Table 1 Physical Specifications

Type	Specification	Comments
Weight	15.5 kg (34 lbs)	
Dimensions (height × weight × depth)	180 × 345 × 435 mm (7 × 13.5 × 17 inches)	
Line voltage	100 – 120 or 220 – 240 VAC, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	220 VA	Maximum
Ambient operating temperature	4 – 55 °C (41 – 131 °F)	
Ambient non-operating temperature	-40 – 70 °C (-4 – 158 °F)	
Humidity	< 95 %, at 25 – 40 °C (77 – 104 °F)	Non-condensing
Operating Altitude	Up to 2000 m (6500 ft)	
Non-operating altitude	Up to 4600 m (14950 ft)	For storing the binary pump
Safety standards: IEC, CSA, UL	Installation Category II, Pollution Degree 2	

No accessible hardware fuse is needed because the main power supply is safe against any short circuits or overload conditions on the output lines. When overload conditions occur, the power supply turns off all output voltages. Turning the line power off and on again resets the power supply to normal operation if the cause of the overload condition has been removed.

An over-temperature sensor in the main power supply is used to turn off output voltages if the temperature exceeds the acceptable limit (for example, if the cooling fan of the binary pump fails). To reset the main power supply to normal operating conditions, turn the binary pump off, wait until it is approximately at ambient temperature and turn the binary pump on again.

The following table gives the specifications of the main power supply.

Table 42 **Main Power Supply Specifications**

Maximum power	220 W	Continuous output
Line Input	100 – 120 or 220 – 240 volts AC ± 10 %, line frequency of 50/60 Hz	Wide ranging
Output 1	+ 24 V / 4.5 A (maximum)	Total power consumption of +24V and
Output 2	+ 36 V / 2.5 A (maximum)	+36V must not exceed 107 W
Output 3	+ 5 V / 3 A	
Output 4	+ 15 V / 0.3 A	
Output 5	- 15 V / 0.3 A	

Specifications

Performance Specifications

Table 43 **Performance Specification Agilent 1100 Series Binary Pump**

Type	Specification
Hydraulic system	Two dual piston in series pumps with proprietary servo-controlled variable stroke drive, floating piston design and active inlet valve
Setable flow range	Setpoints 0.001 – 5 ml/min, in 0.001 ml/min increments
Flow range	0.1 – 5.0 ml/min
Flow precision	< 0.3 % RSD (typically 0.15 %), based on retention time, at 1 ml/min
Pressure	Operating range 0 400 bar (0 – 5880 psi) up to 5 ml/min
Pressure pulsation	< 2 %amplitude (typically < 1 %), at 1 ml/min isopropanol, at all pressures > 1 MPa
Compressibility compensation	User-selectable, based on mobile phase compressibility
Recommended pH range	1.0 – 12.5, solvents with pH < 2.3 should not contain acids which attack stainless steel
Gradient formation	High-pressure binary mixing, delay volume 180 – 480 µl without mixer, 600 – 900 µl with mixer, dependent on back pressure
Composition range	1 – 99 % or 5 µl/min per channel, whatever is greater
Composition precision	< 0.2 % SD, at 0.1 and 1 ml/min
Control and data evaluation	Agilent ChemStation for LC
Control and data evaluation	Agilent ChemStation for LC

Table 43 **Performance Specification Agilent 1100 Series Binary Pump**

Analog output	For pressure monitoring, 2 mV/bar, one output
Communications	Controller-area network (CAN), GPIB, RS-232C, APG Remote: ready, start, stop and shut-down signals, LAN optional
Safety and maintenance	Extensive diagnostics, error detection and display (through control module and Agilent ChemStation), leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas.
GLP features	Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of seal wear and volume of pumped mobile phase with user-settable limits and feedback messages. Electronic records of maintenance and errors.
Housing	All materials recyclable.

NOTE For use with flow rates below 500 µl/min a vacuum degasser is required.