Model MFS2 Split-range Transmitter
PC CONFIGURATOR SOFTWARE
Model: MFS2CFG

Users Manual

CONTENTS

1. GENERAL

This document explains how to program Model MFS2 Split-range Transmitter using Model MFS2CFG PC Configurator Software, including points of caution.

In this manual, the user is assumed that he/she is already familiar with operating Windows and terminology used in the operating system. If you need to know about particular operation or terminology on Windows, please refer to manuals provided with the system.

1.1 MFS2 SPLIT-RANGE TRANSMITTER

The Model MFS2 provides four (4) split-range outputs for one input signal. I/O characteristics, high/low limits applied to the outputs, fixed outputs by external contact signal control, and other parameters are programmed on the MFS2CFG PC Configurator.

The MFS2 is connected to a Windows PC via PC Configurator Cable.

1.2 MFS2CFG FEATURES

The following major functions are available:

I/O Characteristics
• Each output characteristics can be independently programmed (defined by two segment points).

High / Low Limits
• Each output can have independent high and low limits.

Fixed Output
• A fixed output value controlled by an external contact signal can be selected independently for each output.
• Open or Closed contact is selectable as the external control.
• Applying the fixed output or not is also selectable for each output.

File Management
• Parameters can be saved as a file stored in the PC. The file can be opened and edited offline without connecting the transmitter.

• Parameters can be read in from files and downloaded to the transmitter. Identical setting can be applied to multiple transmitters quickly and without failure.

Graph
• I/O characteristics determined by the above parameters are drawn on a graph on the window for each confirmation.

Fine Output Adjustments
• Fine adjustments can be applied to each output independently.

1.3 HARDWARE REQUIREMENTS

• DOS/V compatible PC with Windows 7 (32bit, 64bit) or Windows 10 (32bit, 64bit) appropriately installed.

• PC configurator cable, model MCN-CON or COP-US

1.4 INSTALLING & DELETING THE PROGRAM

The program, provided as compressed archive, can be downloaded at our web site.

■ INSTALL

Decompress the archive and execute 'setup.exe' to start up the MFS2CFG installer program. Follow instructions on the Windows.

■ DELETE

Open [Control Panel > Add/Remove Programs]. Select [MFS2CFG] from the program list and click <Delete> button.

<For Windows 10>

1) Click on Windows Start button to display a list of Apps.

2) Locate [MFS2CFG], right-click on it to display buttons. Then select <Uninstall> button.

CAUTION !
If you have already the MFS2CFG program installed in your PC, remove it before installing a new one.

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2. BASIC OPERATIONS

2.1 CONNECTING THE MFS2 TO THE PC

1. Connect the PC configurator cable to the COM port of the PC. (COM1 through COM8 are usable)

CAUTION !
The MFS2CFG may be shut down if the selected COM port is not available on the PC. Reassign the COM port on the PC in advance if necessary.

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2. Connect the cable to the miniature jack port of the MFS2.

2.2 STARTING / QUITTING THE MFS2CFG

Display images shown in this manual may change in detail when the software version is updated.

■ STARTING THE MFS2CFG

Press [Start] on the task bar and choose [MFS2CFG] from [Program] menu. The main view appears on the screen as shown below.
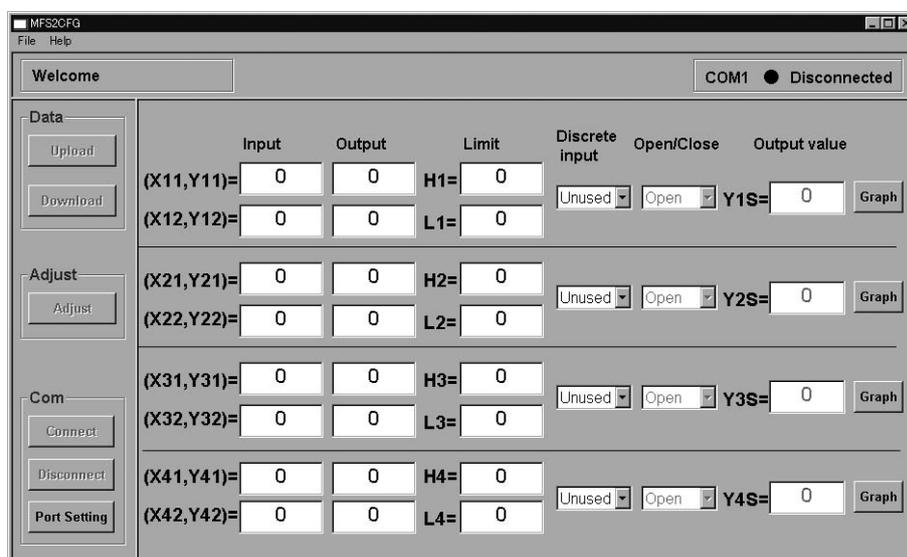
■ QUITTING THE MFS2CFG

Choose [X] at the right end of the title bar to quit the program.

3. VIEW COMPONENTS AND FUNCTIONS

The MFS2CFG view is composed of the menu bar on the top, tool buttons at the left, and the configuration window for each output.
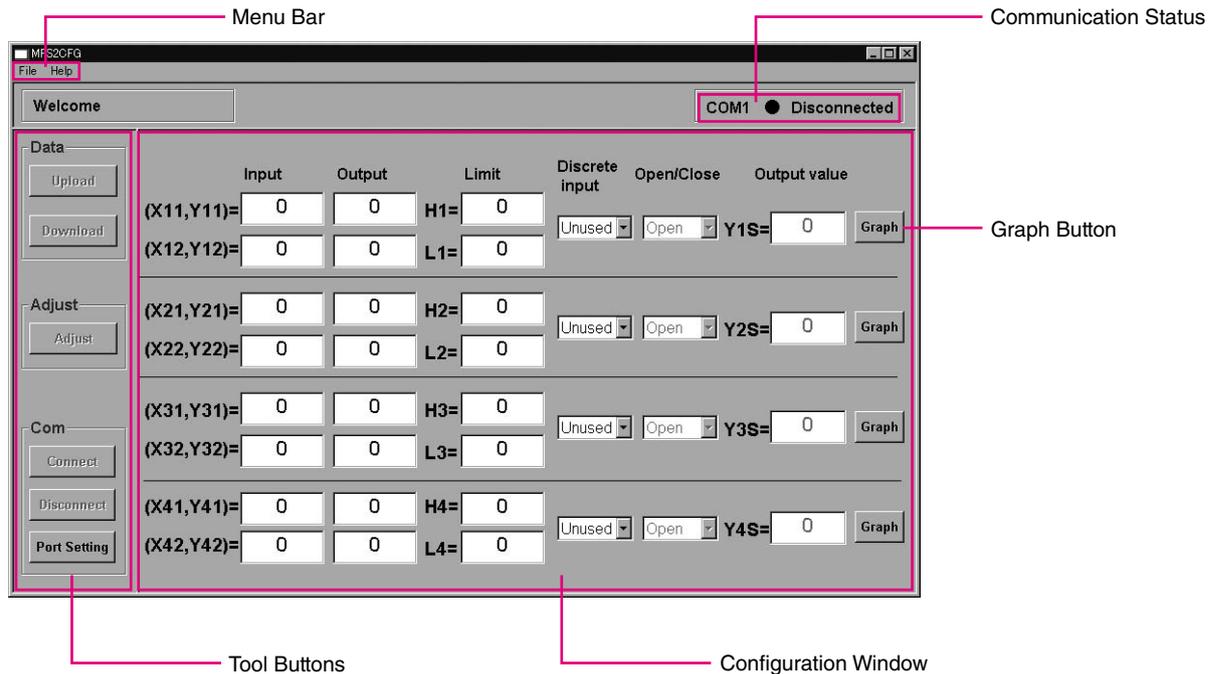
3.1 MENU BAR

3.1.1 SAVING PARAMETERS AS A FILE

Configurations can be stored as a file in the PC.

Choose [Save] from [File] menu. Specify file name and location, and save the file.

File Format

Configuration files are stored in CSV format, which can be opened and edited on text editing applications.

The figure below shows an example of such file opened on Microsoft Excel. DO NOT modify any data other than those enclosed in the black frame. Inadequately modified files may not be opened.

3.1.2 READING PARAMETERS FROM A FILE

Configurations can be read in from a file stored in the PC. Parameters called up on the window can be edited and downloaded to the MFS2.

Choose [Open] from [File] menu. Locate the file and open it.

3.1.3 CONFIRMING PROGRAM VERSION

Choose [Version] from [Help] menu in order to confirm the software version number.

3.2 COMMUNICATION STATUS

COM port number and communication status (Connected or Disconnected) are indicated at the right top of the window.

3.3 TOOL BUTTONS
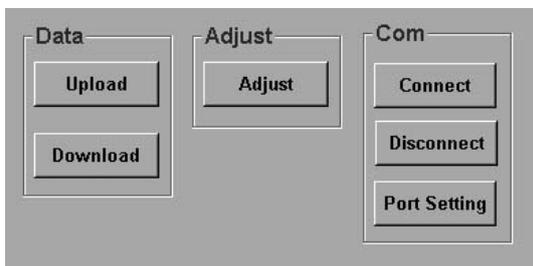
Button	Function
Upload	Uploading the configuration setting from the MFS2 and showing them on the window.
Download	Downloading the configuration setting currently on the window to the MFS2
Adjust	Conducting fine adjustments of each output (Refer to Section 3.6)
Connect	Connecting to the COM port to establish communications with the MFS2.
Disconnect	Disconnecting the COM port
Port Setting	Setting up the COM port specifications

3.4   CONFIGURATION WINDOW

Parameters applied to each of four outputs are as follows:

• Two pairs of input and output values to define I/O characteristics

• High and Low limits

• Applying control by the external contact input or Not

• If the contact control applies, Contact's triggering logic: Open or Close

• If the contact control applies, Fixed output

3.4.1   I/O CHARACTERISTICS: INPUT, OUTPUT

Two pairs of X (input) and Y (output) values to determine the relations between the input and each output.

Range: 0 (0.00%) to 10000 (100.00%)

Proportional and inverted characteristics are programmable.

3.4.2   HIGH / LOW LIMITS: LIMIT H1, L1

Upper and lower limits can be applied to each output in order to prevent it to go over-scale.

Range: 0 (0.00%) to 10000 (100.00%)

High limit ≥ Low limit

3.4.3   APPLYING THE CONTACT CONTROL: DISCRETE INPUT

A fixed output value can be provided to each output independently by the external contact input.

Choose 'Use' or 'Unused.'

3.4.4   TRIGGERING CONTACT LOGIC: OPEN/CLOSE

This parameter is selectable only when 'Use' is specified in 'Discrete Input.'

Contact logic to trigger the fixed output: Open or Close

3.4.5   FIXED OUTPUT VALUE

This parameter is selectable only when 'Use' is specified in 'Discrete Input.'

Fixed output is provided when the external contact condition is true according to 'Open/Close' setting.

Range: 0 (0.00%) to 10000 (100.00%)

High limit ≥ Fixed output ≥ Low Limit

3.5   GRAPH WINDOW

Clicking <Graph> button in each configuration window opens a graphical representation of the I/O characteristics setting. Use this window to simulate and confirm your setting.

'Display as' shows the virtual contact input status. In order to switch the contact, click <Open/Close> button in 'Discrete input change to' section.
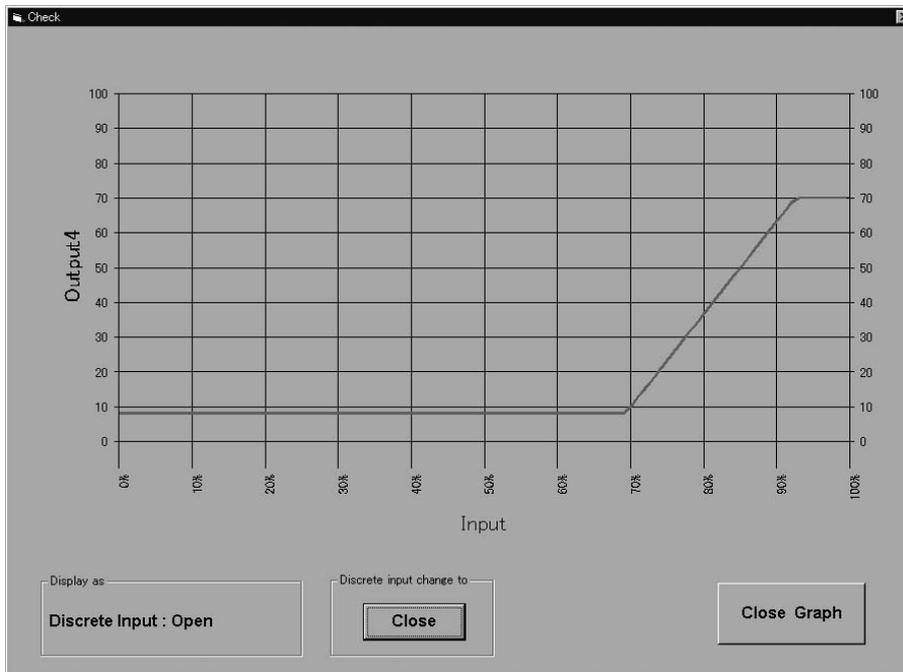
3.6   OUTPUT ADJUST MODE

Each output can be finely adjusted.
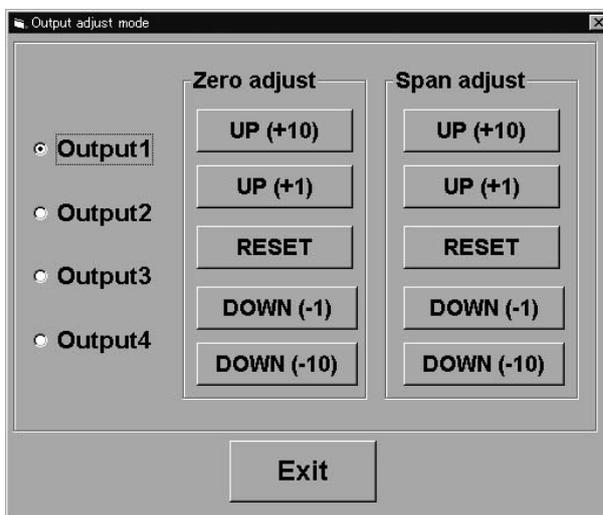
1) Choose the output to be adjusted.

2) Monitor the output signal using a multimeter connected to the output terminals.

3) Increase or decrease the signal using the control buttons for Zero and Span, respectively.

    Each time <UP>, <DOWN>, or <RESET> button is pressed, the MFS2's internal adjustment value is changed accordingly and saved automatically.

    To reset the value to the factory's default status, click <RESET>.

4) Turn off and on the power supply to the MFS2 after the adjustment is complete.