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G1312A Binary Pump

Performance Specifications

| 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 | ≤0.07% RSD, or ≤0.02 min SD whatever is greater, based on retention time at constant room temperature |
| Flow accuracy | ±1% or 10µl/min whatever is greater |
| 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 | ≤0.5% absolute |
| Composition accuracy | °0.15% RSD, at 1 ml/min |
| Control and data evaluation | Agilent ChemStation for LC |
| 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 handheld controllers G4208A, G1323B 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. |

Physical Specifications

| Type | Specification | Comments |
|---|---|-----------------------------|
| Weight | 15.5 kg (34 lbs) | |
| Dimensions (height x weight x depth) | 180 x 345 x 435mm (7 x 13.5 x 17 inches) | |
| Line voltage | 100 – 120 or 220 – 240 VAC, $\pm 10\%$ | Wide-ranging capability |
| Line frequency | 50 or 60 Hz, $\pm 5\%$ | |
| 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 | |



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