

Digital Controllers and Indicators

Overview

Description

LEADERLINE MICROPROCESSOR-BASED DIGITAL CONTROLLERS

Honeywell's LeaderLine Microprocessor-based Digital Controllers have what it takes to set the industry pace. Together they comprise a full-range product offering. Individually each is at the top of its class. In addition, these controllers offer you numerous options so that no matter which LeaderLine controller you select, you can customize it to suit your application precisely.

Whether you need a simple, basic function controller ... a versatile mid-level unit ... or a super-sophisticated model designed for the most demanding applications, you'll find the instrument that's right on target in the LeaderLine. Best of all, you'll find it at a price certain to make even the most skeptical purchasing agent do a double-take.

Even though the LeaderLine controllers vary in specifics, they are essentially the same. All offer ease of use through simple prompts, logical display sequences, configurable input ranging, and much more. All are the product of state-of-the-art technology. And all are protected by a comprehensive warranty program, a no-nonsense replacement policy, and a customer support network which includes a toll-free 800 telephone "Help" phone number staffed by trained technicians.

All LeaderLine controllers feature a sealed faceplate that provides protection against dust and moisture. An available NEMA4 mounting accessory enables the UDC 2300 and UDC 3300 to be used in hose-down applications

UDC 100 UNIVERSAL DIGITAL CONTROLLER

The UDC 100 (1/4 DIN size) is a microprocessor-based, low-cost temperature controller that provides simple ON-OFF/PID control with alarm and timer option capability. Its large dial allows easy parameter set-up of current parameters such as setpoints, alarm value, and duration. All other parameters can be easily modified using a PC configurator package. Depending on the model, the controller can have single or dual displays of three or four digits. A two-loop control model is also available.

UDC 700 DIGITAL CONTROLLER

The UDC 700 (1/32 DIN size) is a compact relay/SSR output only controller used in basic thermal applications where space and price are important. It has one display of four digits, 0.1% accuracy, thermocouple or RTD inputs, universal power, and self-tune software. Options include a second alarm relay and communications.

DC1000 GENERAL PURPOSE DIGITAL CONTROLLERS

The DC1000 family combines a high degree of function and reliability at a very low price. They are available in 4 different sizes: 1/16 DIN, 1/8 DIN, 3/16 DIN and 1/4 DIN. They provide basic control requirements plus features such as motor position control, phase angle power control and setpoint programming. Accuracy is 0.5% FS

UDC1200 Micro-Pro

The UDC1200 is a 1/16 DIN microprocessor controller that combines a high degree of functionality and reliability at a low cost. The large and easy-to-read dual 4-digit display and tactile keypad make the UDC1200 easy to configure and use. The UDC1200 controller is downward compatible to existing UDC1000 installations. Accuracy is 0.1% of span.

UDC 1000 AND UDC 1500 MICRO-PRO UNIVERSAL DIGITAL CONTROLLER

The UDC 1000 (1/16 DIN size) and UDC 1500 (1/8 DIN size) are compact, microprocessor-based controllers that provide Honeywell's high quality and performance at low cost. Their very small size makes them ideally suited for applications where panel space is at a premium, but where performance and versatility are also important considerations. Key features include dual display, NEMA3/IP65 front-face protection, universal input and power, three output types, auto-manual mode, automatic tuning, and RS485 communication (ASCII and Modbus).

UDI1500 MICRO-PRO UNIVERSAL DIGITAL INDICATOR

Based on the same technology and appearance as our low-priced UDC 1000 and UDC 1500 controllers, the UDI1500 is the ideal companion for applications requiring performance in control and accurate indication. The UDI1500 is a 1/8 DIN horizontal indicator that combines high quality and clear information at a competitive price. The large display provides immediate process interpretation, and is ideally suited for a large number of applications that require reliability, accuracy, and ease of reading.

UDC 2300 UNIVERSAL DIGITAL CONTROLLER

The UDC 2300 provides all the capabilities of the UDC 2000 (its predecessor), plus more, while maintaining the simplicity of the industry-leading HMI. This controller has universal AC power input and isolated inputs and outputs while offering communications, auxiliary current output.

UDC 3300 UNIVERSAL DIGITAL CONTROLLER

The UDC 3300 has capabilities beyond those of the UDC 2300 ... capabilities which make it a highly flexible instrument and ideal for your more complex applications. It combines a high degree of functionality with operating simplicity. The bright dual displays with multi-language prompts make the operator interface easy to read, understand and operate.

A new and innovative Maintenance and Diagnostic tool available with Expanded UDC 3300 controllers is HealthWatch, a low-cost software program that puts maintenance and diagnostic data at your fingertips so you can monitor vital performance activities to improve your process, predict equipment failure, and minimize downtime.

HealthWatch consists of three timers and three counters, which can each be assigned to track the following UDC 3300 controller functions:

(3) Timers

Total Operating Time
Time in Manual or Automatic Mode
Time in Alarm

Time of Digital Input Activation
Time of Digital Input Activation
Time in "Sooting" State

(3) Counters

Manual Control Mode Counts
Alarm Trip Counts
Control Relay Actuations
Digital Input Actuations
Outside PV Range Limit Counts
Failsafe Mode Counts
Re-tune Counts
Out of Soak-Band Counts
Power Cycle Events

Selected Maintenance and Diagnostic data can be accessed from the front panel or via communications. Alarms can be configured to activate when a desired threshold is reached. A security code is required to perform resetting of any of the above listed counter or timer functions.

Programmed sequences of displays assure quick and accurate entry of all configurable parameters. Simple key-strokes let you select input and range configuration, set the operating parameters that meet your process control needs now, and change them later to meet new ones.

The UDC 3300 can also be configured to function as a manual/auto station, and as an automatic backup controller for PLCs or other PID controllers in critical loop applications.

This controller is also available as a single or dual loop controller with up to three inputs and math functions. Optional math functions include: feed-forward, summer/multiplier, summer/subtractor, multiplier/divider, input high/low select, gain scheduling, 8-segment characterizer, and totalizer. When combined with the Accutune II tuning and fuzzy logic overshoot suppression, you have price/performance leadership.

UDC 5000 ULTRA-PRO UNIVERSAL DIGITAL CONTROLLER

For the most exacting applications, the UDC 5000 Ultra-Pro is a more sophisticated member of Honeywell's Leader-Line microprocessor-based, digital controllers. It combines the highest accuracy available with unparalleled functionality and performance. This combination addresses the needs of critical processes and complex applications typical of the high performance arena where final product quality, high throughput and minimal scrap of expensive materials are prime considerations.

Bright dual displays and English prompts make the operator interface easy to read, understand and operate. Programmed sequences of displays assure quick and accurate entry of all configurable parameters. Simple key-strokes let you change your operating parameters to conform to your process control needs.

The UDC 5000 Carbon Potential model allows control of furnace atmosphere with a variety of popular carbon probes.

UDC 6300 PROCESS CONTROLLERS

The UDC 6300 is a microprocessor-based, stand-alone Process Controller. This price/performance leader combines cost effectiveness with unparalleled accuracy, functionality, and performance.

This combination addresses the needs of continuous process applications such as fuel/air ratio, distillation towers, and compressor control, where product quality, high throughput, and reliability are prime considerations.

User-friendly bargraph displays of Process Variable, Set Point, and Output and English prompts make the device easy to read, configure, and operate.

The UDC 6300 standard features provide ample power and functionality to handle a variety of basic continuous process control strategies at low cost with available options that allow you to upgrade a higher functionality to meet advance control strategies such as 2 Loops of control, Cascade or Feedforward control.

Accutune™ sets Honeywell's UDC 6300 apart by automatically tuning your process control loop for peak operating efficiency. Accutune™ adjusts the PID tuning parameters as necessary while controlling the set point in Automatic control mode. This unique technology requires no process knowledge and it automatically tunes two loops or a cascade loop simultaneously.

Optional communication allows the UDC 6300 to be integrated with the Honeywell TDC 3000 Distributed Control System or configured and monitored from a personal computer.

An Indicator-only version of the UDC 6300 is also available.

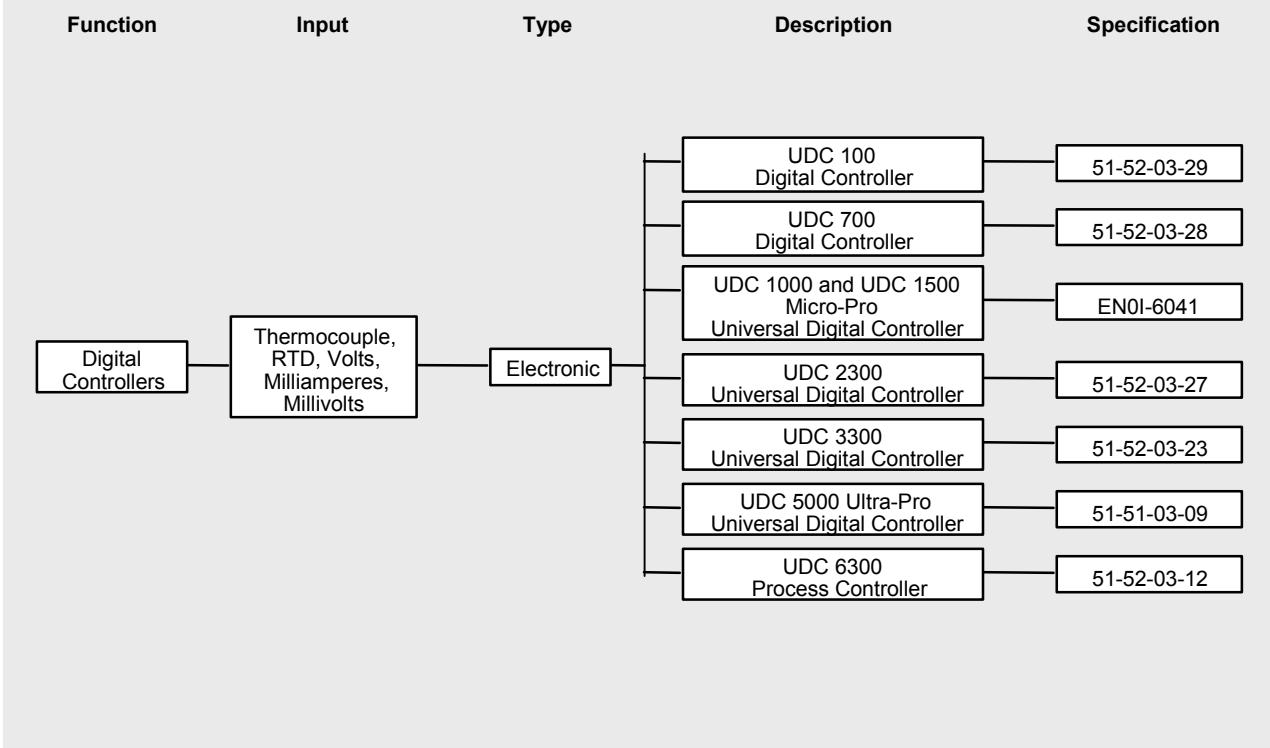
GATEWAY

Honeywell's Gateway offers a simple and effective means of interfacing a host computer with a network of up to 31 process-connected devices, including the UDC 3300, 5000, and 6300 Leaderline Controllers, the DR 4500 Truline Recorder, and the 620 Logic Controller System. It permits both a highly secure communication network and single loop integrity at the process. Typical applications include central computer monitoring of process data for alarms, trending, or report generation; supervisory control for process optimization; or direct digital control of the process.

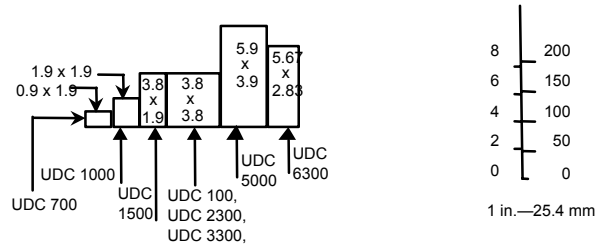
The use of a Gateway allows a wide variety of computers to be connected to the communications network. The Gateway provides electrical isolation between the computer and the process, thereby protecting the computer. It enables the user to poll any of the digital devices connected to the network for its complete operational status, which includes process and configuration parameters. The Gateway also allows the user to direct changes from a distance in the function of any of these process-connected devices.

With its extensive series of precise command and response messages, the Gateway makes generating the necessary computer application programs uncomplicated and efficient. It is designed to be easy to install and adaptable to meet the changing needs of the user.

Decision Tree



Relative Bezel Dimensions (inches)



Summary Specification

Model Number	Controller Type	Power	Operating Temperature	Maximum Span	Maximum Input	Specification
UDC 100	Digital—1 or 2 Loops, On/Off, 1 or 2 inputs	115/230 Vac, 50/60 Hz 24/48 Vac, 50/60 Hz	60°C (140°F)	—	—	51-52-03-29
UDC 700	Digital—On/Off, Time, 1 input	90-264 Vac, 50/60 Hz	55°C (131°F)	—	—	51-52-03-28
DC1000	Digital—On/Off, Current, Time, Duplex Time, 2 input	85-265 Vac, 50/60 Hz	65° C (149 °F)			51-52-03-33
UDC1200	Digital—On/Off, Current, Time, Duplex Time, 2 input	90-264 Vac, 50/60 Hz	55°C (131°F)			51-52-03-35
UDC 1000/ UDC 1500	Digital—On/Off, Current, Time, Duplex Time, 1 input	90-264 Vac, 50/60 Hz 24-48 Vac/dc	55°C (131°F)	—	—	EN0I-6041
UDI1500	Digital Indicator On/Off	90-264 Vac, 50/60 Hz 24-48 Vac/dc	55°C (131°F)	—	—	51-52-03-22
UDC 2300	Digital—On/Off, Current, Time, Duplex Time, 1 or 2 inputs	120, 240 Vac, 50/60 Hz	55°C (131°F)	—	—	51-52-03-27
UDC 3300	Digital—On/Off, Current, Time, Position Proportional, 3-Position Step, Duplex, 1, 2, or 3 inputs	90-264 Vac, 50/60 Hz 24 Vac/dc	55°C (131°F)	—	—	51-52-03-23
UDC 5000	Digital—On/Off, Current, Time or Position Proportioning, 1 or 2 inputs	120, 240 Vac 50 or 60 Hz	60°C (140°F)	—	—	51-51-03-09
UDC 6300	Digital—On/Off, Current, Time or Duplex, 3 Position Step, 5 inputs	24 Vdc, 120 or 240 Vac, 50 to 60 Hz	60°C (140°F)	—	—	51-52-03-13