

2.11.4 VARIABLES (CONT'D)

Variable No.	Meaning
#5001 to #5004	End position of immediately preceding block (for each axis).
#5021 to #5024	Current position of machine coordinate system (for each axis).
#5041 to #5044	Current position of POS. UNIVERSAL (for each axis).
#5061 to #5064	Position at which G31 skip signal is turned on (for each axis).
#5083	Valid tool length compensation amount.
#5101 to #5104	Servo position deflection amount (for each axis)

K. Variable Representation

Each variable is represented in a variable number that follows #.

a. How to designate a number directly:

#i (i = 1, 2, 3, 4, ...)

Sample #10
 #130
 #2000

b. How to designate an expression as a variable number:

#[<expression>]

Sample # [#100]
 # [#500 + 1]
 # [#20/2]

In the following description, variable #i may be replaced with variable #[<expression>].

L. Variable Reference

a. The value that follows an address may be replaced by a variable.

When < address> #i or <address> -#i is specified, the value of the variable or its negative value (complement, more exactly) is made the specified value of the address.

Sample #30 = 1. 0 ;
 #101 = 100. ;
 #102 = 200. ;
 #103 = 300. ;
 #140 = 250. ;
 G#30 X#101 Y#102 Z-#103 F#140 ;

The above specification is equivalent to the specification below:

G01 X100 X200 Z-300 F-250 ;

Notes:

(1) Address /, O, and N may not refer to variables.

Sample /#8, N#100 ... Error.

(2) A variable number may not be replaced with a variable.

Sample ##20 ... Error.
 # [#20] ... Correct.

(3) When a variable is used as address data, the values below the least significant digit are rounded.

Sample

(i) When #1 = 45.2346
X#1 ... = X45.235 mm (for mm input)

(ii) When #2 = 350.85
F#2 ... F351 (mm/min)

(iii) When #3 = 5.37672
G04 P#3 ... = G04 P5.377 (sec)

(iv) When #4 = 2.7236

M#4 ... M03
G#4 ... G03

(4) Value for each address should not exceed the maximum programmable value.

(5) The value that follows an address may be replaced with <expression>.

(6) The constant without decimal point enclosed in brackets[] is assumed to have a decimal point at its end.

M. Undefined Variable

The value of an undefined variable is assumed to be "blank." An undefined variable occurs in the following situations:

a. The local variable for which argument designation was not performed in macro call command.

b. Common variables #100 through #149 at the time of power-on and reset operations.

c. The local variables and common variables for which the values were not written from MDI panel.