# UDC 2500
# FEATURES AND BENEFITS

The following is a summary of the key features and advantages of the UDC2500. 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.

## LIMIT CONTROL

**Features**

- Latching relay that is activated when the PV goes above or below the setpoint.
- An alarm message is displayed when the output is activated.
- Reset of the latching relay is through the keyboard or an optional digital input.
- FM approved model available.

**Benefits**

- Latching relay requires an operator to acknowledge that an over temperature situation occurred.
- Required by many local codes and Insurance Companies.

## INFRARED PORT

**Features**

- Non-intrusive wireless infrared connection,

**Benefits**

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

# PC BASED TOOLS

**Features**

- PC and Pocket PC Configuration Software

**Benefits**

- Create/Edit configurations live or off-line via communications port
- Same port types on UDC3200 and UDC3500 allow interconnectivity.
- Software is available in English, Spanish, Italian, German and French.
- Pocket PC's are commercially available at local retail stores.

# PANEL 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 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)

# 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

# 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**

- Accutune III tuning with fuzzy logic overshoot suppression.
- True plug and play tuning algorithm.
- Now tune both the heat and cool side of a duplex control.
- Can be configured for fast tune or slow tune.

**Benefits**

- 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.

# 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.
- The optional 24 Vac/dc model satisfies almost 100% of the remaining control room power sources.

# 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.

# ETHERNET COMMUNICATIONS

**Features**

- Industry Standard Ethernet 10BT connection 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.

# FIELD UPGRADE CAPABILITY

**Features**

- You can field upgrade from Relay Output to Current Output or vise 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.

# TWO LOCAL SETPOINTS

**Features**

- Configure for either two local setpoints or one local and one remote setpoint.
- SP selection made via dedicated FUNCTION key or an optional digital input.

**Benefits**

- Quick and accurate change between 2 predetermined setpoints – no operator training required.
- Ramp Rate applies to all local SP's providing a simple programming function that may eliminate the need for a separate extra cost programmer option.

# 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**

- Smoothes 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 International customers in North America, Europe and South America.
- 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.

## SECOND INPUT OPTION

**Features**

- Provides a second linear voltage or current input.
- Isolated from all outputs, but it is NOT isolated from Input #1.
- Provides Remote Set Point capability.
- Provides method for display of a second variable.

**Benefits**

- Provides a low cost remote SP solution that is not available on many competitive models.

# DUAL DISPLAY CAPABILITY

## Features

- Two digital displays capable of displaying multi-language configuration prompts. A 4 character upper display and a 6 character, 14-segment, alphanumeric lower display.
- Provides large numerical readout of any input PV, setpoint output or other selected variables (Up to 4 digits and 2 decimal places – configurable).

## Benefits

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