

High performance UHPLC pump with binary gradient

AZURA® P 8.1L UHPLC pump suitable for ultra-fast and high-resolution applications

General information

Max. flow rate	5 ml/min
Flow rate range	0.001–5 ml/min
Flow rate increment	0.001 ml/min
Maximum delivery pressure [psi]	18000 psi
Maximum delivery pressure [MPa]	124 MPa
Maximum delivery pressure [bar]	1240 bar
Pump head materials	Stainless Steel
Liquid temperature range	4–60 °C (39.2–140 °F)
Gradient	High pressure gradient (binary)
Leak management	Yes
Wetted materials	GFP (graphite fiber reinforced PTFE), sapphire, ruby, stainless steel, Zirconium oxide, DLC (Diamond-like carbon), Vespel®
Pump features	Active pulsation compensation, RFID for automatic pump head detection, Integrated pressure sensor, Leak management, Piston seal wash, Purge valve (automatic)

Detailed information

Flow rate accuracy	± 0.5 %
Flow rate accuracy conditions	measured at 1 ml/min at 1200 bar with water. < 1% at 1 ml/min or 10 µl at all pressures > 10 bar for water, acetonitrile and methanol
Flow rate precision	≤ 0.05 % RSD or 0.01 min SD
Flow rate precision conditions	measured at 1 ml/min at 1200 bar with water. < 0.1% RSD or 0.05 min SD for water, acetonitrile and methanol (based on retention time at constant room temperature)
Gradient range	0–100 % in 0.1 % increments
Gradient accuracy	+/- 0.35 %
Gradient precision	≤ 0.15 % RSD or 0.01 min SD
Gradient minimum increment	0.1 %
Mixing volume	50 µl
Pump type	Analytical UHPLC pump
Degasser	Yes
Solvent selection valve	Yes
Pulsation	≤ 0.5% or 2 bar amplitude (whichever is greater at 1 ml/min, 1200 bar with water)
Pulsation compensation	Active pulsation compensation
Active piston seal wash	Yes
Piston seal washing	Yes
System protection	Soft start, Pmin und Pmax are programmable
Pump Outlet thread	Female UNF 10-32 (coned)
Pump head inlet (standard)	UNF 1/4-28 Thread

Communication

Interfaces	LAN, Pin header connectors (Analog IN, Start In, Error IN)
Control	LAN, Analog and event control, Mobile Control
Analog inputs	Flow rate, 0–10 V via pin header connectors
Analog outputs	8 event outputs (TTL, OC, Relais) and 24 V

General

Power supply	100–240 V; 50–60 Hz; Maximum power consumption 310 Watt
Dimensions	361 mm x 208.2 mm x 523 mm (W x H x D)
Weight	26.7 kg
Leak sensor	Yes
Ambient conditions	4–40 °C (39.2–104 °F) Air humidity below 90 %, non-condensing