azbil

CM2-CFS100-2001

Field Communication Software

CommStaff

Model: CFS100 (Common Edition)

User's Manual

Azbil Corporation

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The parties agree to comply with all applicable laws and regulations of Japan, the United States of America and any other applicable jurisdiction with respect to the export and use of the Software directly or indirectly. Without limiting the generality of the foregoing, User shall not sell, reexport, deliver or retransfer, the Software, service or technology, directly or indirectly, to any entity related to the design, development, production, stockpiling or use of chemical, biological or nuclear weapons or missiles.

10. Termination

10.1 This Agreement becomes effective as of the date of delivery of the Software and remains effective until terminated by the User with one (1) month prior written notice to Azbil.

10.2 This Agreement will automatically terminate if the User fails to comply with any condition of this Agreement.

10.3 Upon termination of this Agreement for any reason, the User shall cease all use of the Software. Further, the User shall remove the Licensed Programs from the PC, and, at Azbil's request, return to Azbil or destroy the Software and all copies of it.

10.4 Regardless of termination of this Agreement, the obligations defined in the Articles 4.2, 8, 10.3 and 11 hereof shall remain effective and bind the User.

11. Miscellaneous Provisions.

This Agreement will be governed by and construed in accordance with the laws of Japan. This is the entire agreement between the User and Azbil relating to Software, and supersedes any prior agreement, purchase order, communication, advertising or representation concerning the Software. No change or modification to this Agreement shall be made without written consent of Azbil.

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Safety precautions

Introduction

Proper installation, operation and maintenance are essential to ensure safety during the use of your CommStaff. Do not use CommStaff before completely reading and fully understanding the safety precautions explained in this manual, and be sure to follow the instructions on installation, operation and maintenance.

Verifying your order

Upon receiving CommStaff, check that the specifications match what you ordered, and check for any damage to the product that might have occurred during shipping.

Verify that the package contains the following items:

- Installation CD-ROM
- Quick start guide
- CFS100 SFN/DE communication interface (optional)

Transporting CommStaff

To avoid damage, transport CommStaff in its original packaging until it arrives at the installation site.

Storing CommStaff

Select a storage site that satisfies the following conditions:

- Not exposed to rainwater
- Not subject to vibration or shock
- As close as possible to normal temperature and humidity (approx. 25 °C and 65 %RH)

Store CommStaff in its original packaging if possible.

Use of cellular phone or radio transceiver

Using a cell phone or radio transceiver near CommStaff may affect CommStaff's performance due to radio interference, depending on the transmitting power and the frequency.

China RoHS

基于SJ/T11364-2014「电子电气产品有害物质限制使用标识要求」的表示式样

产品中有害物质的名称及含量

部件名称 CFS100	有害物质					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板	×	○	○	○	○	○
锁定螺母	×	○	○	○	○	○

本表格依据SJ/T 11364 的规定编制。
○：表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下。
×：表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。

Chapter 1. Overview

1-1. Introduction

CommStaff is a tool for communicating with Azbil Corporation's smart field devices (DSTJ and others) that enables configuration of device settings. It is a software product that operates on Windows PCs. CommStaff communicates with Azbil Corporation's smart field devices using a USB interface connected to a Windows PC, which is then connected by communications cable to the USB port of a device.

CommStaff supports Azbil Corporation's proprietary SFN/DE communication protocol as well as the HART communication protocol.

*HART is a registered trademark of the FieldComm Group.

1-2. Important Notes

- When changing connected devices

  CommStaff continues communicating with the device when displaying dynamic values, such as pressure, so that it can continuously update these values. If you remove the communications cable to change the device during this communication, an error will occur.

  Exit CommStaff before detaching the communications cable from the device, and then start CommStaff again after connecting the communications cable to the new device.
- Do not use CommStaff while the PC is connected to AC power.
- If the plastic case of the communication interface becomes cracked, do not use CommStaff .
- Handling the communication interface cable clamp unnecessarily may lead to malfunction of the latch. Handle the cable clamp only as necessary.
- If the decimal point is set to a comma (,), CommStaff will not work correctly. If the decimal point is set to comma (,) by Windows, change the setting to a period (.) as the chapter 2-1-2.
- CommStaff may display it with "1.$". This is non-numerical value or an infinite meaning.

1-3. Package Contents and Part Names

The CommStaff product consists of the following items.

- Installation CD-ROM

  The CD-ROM contains an installer to install the CommStaff application on your Windows PC. It also includes the operating manual and the instruction manual of the device in PDF format.

  Store the CD-ROM away from direct sunlight.
- Quick start guide

  A simple guide for initial setup of CommStaff.
- CFS100 SFN/DE communication interface (optional)

  A USB-type SFN/DE communication interface. Connect this interface to a USB port on the PC.

Caution: Do not connect the communication interface before you have installed the CommStaff software on the PC. Otherwise, the interface will fail to find the driver and the program will not operate correctly.

1-4. Operating Environment

The product intends to be used in industrial environment.

- Use CommStaff within the following ranges.

  Environmental conditions (CFS100 SFN DE communication interface)

  Operating temperature 0 to 50 °C; operating humidity 5 to 95 %

Note: If the PC has a more limited operating environment range, use CommStaff within that range.

1-5. System Requirements

1-5-1. PC

Use a PC that meets the following requirements.

OS	Windows 7 Professional Windows 8.1 Professional or Windows 10 Professional (32-bit or 64-bit, Japanese or English version)
Hard disk drive space	500 MB or more
Communication port	USB 2.0 or later

Do not install any application on the PC other than the software required by CommStaff.

1-5-2. Communication Interface

Use a communication module that meets the following requirements.

SFN/DE communication interface	CFS100 SFN DE Azbil Corporation model number: 80345962-001
HART communication interface	MACTek VIATOR USB HART Interface MACTek model number: 010031

Regarding the HART communication interface, although CommStaff was designed for use with other similar products, operation with other products has not been tested.

Chapter 2. Installing/Uninstalling CommStaff

Installing CommStaff requires logging onto Windows as an administrator.

2-1. Preparation for Installation

2-1-1. Items Required

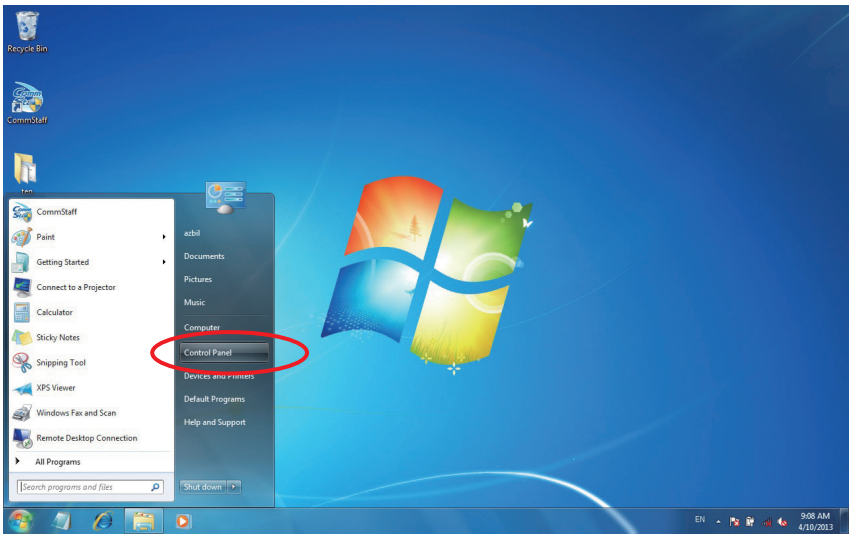
Have the following items on hand before beginning installation.

- PC
  - Check that it meets the system requirements described in Section 1-5-1.
  - A CD-ROM drive is necessary for installation.

2-1-2. Setting the Decimal Point

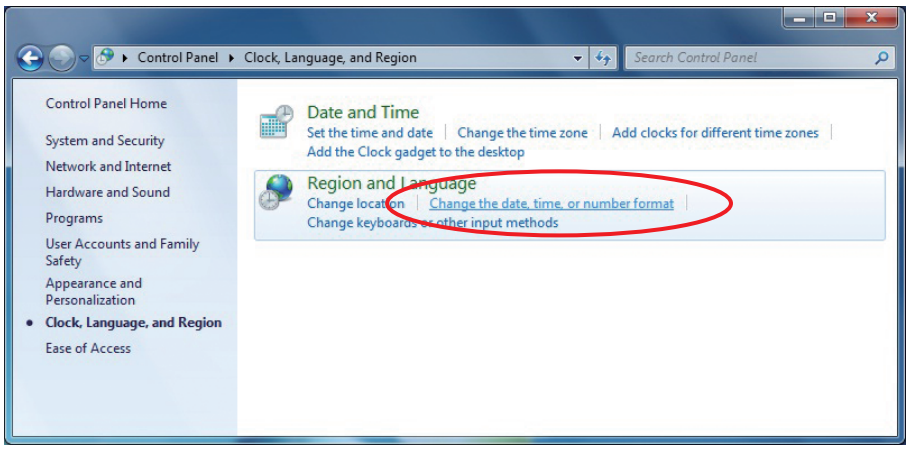
If the decimal point is set to a comma (,), CommStaff will not work correctly. If the decimal point was preset to comma by Windows, change the setting to a period (.) as described below.

Open Control Panel.

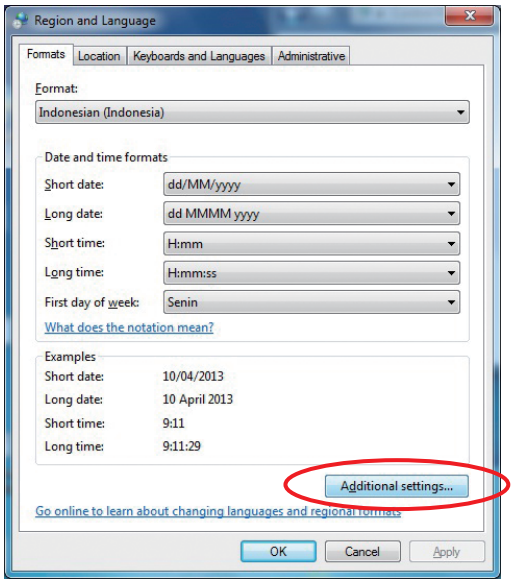


Select “Clock, Language, and Region.”

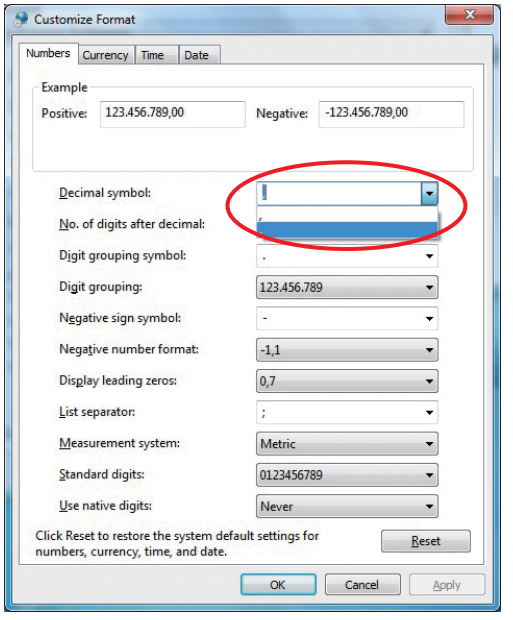
Select “Change the date, time, or number format.”



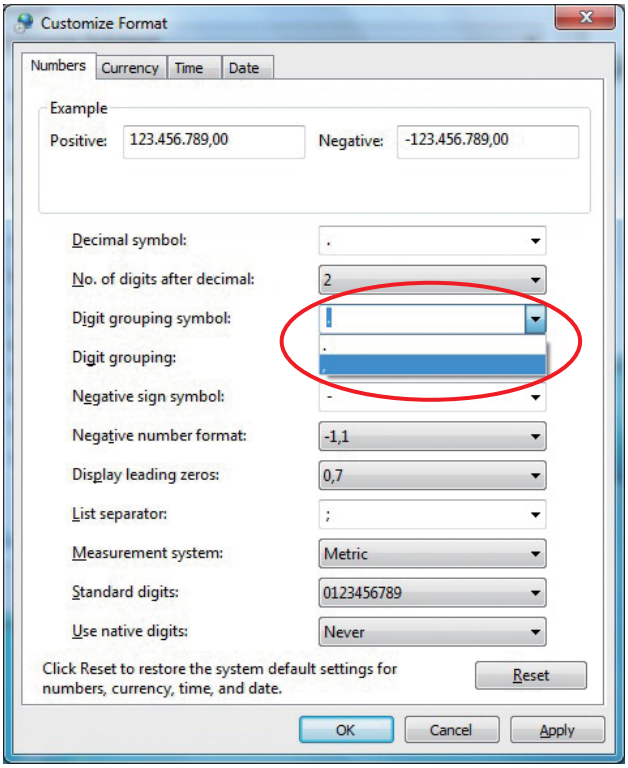
Select “Additional settings…”.



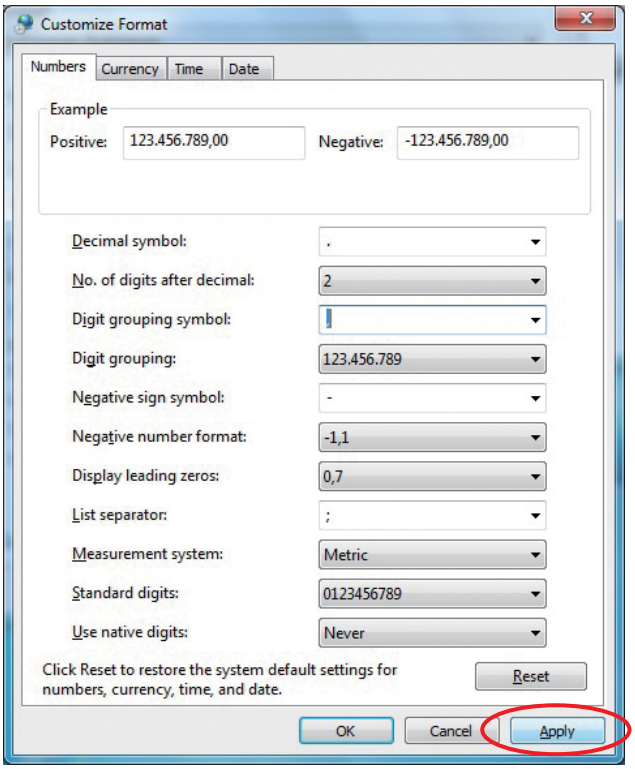
Set “Decimal symbol” to a period (.). If a period does not appear in the selection box, enter it directly using the keyboard.



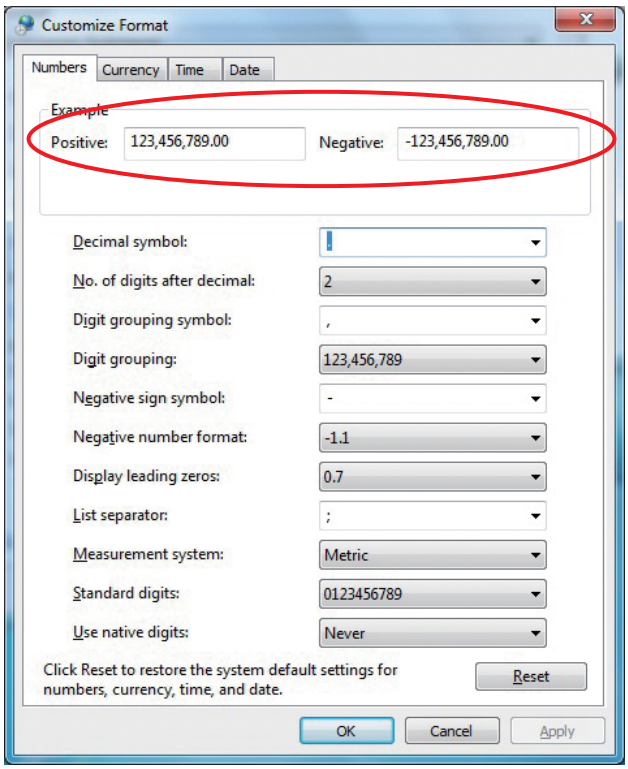
Set “Digit grouping symbol” to a comma (,). If a comma does not appear in the selection box, enter it directly using the keyboard.



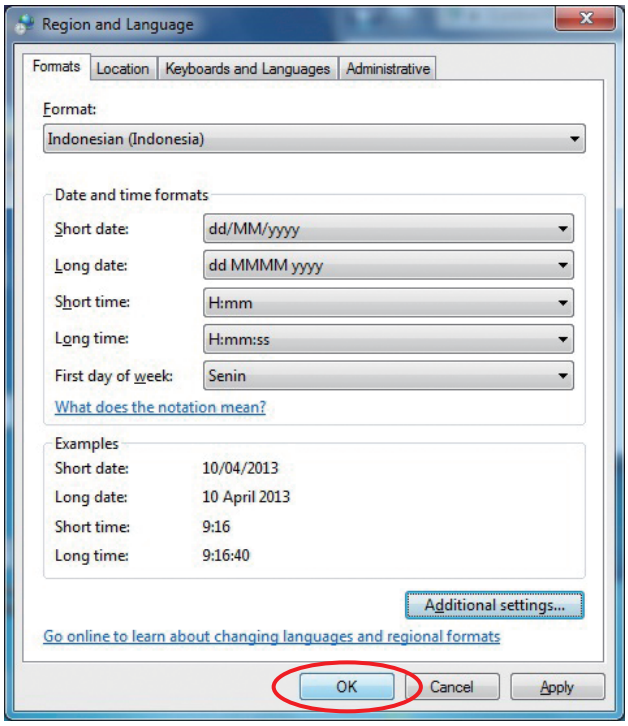
Click [Apply].



Check that the numbers shown under Example are correctly formatted, and click [OK].



Click [OK].



Setup is now complete.

2-2. Installation

2-2-1. Installation Overview

1. Put the CommStaff installer CD-ROM in the CD-ROM drive of the PC.
2. Execute the following two installers.
   1) CommStaff application installer

      Run Setup.exe, located in the root directory of the installer CD-ROM. (For correct installation in the case of an upgrade, first uninstall the old version and then install the new version.)

   2) SFN communication interface driver installer

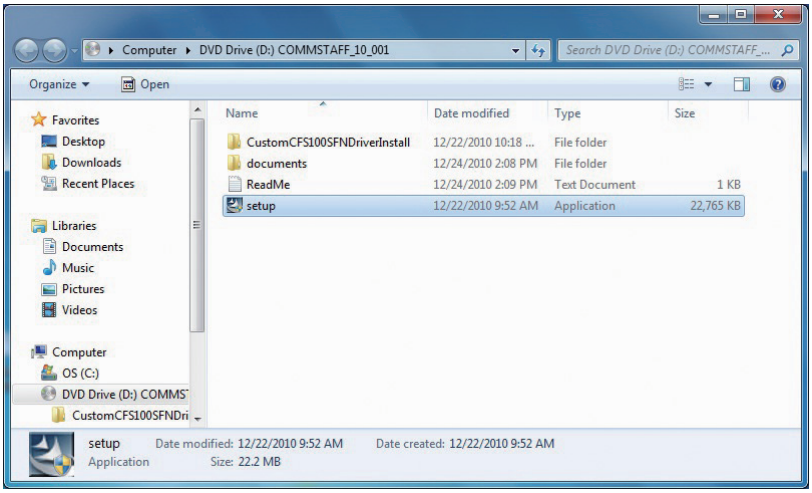
      Run CFS100SFNInstaller.exe, located on the installer CD-ROM in the ¥CustomCFS100SFNDriverInstall subfolder.
3. If using the HART communication interface, install the driver supplied with it.

This completes the installation.

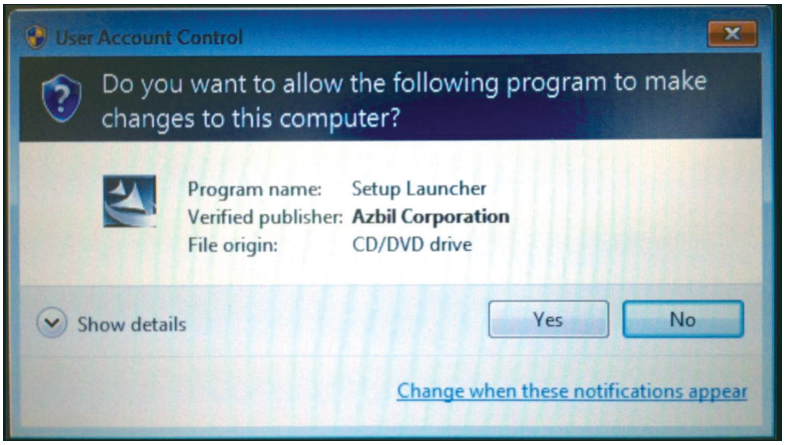
2-2-2. Installation in Detail

Installation of the CommStaff application

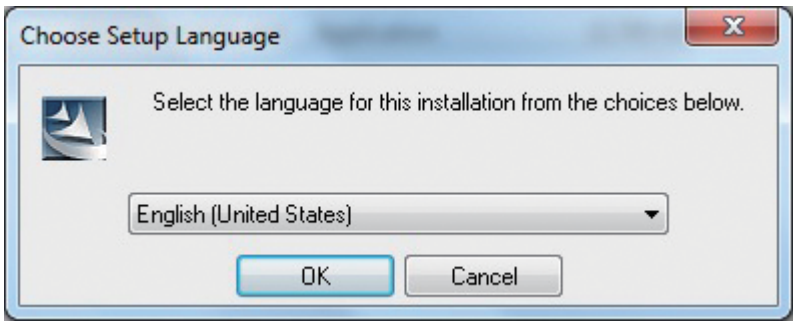
Execute Setup.exe in the root directory of the installer CD-ROM.



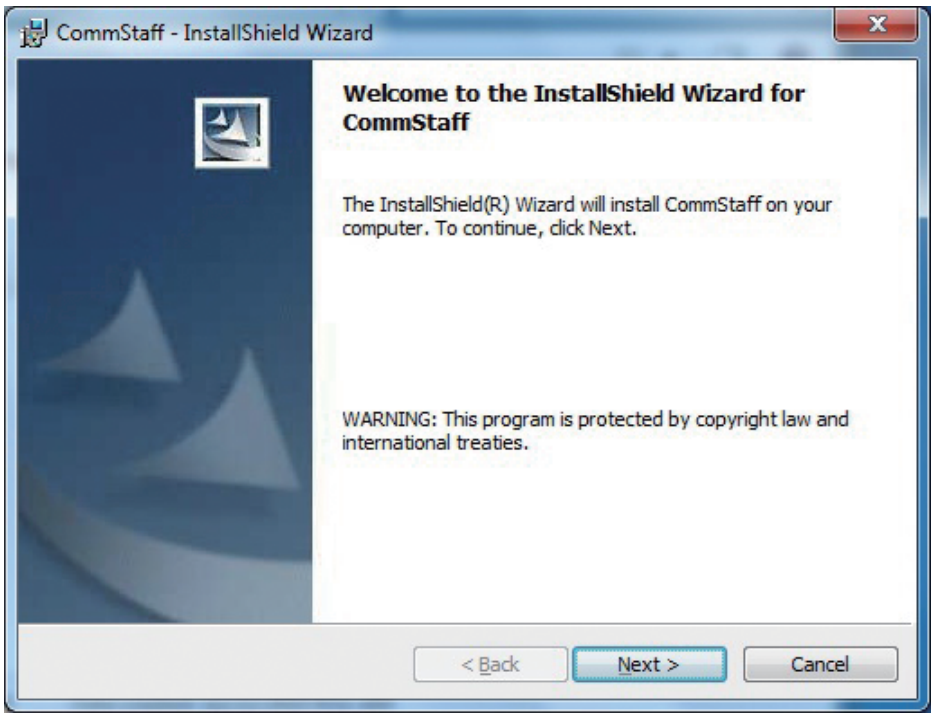
The message “Do you want to allow the following program to make changes to this computer? ” appears. Click [Yes].



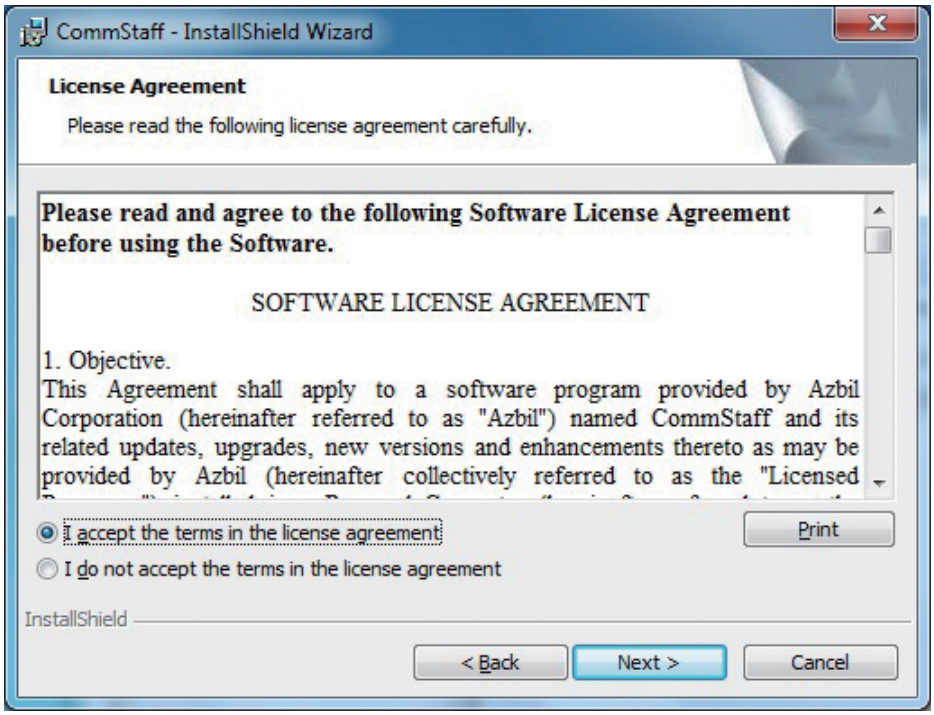
The language selection screen appears. Click [OK] to continue.



Click [Next].

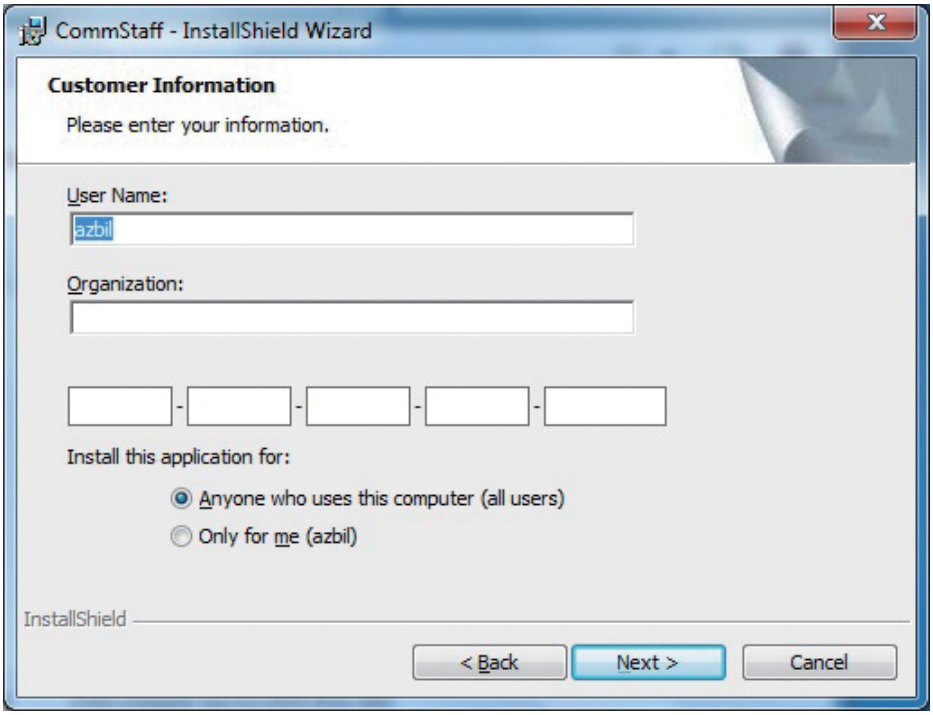


Read the License Agreement. If you accept the terms of the License Agreement, select "I accept the terms in the license agreement" and click [Next] to continue.

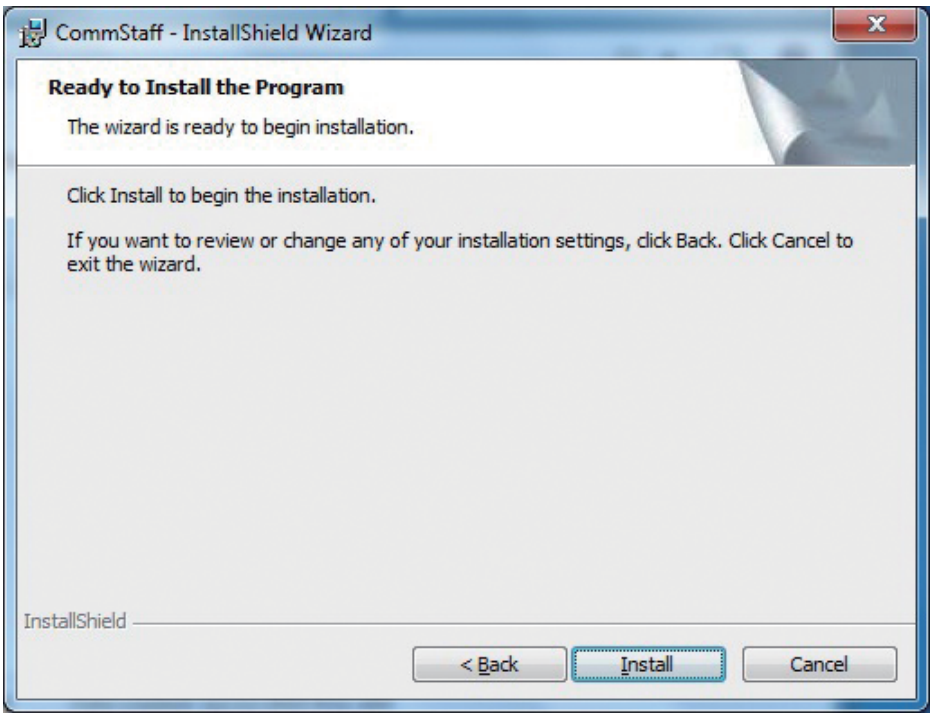


Enter the user name, organization, and license key, and click [Next] to continue.

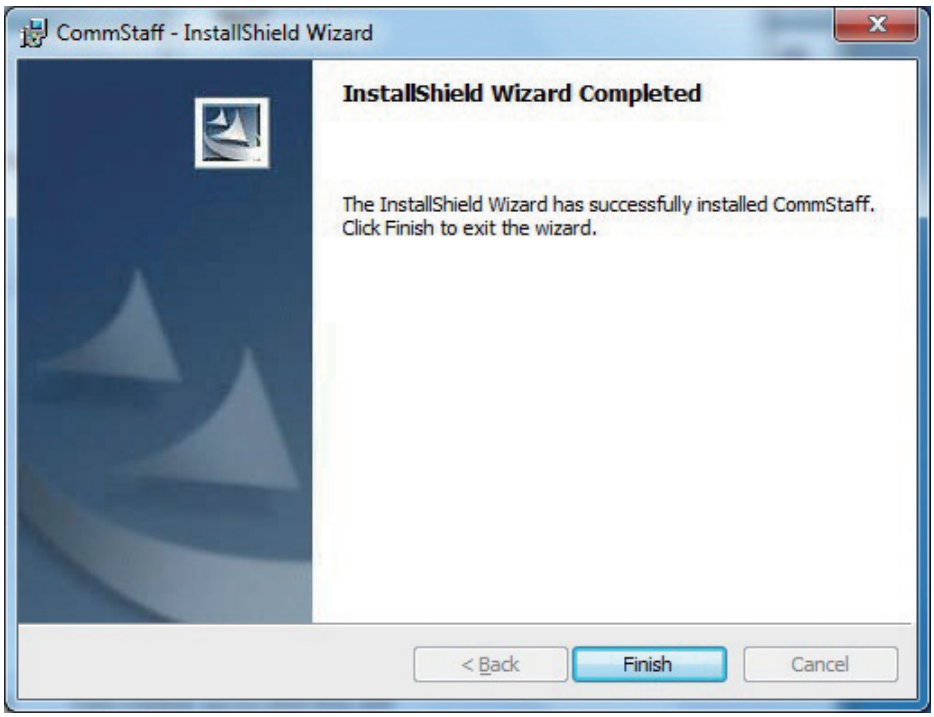
The serial number. is printed on the sticker on the CommStaff Installer CD-ROM case as a license key.



Click [Install].



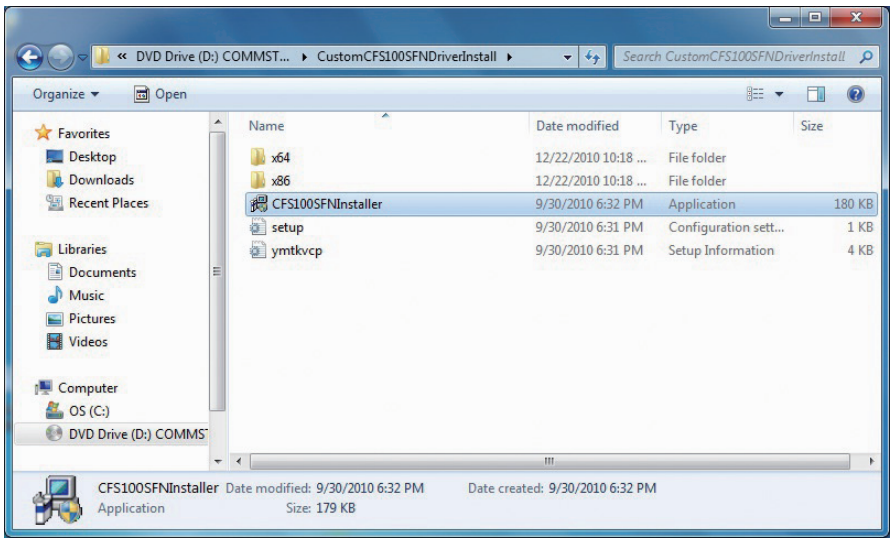
Click [Finish].



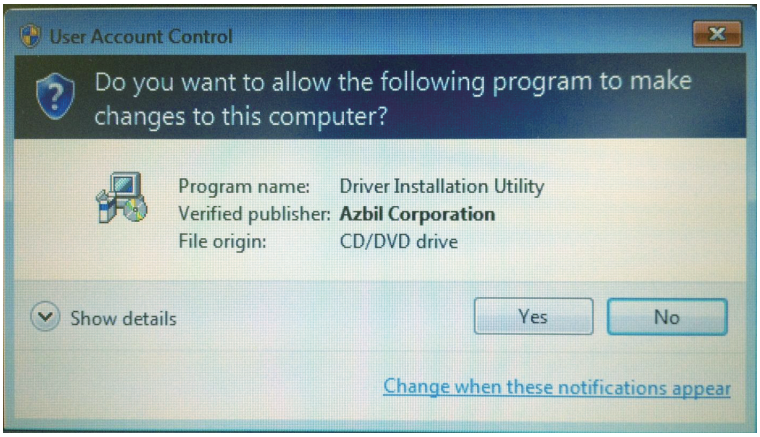
This completes installation of the CommStaff application.

Next, install the driver for the SFN communication interface.

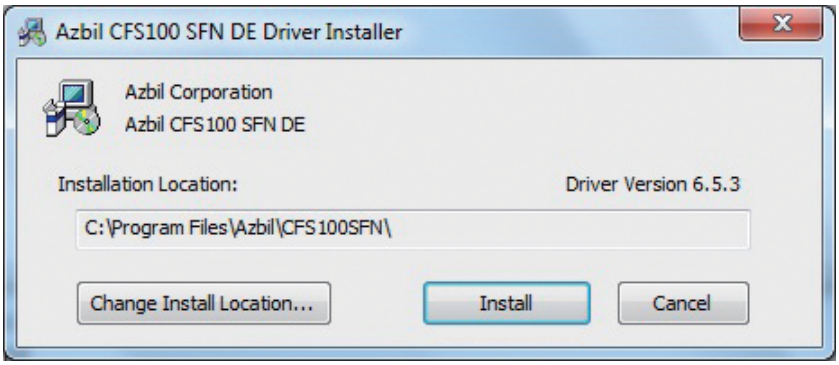
Run CFS100SFNInstaller.exe in the ¥CustomCFS100SFNDriverInstall subfolder of the installer CD-ROM.



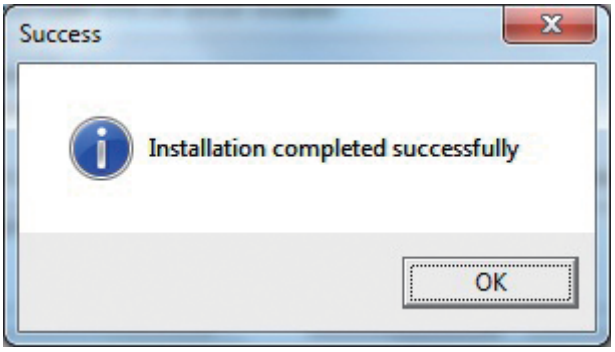
The message "Do you want to allow the following program to make changes to this computer?" appears. Click [Yes].



Click [Install].



Click [OK].



This completes installation of the SFN communication interface driver.

If using the HART communication interface, install the driver software supplied with it.

Note: If installation fails, refer to 7-3, "Reasons for installation failure".

2-3. Uninstalling CommStaff

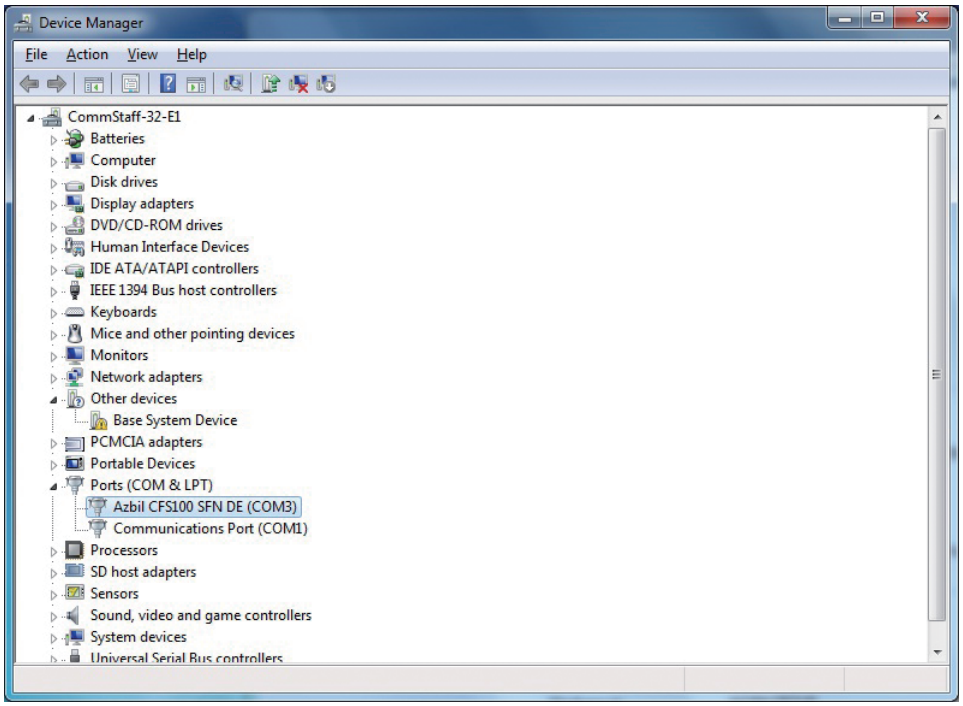
In the Windows Control Panel, go to Programs and Features and delete the target application program from the program list.

Chapter 3. Checking the Communication Interface Connection

On completion of software installation, check the communication interface connection.

1. Connect the communication interface to the USB port of the PC.
2. If the driver software was installed correctly, the PC recognizes the communication interface as a COM port.
3. In Control Panel, open the Device Manager and verify that the communication interface is recognized by the PC correctly.

Open the ports (COM and LPT) and check that the connected communication module is recognized correctly.

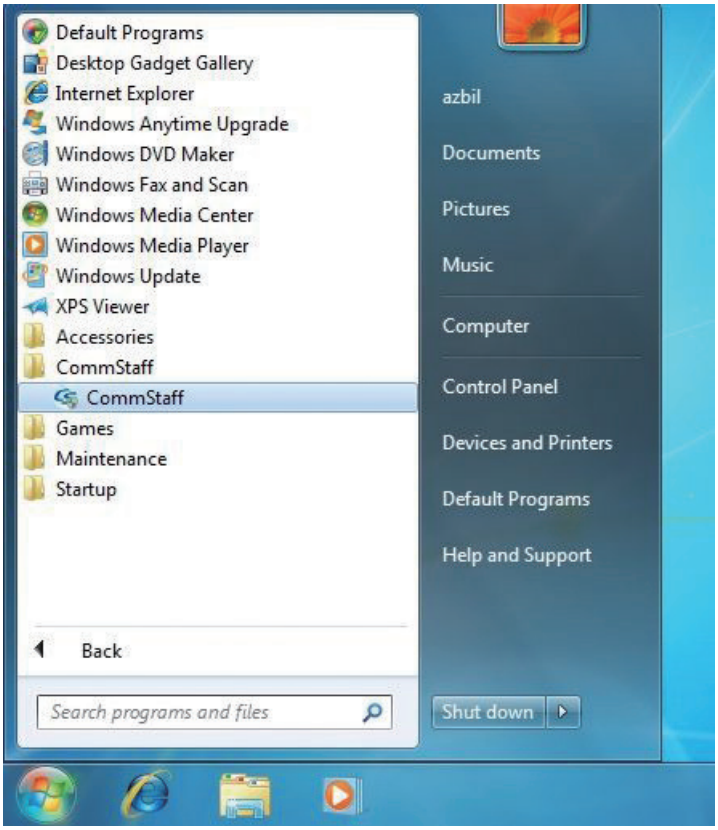


Chapter 4. Starting and Exiting the Application and Starting Communication

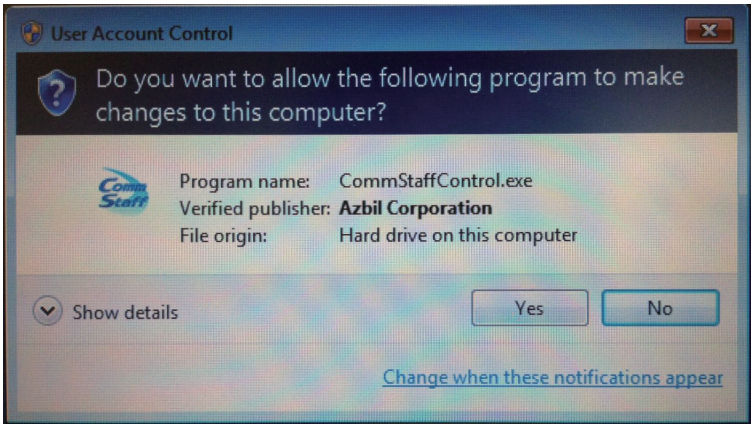
Using CommStaff requires logging onto Windows as an administrator.

4-1. Starting the Program

1. Select Start → All Programs → CommStaff → CommStaff to start the application.



2. The User Account Control screen appears. Click [Yes].



4-2. Exiting the Application

When your work is complete, exit the CommStaff application.

4-3. Starting Communication

When CommStaff starts, the following screen appears.

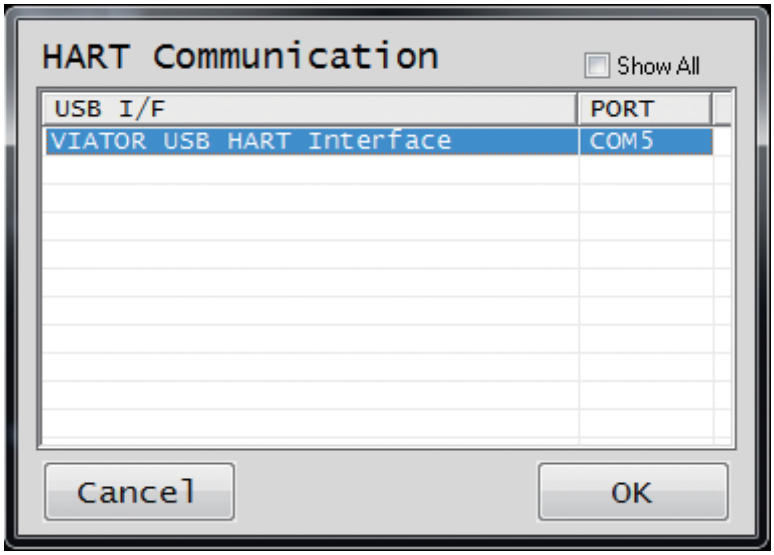
Note: If the communication protocol buttons are not displayed, resize the window by dragging the frame so that the buttons can be seen.

4-3-1. HART Communication

To start HART communication, click [HART Communication].

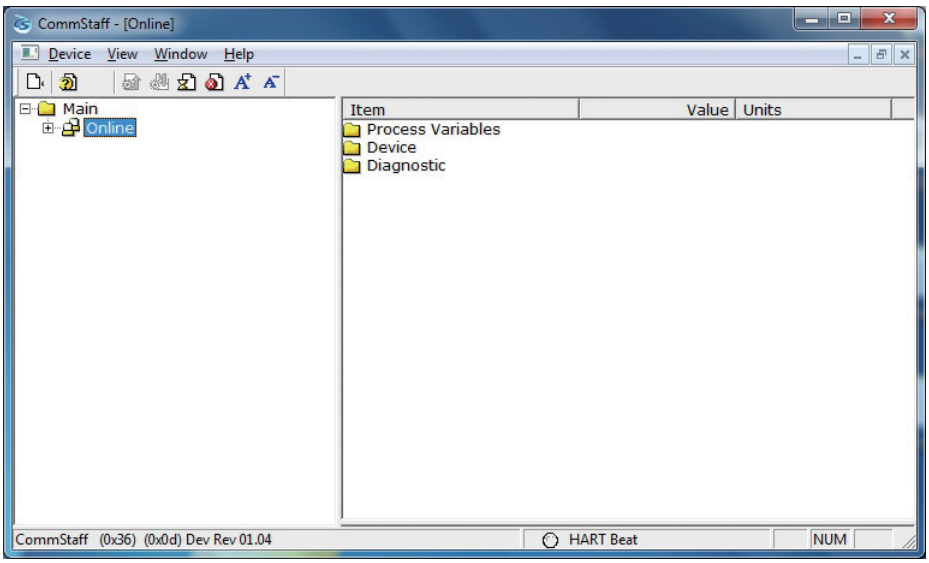
The HART-related COM ports that are currently connected are listed on the screen. Select the desired COM port and click [OK].

This COM port number is assigned automatically to the CommStaff serial port number setting.



Note: If the desired COM port is not displayed, put a check in the [Show All] check box.

CommStaff screen appears and information about the connected device is displayed.



If communication fails due to some problem, such as no device being connected to the communications cable, the message "ERROR: Failed to acquire a device identity." appears on the status bar on the bottom left of the window.

Check the device connection.

For more information on the device in question, refer to the instruction manual of the device.

* When changing connected devices

CommStaff continues communicating with the device while it is operating. A communication error will occur if you remove the communications cable from the device in order to change to another device.

First, exit CommStaff and then remove the communications cable from the device. Start CommStaff again after you have connected the communications cable to the new device.

The following message appears if you remove the communications cable while CommStaff is operating.

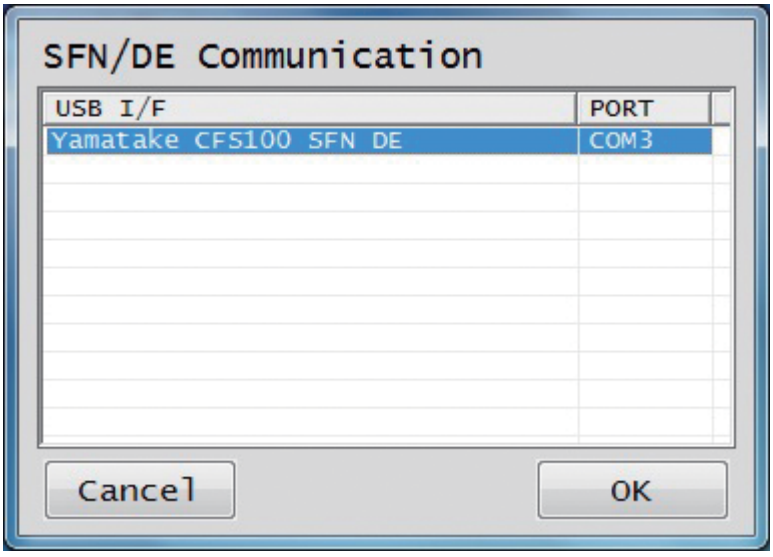
"Error In Communication with Device, Closing the Device…"

When [OK] is clicked, all displayed data disappears.

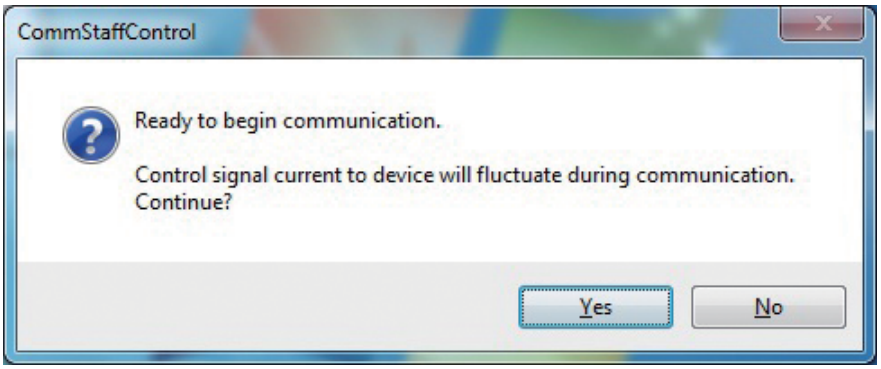
4-3-2. SFN/DE Communication

To start SFN/DE communication, click [SFN/DE Communication].

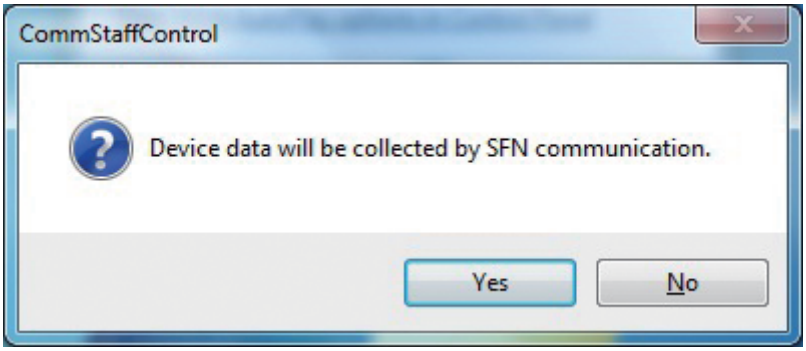
The SFN/DE-related COM ports that are currently connected are listed on the screen. Select the desired COM port and click [OK].



When using SFN/DE communication, the output current from devices that output current fluctuates. The following message appears asking you to confirm that you are aware of this fact. Click [Yes] to continue.



A message appears that asks you to confirm that data should be collected from the SFN device. Click [Yes] to continue.

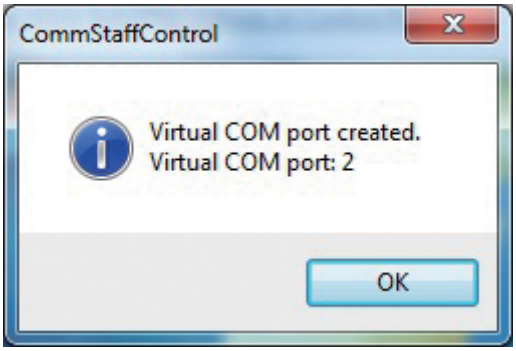


If communication fails due to some problem, such as no device being connected to the communications cable, the message “Procedure terminated because there was no response.” appears on the CommStaffControl screen.

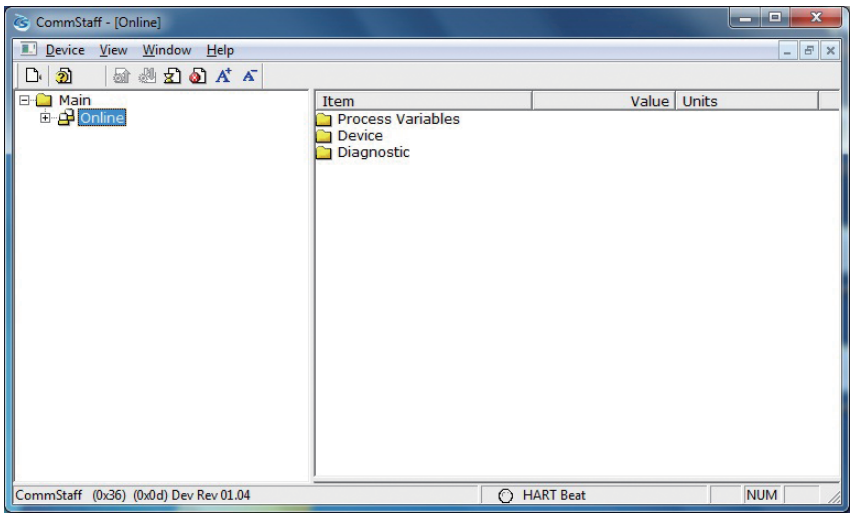
Check the device connection.

When using SFN/DE communication, CommStaffControl converts between the SFN/DE communication and HART communication protocols using a virtual communication port for relaying communication. The following message confirms that the virtual communication port has been created and displays the port number. Click [OK] to continue.

This COM port number is assigned automatically to the CommStaff serial port number setting.



CommStaff starts and information about the connected device is displayed.



For more information on the device in question, refer to the DD (Device Description) of the device.

* When changing connected devices

CommStaff continues communicating with the device while it is operating. A communication error will occur if you remove the communications cable from the device in order to change to another device.

First, exit CommStaff and then remove the communications cable from the device. Start CommStaff again after you have connected the communications cable to the new device.

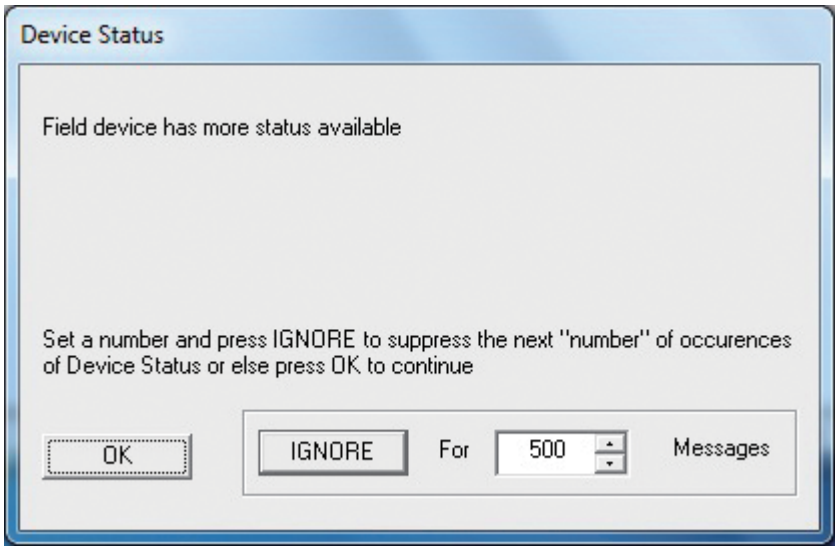
The following message appears if you remove the communications cable while CommStaff is operating.

“Error In Communication with Device, Closing the Device…”

When [OK] is clicked, all displayed data disappears.

4-4. When the device status is ON

When the device is ON, the following screen is displayed.Click the [Ignore] button.Next, check the device status details as necessary. —For details see section 6.1.2, “View Menu.”

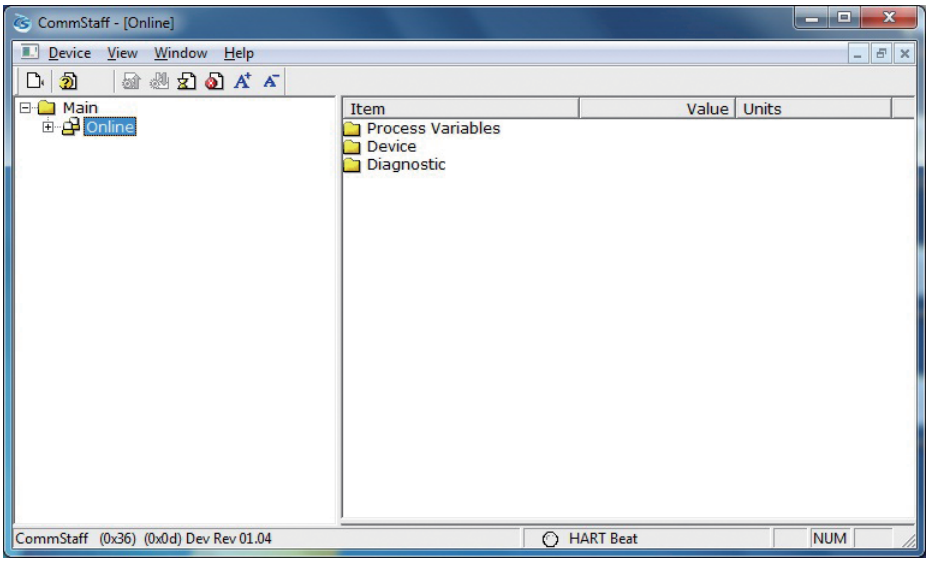


Chapter 5. Basic Operation of CommStaff

This chapter describes the basic operation of CommStaff.

CommStaff uses an Explorer-type screen configuration. A menu tree appears in the left pane and details of the item selected in the menu tree appear in the right pane.

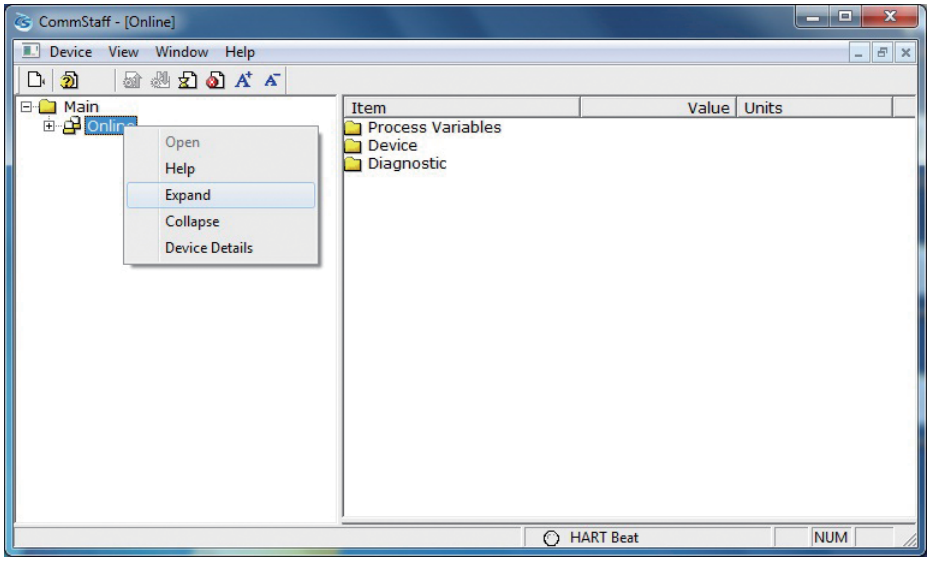
CommStaff has four menus (Device, View, Window, and Help) and eight icon functions.



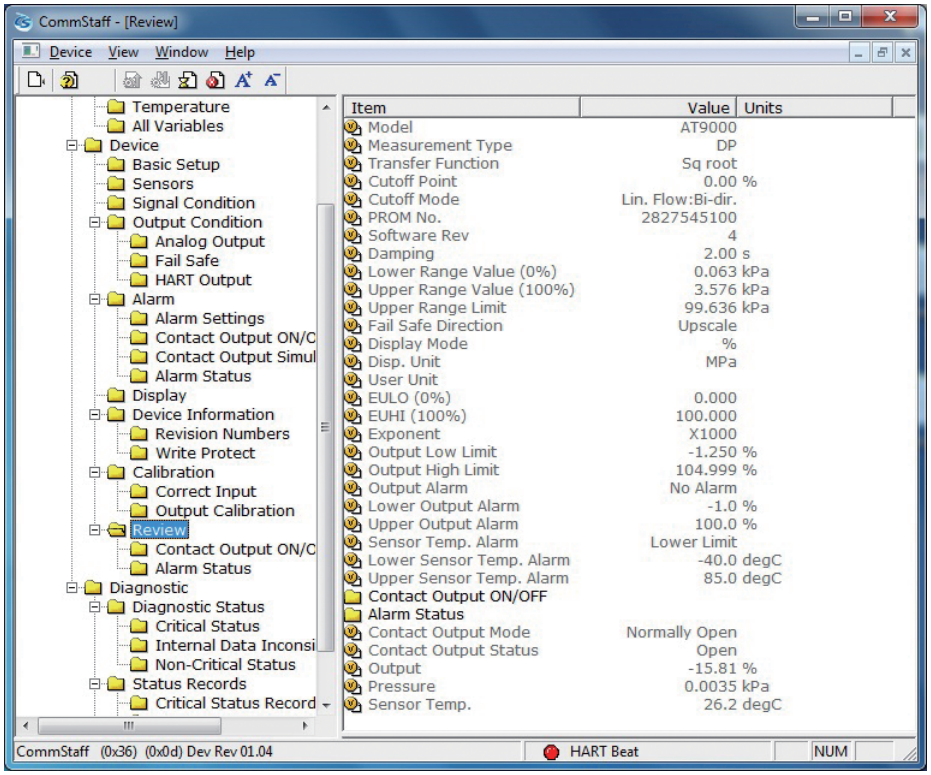
5-1. Displaying a List of Main Data Items

To display a list of main data items, select Review in the menu tree.

First, right-click Online in the left pane and select “Expand.” The expanded menu tree is displayed in the left pane.



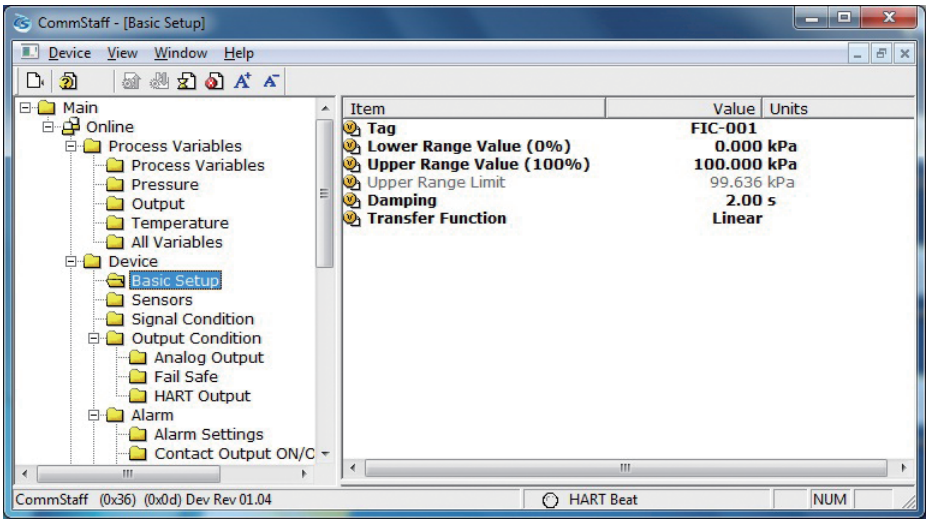
Select Review from the expanded menu tree. A list of main data items appears in the right pane.



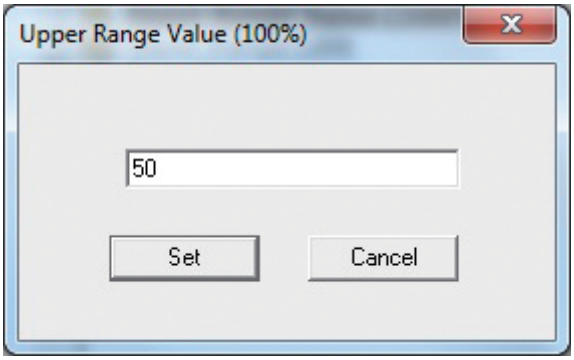
5-2. Changing Settings

To change data item settings, double-click the item in the right pane. Note, however, that only the settings of boldfaced data items can be changed. The settings of grayed-out data items cannot be changed. Also note that data settings cannot be changed in the Review pane.

For example, the basic data items for the AT9000 (GTX) device are contained in Basic Setup.

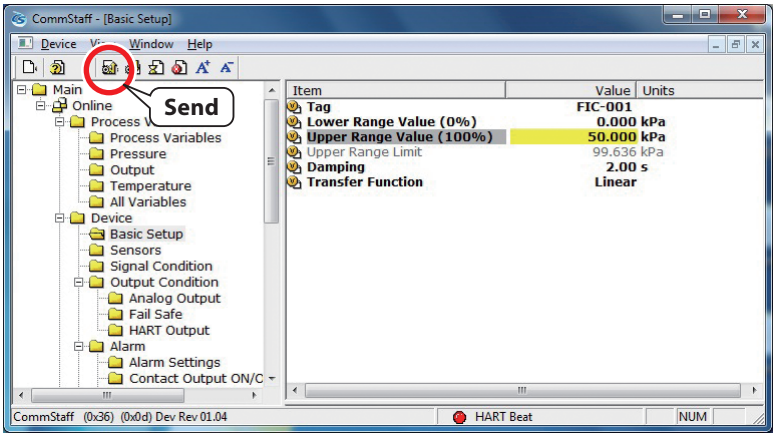


To change the setting for Upper Range Value (100 %), double-click that item in the right pane as shown above. A window opens for changing the setting. Enter the desired value and then click the Set button. Input the setting after deletion of the former setting.



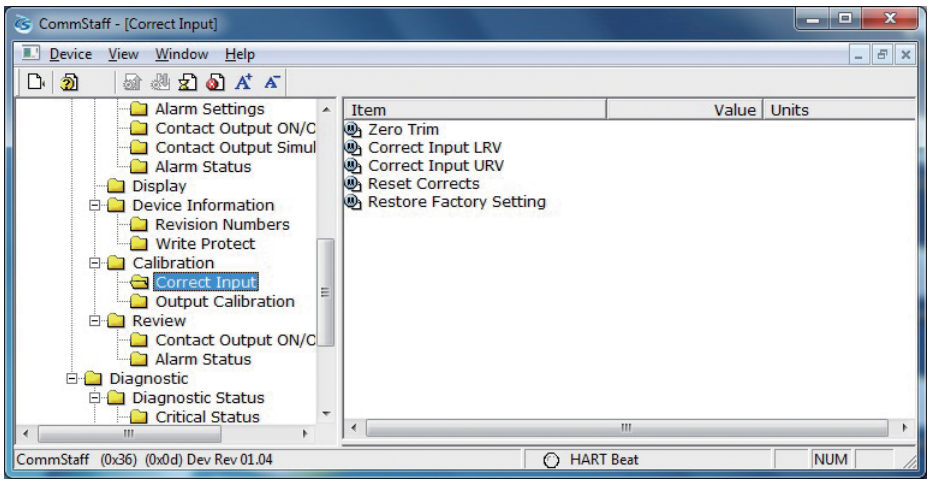
The changed value is highlighted in yellow. The value has not yet been applied in the connected device. To send the changed value to the device, click the send button. The send button has an icon containing an upward arrow and is third from the left in the icon menu.

When the changed value is sent to the device, the yellow highlighting disappears.



5-3. Adjustment, Calibration, and Loop Tests

Adjustment, calibration, and loop tests require method calls. For more information, refer to the instruction manual of the device in question.



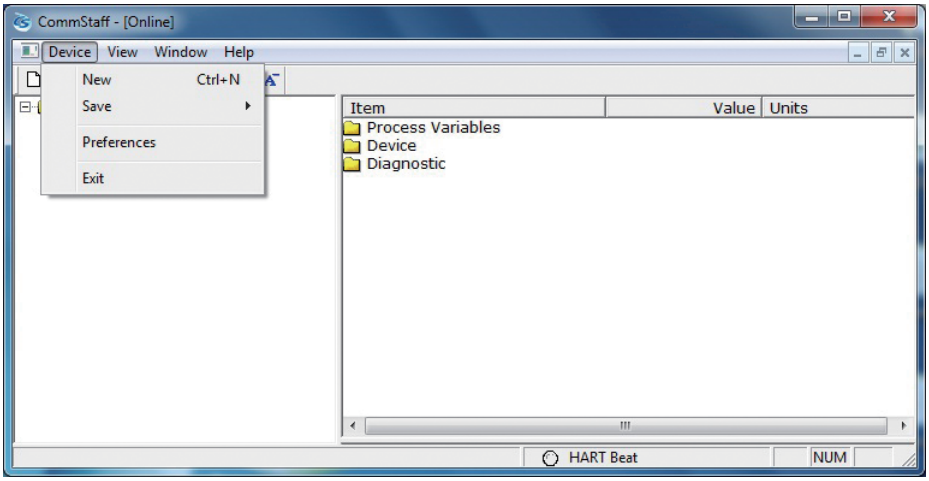
Chapter 6. CommStaff Functions

This chapter describes the menu functions and the icon menu functions in CommStaff.

6-1. Description of Menu Functions

CommStaff has four menus: Device, View, Window, and Help.

6-1-1. The Device Menu



The Device menu contains the following items.

New	This function is not used in normal operation. It resends data that disappeared from the screen due to a communication error or other reason. (When changing connected devices, temporarily exit CommStaff and then restart it.)
Save	Saves device data to a file. The data can be saved in CSV or PDF format. For more information, refer to Section 6-1-1-1, "Save Function."
Config.	Configures communication settings. This function is not used in normal operation. For more information, refer to Section 6-1-1-2, "Config."
Exit	Exits CommStaff.

6-1-1-1. Save Function

This function saves device data to a file. Either of the following two file formats can be selected:

CSV format, PDF format

The default file names are as follows. The file name can be changed when saving.

CSV format: tag name_yyyymmddhhmmss.csv

PDF format: tag name_yyyymmddhhmmss.pdf

Example: FIC-001_20100804152348.csv

CSV stands for comma-separated values because in the CSV format, data is saved as plain text separated by commas. CSV files can be opened using spreadsheet software such as Excel. They can also be opened using a text editor such as Microsoft Notepad.

Example: PV LRV, 0.00, kPa
PV URV,1 00.00, kPa

To open PDF files, software for reading PDF files is required.

6-1-1-2. Config.

This function is not used in normal operation.

"Serial Port" is configured automatically when a communication interface is selected. Do not change this setting.

"Search by Poll Address" is used when the device is connected in a HART multidrop topology.

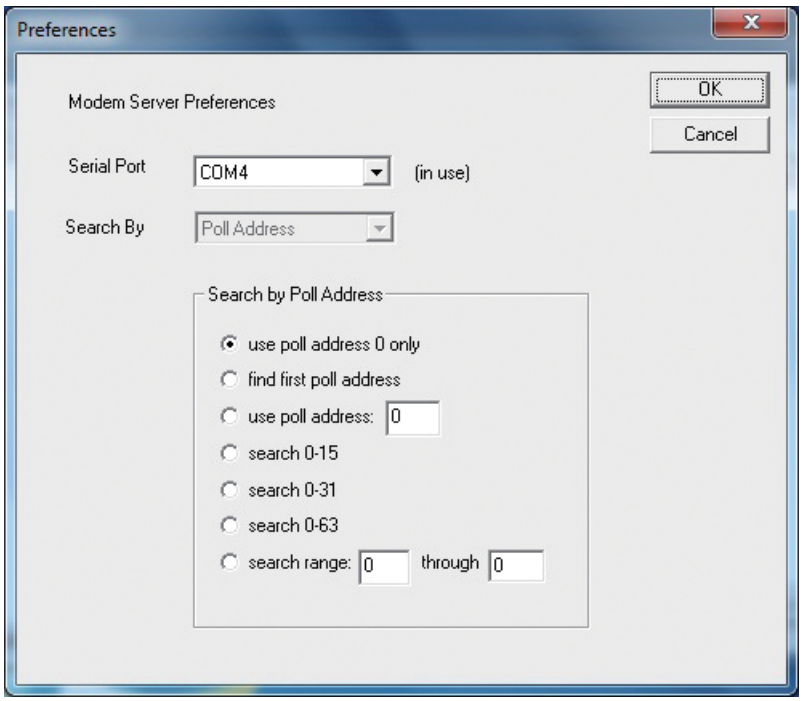
Multidrop topology is the HART communication specification that allows multiple devices to be connected to a single current loop.

In this case, only the device with the polling address "0" outputs 4–20 mA analog current.

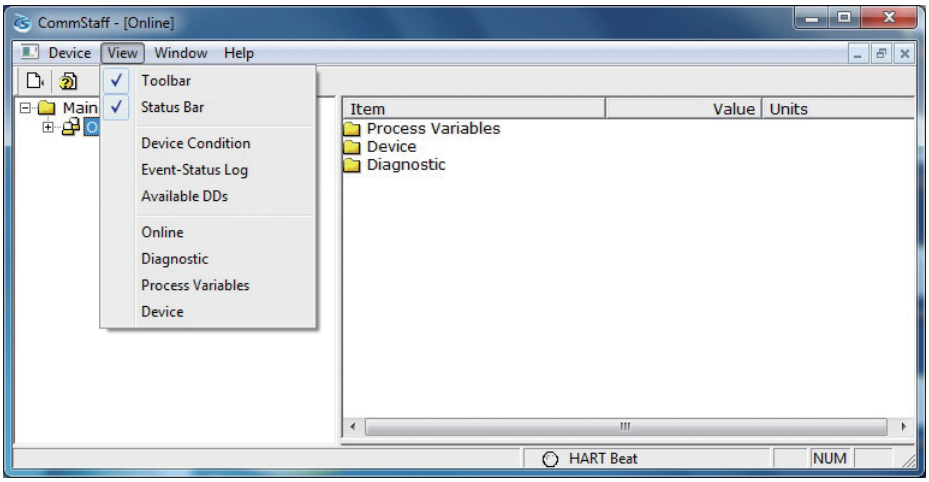
Devices with polling addresses other than 0 output a fixed current (usually 4 mA).

When not using the multidrop topology, be sure to select "use poll address 0 only."

The search time increases as the number of search addresses increases.



6-1-2. View Menu



The View menu contains the following items.

Toolbar	Toggles display of the icon menu. Refer to Section 6-1-2-1, "Icon Menu."
Status Bar	Toggles display of the status bar at the bottom of the screen.
Device Condition	Displays the device status. For more information, refer to the instruction manual of the device in question.
Event-Status Log	Toggles display of the event status log. Refer to the event status log when an incompatibility issue or other similar problem occurs. This function is not used in normal operation.
Available DDs	Displays all available DDs. Refer to Section 6-1-2-2, "All Available DDs."

The items listed below "Online" depend on the contents of the DD of the connected device. Refer to the instruction manual of the device.

6-1-2-1. Icon Menu

The icon menu contains the following eight items.

	New	This function is not used in normal operation. It resends data that disappeared from the screen due to a communication error or other reason. (When changing connected devices, temporarily exit CommStaff and then restart it.)
	Version information	Displays information about CommStaff, such as the version.
	Send	Sends data items that have had settings changed to a device.
	Cancel	Cancels changed settings before they are sent, and restores them to the original settings.
	Status	Displays the device status.
	Event status log	Displays the event status log.
	Increase font size	Increases the font size in the menu tree display and the data display panes. This function is useful on PCs with small screens.
	Decrease font size	Decreases the font size in the menu tree display and the data display panes.

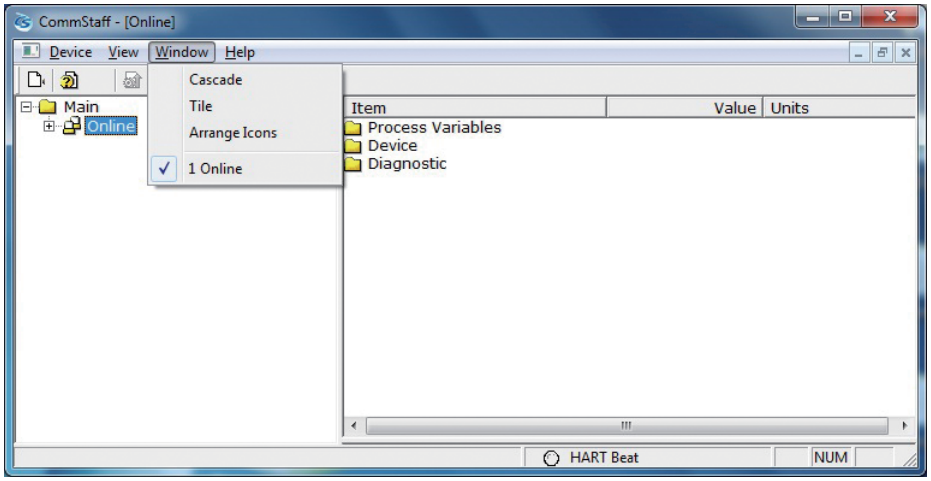
6-1-2-2. All Available DDs

DD is an abbreviation for Device Description. It is a file describing the parameters of a HART device.

The vendor code of Azbil Corporation (previously Yamatake Corporation) in HART FieldComm Group is 0x36 (in hexadecimal), so it is displayed as Yamatake (0x36).

0x00, 0x26, and 0xf9 contain default DDs provided by the HART FieldComm Group.

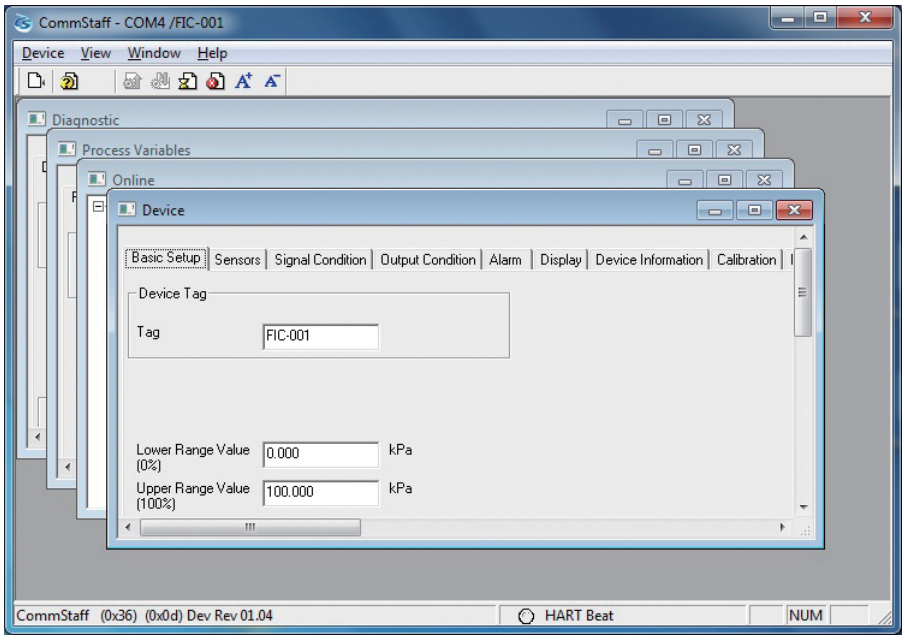
6-1-3. Window Menu



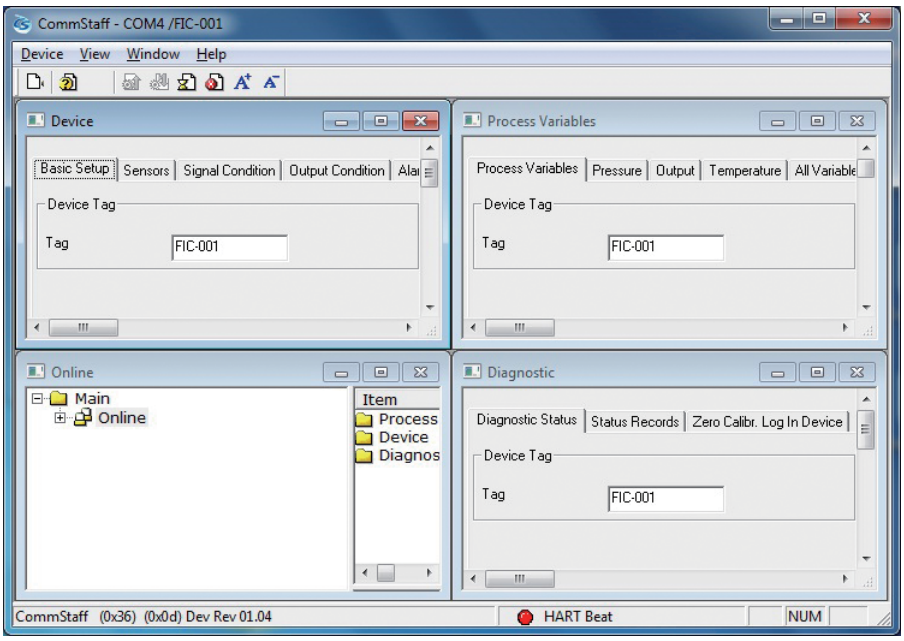
Cascade	Displays multiple open windows in a cascade. An example of cascade display is given in (1) below.
Tile	Displays multiple open windows in a tile arrangement. An example of tiled display is given in (2) below.
Arrange Icons	When windows are minimized, they are arranged as small icons at the bottom of the screen. An example of arranged icons is given in (3) below.

The items listed below “Online” are the currently open windows.

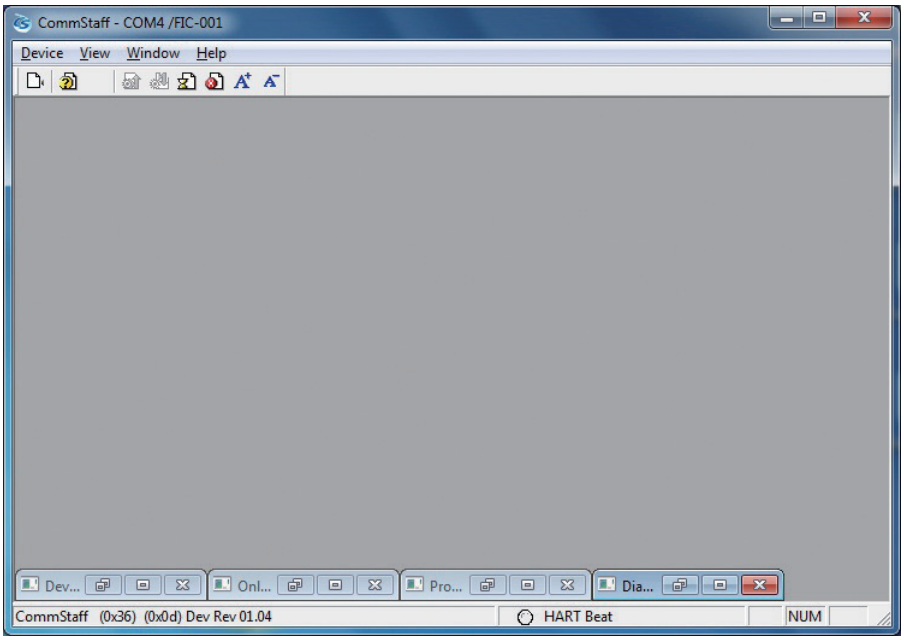
(1) Example of cascade display



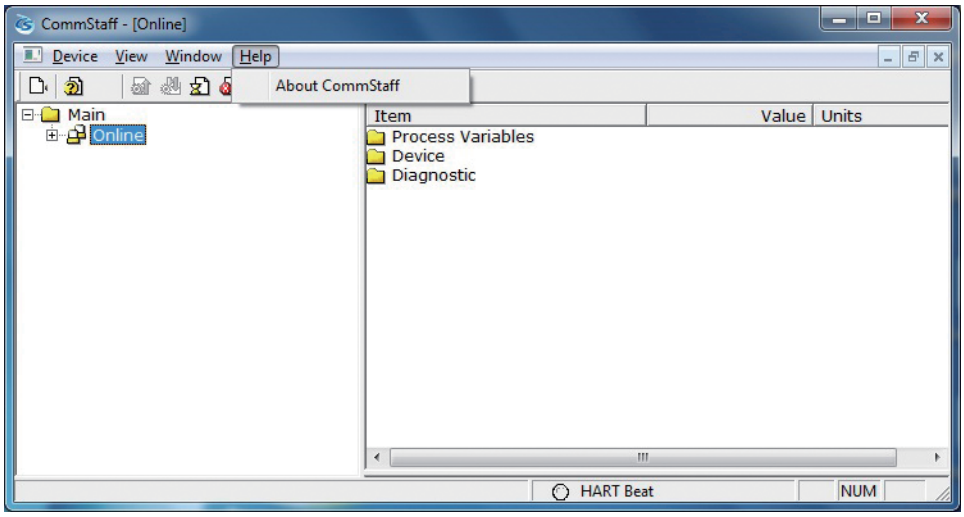
(2) Example of tiled display



(3) Example of arranged icons



6-1-4. Help Menu

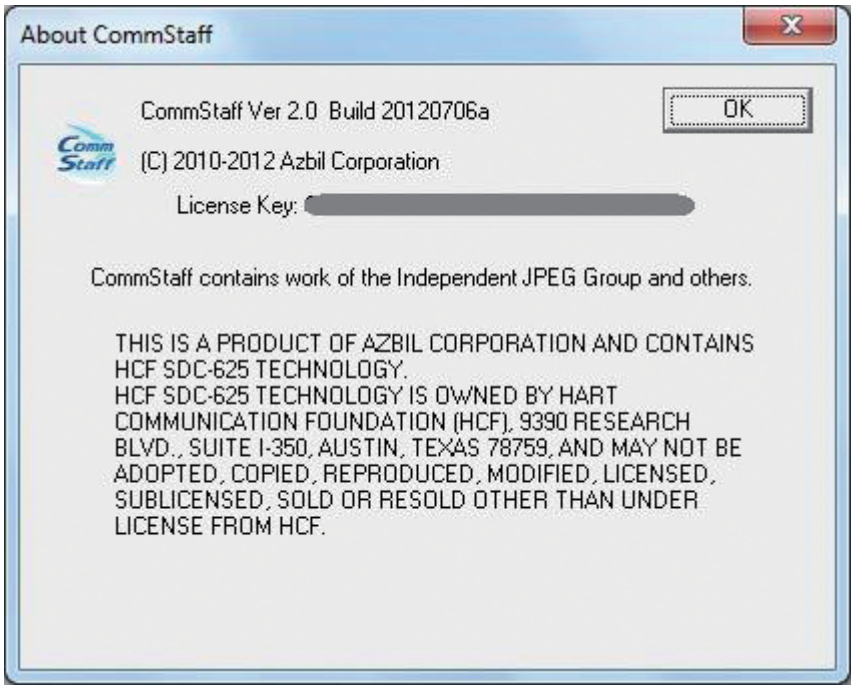


The Help menu contains the following items.

About CommStaff	Displays information about CommStaff, such as the version. Refer to Section 6-1-4-1, "About CommStaff."

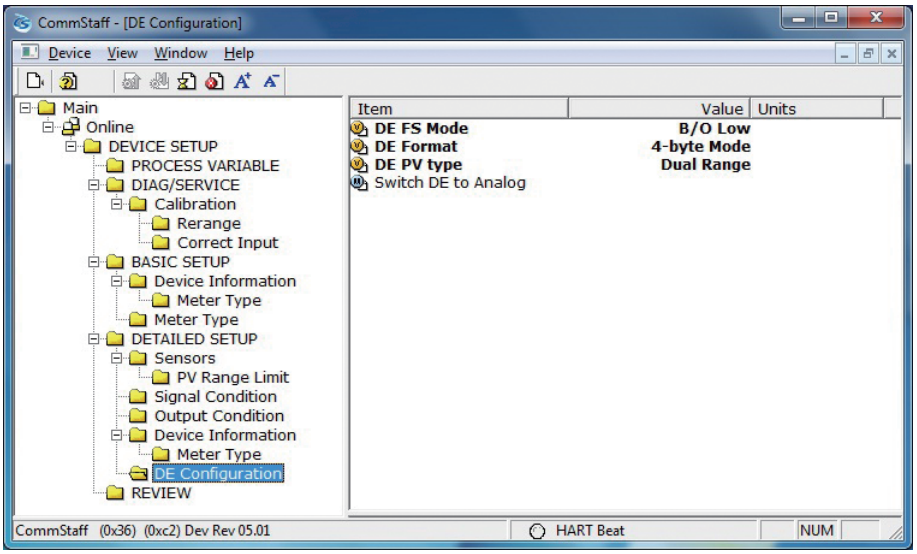
6-1-4-1. About CommStaff

This function displays the CommStaff version, copyright, license key, and other information.

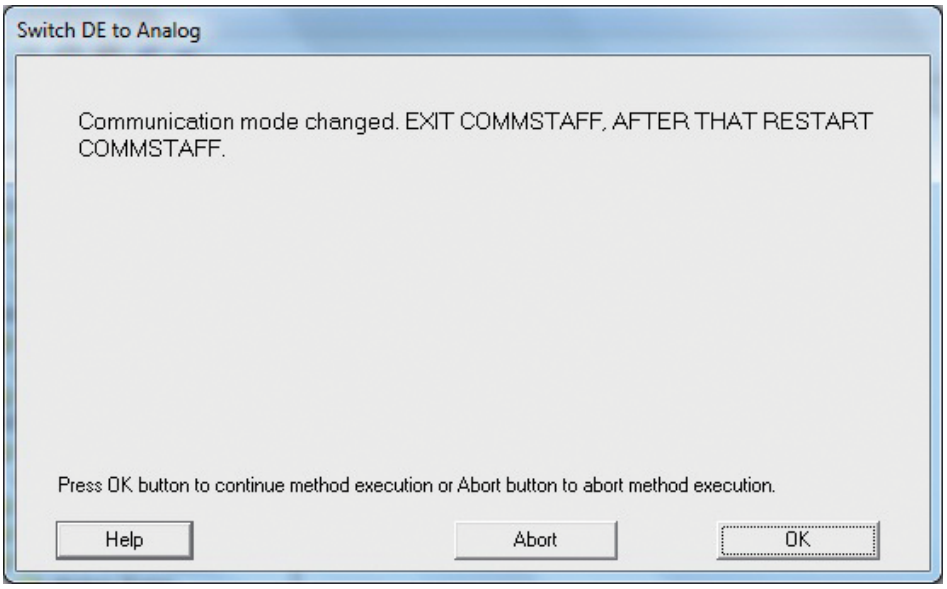


6-1-5. DE Setup Menu

Configure DE on the DE Configuration menu. Items available for setup are DE, FS Mode, DE Format, and DE PV type.



To change from DE Mode to Analog Mode (4–20 mA mode), execute the "Switch DE to Analog" method. After the changeover, the following screen is displayed. Be sure to exit CommStaff and restart it.



To change from Analog Mode (4–20 mA mode) to DE Mode, execute "Switch Analog to DE." In this case also, after the changeover, be sure to exit CommStaff and restart it.

Chapter 7. Troubleshooting

If you encounter a problem, please review the following "Troubleshooting Checklist" before contacting the azbil Group.

7-1. Troubleshooting Checklist

1. Is the connected device supported by (compatible with) CommStaff?
2. Does a similar problem occur when another device is connected? If a similar problem does not occur when another device is connected, there may be something wrong with the connected device or the connection loop.
3. Is the communication module connected correctly?
4. Does the PC meet the system requirements recommended by Azbil Corporation?
5. Are other application programs running at the same time? If so, exit the programs and restart CommStaff.
6. If the problem persists after checking the above items, restart the PC and then restart CommStaff.
7. Does the CommStaff application start up? If CommStaff does not start up, there may be a problem with the PC. If programs other than CommStaff do not start either, it is likely that the problem is the PC.

7-2. If CommStaff Freezes

If the screen freezes for some reason during operation and you cannot operate CommStaff, restart your PC.

7-3. Reasons for installation failure

1. If user access control (UAC) is operating, installation may fail. Please install after turning off UAC. After the installation, return UAC to the initial setting.
2. If the Windows user name is too long, or if any characters other than regular alphanumeric characters are used, installation may fail. The recommended Windows user name is 8 alphanumeric characters (no double-width Asian characters).

7-4. Incompatibility

If a problem occurs due to incompatibility, contact your Azbil Corp. sales representative.

7-5. Known issues

We are already aware of the following problems and are working to solve them. Thank you for your understanding.

No.	Description	Countermeasures
1	CommStaff operates as primary master. Therefore it cannot operate as the secondary master of a multi-master. Specifically, while another host and a HART device are communicating continuously with each other, it is not possible to connect CommStaff and communicate with the HART device.	Do not use simultaneously with other HART hosts. This is corrected in Ver. 3.0.
2	The menu can be opened by double-clicking on the left side of the screen, but cannot be opened on the right side.	Open the menu on the left side of the screen. This is corrected in Ver. 3.0.
3	If CommStaff is displayed in full screen mode and then terminated, when it starts the next time, the screen will not be in full screen mode, and a very small screen appears instead.	Instead of using full screen mode, drag the right lower corner of the screen to enlarge it to the desired size.
4	In the SFN communication version, the Analog Output (current value) display of ±200 % is shown converted to the 4–20 mA range. This results in display of the erroneous values of –12 mA and 36 mA for –200 % and 200 % respectively.	Treat the Analog Output values (current values) that are converted from % output values as reference values only.
5	ATT HART communication version: The PV highest and PV lowest values are created when CommStaff starts, and are not updated while CommStaff operates.	To update to the latest values, restart CommStaff.
6	For all types of the SFN communication version: After adjustment or calibration, the message "NOTE-Loop may be returned to automatic control" is sometimes mistakenly shown as the completion message.	In the SFN communication version, the 4–20 mA current signal will be disrupted while CommStaff operates, so manual control must continue. Do not switch to automatic control.
7	In some SFN communication versions: In the four SFN communication version models listed below, during adjustment function procedures, the latest values are sometimes not shown. • ST3000-SFN: Apply values: • AT9000-SFN: Apply values: Zero, Span, LRV (Actual) • PTG-SFN: Apply values: • ALTJ-SFN: Apply values:	To retrieve and display the latest values, select and execute "Read new value" from the menu.
8	SFN version: When an SFN communication interface is connected to a PC, it will be recognized as a COM port and will be assigned a number such as COM9. For the CommStaff SFN version, the range of legal numbers is COM1 to COM16, so if the assigned number is COM17 or more, the interface will not function.	If COM17 or a higher a number is issued, change the setting to a value between COM1 and COM16 using the Windows Device Manager.

No.	Description	Countermeasures
9	Parameters are shown as blank until they are acquired via communication. Also, during this time double-clicking a parameter will show an initial value which is different from the device value. Moreover, saving files when a blank is displayed will save the initial value, which is not the correct value.	To change a parameter, wait until it is displayed. If the device has a Review menu, wait until the Review menu is completely displayed. Communication speed is slow with SFN communications (218 bps, while HART is 1200 bps), so for some models it takes a few minutes to read all the parameters.
10	When executing Auto setup for AVP or SVX, the screen may indicate that setup is complete even though the device is not actually fully set up.	When the control valve can execute control in response to the input signal, Auto setup is complete, so wait until that time.
11	MTG: If characters other than the ones specified below are used for the tag setting, the tag will be displayed as "XXXXXXXX" when it is checked on the local setting card. Allowable characters: letters (A to Z) numbers (0 to 9) , (comma) - (hyphen) . (period) / (slash) space ( )	When setting the tag, use only the characters specified at left.
12	If the Message was set using numbers only and saved as a CSV file, then the message will be recognized as a numeric value when the file is opened from a spreadsheet application like Excel, and will be displayed as exponential notation (example: 1.23457E+31).	Set the Message using at least one alphabetical character, or set the message as a character string when opening it from the spreadsheet application.
13	In MTG SFN communication, once auto zero adjustment has been made from the local setting card, auto zero adjustment via CommStaff cannot be made.	Turn the power to the MTG main unit off and on again, or make the auto zero adjustment via the local setting card.
14	On the AT9000 (GTX) SFN communication version, DE communication is not supported by transmitter version 3.0 or earlier, even though the DE Configuration appears on the menu. So even using the Switch Analog to DE method will not switch to DE communication.	On the transmitter version 3.0 or earlier, only analog output is available.
15	AVP702: If operation authority was obtained on the Device screen, it may not be possible to use the input box.	Please obtain operation authority from the Online screen. If you do so from the Device screen, redisplay the screen.
16	If the OS is Windows 8, it may take more than 5 minutes for CommStaff to shut down.	Please upgrade the OS to Windows 8.1 or higher.
17	The OK button on the dialog screen is not displayed in some cases.	Display the OK button with sliding the horizontal scrolling bar to the right.
18	When you open the plural screens, indication update and operation may take time.	Please operate the next after closing an opened screen.
19	The data in CommStaff is updated when CommStaff starts and when parameters are displayed on the CommStaff screen. Accordingly, when Save is executed, the device data saved may not be the latest.	To save the latest data, restart CommStaff or wait until all parameters are displayed on the CommStaff screen and all data are updated before executing the Save command.

No.	Description	Countermeasures
20	In SFN communication, there may be an error in displayed values depending on the resolution of the data communication. Ex.: When "25.00 kPa" is written, "24.99 kPa" is displayed.	Even in this case, the correct value is written to the device.
21	When device data is saved, if any of the following characters are in the device tag, they will be deleted when the file name is written: "/", "*", "?", """, "<", ">", "|","\" Ex.: If device tag "FT0001/1" is specified, the file name will be "FT00011_yyyyMMddHHmmss."	Not using these characters is recommended.

Terms and Conditions

We would like to express our appreciation for your purchase and use of Azbil Corporation's products.
You are required to acknowledge and agree upon the following terms and conditions for your purchase of Azbil Corporation's products (system products, field instruments, control valves, and control products), unless otherwise stated in any separate document, including, without limitation, estimation sheets, written agreements, catalogs, specifications and instruction manuals.

1. Warranty period and warranty scope

1.1 Warranty period

Azbil Corporation's products shall be warranted for one (1) year from the date of your purchase of the said products or the delivery of the said products to a place designated by you.

1.2 Warranty scope

In the event that Azbil Corporation's product has any failure attributable to azbil during the aforementioned warranty period, Azbil Corporation shall, without charge, deliver a replacement for the said product to the place where you purchased, or repair the said product and deliver it to the aforementioned place.

Notwithstanding the foregoing, any failure falling under one of the following shall not be covered under this warranty:

(1) Failure caused by your improper use of azbil product
(noncompliance with conditions, environment of use, precautions, etc. set forth in catalogs, specifications, instruction manuals, etc.);
(2) Failure caused for other reasons than Azbil Corporation's product;
(3) Failure caused by any modification or repair made by any person other than Azbil Corporation or Azbil Corporation's subcontractors;
(4) Failure caused by your use of Azbil Corporation's product in a manner not conforming to the intended usage of that product;
(5) Failure that the state-of-the-art at the time of Azbil Corporation's shipment did not allow Azbil Corporation to predict; or
(6) Failure that arose from any reason not attributable to Azbil Corporation, including, without limitation, acts of God, disasters, and actions taken by a third party.

Please note that the term "warranty" as used herein refers to equipment-only-warranty, and Azbil Corporation shall not be liable for any damages, including direct, indirect, special, incidental or consequential damages in connection with or arising out of Azbil Corporation's products.

2. Ascertainment of suitability

You are required to ascertain the suitability of Azbil Corporation's product in case of your use of the same with your machinery, equipment, etc. (hereinafter referred to as "Equipment") on your own responsibility, taking the following matters into consideration:

(1) Regulations and standards or laws that your Equipment is to comply with.
(2) Examples of application described in any documents provided by Azbil Corporation are for your reference purpose only, and you are required to check the functions and safety of your Equipment prior to your use.
(3) Measures to be taken to secure the required level of the reliability and safety of your Equipment in your use
Although azbil is constantly making efforts to improve the quality and reliability of Azbil Corporation's products, there exists a possibility that parts and machinery may break down.
You are required to provide your Equipment with safety design such as fool-proof design, *1 and fail-safe design*2 (anti-flame propagation design, etc.), whereby preventing any occurrence of physical injuries, fires, significant damage, and so forth. Furthermore, fault avoidance, *3 fault tolerance,*4 or the like should be incorporated so that the said Equipment can satisfy the level of reliability and safety required for your use.

*1. A design that is safe even if the user makes an error.
*2. A design that is safe even if the device fails.
*3. Avoidance of device failure by using highly reliable components, etc.
*4. The use of redundancy.

3. Precautions and restrictions on application

Azbil Corporation's products other than those explicitly specified as applicable (e.g. azbil Limit Switch For Nuclear Energy) shall not be used in a nuclear energy controlled area (radiation controlled area).
Any Azbil Corporation's products shall not be used for/with medical equipment.
The products are for industrial use. Do not allow general consumers to install or use any Azbil Corporation's product.
However, azbil products can be incorporated into products used by general consumers. If you intend to use a product for that purpose, please contact one of our sales representatives.
In addition,
you are required to conduct a consultation with our sales representative and understand detail specifications, cautions for operation, and so forth by reference to catalogs, specifications, instruction manual, etc. in case that you intend to use azbil product for any purposes specified in (1) through (6) below.
Moreover, you are required to provide your Equipment with fool-proof design, fail-safe design, anti-flame propagation design, fault avoidance, fault tolerance, and other kinds of protection/safety circuit design on your own responsibility to ensure reliability and safety, whereby preventing problems caused by failure or nonconformity.

(1) For use under such conditions or in such environments as not stated in technical documents, including catalogs, specification, and instruction manuals

(2) For use of specific purposes, such as:
* Nuclear energy/radiation related facilities
[For use outside nuclear energy controlled areas] [For use of Azbil Corporation's Limit Switch For Nuclear Energy]
* Machinery or equipment for space/sea bottom
* Transportation equipment
[Railway, aircraft, vessels, vehicle equipment, etc.]
* Antidisaster/crime-prevention equipment
* Burning appliances
* Electrothermal equipment
* Amusement facilities
* Facilities/applications associated directly with billing

(3) Supply systems such as electricity/gas/water supply systems, large-scale communication systems, and traffic/air traffic control systems requiring high reliability
(4) Facilities that are to comply with regulations of governmental/public agencies or specific industries
(5) Machinery or equipment that may affect human lives, human bodies or properties
(6) Other machinery or equipment equivalent to those set forth in items (1) to (5) above which require high reliability and safety

4. Precautions against long-term use

Use of Azbil Corporation's products, including switches, which contain electronic components, over a prolonged period may degrade insulation or increase contact-resistance and may result in heat generation or any other similar problem causing such product or switch to develop safety hazards such as smoking, ignition, and electrification.
Although acceleration of the above situation varies depending on the conditions or environment of use of the products, you are required not to use any Azbil Corporation's products for a period exceeding ten (10) years unless otherwise stated in specifications or instruction manuals.

5. Recommendation for renewal

Mechanical components, such as relays and switches, used for Azbil Corporation's products will reach the end of their life due to wear by repetitious open/close operations.
In addition, electronic components such as electrolytic capacitors will reach the end of their life due to aged deterioration based on the conditions or environment in which such electronic components are used.
Although acceleration of the above situation varies depending on the conditions or environment of use, the number of open/close operations of relays, etc. as prescribed in specifications or instruction manuals, or depending on the design margin of your machine or equipment, you are required to renew any Azbil Corporation's products every 5 to 10 years unless otherwise specified in specifications or instruction manuals.
System products, field instruments (sensors such as pressure/flow/level sensors, regulating valves, etc.) will reach the end of their life due to aged deterioration of parts.
For those parts that will reach the end of their life due to aged deterioration, recommended replacement cycles are prescribed. You are required to replace parts based on such recommended replacement cycles.

6. Other precautions

Prior to your use of Azbil Corporation's products, you are required to understand and comply with specifications (e.g., conditions and environment of use), precautions, warnings/cautions/notices as set forth in the technical documents prepared for individual Azbil Corporation's products, such as catalogs, specifications, and instruction manuals to ensure the quality, reliability, and safety of those products.

7. Changes to specifications

Please note that the descriptions contained in any documents provided by azbil are subject to change without notice for improvement or for any other reason.
For inquires or information on specifications as you may need to check, please contact our branch offices or sales offices, or your local sales agents.

8. Discontinuance of the supply of products/parts

Please note that the production of any Azbil Corporation's product may be discontinued without notice.
For repairable products, we will, in principle, undertake repairs for five (5) years after the discontinuance of those products. In some cases, however, we cannot undertake such repairs for reasons, such as the absence of repair parts.
For system products, field instruments, we may not be able to undertake parts replacement for similar reasons.

9. Scope of services

Prices of Azbil Corporation's products do not include any charges for services such as engineer dispatch service.
Accordingly, a separate fee will be charged in any of the following cases:
(1) Installation, adjustment, guidance, and attendance at a test run
(2) Maintenance, inspection, adjustment, and repair
(3) Technical guidance and technical education
(4) Special test or special inspection of a product under the conditions specified by you

Please note that we cannot provide any services as set forth above in a nuclear energy controlled area (radiation controlled area) or at a place where the level of exposure to radiation is equivalent to that in a nuclear energy controlled area.

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