT**

Issue	Description	Date
B	INPUT TERMINALS CHANGED	10.07.14
A	PRELIMINARY	11.07.12
Drawn:	LOF	11.07.12
Issue		
Appd:		

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Dwg. No. RJ743221032 Rev. B

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