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.
Copyrights and Trademarks

■ Copyrights

The copyrights of this document belong to Yokogawa Electric Corporation.
No part of this document may be transferred, sold, distributed (including delivery via a commercial PC network or the like), or registered or recorded on videotapes.

■ Trademarks and Licensed Software

• STARDOM is a trademark of Yokogawa Electric Corporation.
• Other product and company names used in this manual are trademarks or registered trademarks of their respective holders.
• Registered trademarks or trademarks are not denoted with the ‘TM’ or ‘®’ mark in this document
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
TI 30B10A10-01EN 1st Edition

CONTENTS

Introduction .......................................................................................... i
Documentation Conventions .......................................................... ii
Copyrights and Trademarks .......................................................... iii
Document List .............................................................................. iv
CONTENTS ....................................................................................... v
1. Setup Guide ............................................................................. 1
2. Ordering Information .............................................................. 3
Revision Information ................................................................. i
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>
<thead>
<tr>
<th>Block name</th>
<th>Parameter name</th>
<th>Setting value (initial value)</th>
<th>Description and remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>SENSOR transducer</td>
<td>PRIMARY_VALUE_FTIME</td>
<td>0.0(2.0)</td>
<td>Dumping time constant for the PRIMARY value (seconds)</td>
</tr>
<tr>
<td></td>
<td>SP_VALUE_FTIME</td>
<td>0.0(2.0)</td>
<td>Dumping time constant for the static pressure value (seconds)</td>
</tr>
<tr>
<td></td>
<td>DIAG_PERIOD</td>
<td>20(180)</td>
<td>Blockage detection period</td>
</tr>
<tr>
<td></td>
<td>SP_VALUE_TYPE</td>
<td>109: absolute pressure</td>
<td>Type of static pressure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>108: gauge pressure</td>
</tr>
<tr>
<td>AI1 function block</td>
<td>CHANNEL</td>
<td>3: TERTIARY_VALUE</td>
<td>Selects the channel of transducer block to be connected</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1: PRIMARY_VALUE)</td>
<td>TERTIARY_VALUE: L-side static pressure</td>
</tr>
<tr>
<td></td>
<td>L_TYPE</td>
<td>Direct (ordered)</td>
<td>Selects the calculation function of AI function block</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Direct: Directly outputs the input value</td>
</tr>
<tr>
<td></td>
<td>PV_FTIME</td>
<td>0(0)</td>
<td>The filter (damping) of AI function block (in seconds)</td>
</tr>
<tr>
<td>AI2 function block</td>
<td>CHANNEL</td>
<td>2: SECONDARY_VALUE</td>
<td>Selects the channel of transducer block to be connected</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2: SECONDARY_VALUE)</td>
<td>SECONDARY_VALUE: H-side static pressure</td>
</tr>
<tr>
<td></td>
<td>L_TYPE</td>
<td>Direct (ordered)</td>
<td>Selects the calculation function of AI function block</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Direct: Directly outputs the input value</td>
</tr>
<tr>
<td></td>
<td>PV_FTIME</td>
<td>0(0)</td>
<td>The filter (damping) of AI function block (in seconds)</td>
</tr>
</tbody>
</table>
- **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>
<thead>
<tr>
<th>Block name</th>
<th>Parameter name</th>
<th>Setting value (initial value)</th>
<th>Description and remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCD Transducer Block</td>
<td>DISPLAY_SEL</td>
<td>Display out1 on (Display out1 on)</td>
<td>Selection of display1 to 4 to be shown on LCD: 1 (DISPLAY1 ON)</td>
</tr>
<tr>
<td>INFO_SEL</td>
<td>Display Tag on (Parameter on Unit on)</td>
<td>Selection of items to be displayed: 1 (TAG ON)</td>
<td></td>
</tr>
<tr>
<td>PARAMETER_SEL1</td>
<td>AI1 OUT (AI1 OUT)</td>
<td>Selection of a parameter to be displayed on display1: AI1 OUT</td>
<td></td>
</tr>
<tr>
<td>DISPLAY_CYCLE</td>
<td>5 (0)</td>
<td>Duration of display cycle. (Time unit: 1=400 ms): 5 (2 seconds)</td>
<td></td>
</tr>
</tbody>
</table>
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>
<thead>
<tr>
<th>Port (Segment) of NFLF111</th>
<th>Software Tag (PD_TAG)</th>
<th>Node Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PAMDCV001</td>
<td>245 (0xF5)</td>
</tr>
<tr>
<td>2</td>
<td>PAMDCV002</td>
<td>245 (0xF5)</td>
</tr>
<tr>
<td>3</td>
<td>PAMDCV003</td>
<td>245 (0xF5)</td>
</tr>
<tr>
<td>4</td>
<td>PAMDCV004</td>
<td>245 (0xF5)</td>
</tr>
</tbody>
</table>

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

Document name: Cavitation Detection Software Setup Guide
Document No.: TI 30B10A10-01EN

Jan. 2019/First Edition

- New publication

Written by: Yokogawa Electric Corporation
Published by: Yokogawa Electric Corporation
2-9-32 Nakacho, Musashino-shi, Tokyo 180-8750, Japan