



DIGITAL ION PUMP CONTROLLERS

DIGITEL ION PUMP CONTROLLERS

The DIGITEL family of Ion Pump controllers offers the right balance of performance, power and protection.



DIGITEL SPCe Small Pump Controller

The SPCe is a versatile way to fully operate ion pumps 0.2-75 l/s or larger with up to 40 mA (50 watts) of power. An LCD display along with standard Ethernet and serial communications makes the SPCe able to accommodate the needs of basic and advanced users. Nano amp resolution provides gauging capabilities using the appropriate ion pump set-up.



DIGITEL QPC Quad Pump Controller

Ion pumps 100 l/s and larger required 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.



rTSP/rNEG Remote TSP/NEG Control

A TSP or NEG can be fully operated from the color touchscreen of the QPC or MPCq. TSPs can be fired manually or automatically based on the pressure of either ion pump the controller is monitoring. Timed modes also let the user have full control over exact parameters of operation. A single remote controller can operate up to eight TSP filaments or two NEG pumps.

Ease of use

Each DIGITEL has a highly visible display. The SPCE has an easy-to-read LCD that displays pressure, current and voltage. The QPC and MPCq are each fully controlled with an intuitive touch panel display. 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 on select units.



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.



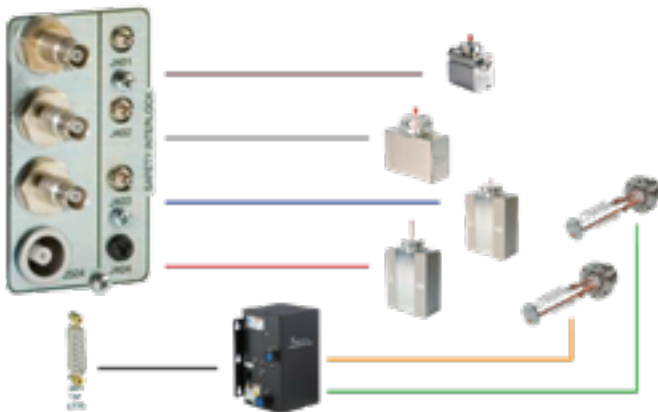
DIGITEL Flexibility

The DIGITEL line is flexible enough to control a wide variety of ion pump and TSP/NEG 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 is capable of controlling one or two TSP/NEG cartridges independently.

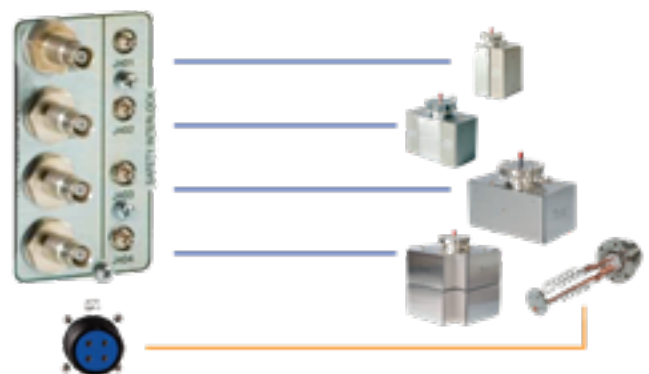
MPCq Example Configuration

Four ion pumps in parallel and Single TSP operation.



QPC/MPCq Example Configuration

Four independent ion pumps and dual remote TSP/NEG operation.



Specifications	SPCe	QPC	MPCq
Input power			
Voltage	90-240 Vac or 24 vdc	120-220 Vac	120 Vac or 240 Vac, +/- 10%
Frequency	48-62 Hz	48-62 Hz	50-60 Hz
Output power			
Independent outputs	1	1-4	1-2
Open circuit voltage	+/-3000-7000 vdc programmable	+/-3000-7000 vdc programmable	+/- 5600 or 7000 VDC
Current (maximum)	40mA	125 mA per channel	500 mA
Watts (maximum)	50 W	125 W per channel	500 W
Resolution	1 nA	1 nA	0.1 uA
High voltage connections	1, 10kV SHV or Fischer	1-4, 10kV SHV or Fischer	1-4, 10kV SHV or Fischer
Display			
Type	3" 128 x 64 Gray LCD	7" TFT WVGA 800 x 480 Color LCD	7" TFT WVGA 800 x 480 Color LCD
Readouts	Pressure, current, voltage, and programmable options	Pressure, current, voltage, and programmable options	Pressure, current, voltage, and programmable options
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
Setpoints	2, one relay, one TTL	4, user configurable	8, Four relay, four TTL
Communications	Local/Remote/Full	Local/Remote/Full	Local/Remote/Full
	Ethernet	Profibus/Ethernet/Serial	Profibus/Ethernet/Serial
	Serial: 232, 485 FD/HD	Serial: 232, 485 FD/HD	Serial: 232, 485 FD/HD
Conformity to norms	EN 55011 Class A, IEC 801-2	EN 55011 Class A, IEC 801-2	EN 55011 Class A, IEC 801-2
	EN 801-3, IEC 801-4, EN 61010-1	EN 801-3, IEC 801-4, EN 61010-1	EN 801-3, IEC 801-4, EN 61010-1
Weight, KG (LBS)	1.5 (3.3)	16.8-25.4 (37-56)	16.8 (37) minimum
Size	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
Additional features	SAFECONN	SAFECONN	SAFECONN
	AUTOSTART/AUTORUN	AUTOSTART/AUTORUN	AUTOSTART/AUTORUN
	High Voltage Enable	High Voltage Enable	High Voltage Enable
	Fowler-Nordheim Calibration	Remote TSP/NEG Control	Remote TSP/NEG Control
Compatibility (I/s)			
Mini/3S	x		
10-75	x	x	x
100-300		x	x
400-1200		x	x

