# Technical Information

Cavitation Detection Software Setup Guide

TI 30B10A10-01EN

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# Introduction

## ■ About this manual

This manual describes in detail the functions in the Cavitation Detection Software.

## ■ Contents of this manual

The contents of this manual are based on the style of hardware and the specifications of software release at the time of this publication.

A function may be limited by the combination of an operating hardware and software.

# Documentation Conventions

## ■ Symbol Marks

Throughout this Technical Information, you will find several different types of symbols are used to identify different sections of text. This section describes these icons.

**WARNING**

Indicates precautions to avoid a danger that may lead to death or severe injury.

**CAUTION**

Indicates precautions to avoid a danger that may lead to minor or moderate injury or property damage.

**IMPORTANT**

Identifies important information required to understand the operations or functions.

**TIP**

Identifies additional information.

**SEE ALSO**

Identifies a source to be referred to.

Clicking a reference displayed in green can call up its source, while clicking a reference displayed in black cannot.

## ■ Drawing Conventions

Some drawings in this manual may be partially emphasized, simplified or omitted for the convenience of description.

Some screen images depicted in this manual may have different display positions or character types (e.g., uppercase/lowercase letters) compared to the actual screen displays, but only within a range that will not lead to misunderstanding of the function and operation monitoring.

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## ■ Copyrights



## ■ Trademarks and Licensed Software

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# Document List

## STARDOM

| | |
|---|---|
| STARDOM Engineering Guide (FCN-500/FCN-RTU) | TI 34P02K35-02E |
| STARDOM Troubleshooting Guide: Information Gathering | TI 34P02K03-02E |

## FOUNDATION Fieldbus

| | |
|---|---|
| FOUNDATION Fieldbus Book - A Tutorial | TI 38K02A01-01E |

## Differential Pressure and Pressure Transmitters

| | |
|---|---|
| EJX and EJA-E Series Differential Pressure and Pressure Transmitters Installation Manual | IM 01C25A01-01E |
| DPharp Fieldbus Communication Type | IM 01C25T02-01E |

# Cavitation Detection Software Setup Guide

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# 1. Setup Guide

## ■ FOUNDATION Fieldbus Devices Setup

Setup the EJX Series Differential Pressure and Pressure Transmitters as instructed by "EJX and EJA-E Series Differential Pressure and Pressure Transmitters Installation Manual" (IM 01C25A01-01E). Regarding wiring, refer to "DPharp Fieldbus Communication Type" (IM 01C25T02-01E).

## ■ Parameters of FOUNDATION Fieldbus Device

Setup the parameters in the table below for the EJX series differential pressure and pressure transmitters.

The parameters are set to the EJX Series by execution of [Necessary parameters of field device] on the Cavitation Maintenance.

In addition, change the mode of each function block to AUTO.

**Table Setting value and initial value of parameters**

| Block name | Parameter name | Setting value (initial value) | Description and remarks |
|---|---|---|---|
| SENSOR transducer block | PRIMARY_VALUE _FTIME | 0.0(2.0) | Dumping time constant for the PRIMARY value (seconds) |
| | SP_VALUE_FTIME | 0.0(2.0) | Dumping time constant for the static pressure value (seconds) |
| | DIAG_PERIOD | 20(180) | Blockage detection period |
| | SP_VALUE_TYPE | 109: absolute pressure (108: gauge pressure) | Type of static pressure<br>109: absolute pressure |
| AI1 function block | CHANNEL | 3: TERTIARY_VALUE (1: PRIMARY_VALUE) | Selects the channel of transducer block to be connected<br>TERTIARY_VALUE: L-side static pressure |
| | L_TYPE | Direct (ordered) | Selects the calculation function of AI function block<br>Direct: Directly outputs the input value |
| | PV_FTIME | 0(0) | The filter (damping) of AI function block (in seconds) |
| AI2 function block | CHANNEL | 2: SECONDARY_VALUE (2: SECONDARY_VALUE) | Selects the channel of transducer block to be connected SECONDARY_VALUE: H-side static pressure |
| | L_TYPE | Direct (ordered) | Selects the calculation function of AI function block<br>Direct: Directly outputs the input value |
| | PV_FTIME | 0(0) | The filter (damping) of AI function block (in seconds) |

## ● Recommended Setting value of parameters

By setting the following table on the EJX series differential pressure and pressure transmitters, cavitation detection software can be effectively used.
(It does not affect the operation of cavitation detection software. )

**Table Recommended Setting value of parameters**

| Block name | Parameter name | Setting value (initial value) | Description and remarks |
|---|---|---|---|
| LCD Transducer Block | DISPLAY_SEL | Display out1 on (Display out1 on) | Selection of display1 to 4 to be shown on LCD: 1 (DISPLAY1 ON) |
| | INFO_SEL | Display Tag on (Parameter on Unit on) | Selection of items to be displayed: 1 (TAG ON) |
| | PARAMETER_SEL1 | AI1 OUT (AI1 OUT) | Selection of a parameter to be displayed on display1: AI1 OUT |
| | DISPLAY_CYCLE | 5 (0) | Duration of display cycle. (Time unit: 1=400 ms): 5 (2 seconds) |

# 2. Ordering Information

When ordering the EJX series differential pressure and pressure transmitters, set the software tag and the node address in the table below according to the segment used by Foundation fieldbus communication modules (NFLF111).

**Table Software Tag and Node Address**

| Port (Segment) of NFLF111 | Software Tag (PD_TAG) | Node Address |
|---|---|---|
| 1 | PAMDCV001 | 245 (0xF5) |
| 2 | PAMDCV002 | 245 (0xF5) |
| 3 | PAMDCV003 | 245 (0xF5) |
| 4 | PAMDCV004 | 245 (0xF5) |

Note: If parameters different from the above table are set for the EJX series, reset the parameters on the field device setting terminal such as FieldMate.

# Revision Information

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