



## DIGITEL ION PUMP CONTROLLERS

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The right balance of performance, power & protection



## DIGITEL SPC-ION Small Pump Controller

The SPC-ION is a versatile controller ideal for operating ion pumps of 0.2 to 75 l/s, and delivers up to 50 watts of power. It features a color touchscreen, SAFECONN or Fischer HV connections, analogue output, and digital communication options - serial and Ethernet, enabling reliable performance for both basic and advanced users. The nano amp resolution, along with the refined analog monitor resolution, serve as indicator of pressure changes in an ion pump set-up.



## DIGITEL QPC Quad Pump Controller

Ion pumps 100 l/s and larger require higher currents for starting and higher pressure operation. The QPC supplies up to four ion pumps with 125 mA (125 watts) each. The easy-to-read color touchscreen display simultaneously displays pressure, current, and voltage. Standard serial and standard Ethernet communications along with legacy set-point and analog outputs allow for easy system integration. The QPC fits into any rack at just 3U high and 1/2 rack wide.



## DIGITEL MPCq Multiple Pump Controller

The MPCq allows for high current control of up to two ion pumps independently or up to four in parallel with 500 mA (1000 watts maximum). At 3U high and a full rack in width, the MPCq is ideal for operating a wide variety of ion pump configurations on any system.



## DIGITEL rTSP Remote TSP Control

An rTSP enables remote operation of Gamma TSP cartridge over long distances. It can be fully controlled through the color touchscreen of the QPC or MPCq. TSPs can be triggered manually or automatically based on the pressure of either ion pump monitored by the controller. Timed operating modes also give the user precise control over all operating parameters. The remote controller is available for single or dual TSP operation.

## Ease of use

Each DIGITEL controller has a highly visible and intuitive touchscreen that displays pressure, current and voltage. Digital resolution down to 1nA is possible depending on pump size and current requirements.



## Operator safety

The integrated SAFECONN high voltage interlock system eliminates electrical shocks and false positive pressure readings. The controller automatically shuts off high voltage when the cable is disconnected from the ion pump or controller end. The system is isolated and provides ground, high voltage, and safety connectivity that prevents accidental arcing.



## Communications

Ethernet and serial communications (RS232 and RS485) are standard on all DIGITEL products. Ethernet protocol for advanced facility and instrumentation communications is available on all units. Profibus is available as an option.



## Connectivity

Each DIGITEL has programmable analog and interlock capabilities. This allows for optimal flexibility when integrating with standard or legacy setpoint and analog monitoring systems.

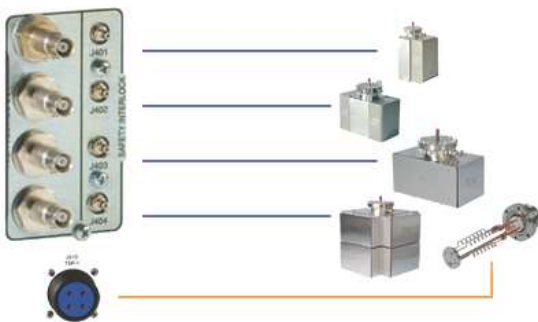


## DIGITEL Flexibility

The QPC and MPCq line is flexible enough to control a wide variety of ion pump and TSP configurations. The QPC and MPCq can operate up to four ion pumps simultaneously or independent operation of one or two ion pumps, respectively. The MPCq can independently control one TSP cartridge and a remote TSP controller that supports up to two cartridges. In contrast, the QPC operates TSP cartridges exclusively via the remote TSP control.

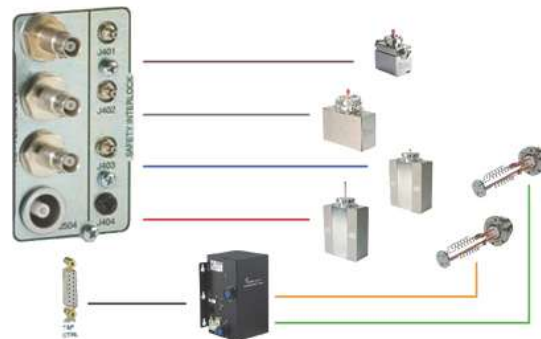
### MPCq Example Configuration

Four ion pumps in parallel and single TSP operation.



### QPC Example Configuration

Four independent ion pumps and dual remote TSP operation.



Specification	SPC-ION	QPC	MPCq
<b>Input power</b>			
Voltage	100-240 VAC or 24 VDC	120-220 VAC	120 VAC or 240 VAC, +/- 10%
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
<b>Output power</b>			
Independent outputs	1	1-4	1-2
Operation Voltage	+/- 3 - 7 kV (100V steps)	+/- 3 - 7 kV programmable	+/- 5.6 or 7 kV
Current (maximum)	40mA	125 mA per channel	500 mA
Watts (maximum)	50 W	125 W per channel	500 W
<b>High voltage connections</b>	1, 10kV SHV or Fischer	1-4, 10kV SHV or Fischer	1-4, 10kV SHV or Fischer
<b>Display</b>			
Type	3.5" LCD color touchscreen (320x240 pixel)	7" TFT WVGA (800 x 480 pixel) Color LCD	7" TFT WVGA (800 x 480 pixel) Color LCD
Readouts	Pressure, current, voltage, controller temperature and programmable options	Pressure, current, voltage, and programmable options	Pressure, current, voltage, and programmable options
Analog outputs	2 analog outputs	4 analog outputs	4 analog outputs
Voltage	Linear, configurable	Linear, configurable	Linear, configurable
Current/Pressure	Linear or logarithmic, configurable	Linear or logarithmic, configurable	Linear or logarithmic, 1V per 1000V
<b>Setpoints</b>	Single setpoint drives relay and TTL	4, user configurable	8, Four relay, four TTL
<b>Communications</b>	100BASE-TX/Ethernet/Serial	100BASE-TX/Ethernet/Serial	100BASE-TX/Ethernet/Serial
	Serial: 232, 485 FD/HD	Serial: 232, 485 FD/HD	Serial: 232, 485 FD/HD
<b>Conformity to norms</b>	EN 61326-1, EN 61010-1	EN 55011 Class A	EN 55011 Class A
	FCC Part 15	EN 61010-1	EN 61010-1
<b>Weight, kg (lbs)</b>	Universal 100-240 VAC: 2.2 (4.9), 24 V: 1.8 (4.0)	16.8-25.4 (37-56)	16.8 (37) minimum
<b>Size</b>	2U high, 1/4 rack wide	3U high, half rack wide	3U high, full rack wide
	313 mm (12.3 in.) deep	483 mm (19 in.) deep	476 mm (18.7 in.) deep maximum
<b>Additional features</b>	SAFECONN	SAFECONN	SAFECONN
	Auto HV Restart	Auto HV Restart	Auto HV Restart
		Remote TSP Control	Remote TSP Control
	Automatically high-voltage adjustment, High-Pot, Jumpstart		
<b>Compatibility (I/s)</b>			
Mini/3S	x	x	
10-75	x	x	x
100-300		x	x
400-1200		x	x

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www.gammavacuum.com | info@gammavacuum.com | 3601 7012 01  
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 Read all safety instructions in the manual before usage.