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# 4UHV Ion Pump Controller Fast Response

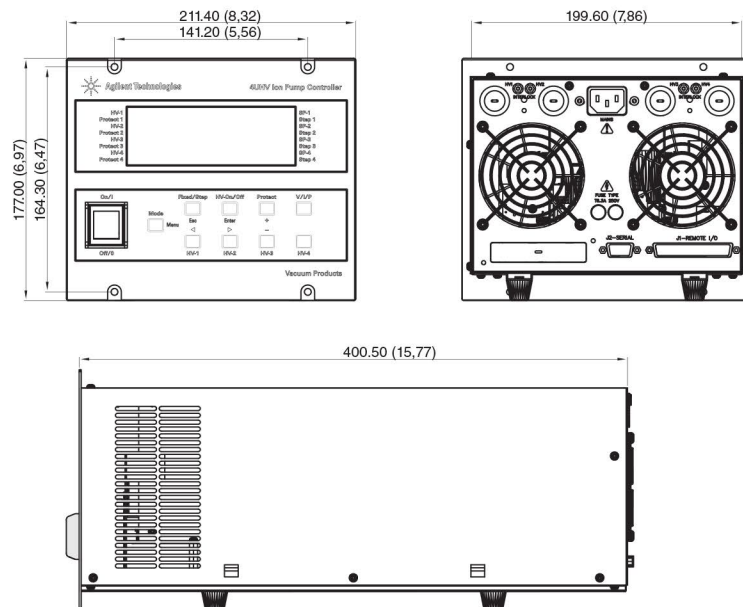
## For Ultra-High Vacuum



Introducing the new Agilent 4UHV Controller with Fast Response (4UHV Ion Pump Controller F.R.): the 4UHV enables you to power, control, and monitor (simultaneously and independently) up to four ion pumps of any type (Diode, Noble Diode, StarCell), with capacities ranging from 20 to 1000 L/s.

In addition to the standard 4UHV version, the new 4UHV Ion Pump Controller Fast Response can be used whenever the output signal is crucial to trigger a fast response in the acquisition process and/or to trigger an action (i.e. close a valve when a sudden pressure increase is detected).

### Outline Drawing



Dimensions: millimeters [inches]

# Agilent 4UHV Ion Pump Controller Fast Response

## Technical Specifications

Technical Specifications		
	4UHV standard version	4UHV Fast Response version
Input voltage	100-240 Vac ( $\pm 10\%$ )	100-240 Vac ( $\pm 10\%$ )
Input frequency	50-60 Hz	50-60 Hz
Dimensions	400.5 x 211.4 x 177.0 mm (l x w x h)	400.5 x 211.4 x 177.0 mm (l x w x h)
Display	4 rows with 20 characters	4 rows with 20 characters
Available configurations	1 x 200W, 2 x 200W, 2 x 80W, 4 x 80W, 1 x 200W + 2 x 80W	1 x 200W, 2 x 200W, 2 x 80W, 4 x 80W, 1 x 200W + 2 x 80W
Minimum configuration	One HV card with 200 W or 2x80 W	One HV card with 200 W or 2x80 W
Output voltage (open circuit)	3.5 and 7 kV	3.5 and 7 kV
Output current (short circuit)	40 mA for 80 W channel 100 mA for 200 W channel	40 mA for 80 W channel 100 mA for 200 W channel
Modes of operation	Local / Serial / Remote	Local / Serial / Remote
Front panel readings	Voltage, Pressure, Current, Status	Voltage, Pressure, Current, Status
Safety marks	CE, C_CSA_US	CE, C_CSA_US
Current measurement range	10 nA to 100 mA	10 nA to 100 mA
Input signals	On/Off; Protect; Step Mode	On/Off; Protect; Step Mode
Output signals	Analog Out; NC Set-point; NO Set-point	Analog Out; NC Set-point; NO Set-point
HV connector	Fischer Type 105	Fischer Type 105
Output power maximum	400 W	400 W
Communications	RS232/485 standard, Profibus, Ethernet	RS232/485 standard, Profibus, Ethernet
Relay and analog output response time	1 s typical (*)	20 ms typical (*) (**)
Relay	4 relays configurable	Only one for each channel
Analog Output	4 relays configurable	Only one for each channel

(\*) test performed with a step load from 100nA to 1mA and set-point set to 1 $\mu$ A

(\*\*) Warning: Electrical discharges may occur inside the ion pump. To achieve 20ms response time filtering on the relay and on the analog output has been reduced. If, by chance, those discharges last more than 20ms, the controller could activate the relay and generate false positive (due to discharges and not to real pressure increase).

[www.agilent.com/chem/vacuum](http://www.agilent.com/chem/vacuum)

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## Ordering Information

Description	Part Number
4UHV CONTROLLER F.R. 1x200W NEGATIVE	9299010M1000
4UHV CONTROLLER F.R. 1x200W POSITIVE	9299011M1000
4UHV CONTROLLER F.R. 2X80W NEGATIVE	9299200M1000
4UHV CONTROLLER F.R. 2X80W POSITIVE	9299201M1000
4UHV CONTROLLER F.R. 2x200W NEGATIVE	9299020M1000
4UHV CONTROLLER F.R. 2x200W POSITIVE	9299021M1000
4UHV CONTROLLER F.R. 1x200W POSITIVE & 1x200W NEGATIVE	9299022M1000
4UHV CONTROLLER F.R. 4X80W NEGATIVE	9299400M1000
4UHV CONTROLLER F.R. 4X80W POSITIVE	9299401M1000
4UHV CONTROLLER F.R. 2x80W POSITIVE & 2x80W NEGATIVE	9299402M1000
4UHV CONTROLLER F.R. 2x80W NEGATIVE & 1X200W NEGATIVE	9299210M1000
4UHV CONTROLLER F.R. 2x80W POSITIVE & 1x200W POSITIVE	9299211M1000
4UHV CONTROLLER F.R. 2x80W POSITIVE & 1x200W NEGATIVE	9299212M1000
4UHV CONTROLLER F.R. 2x80W NEGATIVE & 1X200W POSITIVE	9299213M1000
4UHV CONTROLLER F.R. 1x200W NEGATIVE, Ethernet	7299010M1000
4UHV CONTROLLER F.R. 1x200W POSITIVE, Ethernet	7299011M1000
4UHV CONTROLLER F.R. 2X80W NEGATIVE, Ethernet	7299200M1000
4UHV CONTROLLER F.R. 2X80W POSITIVE, Ethernet	7299201M1000
4UHV CONTROLLER F.R. 2x200W NEGATIVE, Ethernet	7299020M1000
4UHV CONTROLLER F.R. 2x200W POSITIVE, Ethernet	7299021M1000
4UHV CONTROLLER F.R. 1x200W POSITIVE & 1x200W NEGATIVE, Ethernet	7299022M1000
4UHV CONTROLLER F.R. 4X80W NEGATIVE, Ethernet	7299400M1000
4UHV CONTROLLER F.R. 4X80W POSITIVE, Ethernet	7299401M1000
4UHV CONTROLLER F.R. 2x80W POSITIVE & 2x80W NEGATIVE, Ethernet	7299402M1000
4UHV CONTROLLER F.R. 2x80W NEGATIVE & 1X200W NEGATIVE, Ethernet	7299210M1000
4UHV CONTROLLER F.R. 2x80W POSITIVE & 1x200W POSITIVE, Ethernet	7299211M1000
4UHV CONTROLLER F.R. 2x80W POSITIVE & 1x200W NEGATIVE, Ethernet	7299212M1000
4UHV CONTROLLER F.R. 2x80W NEGATIVE & 1X200W POSITIVE, Ethernet	7299213M1000
4UHV CONTROLLER F.R. 1x200W NEGATIVE, Profibus	8299010M1000
4UHV CONTROLLER F.R. 1x200W POSITIVE, Profibus	8299011M1000
4UHV CONTROLLER F.R. 2X80W NEGATIVE, Profibus	8299200M1000
4UHV CONTROLLER F.R. 2X80W POSITIVE, Profibus	8299201M1000
4UHV CONTROLLER F.R. 2x200W NEGATIVE, Profibus	8299020M1000
4UHV CONTROLLER F.R. 2x200W POSITIVE, Profibus	8299021M1000
4UHV CONTROLLER F.R. 1x200W POSITIVE & 1x200W NEGATIVE, Profibus	8299022M1000
4UHV CONTROLLER F.R. 4X80W NEGATIVE, Profibus	8299400M1000
4UHV CONTROLLER F.R. 4X80W POSITIVE, Profibus	8299401M1000
4UHV CONTROLLER F.R. 2x80W POSITIVE & 2x80W NEGATIVE, Profibus	8299402M1000
4UHV CONTROLLER F.R. 2x80W NEGATIVE & 1X200W NEGATIVE, Profibus	8299210M1000
4UHV CONTROLLER F.R. 2x80W POSITIVE & 1x200W POSITIVE, Profibus	8299211M1000
4UHV CONTROLLER F.R. 2x80W POSITIVE & 1x200W NEGATIVE, Profibus	8299212M1000
4UHV CONTROLLER F.R. 2x80W NEGATIVE & 1X200W POSITIVE, Profibus	8299213M1000



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