**GUI POST EXPO SORTER**

**Contract #:**

**Application messaging Specification Rev-1**

Prepared for: POST EXPO Sorter

Prepared by: Fluence Automation LLC

Eric DUCHARNE  
3730 Commerce Dr., Suite 1214

Halethorpe, MD 21227

Telephone: 800-207-1848

[www.fluenceautomation.com](http://www.Post-IS.com)

This document includes data that may not be duplicated, used, or disclosed outside of the receiving agency – in whole or in part – for any purpose. This restriction does not limit the right to use information contained in the data if it is obtained from another source without restriction.

**Fluence Automation, LLC**

3730 Commerce Drive, Suites 1214, Baltimore, MD 21227

800.207.1848 \* www.fluenceautomation.com

[1 Introduction 3](#_Toc111687300)

[2 Screen Layout 3](#_Toc111687301)

[1- Status area 4](#_Toc111687302)

[2- Main menu 4](#_Toc111687303)

[3- Body 4](#_Toc111687304)

[1 - General View 4](#_Toc111687305)

[2 -Alarms view 6](#_Toc111687306)

[3-Alarms History View 6](#_Toc111687307)

[4- Alarms Hit list view 6](#_Toc111687308)

[5-Status view 7](#_Toc111687309)

[6-Statistics view 7](#_Toc111687310)

[6-1 SortedCode Screen 8](#_Toc111687311)

[6-2 Packages Screen 9](#_Toc111687312)

[7-Secondary Menu 9](#_Toc111687313)

[7-1 Lift Screen 9](#_Toc111687314)

[8- Help view 10](#_Toc111687315)

[9- Symbols 10](#_Toc111687316)

[3- Alarms 11](#_Toc111687317)

[4- Secondary menu 11](#_Toc111687318)

[3- Data logging 11](#_Toc111687319)

[Figure 1 - Screen Layout 3](#_Toc48436701)

[Figure 2 - Status area 4](#_Toc48436702)

# 1 Introduction

The purpose of the document.is to describe the GUI organization and the data that must be displayed on the views.

# 2 Screen Layout

The screen layout of the HMI is split into sections as shown in the following figure :



Figure 1 - Screen Layout

## 1- Status area

The status area shall show : local date and time and site name, HMI IP address, logged user and an LED showing the status of the HMI.

The HMI status is a combination of the statuses of the different components in the system :

- server PC

- communication with the various PLC's

- databases

- other connected systems.

Figure 2 - Status area

## 2- Main menu

The main is composed by a series of buttons linked to the views

1- General view : general layout

2- Alarms : list of active alarms

3 - Alarms History : list of historical alarms

4 - Alarms Hit List : list of the recurrent alarms ordered per frequency and duration

5 - Statistics :

6 - Status : graphical overview of the status of the network and the safety system

## 3- Body

This section will display the views connected to the main menu buttons.

#### 1 - General View

Each bin is shown as a rectangle. The color of the rectangle indicates the state :

- Blinking blue : bin partially full

- Bue : bin full

- Green : bin ok

- Gray : bin disabled

- Blinking Orange : confirmation Pe Blocked

Bin numbering and Inputs monitoring :

Conveyor and Induction Line naming :

#### 2 -Alarms view

This view will show a table of active alarms. Each alarm should have the following details :

- timestamp

- duration

- class (Error, Warning, Message)

- location

- description

- variable name (PLC Tag)

The table shall have filter, sort and export data features.

Filter : class, location

Sort : class, location, timestamp

#### 3-Alarms History View

This view will show a table of all historical alarms ordered per timestamp. Each alarms should have the following details :

- timestamp

- duration

- class (Error, Warning, Massage)

- location

- description

- variable name (PLC Tag)

The table shall have filter, sort and export data features.

Filter : begin/end date, class, location

Sort : class, location, timestamp

#### 4- Alarms Hit list view

This view will show all historical alarms ordered per frequency and duration. The user should be able to select a time window to find out which were the most frequent alarms and their duration in the given period of time. Each alarms should have the following details :

- timestamp

- duration

- class (Error, Warning, Massage)

- location

- description

- variable name (PLC Tag)

The table shall have filter, sort and export data features.

Filter : begin/end date, class, location

Sort : class, location, timestamp

#### 5-Status view

The view will show the status of the industrial network and all devices connected to it.In the same way, the safety system status should be shown so that a user can easily identify active safety devices (Emergency stop).

The barecode reader status and counter (read/no-read) should be shown.

#### 6-Statistics view

The view will show the BCR read rate and the troughput for the past 24 hours by period of 5 minutes.

The sorting result (percentage of each sorting code) will be display in a pie.

The screen will be refresh every minutes.

Sorting code definition :

sc01 : success

sc02 : alternate reject

sc03 : mechanical reject

sc04 : labeller error

sc05 : no container

#### 6-1 SortedCode Screen

The view will show the SortedCode SC 01 (Success) rate at the top and all the other SortedCode at the bottom for the past 24 hours by period of 5 minutes.

#### 6-2 Packages Screen

This view will show the packages processed by the machine. The user should be able to select a time window. Each package should have the following details :

- timestamp (Dimension message)

- packageId

- length

- rejectCode

- sortedCode

- Destination

- FinalDestination

The table shall have filter and export data features(csv file with semicolon as the separator) .

Filter : begin/end date, sortedCode

#### 7-Secondary Menu

#### 7-1 Lift Screen

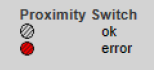
#### 8- Help view

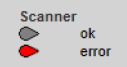
The help view will show a quick guide ot the HMI features and a legend of all the symbols used in the interface.

#### 9- Symbols

The following icons must be used to indicate the type and status of every device.











## 3- Alarms

In this section the last 5 alarms will be shown. For each alarm the following details must be present :

- timestamp

- duration

- class (Error, Warning, Massage)

- location

- description

- variable name (PLC Tag)

## 4- Secondary menu

This menu is designed to help the user navigate the views hierarchy. For example, when the overall overview is displayed, this menu will provide quick link to each area's details view.

# 3- Data logging

The system must maintained logged data for a minimum of 90 days.