

## UDC2300 Universal Digital Controller: Exceptional functionality at an affordable price

*Proven LeaderLine® quality, accuracy, and value*

The UDC2300 is a low cost, easy-to-use ¼ DIN controller which provides accurate control of process variables including temperature, pressure, flow, level, and rotation.

The UDC2300 Controller with the industry-leading human/machine interface (HMI) and many other popular features now offers options such as RS485 ASCII or Modbus\* RTU communications and auxiliary current output. Standard features include input/output isolation, Accutune II™ tuning with fuzzy logic overshoot suppression, and a universal AC power supply.

For the thousands of satisfied UDC2000 users, the UDC2300 Controller is downward-compatible to existing UDC2000 applications and installations.

Because its dimensions are identical to the UDC2000, the UDC2300 Controller can be easily inserted into existing panel installations.

### Features / Options

- **Universal input with optional 2<sup>nd</sup> input:** The UDC2300 offers one standard universal input which accepts thermocouple, RTD, mA, mV and volt input types. The optional second input accepts mV and mA inputs and is used as a remote setpoint.
- **Accutune II with fuzzy logic:** This standard feature provides a plug-and-play tuning algorithm that will accurately identify and tune most any process, including deadtime and integrating processes. Accutune II speeds up and simplifies startup, and allows retuning at any setpoint. Fuzzy logic suppresses process variable overshoot resulting from setpoint changes or externally induced process disturbances. It operates independently from Accutune II tuning and allows more aggressive tuning to co-exist with smooth process variable response.
- **Output forms:** Four output forms are available. Current (4-20mA DC), 5 amp electro-mechanical, 1 amp solid state relay (internal), or open collector output for use with external relays.



- **Serial communications:** The RS485 communications option is configurable for ASCII or Modbus RTU.
- **Input / Output isolation:** Analog inputs and outputs are isolated from each other and all other circuits.
- **Auxiliary output:** This option can be scaled from 4-20mA for 0 to 100% for any range and can represent input 1 or 2, PV, active setpoint, local SP1, deviation, or the control output.
- **Universal switching power:** Operates on any line voltage from 90 to 264 VAC 50/60 Hz. 24 VAC/DC power is optional.
- **Limit control:** A limit control model has a latching relay which is activated whenever the process variable (PV) goes above (High Limit) or below (Low Limit) a preset setpoint value. An alarm message is displayed when the output is activated. Reset is achieved via a key on the front of the

controller or an optional external switch. A Factory Mutual (FM) approved model is available.

- **High noise immunity:** The UDC2300 is designed to provide reliable, error-free performance in industrial environments that often disturb highly noise-sensitive digital equipment.
- **Standard features now include:** Dual display, auto / manual, UL recognition, dual setpoints, setpoint ramp, failsafe outputs, timer and CE approval.
- **Moisture protection:** IP65 / NEMA3-rated front face permits use in applications where it may be subjected to moisture, dust, or hosedown conditions.
- **FM approval and CSA certification** available as an option on controller and limit models.
- **Quality assurance:** The quality of the UDC2300 is assured by a two-year warranty program which features replacement units in the event of malfunction. Comprehensive customer support includes toll-free technical assistance.
- **Easy-to-configure:** A bright, dedicated configuration display provides straightforward English prompts that allow easy setup with minimum time and effort. A tactile keyboard promotes quick and accurate entry of all data.

- **Highly secure:** Non-volatile memory assures data integrity during loss of power. Four configurable security levels plus a four-character code prevent accidental or unauthorized changes to the process.
- **Additional Options include:**
  - Two alarms or a second control output and one alarm
  - Remote setpoint via Input 2
  - Digital input (mutually exclusive with auxiliary output and communications)
  - Setpoint program (six ramps + six soaks)
  - Customer ID tag
  - Rear terminal cover

## Condensed Specifications

Accuracy	± 0.25% of span
Front face protection	IP65/NEMA3 hose-down rating
Analog inputs	1 universal input: T/Cs, 100 PT RTD, mA, mV, or volts Optional 2 <sup>nd</sup> input: 1-5 volts or 4-20 mA
Accutune II™	Standard feature – includes fuzzy logic overshoot suppression
Duplex – heat/cool	Current duplex, time duplex, or all combinations
Communications	RS 485 ASCII or Modbus RTU (configurable)
Input sampling rate	6 times per second – standard feature
Alarms	Up to two 5-amp SPDT relays New features: <ul style="list-style-type: none"> <li>• Alarms are configurable as latching or non-latching</li> <li>• Alarm blocking feature (configurable)</li> <li>• PV rate of change alarms are standard</li> <li>• New ‘failsafe’ alarm type</li> </ul>
Universal power supply	90 to 264 VAC 50/60 Hz 24 VAC/DC - optional
Auxiliary output	Linear, isolated 4-20 mA signal – optional
Transmitter power supply	30 VDC – requires use of Alarm 2 or Aux Output

## Product Dimensions (same as UDC2000)

Front face	96 mm x 96 mm (3.78 x 3.78 in.): ¼ DIN
Depth	105 mm (4.19 in.)
Panel cutout	92 mm x 92 mm (3.62 x 3.62 in. )

*Specifications are subject to change without notice.*

The reliability, accuracy and quality of Honeywell’s industry-proven LeaderLine® family of controllers are second to none and offer the best total value of ownership. The UDC2300 is backed by a two-year warranty and, as with all Honeywell industrial products, is supported by the largest service network in the industry.


*Honeywell provides a complete line of temperature sensors including thermocouples, RTDs, and non-contact sensors that are compatible with the UDC2300 and other industrial control products. For more information contact your Honeywell representative, or call 1-800-343-0228. Visit our website at: [www.honeywell.com/sensing](http://www.honeywell.com/sensing).*

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### Sensing and Control

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