

UDC 3200

FEATURES AND BENEFITS

The following is a summary of the key features and advantages of the UDC3200. It is important to recognize that these features are meaningless unless they provide an advantage to the customer. Furthermore, a feature has no value unless it addresses an identified customer need. You must uncover the client's needs by asking questions relating to his application.

NEMA 4X/IP66 HOSE-DOWN CAPABILITY

Features

- Front face meets IP66 & NEMA 4X hose down standard.
- Front face withstands continuous spray of water at 65 gallons/minute from 1" dia. nozzle for at least 5 minutes from a distance of 10 to 12 feet.

Benefits

- Eliminates the need for costly protective bezels or enclosures in hose-down areas, typical in many process industries.
- Opens up sales opportunities in Food & Pharmaceutical applications that are off limits to competition (Refer to Competitive Matrix)

DUAL DISPLAY CAPABILITY

Features

- Two digital displays capable of displaying multi-language configuration prompts. A new 7 character upper display (the UDC3300 has 6 characters) and an 8 character, 14-segment, alphanumeric lower display.
- Provides large numerical readout of any input PV, setpoint output or other selected variables.

Benefits

- Dedicated PV display (upper display) minimizes operator confusion.
- Provides extra character for configuration prompts.
- Minimizes operator training by providing clear configuration prompts and control parameter labeling.

ETHERNET COMMUNICATIONS

Features

- Industry Standard Ethernet communications now available as an option.

Benefits

- Uses Modbus TCP/IP to connect to other Ethernet networks.
- Allows you to monitor your process from almost any location.
- Configure controller to send an Email when an alarm condition occurs.
- Configure the controller directly from your PC.

INFRARED PORT

Features

- Non-intrusive wireless infrared connection,

Benefits

- Non-intrusive I/R connection reduces set-up time and maintains the NEMA 4X integrity.
- Works with Pocket PC
- No need to access the back of the controller to communicate with the instrument.
- Upload or download configurations in seconds

RS485 COMMUNICATIONS

Features

- Links the UDC3200 to a personal computer via the RS485 option.
- MODBUS compatible.
- Provides the capability of daisy chaining up to 31 UDC3200 Controllers on a serial multi-drop link, which connects to a host computer.

Benefits

- Accurate on-line monitoring of process operation.
- Allows host device to override controller outputs and/or SP.

PC BASED TOOLS

Features

- PC and Pocket PC Configuration Software

Benefits

- Create/Edit configurations live or off-line via communications port
- Same software works on PC, Laptop and Pocket PC.
- Same software works with UDC2500, UDC3200, UDC3500 and other future Honeywell products.
- Software is available in English, Spanish, Italian, German and French.
- Pocket PC's are commercially available at local retail stores.

FIELD UPGRADE CAPABILITY

Features

- You can field upgrade from Relay Output to Current Output or vice versa.
- You can field upgrade to Communications or Auxiliary Output/Digital Input by simply adding the correct printed wiring board.
- You can upgrade the software in the field.
- One-step configuration factory restore.

Benefits

- Provides stocking flexibility for users and distribution.
- Option PWA's are available at the same price as the factory option which minimizes the cost impact of field upgrades.

THERMOCOUPLE HEALTH DIAGNOSTICS

Features

- Monitor the condition of the thermocouple.
- Determine whether it's good, failing or in danger of imminent failure.

Benefits

- Replace the thermocouple before it fails.
- Prevent costly process shutdown.

HEATER BREAK ALARM

Features

- Continuously checks the output circuit to insure the heater has not failed.

Benefits

- Alerts the operator immediately upon a heater failure.
- Saves operating time by not continuing to run with a failed heater.
- Protects the product

ENHANCED ACCUTUNE III

Features

- Fast Tune
- Slow Tune
- Heat/Cool (Duplex Tune)

Benefits

- Fast Tune will tune the process to reach the temperature faster.
- Slow Tune minimizes overshoot.
- Heat/Cool automatically tunes both the heating and cooling sides of the process.

ACCUTUNE III – ADAPTIVE TUNING

Features

- Accutune III recognizes both setpoint and load changes and is a standard feature on the UDC3200 Controller.
- “PV Adapt” monitors and modifies controller tuning “on-line” in the Automatic mode.
- Can be configured as “TUNE + PV” to operate with on-demand tuning.
- Can be configured as “SP + PV” to operate with setpoint changes only.
- Can tune both heat/cool with one press of the key.

Benefits

- Eliminates trial and error procedures.

- Accurately identify and tune any process including those with deadtime and integrating processes.
- Speeds up and simplifies start-ups plus allows returning at any setpoint.
- Frees Engineer from task of identifying correct PID settings.
- Insures proper tuning of the process if maintained.
- Saves energy via tighter control.
- Improves throughput.

OUTPUT TYPES

Features

- Current Outputs (4-20 or 0-20 ma)
- Electromechanical Relays (5 amps).
- Solid State Relays (1 amp)
- Dual Electromechanical Relays (2 amps)
- Open Collector Outputs

Benefits

- You can have as many as five outputs made up of the above choices.
- Up to 4 output relays (1 additional over the UDC3300)
- Easy to Add/Change or Configure in the field.

IMPROVED OUTPUT RESOLUTION

Features

- 14 bit output resolution (vs. 12 bit on the UDC3300)

Benefits

- Tighter control.
- Meets or exceeds competition (see Competitive Matrix)

POSITION PROPORTIONAL CONTROL

Features

- Accepts input from Feedback Slidewire
- Two relays available to operate motor.

Benefits

- Actual motor position is displayed on instrument (not a calculated value).
- Actual motor position is used in PID calculation.
- Tighter control.

2ND UNIVERSAL INPUT OPTION

Features

- Allows a second direct Thermocouple, RTD, Radiamatic, Linear voltage or current inputs.
- Isolation from all other inputs and outputs.

Benefits

- Allow calculations such as Differential Temperature, Average Temperature, Carbon Potential, Oxygen Control or Dewpoint Control process variables.
- Allows operator to easily switch between input 1 and input 2.
- Lowers installed cost by reducing the amount of hardware required to implement strategy.
- Improves accuracy by eliminating an additional source of error (Temperature Transmitter)

TWO DIGITAL INPUTS

Features

- 2 optional digital inputs can be configured for any 25 different selected actions.
- Each DI has up to 5 combination selections, one of which can be configured to occur simultaneously with the DI selected.

Benefits

- Provides flexibility required for applications involving multiple discrete logic operations.
- Enables use of more DI functions than available on UDC3000 or UDC5000 to solve application problems.

MATH ALGORITHMS

Features

- One general math equation is provided as part of the Math option.
- The algorithm can derive a process variable, setpoint or auxiliary output signal.
- Includes Feedforward Summer or Multiplier as a standard feature.
- Available with Weighted Average, Multiplier/Divider, Adder/Subtractor and Input High/Low Select.
- The algorithm operates with Engineering units.
- Note: This functionality also requires the optional 2nd input.

Benefits

- No confusing function blocks
- Simple or complex applications can be implemented
- Saves auxiliary devices.

FEEDFORWARD SUMMER

Features

- Standard feature on the UDC3200 Controller.
- Provides a standard pre-configured algorithm for summing any analog input directly with the calculated controller PID output

Benefits

- Cost effective – no need to purchase Math Option.
- No need to predetermine the need at Order Entry (i.e. – standard feature)

FEEDFORWARD MULTIPLIER

Features

- Standard feature on the UDC3200 Controller.
- Provides a standard pre-configured algorithm for multiplying any analog input directly with the calculated controller PID output

Benefits

- Cost effective – no need to purchase Math Option.
- No need to predetermine the need at Order Entry (i.e. – standard feature)

UNIVERSAL INSTRUMENT POWER SUPPLY

Features

- Automatically covers voltage range of 90 ~ 264 Vac, 50 or 60 Hz. which conforms to the standard ac voltages found worldwide and covers a majority of the control installations in the target markets.
- An optional 24 Vac/dc 50 or 60 Hz powered model is also available.
- Ideal for spares for undefined power requirements.

Benefits

- Minimizes number of models and configurations required by the user.
- Eliminates damage due to power supply mis-wiring during installation.

TRANSMITTER POWER

Features

- Provides 30 volts dc power for one 4~20 mA two-wire transmitter.
- Two methods are available.
 - Use of open-collector alarm 2 output.
 - Use of optional auxiliary current output.

Benefits

- Eliminates purchasing an external power supply, saving \$50 ~ \$100.
- Minimizes panel space requirements, installation cost and wiring labor.

PV HOT START

Features

- The controller will initialize the local setpoint at the current PV value upon power start up in the event of loss of power when configured for Setpoint Ramp or SP Programming. This is also referred to as a “Soft Start”.
- New DI selection provides initialization of the local SP at the current PV value upon a momentary (transition) closure of the Digital Input.

Benefits

- Smooths process recovery following power loss or interruption.
- Saves time and energy while returning toward a SP following power recovery.
- Eliminates need for operator action following power loss.

ONE-TOUCH INCREMENT/DECREMENT KEYS

Features

- Raise/Lower values and accelerate as long as the *Increment* or *Decrement* key is depressed.
- No need to shift to a faster rate with a 2nd key.

Benefits

- More intuitive operator action – saves time.

MULTI-LANGUAGE PROMPTS

Features

- Allows ease of operation/configuration in 5 languages: English, French, German, Spanish and Italian. The desired language is configured in the *Display Group*.

Benefits

- A single product supports customers Worldwide.
- OEM’s who ship Internationally can standardize on one product.
- Reduces set-up time.
- Reduces configuration errors.
- Reduces operator-training time.
- User doesn’t have to decipher confusing codes on display but can read real words.

SETPOINT RAMP & RATE

Features

- Two types of setpoint ramp functions are now available:
 - Setpoint Rate: Provides a SP Ramp Rate, in Engineering Units per hour, that defines the speed at which the SP will change when ramping between any 2 local setpoints:
 - Can be applied when switching between local SP1 or SP2 (not Remote SP)
 - Different rates are configured for increasing & decreasing setpoint changes.
 - Setpoint Ramp: Provides a single SP Ramp defined by the Time in minutes it takes to reach the final, configurable setpoint value from the starting local SP.

Benefits

- Permits a controlled and repeatable change in process setpoints – saves energy.
- SP Rate prevents an abrupt and harmful changes in the process – improves product quality.
- Eliminates need to purchase an optional SP Programmer on simple batch processes.

DUAL SET OF TUNING CONSTANTS

Features

- Two sets of configured PID parameters can be selected automatically based upon the PV or SP value.
- Selection can also be accomplished via the keyboard or the digital Input option.
- Accutune may be used to calculate both sets of PID constraints.

Benefits

- Can help minimize time to reach SP – saving time and energy.
- Provides 2 sets of tuning to optimize on – spec product at different loads.

THREE LOCAL SETPOINTS

Features

- Configure for either three local setpoints or two local and one remote setpoint.
- SP selection made via front panel keys or an optional digital input.

Benefits

- Quick change between 3 predetermined setpoints.
- Ramp rate applies to all 3 local SP's providing a simple programming function that may eliminate the need for a separate programmer feature.

FAST SAMPLE RATE – 6 TIMES/SEC

Features

- Every input is sampled 6 times per second (i.e. 167 ms update rate)

Benefits

- Provides a standard fast scan rate of 6 times per second on all inputs. No need to configure.
- Fast response is required on many rapidly changing processes such as compressor surge control.

OUTPUT RATE LIMITER

Features

- Limits the maximum rate of change for controller output.
- Separate rate for both increasing and decreasing output signals in percent per minute

Benefits

- Allows limited application of energy to the process during start-up or process upsets.
- Eliminates the need for manual intervention.
- Allows more aggressive tuning near setpoint.

SECURITY LOCKOUT

Features

- Permits up to 5 levels of keyboard security.
- User selectable 4-digit code is available to maximize process security.
- Permits the ability to disable operator use of the Auto/Manual key, Setpoint/Select key or Run/Hold key.

Benefits

- Prevents tampering and unauthorized changes to configuration and/or field calibration.
- Provides a method of locking out unauthorized changes in tuning or operational parameters.

FAILSAFE OUTPUT

Features

- Continuous diagnostics used to detect failure modes.
- Forces controller to a pre-determined output value.
- Forcing the failsafe output value is available as a Digital Input selection.
- Can be configured to latch or lockout the operator.

Benefits

- Process and equipment are protected from damage.
- Controller output moves to predictable, not random values.
- Provides a method of planned and safe shutdown.

INDIVIDUAL TACTILE KEYS

Features

- Provides reliable, positive feedback to the operator.

Benefits

- All entries are easily verified
- No accidental entries
- More reliable than membrane keypad.