

General Specifications

FSA210 Mass flow Configuration Software

EJXMVTool™

GS 01C25R50-01E

The FSA210 (EJXMVTool) software package is used to perform mass flow configuration for the EJX910A Multivariable Transmitter. This software can also read and write the general parameters of HART communications. Configuration of the fluid physical properties and the primary device of the EJX910A can be done by means of a dialog menu.

OPERATIONAL CONDITIONS

Personal computer

IBM PC/AT compatible running Windows XP, English version

Note

Please note that any of the following will interfere with HART communications:

- The use of a non-English version of Windows XP
- The installation in Windows XP of files for complex script and right to left languages, including Thai
- The installation in Windows XP of files for East Asian languages
- Setting the PC to be a member of a domain

CPU:

Pentium 300MHz processor or higher.

Main memory:

512 MB or greater.

Hard disk:

NTFS format, with at least 512 MB free space

CD-ROM drive:

Must be supported by the PC's operating system

Display:

Must be supported by the PC's operating system and display at least 256 colors.

Serial port:

RS232C or USB

Incompatible Software

Software type	Software name	Version
Asset Management Software	Plant Resource Manager	Any version
	Pactware	Any version

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Communications interface

HART communications interface

Recommended HART modem:

MACTek 010001 RS232C

MODEL TO BE CONNECTED

EJX910A multivariable transmitters

Note: Peer to peer and burst mode off connection

FUNCTIONAL SPECIFICATIONS

Flow setup wizard

(1) Auto compensation mode

Procedures required to set up primary devices for flow configuration and the fluid physical properties can be performed by a step-by-step dialog window.

(2) Basic mode

Flow operation and density compensation are performed with the flow factors being input manually.

Download/Upload:

Downloading of configuration data to device
Uploading of data from device to PC

Opening/saving of files:

Opening and saving of configuration data

Report:

A setting data list is exported in CSV file format.

Obtain Flow coefficient:

The flow coefficient can be obtained from the transmitter (input selection: sensor data or simulated data.)

Display process values:

Flow, Differential Pressure, Static Pressure, External Temperature, Total Flow

General parameter setting function:

The FSA210 has a function which can read and write HART communication general parameters.

Note: The burst mode and multidrop functions are not supported.

Supported primary device

As specified in Table 1

Density compensation

(1) Density compensated by physical properties

database:

As specified in Table 2

Source:

American Institute of Chemical Engineers (AIChE®) DIPPR® Project No.801 Database: 2003 Edition

(2) Density compensated using standard

Steam tables:

IAPWS-IF97 Water and Steam (1997)
IAPWS-IF97: IAPWS Industrial Formulation 1997
IAPWS: The International Association for the Properties of Water and Steam.

Natural gas:

AGA8.
Compressibility Factors of Natural Gas and
Other Related Hydrocarbon Gases.
American Gas Association (AGA)
Transmission Measurement Committee Report
No.8 Second Edition, November 1992
Detail Characterization Method
Gross Characterization Method 1
Gross Characterization Method 2
ISO 12213:1997 First edition 1997-12-01
Part 2: molar-composition analysis
Part 3: physical properties

(3) Custom fluid density and viscosity compensation:

Numerical value user input for physical properties
(density and viscosity etc.)

MODEL AND SUFFIX CODES

Model	Suffix Codes	Descriptions
FSA210	Mass flow configuration software
	-S	License: Single PC License
	1	Always 1
	C	Software media: CDROM
	1	Language: English
	0	Always 0
	E	Communications protocol: HART

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Note: HART modem is not attached

<Reference>

- Windows is a registered trademark of Microsoft Corporation.
- Pentium is a registered trademark of Intel Corporation.
- IBM PC/AT is a registered trademark of International Business Machines Corp.
- HART is a registered trademark of HART Communication Foundation.
- MACTek is a registered trademark of MACTek Corporation.
- AIChE, DIPPR (Design Institute for Physical Properties) is a registered trademark of American Institute of Chemical Engineers.
- Other company/organization and/or product names are registered trade marks of their respective holders.

<RELATED INSTRUMENTS>

EJX910A Multivariable Transmitters:
GS 01C25R01-01E

Table 1. Primary Device

Type	Primary Device
Orifice	FIX Fixed Mode (Sets the discharge coefficient and gas expansion factor to a fixed value)
	Orifice Corner Taps [ISO5167-1 1991]
	Orifice Corner Taps [ISO5167-2 2003]
	Orifice Corner Taps [ASME MFC-3M 1989]
	Orifice Flange Taps [ISO5167-1 1991]
	Orifice Flange Taps [ISO5167-2 2003]
	Orifice Flange Taps [ASME MFC-3M 1989]
	Orifice Flange Taps [AGA No.3 1992]
	Orifice D and D/2 Taps [ISO5167-1 1991]
	Orifice D and D/2 Taps [ISO5167-2 2003]
Nozzle	Orifice D and D/2 Taps [ASME MFC-3M 1989]
	ISA1932 nozzle [ISO5167-1 1991/ ISO5167-3 2003]
	Long radius nozzle [ISO5167-1 1991/ ISO5167-3 2003]
Venturi	ASME FLOW NOZZLES [ASME MFC-3M 1989]
	Venturi nozzle [ISO5167-1 1991/ ISO5167-3 2003]
	Classical Venturi tube "as cast" convergent section [ISO5167-1 1991/ ISO5167-4 2003]
	ASME Venturi Tubes With a rough Cast or Fabricated Convergent [ASME MFC-3M 1989]
	Classical Venturi tube with a machined convergent section [ISO5167-1 1991/ ISO5167-4 2003]
	ASME Venturi Tubes With a machined convergent section [ASME MFC-3M 1989]
Classical Venturi tube with a rough-welded sheet-iron convergent section [ISO5167-1 1991/ ISO5167-4 2003]	

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Table 2. General liquid and gas

Fluid name
AIR
Ammonia
Carbon dioxide
Chlorine
Ethane
Ethylene
Hydrogen
Nitrogen
Oxygen
Propane
Propylene
Water

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