

MITSUBISHI

READ & WRITE DATA

For manufacturing machines equipped with Mitsubishi controllers this diagnostic tool enables you to test reading and writing operations by using all available commands for these devices. It enables to quickly setup customized [Mitsubishi device driver](#) INI files for CNCnetPDM. The program can be executed on a PC with MS Windows OS (>= XP SP3) connected to your controller via Ethernet. It can be used for machines other than from Citizen or Mazak.

- [Mitsubishi commands overview](#)

SETUP

- [Download and extract all contents of mitsubishicommands.zip](#) to a folder on your PC.
- As the program identifies and accesses controllers by using machine numbers the first thing you have to do is to edit the configuration file melcfg.ini.
- Machine numbers are defined in sections, one for each device. The machine number is the numeric part after Machine, e.g. [Machine01] = 1. Note: The second part of this numeric value uses hexadecimal notation from 1 to F, e.g. 01 = 1 and 0F = 15, remember your math lessons.
- If you're testing with one machine it is recommended to leave section [Machine01] as it is. Only in case it doesn't work you can change the value for Controller from M8NX to NCXJ, NCXK, M6B, NX or M7NX.
- [It is necessary](#) to adjust section [HOSTS] according to your setup e.g. TCP1=192.168.100.1,683 means that the IP Address of your controller is 192.168.100.1. 683 after the comma is the port to be used to access the controller, do not change that.
- For additional machines you have to copy and paste the whole section [Machine01], then change its name e.g. [Machine02] and Device= to a different device in section [HOSTS] e.g. Device=TCP2. In section [HOSTS] you have to add a new device e.g. TCP2=192.168.100.2,683.
- Save melcfg.ini.

USAGE

READ DATA

- After setup of your melcfg.ini file double click MitsubishiCommands in Windows Explorer
- In field 'Mitsubishi Machine Number' (1) enter the machine number as defined in melcfg.ini
- Initially the program starts with Mitsubishi Command (2) M_SSEC_EXST_NC_RUN_STATUS which returns the running status of the machine
- Clicking on button 'Execute' (3) shows the result of the operation, here 2, in the right area:

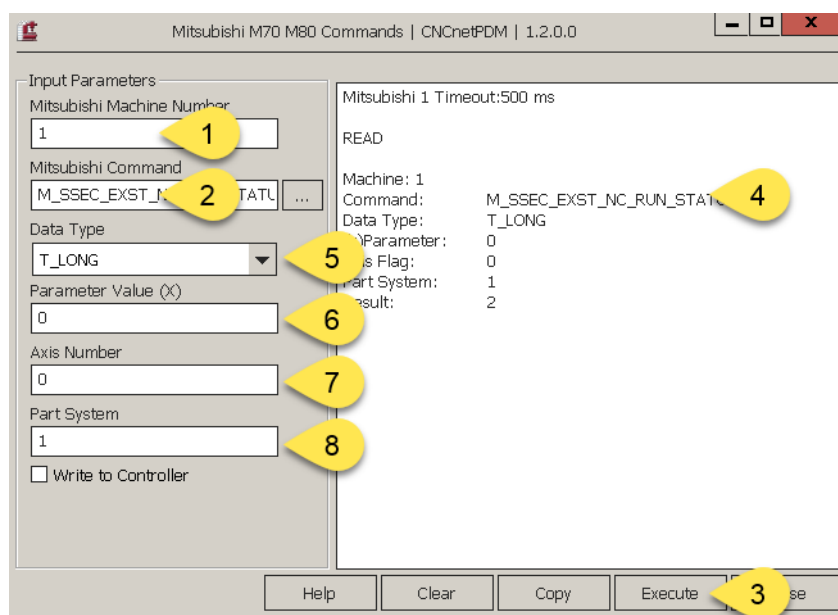


FIG 1: Output of MitsubishiCommands (Read Running Status)

Data Type (5): Allows you to adjust the data type for the command according to the 'Default Data Type' mentioned in the documentation for the respective command.

Parameter Value (X) (6): For commands that require a parameter value e.g. a common variable number M_SSEC_CMVRS_DAT(x) you can enter it's number here. Input this parameter for commands that end with (x).

Axis number (7): For axis related commands e.g. Axis Name M_SSEC_AXISPRM_NAME a specific axis number has to be entered here.

Part System (8): If your machine has more than one part system you can adjust this value.

WRITE DATA

MitsubishiCommands also allows you to change data at the controller by using commands with note 'W' or 'RW' in column R/W of their documentation e.g. [M_SSEC_CMVRS_DAT\(x\)](#).

To change the value of common variable 100, proceed as follows:

- In field Mitsubishi Command (9) type in M_SSEC_CMVRS_DAT(x). You can also copy the command name and paste it into this field by clicking on the button with 3 dots right of the input field
- As Data Type (10) select T_FLOATBIN
- In field Parameter Value (11) enter 100
- Activate checkbox 'Write to Controller' (12) and enter the new value for variable 100 in the input field below
- Clicking on button 'Execute' (13) changes the variable value and shows the result in the right area
- You can verify the new value for common variable 100 at the controller (14)

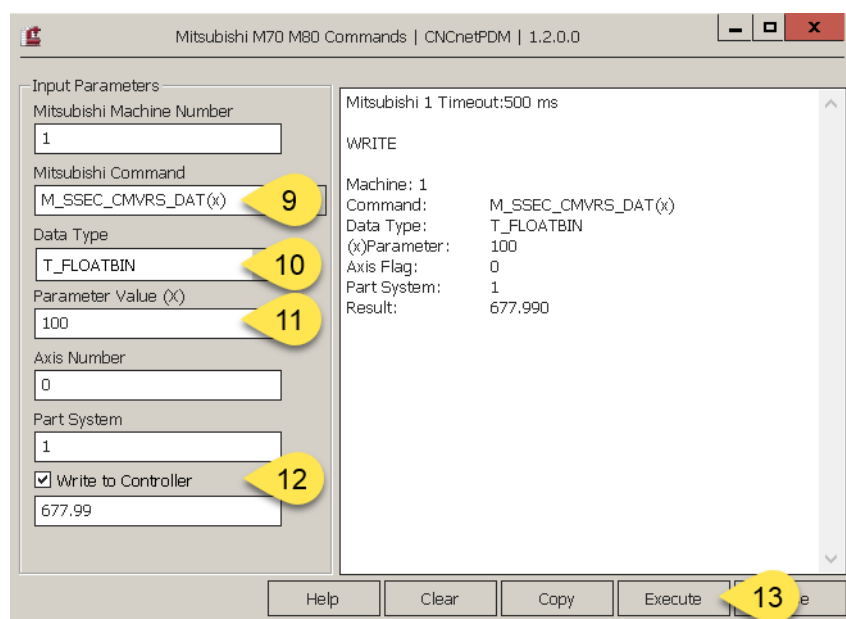


FIG 2: Change common variable 100 with MitsubishiCommands

Common variable		
#	Value	Name
100	677.9900	
101	101.7700	
102	102.8800	
103	555.9900	
104		

FIG 3: Verify the new value for common variable 100 at the controller

LICENSING

If you have installed CNCnetPDM on your PC with a license other than a 'free license' and run this program from the folder where CNCnetPDM is installed you get unlimited functionality. Otherwise you can only read data and execute commands that require no additional input parameter (x). Please see [licensing](#) for details or [contact us](#) if you have any questions.

- Note: If you like to run this program from a different folder on your PC you can simply copy your CNCnetPDM.ini file to this directory.

CONTROLLERS

The program was tested and works with the following controllers, others may work as well:

Series M800 M80

Machining center & Lathe system

- M850W
- M830W
- M850S
- M830S
- M80W
- M80 TypeA
- M80 TypeB

Series E80 C80

Machining center & Lathe system

- E80 TypeA
- E80 TypeB
- C80 TypeA
- C80 TypeB

Series M70

Machining center & Lathe system

- FCA70P-2A
- FCA70P-4A
- FCA70P-2B
- FCA70P-4B

Series M700

- 720M
- 730M
- 750M
- 720L
- 730L
- 750L

Series C6/C64 Series

- C6L
- C6T
- C64M
- C64L
- C64T

Series C70

- M system
- L system

Series M70V

Machining Center & Lathe system

- TypeB
- TypeA

Series M700V

Machining Center & Lathe system

- M720VS
- M730VS
- M750VS
- M720VW
- M730VW
- M750VW