



PCC2 DC POWERED INJECTION CONTROLLERS



Injection Controllers for Hazardous Locations

Building upon the tremendous success of the PCC injection controller, the **PCC2 Chemical Injection Controller** is designed to control either one or two pumps on individual pumping profiles simultaneously. Control can be achieved either locally using the integral keypad and display or remotely via the Modbus communications port.

Typical applications include:

- Single point injection into a well head or pipeline
- Injection into both the wellhead and the pipeline at one location.
- Injection of two different products into a single point.

These Class 1 Division 2 approved controllers are designed and field-proven to meet the rigorous demands of remote oil field applications and harsh climates. These controllers are intended for use with SPEC's injection pumps and are used to automatically control

the pump's daily injected volumes for well site and production facility applications.

Electrically Driven

The PCC2 controller and SPEC chemical injection pumps are ideally suited for use with DC power systems such as solar, thermal electric generators (TEG) or other DC power supply systems. When compared to other technologies, solar powered electrically driven injection pumps are similar or lower in capital cost to install and cost less to run and maintain over time. There are no costs to the producer that relate to fuel gas, venting or emissions issues.

Rugged and Easy to Use

SPEC injection controllers are functionally rated to operate from -40°C to 60°C and feature 18 gauge steel epoxy powder coated cases for superior corrosion resistance. The user interface is functionally intuitive and features a bright, easy to read display as well as user-friendly large tactile push button that makes programming the controller a quick and easy process.

Features:

- Operate one or two separate pumps at individual rates from a single controller.
- Remote control via Modbus communications.
- Class 1 div 2 certified as a component.
- Functionally rated from -40°C to 60°C
- Epoxy powder coated 16 gage steel enclosure for added corrosion resistance.
- No math - To achieve the desired daily-injected volume, the operator simply inputs the calibration sight-glass observation and the required injection rate. Based on the operators input, the controller does the rest by calculating the timing cycles required to achieve the stipulated daily rate.
- Large tactile push button keypad for easy operator input.
- Large, easy to read vacuum fluorescent display operable to -50°C to 60°C .
- Power saver feature. After five minutes with no keypad input the unit switches off the display to reduce power consumption. Press any key to wake up.
- Local or remote configurable digital inputs ("normally open" or "normally closed") for external devices such as ESD, tank level or pressure switches.
- Local or remote configurable 4-20 mA analog inputs for third party monitoring and measurement devices.
- Field selectable calibration cycle times for each channel to facilitate accurate sight glass readings at different field pressures.
- Pluggable terminal block assemblies allowing for easy integration into panel assemblies and simplified troubleshooting for maintenance personnel.



Specifications:

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| Model | PCC2 Chemical Injection Pump Controller | |
| Voltage | 12-30 Vdc | |
| Total Current Consumption | Display off, no active analog | < 20mA |
| | Maximum | 160mA |
| Inputs | Analog | 3 - 4/20mA |
| | Digital | 2 - dry contact |
| Outputs | SSR relay | 15A maximum continuous 20A @ 10% duty cycle 70 max peak surge |
| Fusing | Processor inputs | 0.5A time delay Use only sand filled or porcelain fuses to maintain Class 1 Div 2 |
| | Pump outputs | 15A LP-CC type (current limiting, time delay) Use only sand filled or porcelain fuses to maintain Class 1 Div 2 |
| Communication | Modbus ASCII/RTU | RS-232 / RS-485 |
| | Baud | 2400, 9600, 28800. Default: 9600 |
| | Parity | Even, Odd, None (RS485 only) |
| | Word length | 7 bits |
| | Stop Bits | 1 bit |
| I/O Terminations | Pluggable terminal blocks, 22 - 12 Awg, 15A | |
| Dimensions | Size (HxWxD) (inch) | 6.1 x 5.6 x 1 |
| | Weight (lbs) | 1 |
| Packaging | 18 ga. steel, epoxy powder coat, IP20 | |
| Environment | 5% RH to 95% RH, non-condensing -40 °C to 60 °C | |
| Approvals | Non-Incendive Electrical Equipment for Use in Hazardous Locations; ExnA IIB, T3, Class 1 Division 2 GP. C,D T3 Certified to: CSA C22.2 NO. 213-(R2004)CAN/CSA E60079-15:02 and CSA E60079-0:02, CSA C22.2 NO. 142-87 | |

