

DELTA CU4 Control Units

Direct Connect & AS-i



Make your valves work more reliably and simply for less

The APV DELTA CU4 valve control unit fits any air-operated sanitary valve bringing unprecedented safety, clarity and reliability to dairy, beverage, brewery, processed food, healthcare, and pharmaceutical processes.

In addition to providing precision control and monitoring of process performance via industry standard PLC interfaces, the CU4 valve control unit offers a combination of advantages at a competitive price.

SPX FLOW, Inc. (NYSE:FLOW) is a leading manufacturer of innovative flow technologies, many of which help define the industry standard in the market segments they serve. From its headquarters in Charlotte, North Carolina, it operates a sales and support network, centers of manufacturing excellence, and advanced engineering facilities, throughout the world. Its cutting-edge flow components and process equipment portfolio includes a wide range of pumps, valves, heat exchangers, mixers, homogenizers, separators, filters, UHT, and drying technology that meet many application needs. Its expert engineering capability also makes it a premium supplier of customized solutions and complete, turn-key packages to meet the most exacting of installation demands.

Incorporating many leading brands, SPX FLOW has a long history of serving the food and beverage, power and energy, and industrial market sectors. Its designs and engineered solutions help customers drive efficiency and productivity, increase quality and reliability, and meet the latest regulatory demands. In-depth understanding of applications and processes, state-of-the-art Innovation Centers, and advanced pilot/testing technology further assist in optimizing processes and reducing timescales to reliably meet production targets.

To learn more about SPX FLOW capabilities, its latest technology innovations and complete service offerings, please visit www.spxflow.com.

Advanced Functionality at Exceptional Value

SAFE, EFFICIENT, AND RELIABLE VALVE CONTROL

The APV DELTA CU4 series is a portfolio of control units that allows users to safely, efficiently, and reliably process their products. Each CU4 offers advanced functionality and features at a price-competitive value. These innovative control units can be used on any pneumatically-operated SPX FLOW sanitary valve.

There are several variants available depending on the valve type, controls system, and user interface:

- CU4 Direct Connect (24V DC and 110V AC)
- CU4 AS-i (Standard 31 node addressing)
- CU4 AS-i (Extended 62 node addressing)

FEATURES AND BENEFITS

More value for money

The additional safety, efficiency, clarity, and reliability of the APV DELTA CU4 Control Unit series, at a competitive price, means substantially greater value for money.

Safety

100% protection against process contamination from water and other media means less downtime and less risk of product waste and recalls.

Clarity

Five ultra bright LED's enabling a clear view of valve status from a distance means easier and more convenient control.

Reliability

The air filter to prevent clogging with dust and other particles means less downtime and simple maintenance.

Robust design

Researched design and selection of material means greater robustness in harsh environments.

Greater precision

The transparent sensor tower enabling visual stem monitoring and feedback means rapid and accurate adjustment of valve position sensors.

Easier and quicker maintenance

The product name label under a protective window for clear visibility means quicker identification, correct ordering of any necessary spares and faster maintenance.

Process optimization

Built-in throttle valves control air flow to always ensure the most suitable opening and closing speeds of the valve for process optimization.

Global service and support

SPX FLOW's global service network means that spare parts and service expertise are only a phone call away.

CU4 Direct Connect Control Unit



The CU4 Direct Connect version provides a direct (no bus communication) interface between the PLC control system and the sanitary valve in a process system. Along with the other benefits of the CU4 platform, it also features:

- Automatic on/off (open/close) air supply control to the pneumatic valve actuator via solenoids
- Electrical feedback LED visual indication on the valve seat position
- Direct 24V DC or optional 110V AC electrical communication with the PLC system

ELECTRICAL DATA : DIRECT CONNECTION	
SUPPLY VOLTAGE	15-48VDC, (reverse polarity protection)
POWER CONSUMPTION	Typically 35mA, at 24VDC (Power ON, 2 LED, 1 solenoid valve)
3 INPUT SIGNALS (DI, CONTROL OF SOLENOIDS)	10 – 48 V AC/DC,
2 OUTPUT SIGNALS (DO, VALVE FEEDBACK)	48V AC/DC, Max
DIAGNOSTIC	Power and solenoid monitoring

GENERAL TECHNICAL DATA	
PROTECTION CLASS	IP67 (complies with NEMA6)
TEMPERATURE RANGE	-4°F – 158°F (-20°C – 70°C)
AIR SUPPLY	87-116 PSI (6-8 bar)
NUMBER OF SOLENOIDS	1, 3 Optional NOT element to provide automatic air assist to increase product holding pressure
FEEDBACK SENSORS	2 internal or 2 external feedback sensors switches for valve open/valve closed position detection
INDICATORS	LED for status: - Valve Open - Valve Closed - Power/Diagnose - Upper Seat Lift (optional) - Lower Seat Lift (optional)

***Please Read Operating Manual**

CU4 AS-i Control Unit



The CU4 AS-i control unit provides a cost effective way to connect and communicate with numerous process valves, controls sensors, and measuring instrumentation in a common network. Along with the other benefits of the CU4 platform, it also features:

- Standardized AS-interface network bus communication system that is versatile and supported by leading companies and processors
- Minimum requirements for wiring (only one cable with two conductors) and Input/Outputs (I/O) create a quick, simple, and low cost method to connect the PLC control system to the process valve
- Communication up to 62 nodes with “Extended” version or 31 nodes with legacy “Standard” version within one network
- Active peripheral fault function which will indicate missed functions of the control unit

ELECTRICAL DATA : DIRECT CONNECTION	
SUPPLY VOLTAGE	15-48VDC, (reverse polarity protection)
POWER CONSUMPTION	Typically 35mA, at 24VDC (Power ON, 2 LED, 1 solenoid valve)
3 INPUT SIGNALS (DI, CONTROL OF SOLENOIDS)	10 – 48 V AC/DC,
2 OUTPUT SIGNALS (DO, VALVE FEEDBACK)	48V AC/DC, Max
DIAGNOSTIC	Power and solenoid monitoring

GENERAL TECHNICAL DATA	
PROTECTION CLASS	IP67 (complies with NEMA6)
COMMUNICATION	Certified AS-interface specification; V3.0 profile S-7.A.E (Extended 62 node/master) or V2.0 profile S-7.F.F.F (Standard 31 node/master)
TEMPERATURE RANGE	-4°F – 158°F (-20°C – 70°C)
AIR SUPPLY	87-116 PSI (6-8 bar)
NUMBER OF SOLENOIDS	1, 3 Optional NOT element to provide automatic air assist to increase product holding pressure
FEEDBACK SENSORS	2 internal or 2 external feedback sensors switches for valve open/valve closed position detection
INDICATORS	LED for status: - AS-i Status - Valve Open - Valve Closed - Power/Diagnose - Upper Seat Lift (optional) - Lower Seat Lift (optional)

***Please Read Operating Manual**

DELTA CU4 Control Units

DIRECT CONNECT
& AS-i

SPXFLOW



DELTA DKR
Double Seat Ball Valve



DELTA SVS
Butterfly Valve



DELTA SW4
Single Seat Valve

Based in Charlotte, North Carolina, SPX FLOW, Inc. (NYSE: FLOW) is a multi-industry manufacturing leader. For more information, please visit www.spxflow.com

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