



Overview

The PIC™ 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 quill 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.



Features
(continued) **Soft Moves**

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™*, 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 2
- at position 3
- manual
- at position
- completed move
- reverse limit
- forward limit
- motion
- reverse motion
- forward motion

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