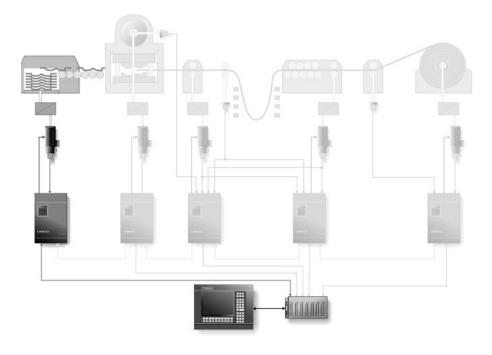


# **Embedded Position/Indexer Control**





**Overview** 

The PIC<sup>™</sup> software module is engineered specifically for controlling linear- or rotary-indexer applications. The program is embedded within the controller of a UNICO drive, eliminating the need for an external control rack. When used in conjunction with a programmable controller, the drive forms a powerful automation work cell that can either stand alone or be easily integrated with other UNICO automation cells to build a complete processing line control system. Embedded control reduces system complexity while taking full advantage of the exceptional performance, flexibility, and ease of use of UNICO drives.

# Features

Move Indexing

When in *move mode*, the indexer commands the motor to increment a programmed distance. This mode is used for applications such as augers, feeders, and indexing conveyors.

#### **Goto Indexing**

In the *goto mode*, the indexer commands the motor to move to one of four preselected positions. This mode is used for such applications as shuttles, transfers, and guill drives.

# **At Position**

An output indicates when an incremental move has been completed in *move mode* and the drive is at position.

# **At Position X**

Four programmable outputs indicate when the drive has reached the four "go to" positions in *goto mode*. These outputs may be used to trigger events relative to being at one of the prescribed positions.

# **Direction Indicator**

The direction of motion is indicated in *goto mode* by the reverse motion and forward motion outputs.

#### Referencing

The drive can be referenced using feedback from either a pulse generator, a serial absolute encoder, or a resolver. When an incremental device is used, an external input or a "snug-up" routine initially references the drive following power-up.



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#### Soft Moves Features

(continued)

Acceleration and deceleration profiles can be shaped with jerk limiting to minimize shock in moving from point to point.

#### Software Limits

Software bounds can be established to protect the mechanical device from overtravel. Once referenced, the drive cannot be commanded to go outside these limits.

## **Operator Interface**

An operator interface provision provides dedicated support for UNICO's P-Terminal, an optional four-line by 40-column liquid crystal display and keypad that mounts on a panel. Other operator devices can easily be connected using one of the serial communication options.

#### Serial Communication Options

A variety of serial communication protocols are supported for interfacing with a programmable controller or operator interface. The specific protocols available depend upon the drive used. Refer to the appropriate 1100 or 2000 series drive brochure for details.

#### Programmability

The control can be customized to a specific installation using UEdit<sup>™</sup>, a powerful Windows-based programming tool that lets users add their own ladder logic and function-block programming.

#### Inputs/ Outputs

A variety of input/output functions are provided for integrating the position/indexer control with external devices. The user can select the functions required by a given system and specify their corresponding hardware or serial I/O points.

#### Inputs

- motor on
- fault reset
- auto
- jog forward
- jog reverse
- reference
- goto
- move
- jog forward and goto
- jog reverse and goto
- teach
- position select 0
- position select 1
- position select 2
- position select 3
- manual
- motion enable
- motor thermal ok
- motor blower ok

#### Outputs

- motor on
- no fault
- auto
- referenced
- at position 0
- at position 1

- at position
- completed move
- reverse limit
- forward limit
- motion
- reverse motion forward motion
- UNICO–Worldwide

# N. America/Headquarters

UNICO, Inc. 3725 Nicholson Road P. O. Box 0505 Franksville, Wisconsin 53126-0505 USA voice: 262.886.5678 fax: 262.504.7396 www.unicous.com

#### UNICO (UK) Ltd. Milton Keynes, England

voice: 44.1.908.260000 fax: 44.1.908.260360

Europe

#### Asia

UNICO Japan Co., Ltd. Osaka, Japan voice: 81.66.945.0077 81.66.945.1161 fax:

**UNICO Stone Force** Automation Co., Ltd. Beijing, China voice: 86.106.218.6365 fax: 86.106.218.7672



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South America

El Tigre, Venezuela

voice: 58.83.414.024 fax: 58.83.416.358

UNICOdeVenezuela, C.A.

- at position 2 at position 3
  - manual