

EBSRAY PUMPS

SUPPLEMENTAL INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS



CE

LPG SYSTEM CONTROLLER Model L861101-01A-16

*.... For Submersible
LPG APPLICATIONS*

IMPORTANT WARNING

1 BEFORE STARTING ANY WORK, this publication and the Ebsray Installation, Operation and Maintenance Instructions (IOM) for Ebsray Model RX10 SHOULD be read/reviewed by all persons involved with the work. If any part of these publications is not understood, obtain clarification before proceeding with any work.

2 All construction and installation is to be carried out only by qualified personnel.

3 All construction and installation is to be strictly in accordance with all relevant Standards, Codes and Regulations (in Australia, AS3000 Wiring Rules Apply).

4 This instruction only applies to the installation and Operation of the Ebsray System Controller which includes the Ebsray L861002 Pump Controller. Please refer to the Ebsray IOM Instructions for details regarding the Installation and Operation of the Ebsray L861002 Pump Controller.

CONTROL SYSTEM DESCRIPTION

The Ebsray L861101 System Controller forms an integral part of the LPG pumping, dispensing and emergency stop system. It incorporates the components and functionality of the Ebsray L861002 RX10 Pump Controller with the addition of the following features:

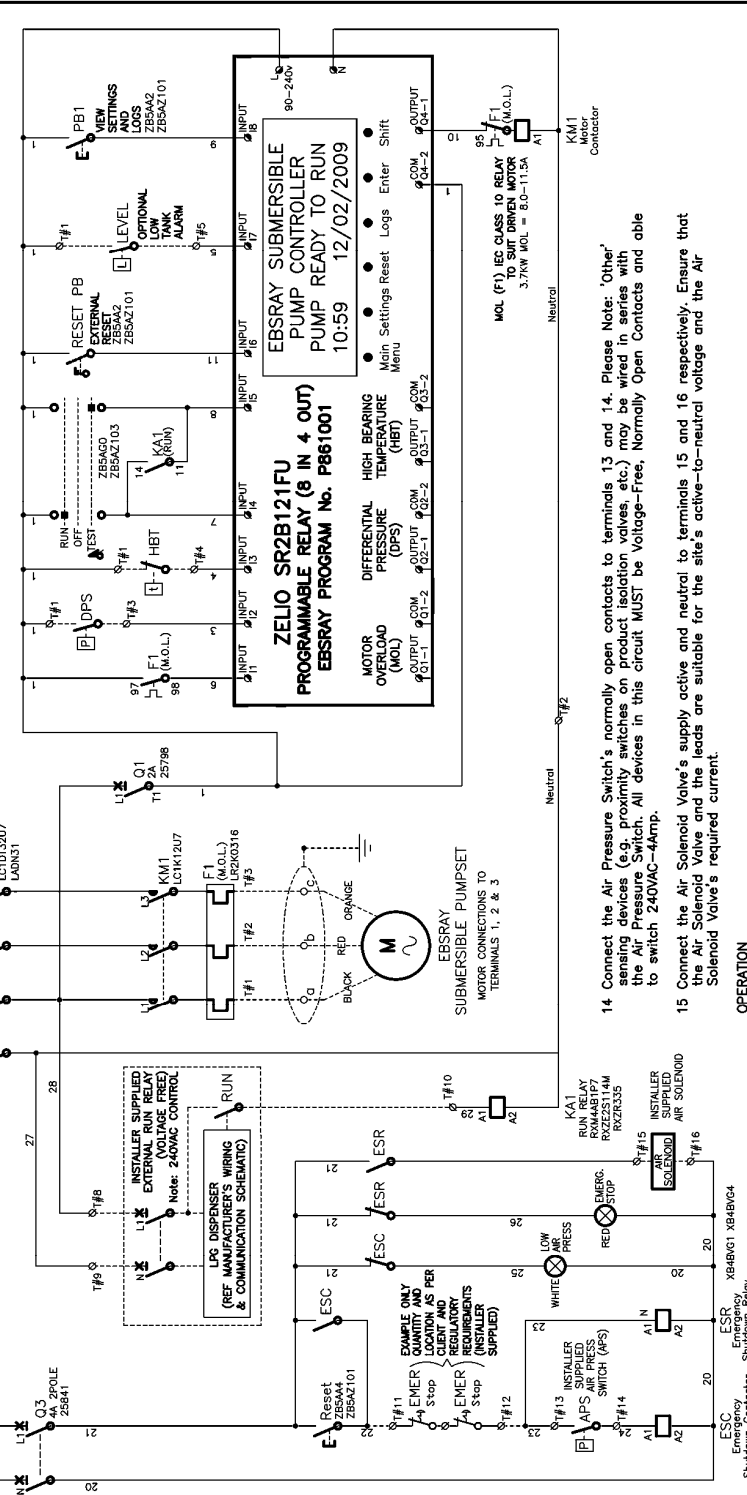
- A) Required System Electrical Isolation of the power to the RX10 and related devices, the Dispenser and to the Emergency Stop Circuit via a 4-pole Isolator/Circuit Breaker in a lockable cabinet.
- B) Supplies Power to the Dispenser.
- C) Emergency Stop, Control Air Pressure Detection and Reset Circuit isolates power to the RX10 and related devices, the Dispenser and the Air Solenoid via a 4-pole contactor, if either one of the Emergency Stop Push Buttons is pressed or if the Control Air Pressure falls below a preset level. A Push Button is provided to reset the Emergency Stop and to re-energise the Air Solenoid.
- D) A Red Lamp indicates the actuation of an Emergency Stop and a White Lamp indicates Low Control Air Pressure.

INSTALLATION

- 5 Mount the L861101 System Controller in a non-hazardous area suitable for IP55 enclosures. Connect control terminal to earth.
- 6 Ensure that Isolator/Circuit Breaker (Q2) is in the 'OFF' position, before connecting 3 phase power and neutral. Note: Leads must be suitable for 30 Amp.
- 7 Ensure that the incoming phase sequence is abc (clockwise).
- 8 Connect the N.O. DPS switch to terminals 1 and 3 and the RX10's HBT switch (blue leads) to terminals 1 and 4 as per the RX10 IOM.
- 9 Connect the RX10 Black, Red and Orange power leads directly to the motor overload (F1) terminals T1, T2 and T3 respectively.
- 10 Connect the Dispenser supply active and neutral to terminals 8 and 9 respectively. Ensure that the Dispenser and the leads are suitable for the site's active to neutral voltage and the Dispenser's required current.
- 11 A normally open voltage free contact (close = run) returning L1 to terminal 10 is required to start/stop the Pump. The installer shall provide a suitable external relay (240VAC rated control) if not integral to the dispenser.
- 12 If applicable, connect Dispenser communications to the operator console. (Ref. Dispenser Manufacturer's wiring and communication schematic).
- 13 Connect the 'Emergency Stop' Latching (Latched Open) Push Buttons wired in series to terminals 11 and 12 as shown. Please Note: 'Other' Emergency Stop Devices (e.g. Auxiliary Contacts on other Emergency Stop Contactors) may also be wired in series with the Push Buttons. All devices in this circuit MUST be Voltage-Free. Normally Open Contacts and suitable to switch 240VAC-4amp.

0101 0102 0103 0104 0105 0106 0107 0108 0109 0110 0111 0112 0113 0114 0115 0116 0117 0118 0119 0120 0121 0122 0123 0124 0125 0126 0127 0128

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14 Connect the Air Pressure Switch's normally open contacts to terminals 13 and 14. Please Note: 'Other' sensing devices (e.g. proximity switches on product isolation valves, etc.) may be wired in series with the Air Pressure Switch. All devices in this circuit MUST be Voltage-Free, Normally Open Contacts and able to switch 240VAC-4amp.

15 Connect the Air Solenoid Valve's supply active and neutral to terminals 15 and 16 respectively. Ensure that the Air Solenoid Valve and the leads are suitable for the site's active-to-neutral voltage and the Air Solenoid Valve's required current.

OPERATION

The L861101 System Controller supplies power and monitors the Dispenser and the Emergency Stop Circuit while its integral L861002 RX10 Pump Controller controls the RX10 and monitors pumping system (see the RX10 IOM for operation of the L861002 Pump Controller). In the event that an Emergency Stop Button is pressed OR if the Control Air Pressure drops below the Air Pressure Switch (APS) set point, the Emergency Stop (ESC) is de-energised, isolating power to the RX10 and related devices, the Dispenser and the Air Solenoid Valve. The Red Emergency Stop lamp is illuminated. As the Control Air Pressure drops below the Air Pressure Switch (APS) set point, the Air Pressure Switch opens and the White Low Air Pressure lamp is illuminated.

Once it is determined to be safe to do so, the Emergency Stop Reset can be pushed to re-energise the Emergency Stop Contactor and the Air Solenoid. If all of the Emergency Stop Push Buttons have been reset, the Red Emergency Stop lamp will be extinguished immediately. The Emergency Stop Reset Button must be held in until the Control Air Pressure exceeds the Air Pressure Switch (APS) set point which, once reached, will extinguish the White Low Air Pressure lamp.

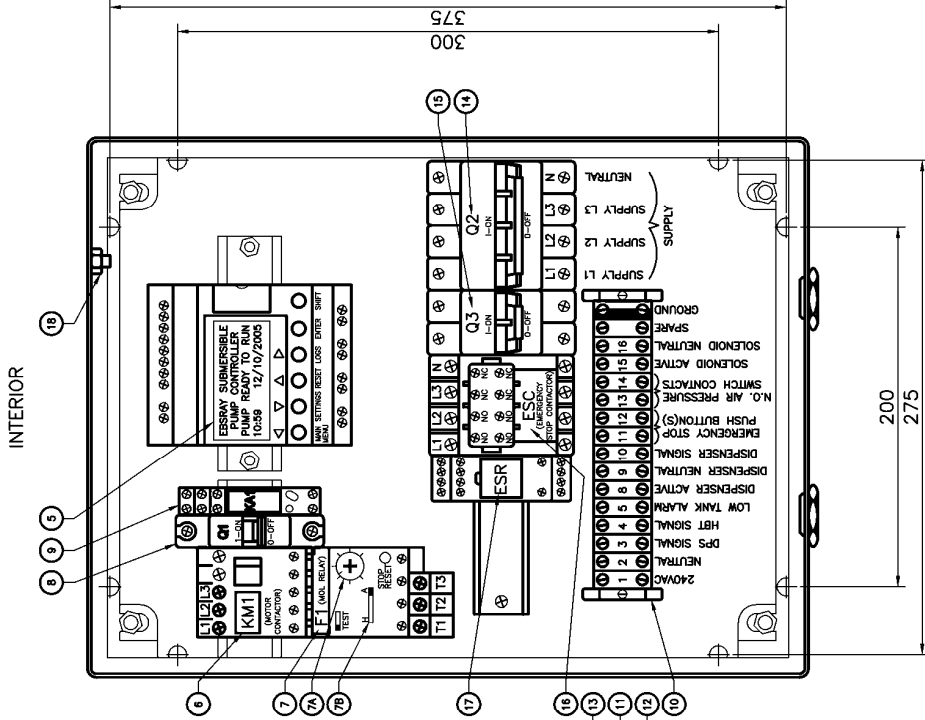
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EBS-RAY PUMPS PTY.LTD
 ABN 52 000 061 003
 628 Pittwater Road Ph:(61 2) 9905 0234
 Brookvale NSW 2100 Fax:(61 2) 9938 3825
 Australia www.ebsraypumps.com.au

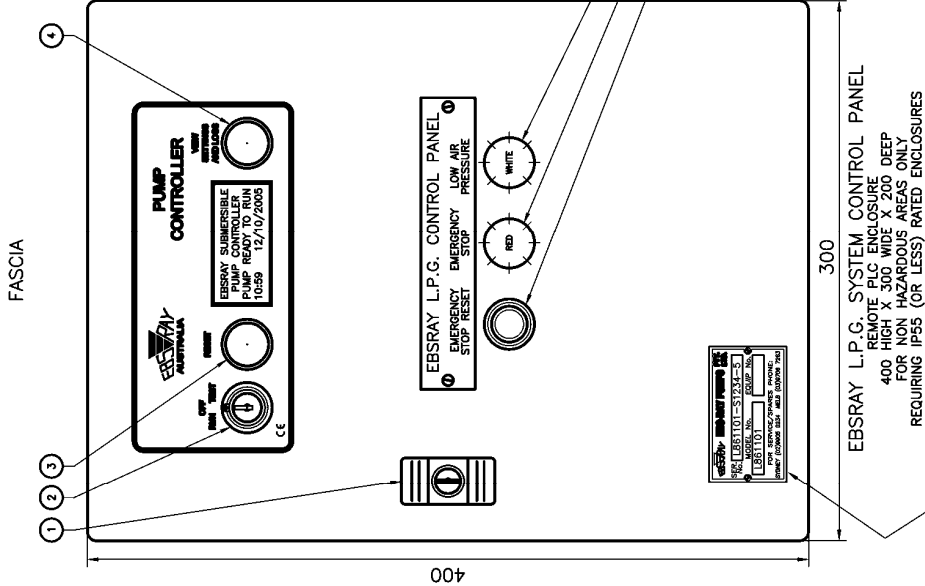
TITLE: EBSRAY MODEL L861101-01 SYSTEM CONTROLLER
 PAGE 1 OF 2 - TYPICAL WIRING DIAGRAM
 SCALE: N/A DATE: 20-02-09
 DRAWN: J.J.D. CHKD: J.J.D. APPR: [Signature]
 COMP. No: L86110101
 DRG. No: L861101-01
 REV. 0

ITEM	DESCRIPTION
1	LOCKABLE ENCLOSURE LATCH
2	'RUN-OFF-TEST' KEYED SELECTOR SWITCH
3	'RESET' PUSH BUTTON
4	'VIEW SETTINGS AND LOGS' PUSH BUTTON
5	PLC WITH LCD SCREEN
6	MOTOR CONTACTOR - LABELLED KM1
7	MOTOR OVERLOAD RELAY (MOL) - LABELLED F1
7A	MOL MANUAL (H) - AUTOMATIC (A) RESET SELECTOR
7B	MOL CURRENT CUT-OUT SELECTOR
8	CIRCUIT BREAKER (ISOLATOR) - LABELLED Q1
9	RUN RELAY - LABELLED KA1
10	TERMINAL STRIP
11	EMERGENCY STOP INDICATOR - RED INDICATOR LAMP
12	EMERGENCY STOP RESET PUSH BUTTON
13	LOW AIR PRESSURE INDICATOR - WHITE INDICATOR LAMP
14	ISOLATOR/CIRCUIT BREAKER 30A 4 POLE - LABELLED Q2
15	EMERGENCY STOP CIRCUIT ISOLATOR - LABELLED Q3
16	EMERGENCY STOP CONTACTOR 30A 4 POLE - LABELLED ESC
17	EMERGENCY STOP RELAY - LABELLED ESR
18	L.P.G. CONTROL PANEL CHASSIS GROUND LUG

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NOTE: DO NOT INSTALL PLC ENCLOSURE WITH ITS BACK ON THE HORIZONTAL PLANE



EBSRAY L.P.G. SYSTEM CONTROL PANEL
 REMOTE PLC ENCLOSURE
 400 HIGH X 300 WIDE X 200 DEEP
 FOR NON HAZARDOUS AREAS ONLY
 REQUIRING IP55 (OR LESS) RATED ENCLOSURES

EBSRAY MODEL L861101
 L.P.G. SYSTEM CONTROL PANEL
 NAMEPLATE

TITLE: EBSRAY MODEL L861101-01 SYSTEM CONTROLLER PAGE 2 OF 2 - PANEL LAYOUT	SCALE: N/A	DATE: 20-02-09
DRAWN: J.J.D.	CHK'D: J.J.D.	APPR:
COMP. No: L86110101	DRG.No: L861101-01	REV: 0

EBSRAY AUSTRALIA
AUSTRALIA
 EBS-RAY PUMPS PTY.LTD
 ABN 52 000 061 003
 628 Pittwater Road Ph:(61 2) 9905 0234
 Brookvale NSW 2100 Fax:(61 2) 9938 3825
 Australia www.ebsraypumps.com.au

UNLESS STATED OTHERWISE ALL DIMENSIONS IN MILLIMETRES

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NOTES

EBSRAY PUMPS Pty. Ltd. ABN 52 000 061 003
628 PITTWATER ROAD
BROOKVALE NSW 2100 AUSTRALIA
www.ebsraypumps.com.au

PHONE (+61 2) 9905 0234
FAX (+61 2) 9938 3825