

EBSRAY PUMPS

INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS



LPG Control Panel *MODEL C860101*

IMPORTANT WARNING

- 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.
- All construction and installation is to be carried out only by qualified personnel.
- All construction and installation is to be strictly in accordance with all relevant Standards, Codes and Regulations (in Australia, AS3000 Wiring Rules Apply).
- This instruction only applies to the installation and Operation of the Ebsray LPG System Control Panel which includes an Ebsray C860001 Control Console, (see Ebsray's RX10 IOM Instructions for details regarding the Installation and Operation of the Ebsray C860001 Control Console).

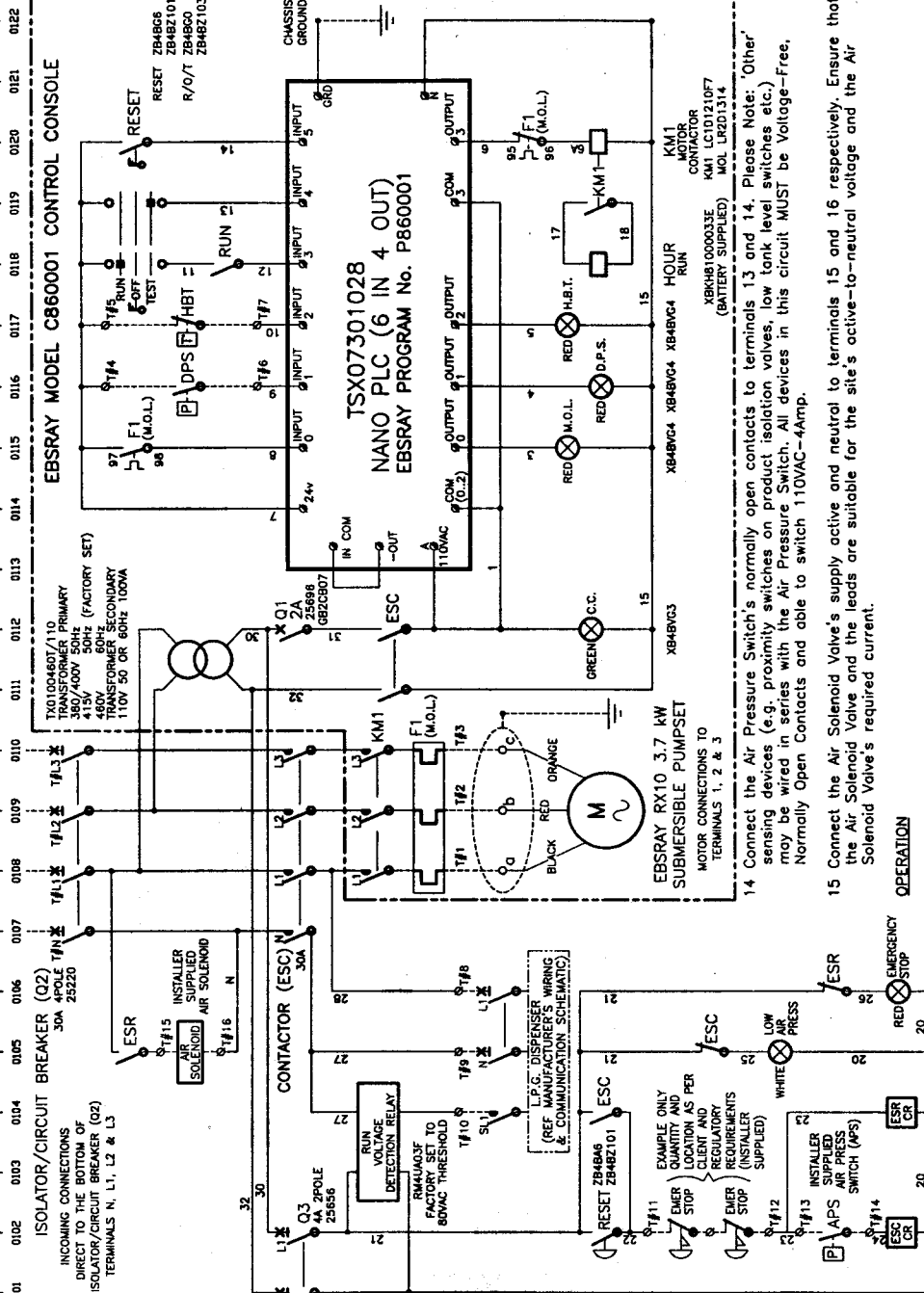
CONTROL SYSTEM DESCRIPTION

The Ebsray C860101 LPG System Control Panel forms an integral part of the LPG pumping, dispensing and emergency stop system. It incorporates the components and functionality of the Ebsray C860001 RX10 Control Console with the addition of the following features:

- 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.
- Dispenser Power and Run Signal to the Pump Circuit supplies power to the Dispenser and converts the line voltage run command from the Dispenser to the RX10 into a voltage-free contact required by the C860001 RX10 Control Console.
- 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 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 for reset of an Emergency Stop and to re-energise the Air Solenoid.
- A Red Lamp indicates the actuation of an Emergency Stop and a White Lamp indicates Low Control Air Pressure.

INSTALLATION

- Mount the C860101 LPG System Control Panel in a non-hazardous area suitable for IP55 enclosures. Connect ground terminal to earth.
- Ensure that Isolator/Circuit Breaker (Q2) is in the 'OFF' position. Connect incoming isolated 3 phase power and a suitable neutral direct to the bottom of (Q2). Note: Leads must be suitable for 30 Amp.
- Ensure that the incoming phase sequence is abc (clockwise).
- Connect the N.O. DPS switch to terminals 4 and 6 and the RX10's HBT switch (blue leads) to terminals 5 and 7 as per the RX10 IOM.
- Connect the RX10 Black, Red and Orange power leads to terminals 1, 2 and 3 respectively.
- 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.
- Connect the Dispenser's switch wire (Dispenser run signal wire to the RX10) to terminal 10. This switch MUST return the active back as a run command from the Dispenser.
- If applicable, connect Dispenser communications to the operator console (Ref Dispenser Manufacturer's wiring and communication schematic).
- 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 110VAC-4Amp.



OPERATION

The C860101 LPG System Control supplies power and monitors the Dispenser and the Emergency Stop Circuit while its integral C860001 RX10 Control Console controls the RX10 and monitors pumping system (see the RX10 IOM for operation of the C860001 Control Console). 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 Contactor (ESC) is de-energised, isolating power to the RX10 and related devices, the Dispenser and the Air Solenoid. 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.

- 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, low tank level switches 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 110VAC-4Amp.
- 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.

REV	DATE	DESCRIPTION	BY	CHKD	APPR	REV	DATE	DESCRIPTION
F	06.01.04	WIRE 32 WAS SHOWN AS 31	J.J.D.	J.J.D.	J.J.D.			
E	14.07.03	RUN VOLTAGE DETECTION RELAY P/N R444035 WAS R444213F67	J.J.D.	J.J.D.	J.J.D.			
D	06.06.03	INSTRUCTION & CORRECTED TO REFLECT THE WIRING DIAGRAM	J.J.D.	J.J.D.	J.J.D.			
C	17.03.00	X82 LEADS AND SWITCHES WERE X84 GLOBES AND SWITCHES	J.J.D.	J.J.D.	J.J.D.			

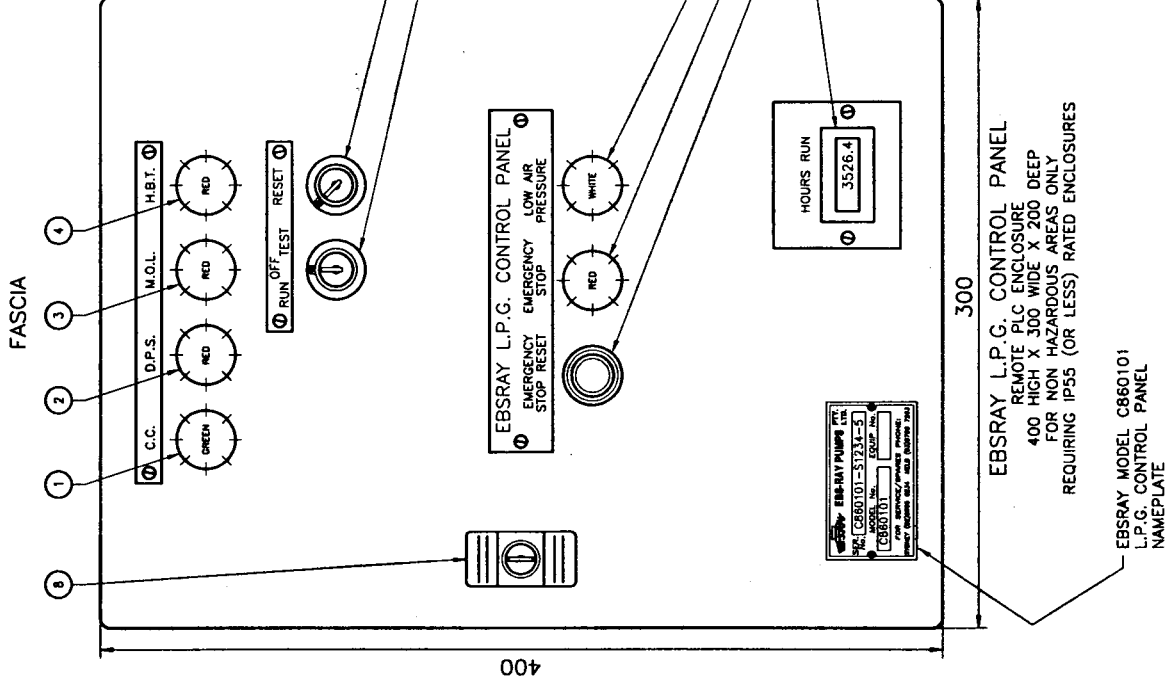
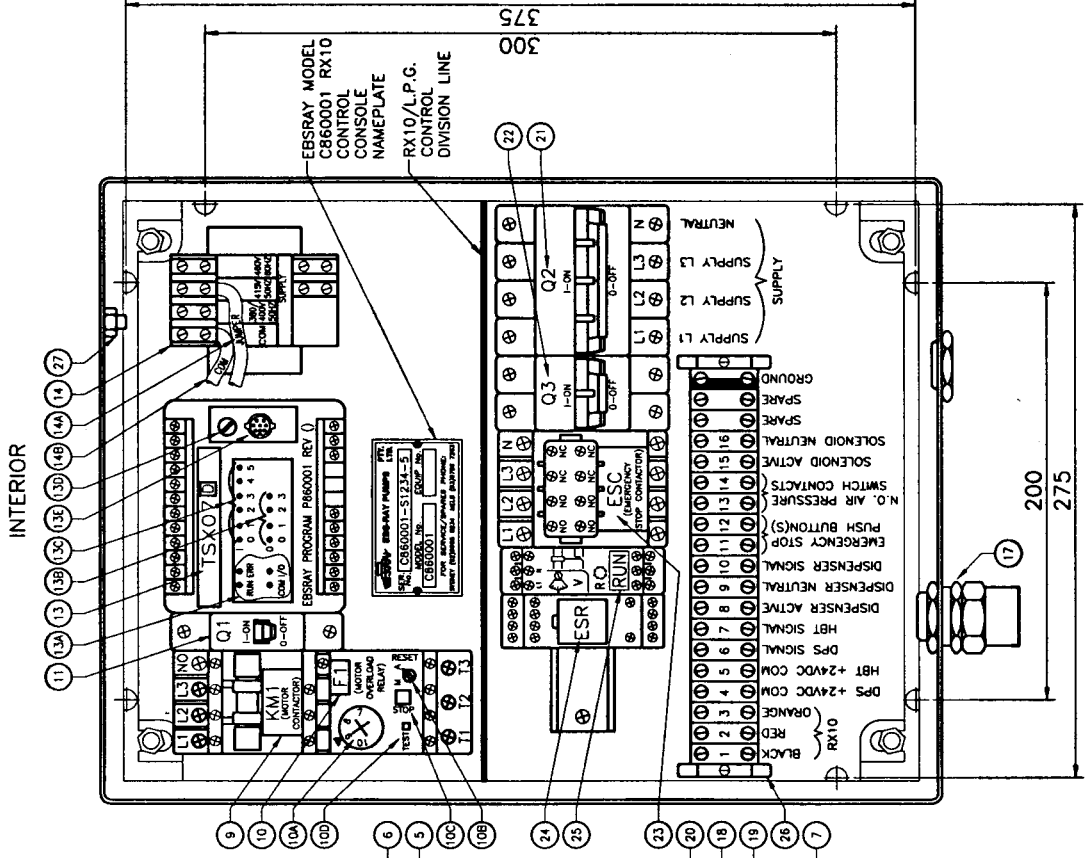
TITLE: EBSRAY MODEL C860101 PAGE 1 OF 2		SCALE: NA		DATE: 24-08-98	
CONTROL-LPG SYSTEM-7.5kW-IP55		DRAWN: J.J.D.		CHKD: W.A.E. APPR: J.J.D.	
EBS-RAY PUMPS PTY.LTD		COMP No: C860101		REV: F	
UNLESS STATED OTHERWISE ALL DIMENSIONS IN MILLIMETRES		628 Pittwater Road		Ph:(61 2) 9905 0234	
		Brookvale NSW 2100		Fax:(61 2) 9938 3625	
		www.ebsraypumps.com.au			

**EBSRAY MODEL C860001
RX10 CONTROL CONSOLE INCLUDES:**

ITEM	DESCRIPTION
1	CONTROL CIRCUIT (CC) - GREEN INDICATOR LAMP
2	DIFFERENTIAL PRESSURE SWITCH (DPS) - RED INDICATOR LAMP
3	MOTOR OVERLOAD RELAY (M.O.L.) - RED INDICATOR LAMP
4	HIGH BEARING TEMPERATURE SWITCH (HBT) - RED INDICATOR LAMP
5	RUN-OFF-TEST MODE SELECTOR SWITCH
6	RESET SWITCH
7	HOUR RUN METER - NON-RESETTING
8	TESTED DOOR LATCH - LABELLED KM1
9	DOOR LOCK RELAY - LABELLED KM1
10	MOTOR OVERLOAD RELAY - LABELLED F1
10A	CURRENT AUTOMATIC SELECTOR - LABELLED F1
10B	MANUAL-AUTOMATIC RESET SELECTOR
10C	STOP SWITCH
10D	TEST SWITCH
11	CIRCUIT BREAKER - LABELLED Q1
13	PLC (TSX07)
13A	PLC STATUS LEDS
13B	PLC OUTPUT STATUS LEDS
13C	PLC INPUT STATUS LEDS
13D	PLC DPS BYPASS TIMER
13E	PLC COMMUNICATIONS PORT
14	TRANSFORMER
14A	TRANSFORMER PRIMARY SELECTION JUMPER
14B	TRANSFORMER PRIMARY COMMON
17	CABLE GLAND - NON-HAL-TO SUIT 8 CORE ARMoured CABLE

**EBSRAY MODEL C860101
L.P.G. CONTROL PANEL INCLUDES:**

ITEM	DESCRIPTION
18	EBSRAY MODEL C860101 L.P.G. CONTROL CONSOLE
19	EMERGENCY STOP INDICATOR - RED INDICATOR LAMP
20	EMERGENCY STOP RESET PUSH BUTTON
21	LOW AIR PRESSURE INDICATOR - WHITE INDICATOR LAMP
22	ISOLATOR/CIRCUIT BREAKER 30A 4 POLE - LABELLED Q2
23	EMERGENCY STOP CIRCUIT ISOLATOR - LABELLED Q3
24	EMERGENCY STOP RELAY - LABELLED ESR
25	RUN RELAY - LABELLED R1
26	L.P.G. CONTROL PANEL TERMINAL STRIP
27	L.P.G. CONTROL PANEL CHASSIS GROUND LUG



REV	DATE	DESCRIPTION	REV.	CHKD.	APPR.	BY
F	06.01.04	WIRE 32 WAS SHOWN AS 31	J.J.D.	J.J.D.		
E	14.07.03	RUN VOLTAGE DETECTION RELAY P/N RMJ02E1JPG WAS INCORRECTED TO REFLECT THE WIRING DIAGRAM	J.J.D.	J.J.D.		
D	06.06.03	REZ LENS AND SWITCHES WERE 284 GLOBES AND SWITCHES	J.J.D.	J.J.D.		
C	17.03.00		J.J.D.	J.J.D.		

UNLESS STATED OTHERWISE ALL DIMENSIONS IN MILLIMETRES

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SCALE: N.T.S. DATE: 14-09-98
 DRAWN: J.J.D. CHKD: W.A.E. APPR: [Signature]
 COMP.No: C860101 DRC.No: C860101
 TITLE: EBSRAY MODEL C860101 PAGE 2 OF 2
 CONTROL - LPG SYSTEM-IP55

NOTES

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