SERVICE MANUAL

Ackermann Fusion Insufflator 16-2045

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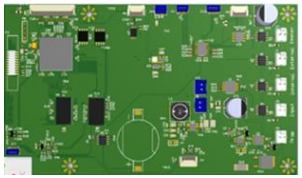
Compact Overview

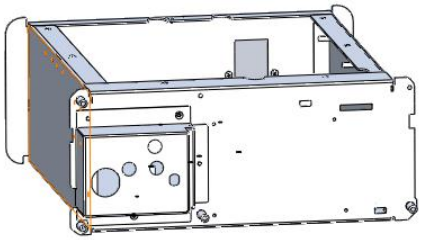
Power supply

Main socket module

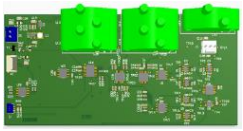


LPC Board

LCD Screen



Insufflator frame



Sensor Board

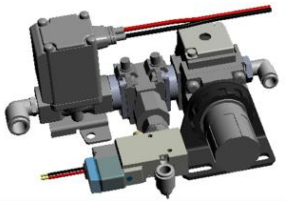
COM Board

Patient output connection

Low Pressure Valve

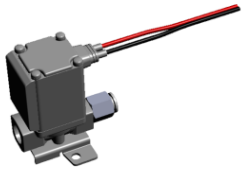
Reducer valve

heating module



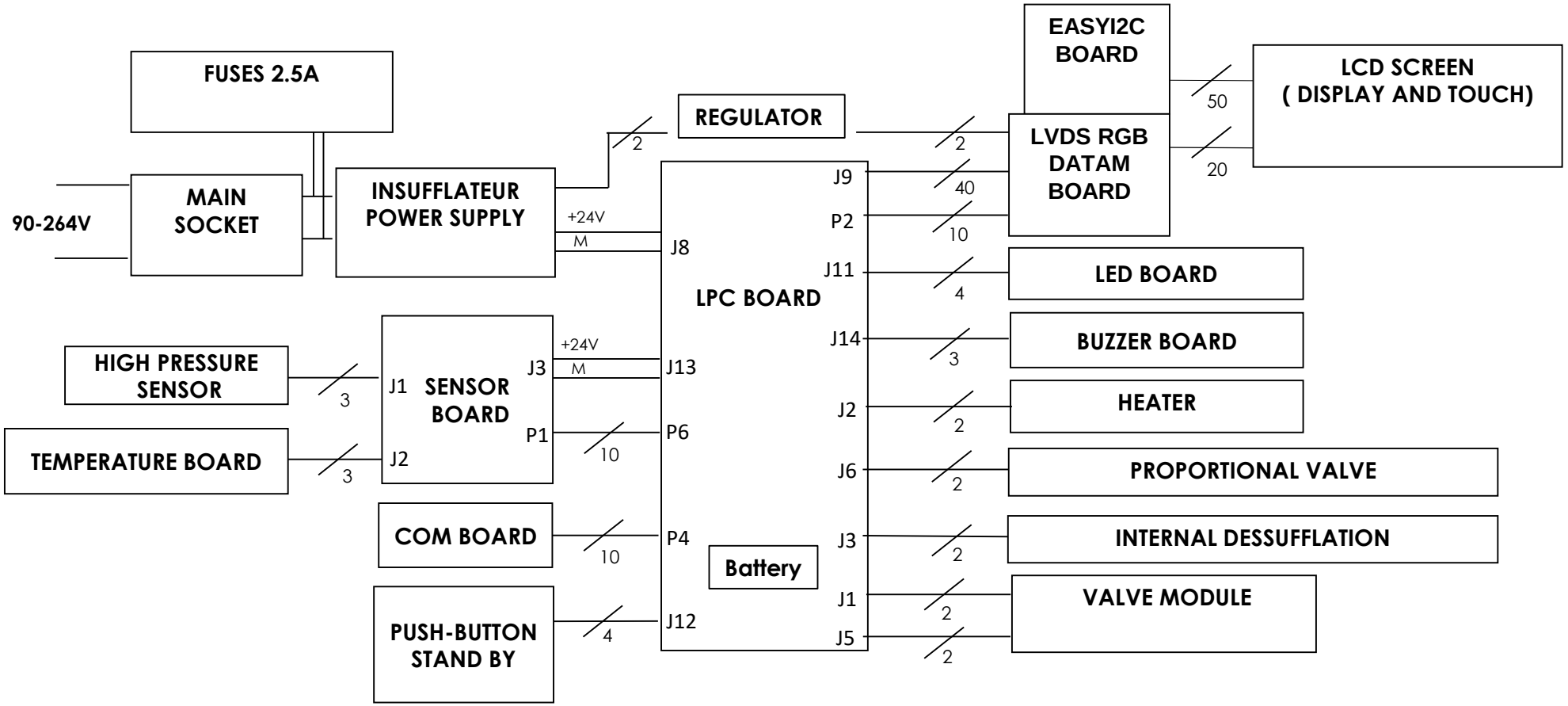
Valve module

Proportionnal valve



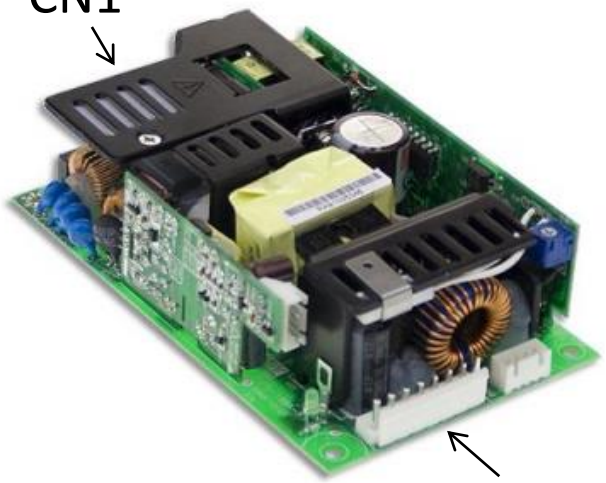
Internal desufflation valve

Electrical Diagram



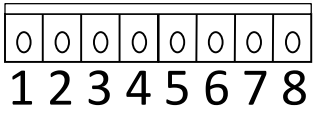
Power Supply Board
Inputs/Outputs

CN1



CN2

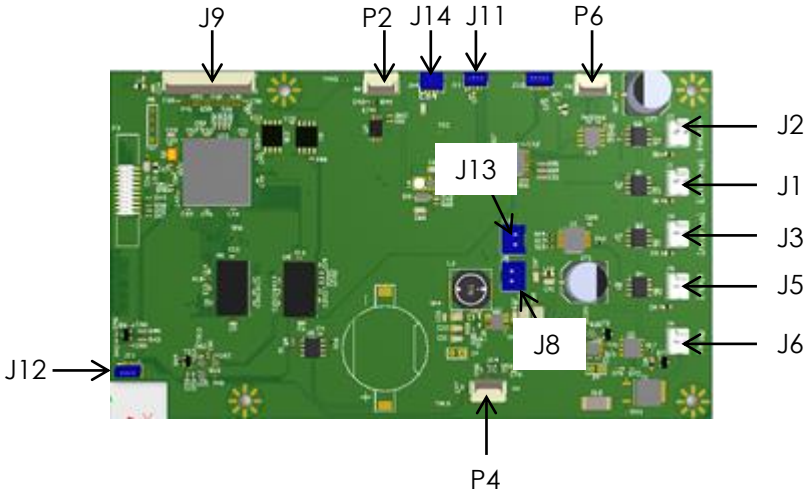
CN1 (from the mains socket)
L : Brown = 90-264 Vac
N : Blue



CN2 (To the main board)

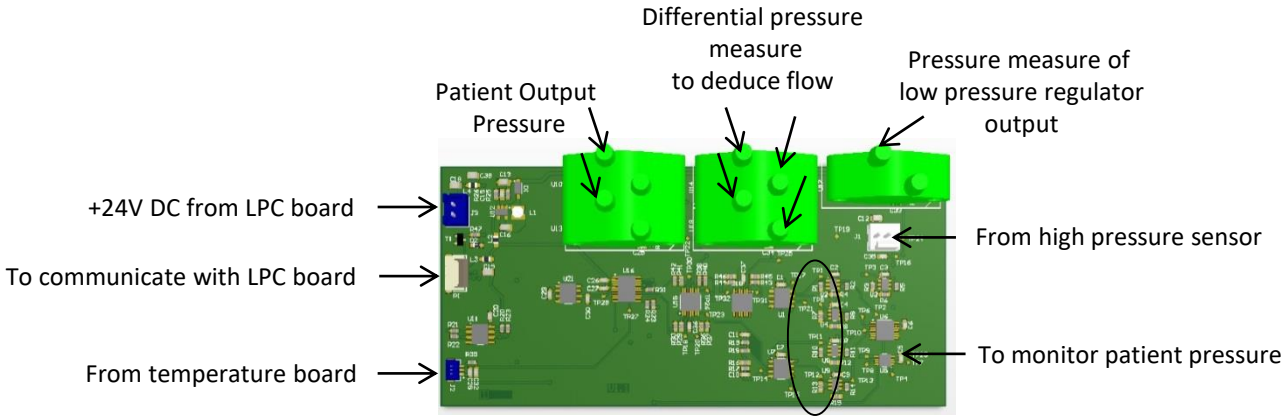
1 : +24 Vdc	**5: 0 Vdc**
2 : +24 Vdc	**6: 0 Vdc**
3: +24 Vdc	**7: 0 Vdc**
4 : +24 Vdc	**8: 0 Vdc**

LPC Board
Connectors

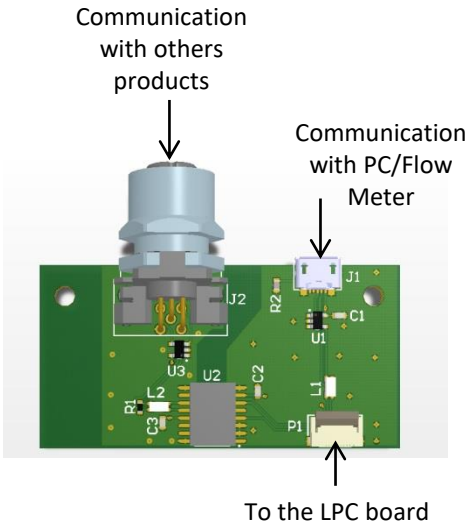


J8 = FROM INSUFFLATOR POWER SUPPLY
P4 = FROM COM BOARD
P6 = FROM SENSOR BOARD
J12 = FROM / TO PUSH-BUTTON
J1 = TO VALVE MODULE (DESUFFLATION VALVE)
J2 = TO HEATER
J3 = TO INTERNAL DESUFFLATION
J5 = TO VALVE MODULE (INPUT VALVE)
J6 = TO PROPORTIONNAL VALVE
J9 = TO LCD SCREEN
P2 = TO LCD SCREEN
J11 = TO LED BOARD
J13 = TO SENSOR BOARD
J14 = TO BUZZER BOARD

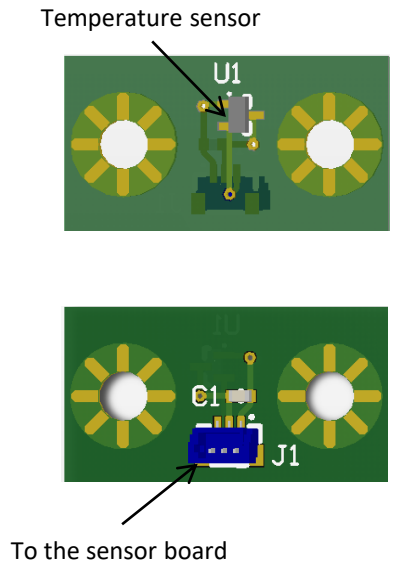
Sensor Board
Electrical & Pneumatic Connectors



COM Board
Connectors



Temperature Board
Inputs/ Outputs

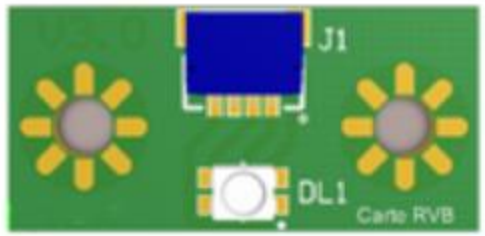


- V input = + 5V DC

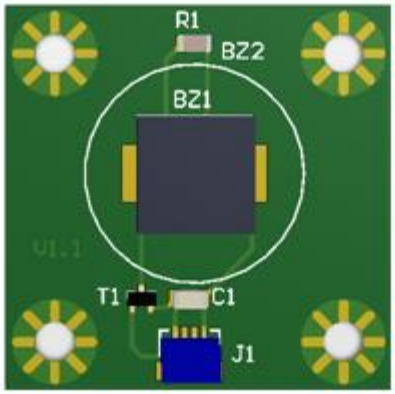
- V output = 0.1V for -40°C
- V output = 0.5V for 0°C
- V output = 1.75V for 125°C

V output = (10mV/°C)*(Temperature °C) +500mV

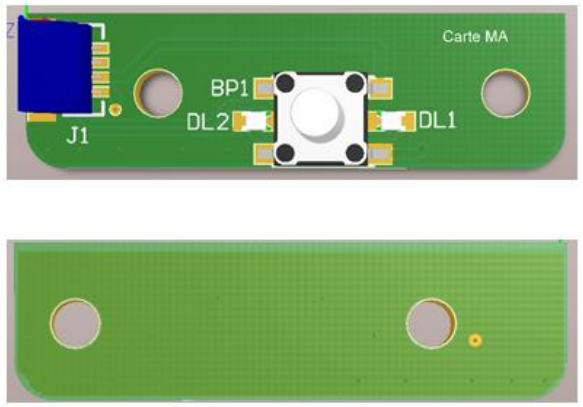
LED RVB Board
Characteristics



Buzzer Board
Characteristics



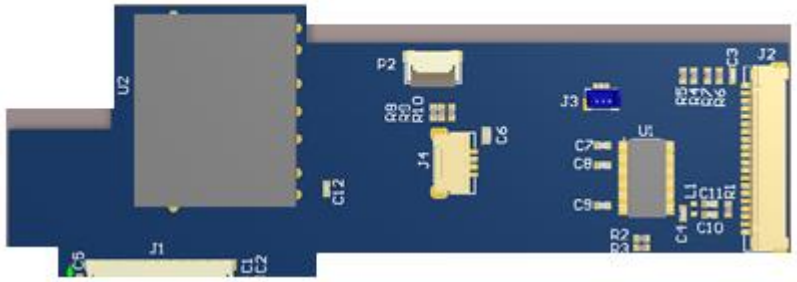
Push-Button Stand-By
Characteristics



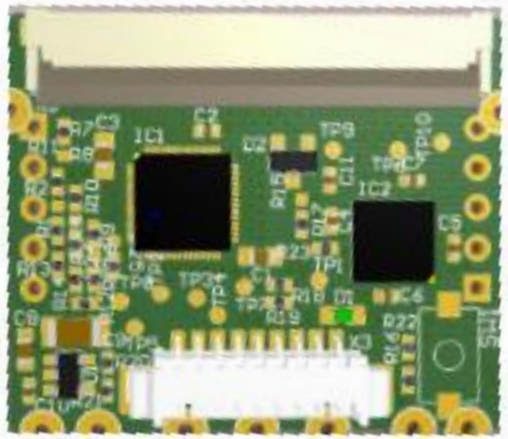
Heater
Characteristics

Power : 23W

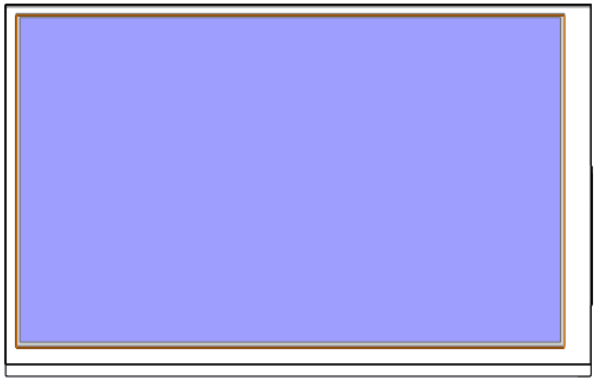
Lvds RGB DATAM Board
Characteristics

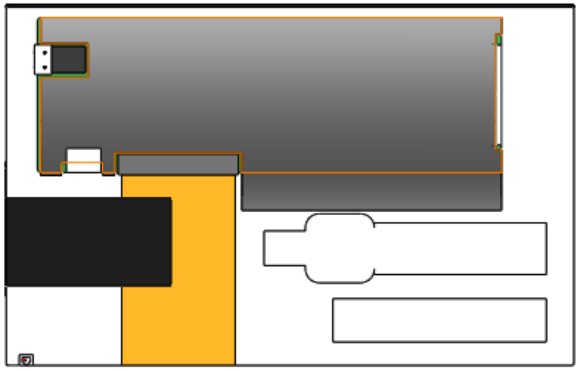


Easyi2C Board
Characteristics



LCD Screen
Overview





Technical Specifications

Pneumatics :

CO2 gas supply system: US 7/16" connector

- Maximum flow without loss of heat (to the nearest decilitre) : 45 l/min in high flow and 2 l/min in low flow
- Pressure set : 0 to 25 mmHg (Accuracy : 1mmHg)
- External desufflation valve
- Option of automatic low/high flow switching

Pressure range :

- CO2 bottle : 10 to 60 bars
- Central gas wall supply : 3,5 to 5 bars

Interface :

- 7-inch LCD screen showing: current CO2 pressure, set pressure, input pressure, total volume of CO2 used and current flow
- Touch-screen navigation and validation system

Power supplies :

- Types of power supply: 90-264 V AC 50-60 Hz
- Protection by fuses: 2 2.5 A – 250V time-lag fuses - UR
- Power used: 75VA

Mechanics :

- Dimensions: L=310mm, D=370mm, H=145mm
- Weight: 7,6 kg

Technical Specifications

Operating – transportation and Storage Environment :

- Operating temperature range: +10°C / +40°C
- Operating relative humidity range: 30 to 75 %
- Transport and storage temperature range: +10°C / +40°C
- Transport and storage relative humidity range: 20% to 85%
- Operating, transport and storage atmospheric pressure range: 700hPa to 1060hPa

Standards :

- Electrical protection: class 1 type CF
- Conforms to standard IEC 60 601–1; with US and Canadian deviations
- Not protected against water (IPX0)
- Not adapted for use in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide

Ancillary equipment :

- Main power cable
- Open-ended spanner intended for CO2 high-pressure feed hose connector
- Extended CO2 filter for high pressure hose.
- User Manual

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