

Series Oi-MF CNC

STANDARD FEATURES

Axis Control

Digital Servo Function	
1 Controlled Path standard, expandable to 2 paths	
Simultaneously controlled axes: Up to maximum of 4; 3 if Contouring Spindle Configured	
PMC Axis Control	
Axis synchronous control, in Package B, C, D & E. Optional in Package A.	
Tandem control, in Package B, C, D & E.	
Serial Encoder Interface	
Axis Name	Selected from X,Y,Z and U,V,W,A,B,C
Spindle	Up to 2 spindles in Package B, C, D, E. 1 spindle with Package A.
Least input increment	0.001mm, 0.001deg, 0.0001inch
Increment system 1/10	0.0001mm, 0.0001deg, 0.00001inch
Flexible feed gear	Optional DMR
Inch/metric conversion	
Interlock	All axes/each axis/each direction/block start/cutting block start
Machine lock	All axes/each axis
Emergency stop	
Overtravel	
Stored stroke check 1	
Stored stroke check 2,3	
Stroke limit external setting	
Mirror image	Each axis
Follow-up	
Servo off	
Backlash compensation	
Backlash compensation for each rapid traverse and cutting feed	
Position switch	
Unexpected disturbance torque detection function	

Operation

Automatic Data Backup	
Automatic operation (memory)	
DNC operation	Reader/puncher interface is required, not available with Touch Panel
MDI operation	
Schedule function	
Program number search	
Sequence number search	

Sequence number comparison and stop
 Program restart
 Manual intervention and return
 Retraction for rigid tapping
 Buffer register
 Dry run
 Single block
 JOG feed
 Manual reference position return
 Reference position setting without DOG
 Reference position setting with mechanical stopper
 Reference position shift
 Manual handle feed Max. 3 units (requires MPG - order from I/O Tab)
 Manual handle feed rate x 1, x 10, x m, x n m: 0~127, n: 0~1000
 Manual handle interruption
 Incremental feed x 1, x 10, x 100, x 1000
 Jog and handle simultaneous mode

Interpolation

Positioning G00 (Linear interpolation type positioning is possible)
 Single direction positioning G60
 Exact stop mode G61
 Exact stop G09
 Linear interpolation
 Circular interpolation Multi-quadrant is possible
 Dwell Dwell in seconds
 Dwell per revolution (synchronous cutting function is required.)
 Cylindrical interpolation
 Helical interpolation Circular interpolation plus max. 2 axes linear interpolation
 Skip G31
 High-speed skip Input signal is 4 point
 Reference position return G28
 Reference position return check G27
 2nd reference position return
 3rd/4th reference position return
 Normal direction control Standard in Package B, C, D & E. Optional in Package A.
 Index table indexing
 General purpose retract
 Nano Interpolation

Feed Function

Rapid traverse rate	Max. 240m/min (1 μ m) Max. 100m/min (0.1 μ m)
Rapid Traverse Feedrate Override	F0, 25, 50, 100% or 0~100%(1% Step)
Feed per minute	
Feed per revolution	
Tangential speed constant control	
Cutting feedrate clamp	
Automatic acceleration/deceleration	Rapid traverse: linear; Cutting feed: exponential, linear
Rapid traverse bell-shaped acceleration/deceleration	
Linear acceleration/deceleration after cutting feed interpolation	
Feedrate override	0~254%
One-digit F code feed	
Jog override	0~655.34%
Override cancel	
Cutting mode	
Tapping mode	
Rapid traverse block overlap	
External deceleration	
AI advanced preview control	

Programming

Program code	EIA RS244/ISO840
Label skip	
Parity check	Horizontal and vertical parity
Control in/out	
Optional block skip	9 Levels
Max. programmable dimension	\pm 8-digit
Program file name	32 characters
External memory and sub program calling function	
Sequence number	N5-digit
Absolute/incremental programming	Combined use in the same block
Decimal point programming / pocket calculator type decimal point programming	
Input unit 10 time multiply	
Plane selection	G17, G18, G19
Rotary axis designation	
Rotary axis roll-over	
Polar coordinate command	
Coordinate system setting	
Automatic coordinate system setting	
Workpiece coordinate system	G52~G59



Workpiece coordinate system preset	
Addition of workpiece coordinate system pair	48 pairs
Direct input of workpiece origin offset value measured	
Manual absolute on and off	
Optional chamfering/corner R	
Programmable data input	G10
Sub program call	10 folds nested
Custom macro	
Addition of custom macro common variables	#100~#199, #500~#999
Pattern data input	
Interruption type custom macro	
Canned cycles for drilling	
Small-hole peck drilling cycle	
Circular interpolation by R programming	
Automatic corner override	
Automatic corner deceleration	
Feedrate clamp based on arc radius	
Scaling	
Coordinate system rotation	
Programmable mirror image	
Tape format for FANUC Series 10/11	

Auxiliary and Spindle Functions

Auxiliary function	M8-digit
2nd auxiliary function	B8-digit
Auxiliary function lock	
High-speed M/S/T/B interface	
Multiple command of auxiliary function	3
Spindle speed function	S5-digit, binary output
Spindle serial output	S5-digit, serial output
Constant surface speed control	
Spindle override	0~254%
Spindle orientation	
Spindle output switching function	
Spindle synchronous control	Package B, C, D & E
Rigid tapping	

Tool Functions and Tool Compensation

Tool Function	T8 digits
Tool offset pairs	±6 digits 400
Tool offset memory C	Distinction between geometry and wear, or between cutter and tool length compensation.
Tool length compensation	
Tool offset	
Tool life management	
Extended tool life management	
Tool length measurement	
Automatic tool length measurement	

Part Program Storage & Editing

Part Program Storage	512KB
Number of registerable programs	400
Part program editing	
Program protect	
Background editing	
Extended part program editing	
Playback	
Password function	

Display

Status display	
Clock function	
Current position display	
Program comment display	Program name 31 characters
Parameter setting and display	
Self-diagnosis function	
Alarm display	
Alarm history display	
Operator message history display	
Operation history display	
Help function	
Run hour and parts count display	
Actual cutting feedrate display	
Directory display of floppy cassette	
Servo setting screen	
Display of hardware and software configuration	
Periodic maintenance screen	

24V Power Cable	44C741911-001	CBL +24V M3 TERM-AMP 5M	USA
Spare Fuses:	A02B-0236-K100	Fuse, LCD Mount CNC	
	A02B-0319-K100	FUSE, Stand Alone CNC	
Cable Clamps	A02B-0124-K001	CABLE CLAMPS	
Grounding Bar	44B295864-001	GROUNDING BAR 11 SLOT	
Miscellaneous Items:	A02B-0319-K191	Screw Caps for LCD Mount.	
	A02B-0120-K324	CONNECTOR AND PINS	

SERIES 0i-MF PACKAGE CHOICES

Pkg A – Type 3 8.4" LCD/MDI	Pkg B – Type 1 10.4" LCD Mount	Pkg C – Type 1 10.4" LCD Mount w/ Touch Screen	Pkg D – Type 1 15" LCD Mount w/ Touch Screen	Pkg E – Type 1 Stand Alone
A02B-0338-B520 Basic Unit	A02B-0338-B512 Basic Unit	A02B-0338-B512 Basic Unit	A02B-0338-B512 Basic Unit	A02B-0338-B802 Basic Unit
A02B-0338-H144#M Horz. LCD/MDI 200x400mm	A02B-0338-H351 10.4" Color LCD G 220x290mm	A02B-0338-H354 10.4" Color LCD G w/ Touch Screen 220x290mm	A02B-0338-H358 15" Color LCD G w/ Touch Screen 400x320mm	No LCD Available
HRV3 Servo Control	HRV3 Servo Control	HRV3 Servo Control	HRV3 Servo Control	HRV3 Servo Control
I/O Link 1	I/O Link 1	I/O Link 1	I/O Link 1	I/O Link 1
3 Axes, up to 5 supported.	3 Axes, up to 10 supported.	3 Axes, up to 10 supported.	3 Axes, up to 10 supported.	3 Axes, up to 10 supported.
0 Expansion Slots	2 Expansion Slots	2 Expansion Slots	2 Expansion Slots	2 Expansion Slots
PMC-L 5000 Steps	PMC 24000 Steps	PMC 24000 Steps	PMC 24000 Steps	PMC 24000 Steps
Approx 1280m Part Program Storage	Approx 1280m Part Program Storage	Approx 1280m Part Program Storage	Approx 1280m Part Program Storage	Approx 1280m Part Program Storage
Embedded Ethernet	Embedded Ethernet	Embedded Ethernet	Embedded Ethernet	Embedded Ethernet
No HSSB	No HSSB	No HSSB	No HSSB	HSSB