LEADJECK® CNC

聯傑自動化科技股份有限公司
LEADJECK AUTOMATION CO.,LTD.

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LEADJECK 2-Axes CNC Lathe Control

A. CNC Lathe Control:

.Type: LAC-50T/Plus

.Controllable Axes: 2~5

.Simultaneous Control Axes: 2~5

.Spindle Axis: 1~2

.Suitable machines: Flat Bed CNC Lathe, Slant Bed CNC Lathe, Heavy Duty Roll Lathe.

.Extended Version: 3~12 Axes, with C-axis and Y-axis Turn-Mill Machines Tools.

B. Hardware Standard Feature:

.15" High Resolution TFT LCD Color Monitor.

.System with Milti-core in Parallel High Speed Processing.

.Full Key Pad with Sealed Tack switch & LED Indicator.

.Modular Hardware PC Boards for easy Maintenance.

.PLC I/O Points with LED Indicator on System Relay Board for easy Trouble Shooting.

.On-line Hardware Self-Diagnostic Function.

.Healthy LED Indicator in each PC-boards and Fuses.

.NC Part Programs, Control Software & System Parameters Stored in CF Memory Card
  for High Reliability, the Backup Battery is un-necessary.

.Thru RS-232C, Portable CF Memory Card or Ethernet, System can be linked with PC
  Computer for High Speed On-line DNC Operation.

.Thru Ethernet, System can be linked with Network for Remote Trouble Shooting and
  Update the Control Software.

C. Software Standard Feature:

.Least Command Input: 0.001mm (Metric), 0.0001in (Inch).

.G/M Code Compatible with FANUC System.

.Tool Path with Z-X Graphic Display.

.Graphic Display with Zoom In, Zoom Out and Shift Function.

.Position of Relative, Work, Machine and All Coordinates Display.

.PLC Input, Output and Internal Relay with Description and Status Display.

.Alarm Messages with Full Description Display for easy Trouble Shooting.

.NC Program G/M Code Instruction Display for easy Programming Debug.

.PLC Ladder Capacity: 32 In, 32 Out, 256 Relays & 16 Timers and Counters.

.System Parameters with Password Protection.

.Working Time and Part Counter Display.

.Cartesian Coordinates, Absolute/Incremental Programming.

.Turning/Drilling Canned Cycle and Call Subprogram Functions.

.ID/OD Chuck Clamp, Quill Interlock and Door Interlock.

.Constant and Variable-lead Threading.

.Turret Index and Tool Change control.

.Tool Length in X,Z and Tool Nose Radius Compensation.

.Imaginary Tool Nose Direction Number from 0 to 9.

.12 Tool Length, Nose Radius and Direction Offset Parameters.

.Spindle Jogging and Orientation.

.Linear/Circular Chamfer Function.

.Automatic Corner Feedrate Override.

.Block Processing Time: 2ms.

.Axes Auto Zero Return Function.

.Hardware & Software Stroke Limit.

.Position Loop with Feedforward and Linear or S-curve Acc./Dec. Control.

.Actual Spindle Speed Control with S Code.

.Axes Rapid Motion Backlash Compensations.

.Axes Cutting Motion Backlash Acceleration Compensations.

.Bi-directional Ball Screw Pitch Error Compensation.

.Multi-Step Skip Function.

.Feedrate Control Knob: 0% ~ 150%.

.Rapid Traverse Knob: 0%, 25%, 50% and 100%.

.Spindle Speed Control Knob: 50% ~ 120%.

.S Code and T codes with 4 Digits Programming.

.EIA or ISO Programming Code.

.Operation Mode: MEM, MDI, JOG, ZERO RETURN, EDIT and PROG LIST

.MEM and MDI Operation functions:

    Block Delete, M01 Stop, Single Block, Dry Run, Simulation,

    On-Line DNC, Re-Start, Auto Power Off and Handle Control Feedrate.

.JOG Mode Operation Functions:

    Rapid Jog, Continuous Jog, Handle Jog, Chuck Inner, O.T. Release,

    Chuck Clamp, Work Zero Set, Tool Offset Measure and Quill

    Interlock.

.ZERO RETURN Mode Functions:

    All Axes and Single Axis.

.Mid-Program Re-start:

    The NC Program Can be Executed from the Start Block of any Tool's

    Command Group.

.Auto Power Off:

    System Power can be Trun Off Automatically by M30 Code at the End

    of NC Program.

.Handle Control Feedrate:

    Feedrate can be Controlled by Swing the Electronic Handle, the Tool

    Path Still follow the NC Program. Use this Function for easy Testing.

.Work Zero Setup:

    The Zero of Work Coordinate can be Setup by Teach-in for Easy and

    Safety.

.Tool Offset Measure:

    The Tool Length Offset also can be Setup by Teach-in.

.Next Tool:

    In JOG Mode, Key in the Number of Next Tool, and Press the " Cycle

    Start" Key, the Tool Changed Cycle will be executed.

D. G Code Functions:

.G00: Rapid Motion.

.G01: Linear Interpolation Motion.

.G02: CW Interpolation Motion.

.G03: CCW Interpolation Motion.

.G04: Dwell, Exact Stop.

.G09: Exact Stop.

.G10: Set Offsets.

.G20: Select Inches.

.G21: Select Metric.

.G27: Machine Zero Return Check.

.G28: Return to Machine Zero.

.G30: 2'nd Reference Point Return.

.G31: Skip Function.

.G32: Threading.

.G34: Variable-Lead Threading.

.G40: Tool Nose Radius Compensation Cancel.

.G41: Tool Nose Radius Compensation Left.

.G42: Tool Nose Radius Compensation Right.

.G50: Coordinate & Max. Spindle Speed Setup.

.G70: Finishing Canned Cycle.

.G71: Stock Removal in Turning Canned Cycle.

.G72: Stock Removal in Facing Canned Cycle.

.G73: Pattern Repeating Canned Cycle.

.G74: Peck Drilling on Z-axis Canned Cycle.

.G75: Grooving on X-axis Canned Cycle.

.G76: Multiple Threading Canned Cycle.

.G90: Outer/Internal Diameter Cutting Cycle.

.G92: Threading Cycle.

.G94: End face Turning Cycle.

.G96: Constant Surface Speed Enable.

.G97: Constant Surface Speed Cancel.

.G98: Feed Per Minute (mm/min., Inches/min.)

.G99: Feed Per Revolution (mm/min., Inches/rev.)

E. M Code Functions:

.M00: Stop Program.

.M01: Optional Program Stop.

.M02,M30: Program End.

.M03: Spindle CW.

.M04: Spindle CCW.

.M05: Spindle Stop.

.M08: Coolant On.

.M09: Coolant Off.

.M10: Chuck Clamp.

.M11: Chuck Unclamp.

.M12: Quill Out.

.M13: Quill In.

.M31: Change to High Gear.

.M32: Change to Middle Gear.

.M33: Change to Low Gear.

.M97: Loop Operation.

.M98: Call External Subprogram.

M98P___L___;

P: Subprogram Start Block N Code.

L: Cycle Times;

.M99: End of External Subprogram.

F. Optional Functions:

.Portable Electronic Handle.

.The Spindle C Axis Control.

.Dual System for Double Turret , Double Spindle Turn-mill Control.

* 2-axes CNC Lathe *

* 3~5-axes CNC Machining Center *

* Operation Panel in English *

* Operation Panel in Chinese *

* 12-axes CNC Controller *

* 4-axes CNC Controller *