



Virtual HMI User Instructions

ISC CAM RnR Technology

Version 1.0
23 April 2021

Table of Contents

- Intended Design and Use of the Virtual HMI
- How to use this document?
- Good to know
- How to connect to the ISC CAM Virtual HMI?
- HMI Overview
- HMI Page
 - Live Info
 - Settings
 - Maintenance
 - Machine
 - IO-Communication
 - Fauts

Intended design and use of Virtual HMI

- Virtual HMI facilitates the interaction of non-controls experts with the Intralox equipment to:
 - commission,
 - adjust key operating parameters,
 - communicate faults,
 - communicate basic operating log data.

How to use this document

- Additional documents from the Intralox User Manual
 - Mechanical drawing of Intralox Equipment
 - Dimensions of Intralox equipment and position of the components
 - Functional layout drawing of Intralox equipment
 - Application information: product trajectories, belt speeds, min product gaps,
 - ISC Interlocks Document
 - ISC Troubleshooting Guide

Good to know

- Default IP Address:
192.168.1.254
- IP address displayed on the HMI updates only after reboot of the ISC CAM (power off/on).
- Click on “Submit” button to implement changes on the ‘fly’.
- Units: SI
- All parameters/values displayed on HMI are available on the ethernet network

Connection to the Virtual HMI

How to connect to the Virtual HMI?

- Connect with a laptop to the ethernet network of the ISC CAM
 - If the ISC CAM is not connected to any ethernet, connect directly to the ethernet port of the ISC CAM.
- Write the IP address of the ISC CAM on the navigation bar of an internet browser such as Microsoft Edge, Google Chrome, Mozilla Firefox or similar.
 - If the IP address of the ISC CAM is unknown, please request it to the responsible/manager of PLC network.
 - Default IP address: 192.168.1.254

HMI Overview

Number of pages & high level Description

- The Virtual HMI has 6 different pages

1. Live: landing page
2. Settings
3. Maintenance
4. Machine
5. IO-Communication
6. Faults

The screenshot displays the 'ISC CAM CONFIGURATION' interface. On the left is a navigation menu with icons and labels: LIVE INFO (selected), SETTINGS, MAINTENANCE, MACHINE, IO-COMM, and FAULT. The main area is titled 'Live Info' and shows the following status indicators: System (FAULT), Belt (STOPPED), Infeed Sensor (CLEAR), and GAP (OK). Below these are several data boxes: Throughput (0 ppm), Belt Speed (0 m/min), Run Time (24 min), Up Time (17 min), Belt Usage (0 m), and GAP Faults (0). A 'Divert Information' section shows three divert units (Divert 0, 1, 2) with their respective 'ON/OFF' controls and 'Activations' and 'Avg/min' statistics. At the bottom, there are three more data boxes: Destination Next Product (0), Current Gap At Infeed (0 mm), and Minimum Gap At Infeed (0 mm). The footer contains copyright information and technical details: © Intralox 2021, IP Address: 192.168.1.254, MAC Address: 00:07:46:8c:0b:c5, SW Version: V1.0, DPE Model: S7000 ARB, S/N: 2568548 E2020SW7001.

Interface Overview

The screenshot displays the ISC CAM CONFIGURATION web interface. At the top left, a navigation panel (1) contains icons and links for LIVE INFO, SETTINGS, MAINTENANCE, MACHINE, IO-COMM, and FAULT. The main content area (3) is titled 'Settings' and includes a file upload section with 'Choose Files', 'No file chosen', 'Import Data', 'Filename', and 'Export Settings' buttons. Below this are two 'General Settings' sections. The first section contains 'Internal Count 0', 'Internal Count 1', and 'Internal Count 2' input fields, all set to 0. The second section contains 'PE Position Offset' (50 mm), 'Default Destination' (0), 'Min Product Length' (58 mm), and 'Retain Divert' (OFF). Below these are two 'Area' settings: 'Area 1' with 'Divert Offset' (51 mm) and 'Activation Delay Override' (52 ms); and 'Area 2' with 'Divert Offset' (54 mm) and 'Activation Delay Override' (55 ms). A 'Submit' button is at the bottom of the settings area. At the bottom of the page (2), a bottom information bar displays: © Intralox 2021, IP Address: 192.168.1.254, MAC Address: 00:07:46:8c:0b:c5, SW Version: V1.0, DPE Model: S800 AIM, and S/N: 2087281 E2020ASO457. A live bit indicator (4) is located in the top left corner of the interface.

1. Navigation panel

- Live Info
- Settings
- Maintenance
- Machine
- IO-COMM
- Fault

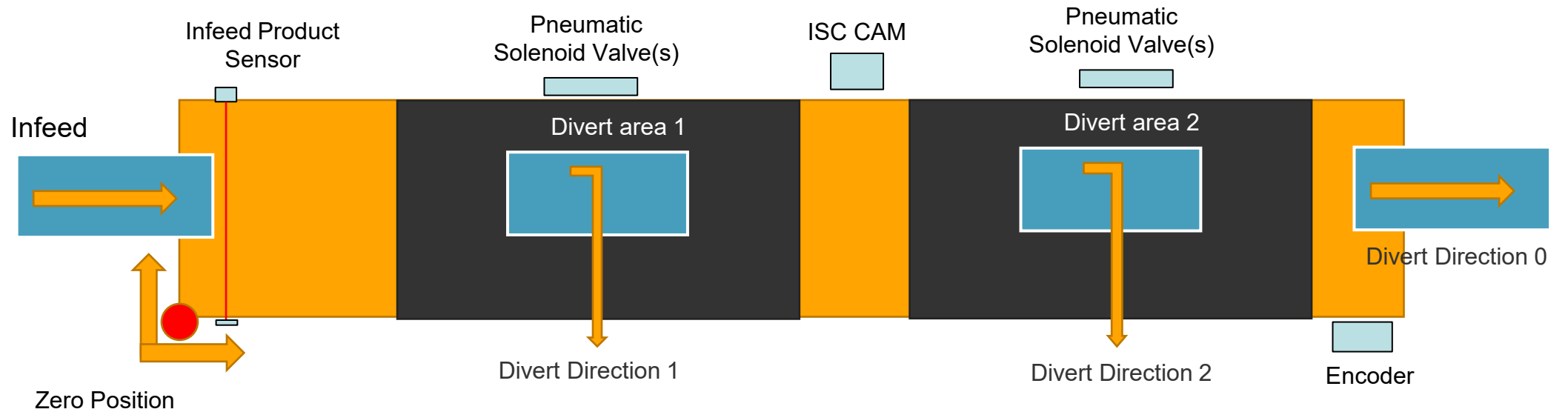
2. Bottom Information Bar

1. IP Address of ISC CAM
2. MAC Address: electronic unique identifier
3. SW Version: Intralox Divert Logic Version
4. DPE Model: Intralox Product Family
5. S/N: serial number of the Intralox equipment

3. Page Unique Information

4. Live bit

Intralox Equipment



1. Live page

End in Mind

- Provide an overview of the status of Intralox equipment using real-time operating data. The data is generated from the field components:
 - Infeed product sensor,
 - encoder,
 - solenoids valves
- ‘Read only’ page
- Intended users: Any user such as equipment operator, controls engineers, maintenance tech

Live Info – Indicators

The screenshot displays the 'Live Info' section of the Intralox control interface. It features a navigation menu on the left with options: LIVE INFO (selected), SETTINGS, MAINTENANCE, MACHINE, IO-COMM, and FAULT. The main content area is titled 'Live Info' and includes a status bar with four indicators: System (OK), Belt (STOPPED), Infeed Sensor (CLEAR), and GAP (OK). Below this, a row of metrics shows: Throughput (0 ppm), Belt Speed (0 m/min), Run Time (24 min), Up Time (12 min), Belt Usage (0 m), and GAP Faults (0). A 'Divert Information' section follows, listing Divert 0, 1, and 2 with their respective activation statuses and metrics. At the bottom, technical details are provided: Destination Next Product (0), Current Gap At Infeed (0 mm), and Minimum Gap At Infeed (104 mm). The footer contains copyright and identification information: © Intralox 2021, IP Address: 192.168.1.254, MAC Address: 00:07:46:8c:0b:c5, SW Version: V1.0, DPE Model: S800 AIM, S/N: 2087281 E2020ASO457.

ISC CAM CONFIGURATION

Live Info

System: OK ✓ Belt: STOPPED ⚠ Infeed Sensor: CLEAR ⚠ GAP: OK ✓

Throughput 0 ppm	Belt Speed 0 m/min	Run Time 24 min	Up Time 12 min	Belt Usage 0 m	GAP Faults 0
---------------------	-----------------------	--------------------	-------------------	-------------------	-----------------

Divert Information

Divert 0		Activations: 0	Avg/min: 0
Divert 1	OFF ⚠	ON/OFF	Activations: 0 Avg/min: 0
Divert 2	OFF ⚠	ON/OFF	Activations: 0 Avg/min: 0

Destination Next Product 0	Current Gap At Infeed 0 mm	Minimum Gap At Infeed 104 mm
-------------------------------	-------------------------------	---------------------------------

© Intralox 2021 IP Address: 192.168.1.254 MAC Address: 00:07:46:8c:0b:c5 SW Version: V1.0 DPE Model: S800 AIM S/N: 2087281 E2020ASO457

- **System**

General status of the system to run

- **Belt**

Status of the belt.

- **Infeed Sensor**

Status infeed Product Sensor.

- **Gap**

Status of gap between 2 consecutive products measured by the infeed product sensor. See page faults for definition of GAP not “OK”.

Gap shorter than “Min Gap at Infeed” triggers fault signal to PLC. See troubleshooting guideline.

Live Info – Indicators

ISC CAM CONFIGURATION intralox

Live Info

System: **OK** ✓ Belt: **STOPPED** ⚠ Infeed Sensor: **CLEAR** ⚠ GAP: **OK** ✓

Throughput 0 ppm	Belt Speed 0 m/min	Run Time 24 min	Up Time 12 min	Belt Usage 0 m	GAP Faults 0
---------------------	-----------------------	--------------------	-------------------	-------------------	-----------------

Divert Information

Divert	Status	Control	Activations	Avg/min
Divert 0	ON	ON/OFF	0	0
Divert 1	OFF	ON/OFF	0	0
Divert 2	OFF	ON/OFF	0	0

Destination Next Product	Current Gap At Infeed	Minimum Gap At Infeed
0	0 mm	104 mm

© Intralox 2021 IP Address: 192.168.1.254 MAC Address: 00:07:46:8c:0b:c5 SW Version: V1.0 DPE Model: S800 AIM S/N: 2087281 E2020ASO457

- **Throughput**

Number of products crossing the infeed product sensor in the last minute, updated every minute (not instantaneously)

- **Belt Speed**

Linear belt speed.

- **(Belt) Run Time**

Time Duration since ISC CAM is powered on first time. It only increases when the belt is moving (receiving encoder pulses)

- **Up Time**

Time duration since the ISC CAM was last time powered on.

- **Belt Usage**

Total distance travelled by the belt since first encoder pulse.

- **Gap Fault**

Total number of 'Gap Not OK' since the first encoder pulse. See page faults for definition of GAP not "OK".

Live Info – Divert Information

ISC CAM CONFIGURATION Intralox

Live Info

System: **OK** ✓ Belt: **STOPPED** ⚠ Infeed Sensor: **CLEAR** ⚠ GAP: **OK** ✓

Throughput 0 ppm	Belt Speed 0 m/min	Run Time 24 min	Up Time 12 min	Belt Usage 0 m	GAP Faults 0
---------------------	-----------------------	--------------------	-------------------	-------------------	-----------------

Divert Information

Divert 0	OFF ⚠	ON / OFF	Activations: 0	Avg/min: 0
Divert 1	OFF ⚠	ON / OFF	Activations: 0	Avg/min: 0
Divert 2	OFF ⚠	ON / OFF	Activations: 0	Avg/min: 0

Destination Next Product	Current Gap At Infeed	Minimum Gap At Infeed
0	0 mm	104 mm

© Intralox 2021 IP Address: 192.168.1.254 MAC Address: 00:07:46:8c:0b:c5 SW Version: V1.0 DPE Model: S800 AIM S/N: 2087281 E2020ASO457

- **Divert Number**

Zone counting starts from infeed of the Intralox equipment

- **ON/OFF button**

ON: zone is available to divert products

OFF: zone is not available to divert products

The ISC CAM would not activate this exit even if the LINE PLC indicates it.

Use the “OFF” button when a zone needs to be temporarily unavailable. Ex: maintenance task.

- **Activations**

Total number of activations of the divert since first encoder pulse received by the ISC CAM (absolute number)

Avg per Minute: products crossing the infeed product sensor in the last minute, update every 60 seconds

- **Destination Next Product**

Destination assigned to next product crossing the Infeed Product Sensor.

- **Current Gap at Infeed**

Gap measured by Infeed Product sensor between 2 products. Max gap displayed is the length of the Intralox conveyor.

- **Minimal Gap at Infeed**

Minimal required gap between 2 products for the Intralox equipment to operate correctly. Functional Layout and ISC Troubleshooting guideline.

2. Settings Page

Setting: End in Mind

- Provides the ability to modify key operating parameters (settings) of the Intralox equipment to optimise the trajectory of products.
- ‘Read and Write’. Option to import and export ‘Application setting files’
- Intended users
 - Technical operators looking for adjusting the performance of the Intralox equipment. Ex. maintenance tech

Setting General

ISC CAM CONFIGURATION

Settings

Select File: No file chosen Filename: Status: no file loaded

General Settings

Internal Count 0: Internal Count 1: Internal Count 2:

General Settings

PE Position Offset: mm Default Destination:

Min Product Length: mm Retain Divert:

Area 1

Divert Offset: mm Activation Delay Override: ms

Area 2

Divert Offset: mm Activation Delay Override: ms

Click "Submit" button to implement changes

© Intralox 2021 IP Address: 192.168.1.254 MAC Address: 00:07:46:8c:0b:c5 SW Version: V1.0 DPE Model: S800 AIM S/N: 2087281 E2020ASO457

- **Import Setting Button**

Import to the ISC CAM backup application setting files to (extension ".apl"). Ex: factory setting

- **Export Data Button**

Export application setting files to generate backup

- **Internal Count 0, 1 and 2**

Slugs/Train functionality. Number of products allocated to divert #. Only applicable when ISC CAM is working in "Internal Model", see HMI Page "Machine".

- **Min Product Length**

Minimum product length configured for this Intralox equipment. See Functional Layout

- **PE Position OffSet**

Infeed Product Sensor distance from the Zero Position. See Mechanical Drawing.

- **Default Destination**

Destination of product when no signal is received from the Line PLC (external mode) or no slugs/train function is set (internal mode)

Setting General SW7

The screenshot displays the 'Settings' page for ISC CAM CONFIGURATION. The interface includes a sidebar with navigation options: LIVE INFO, SETTINGS (highlighted), MAINTENANCE, MACHINE, IO-COMM, and FAULT. The main content area is titled 'Settings' and features a file selection interface with 'Choose Files', 'Import Data', and 'Export Settings' buttons. Below this are sections for 'Destination Counters' (Internal Count 0, 1, 2) and 'General Settings' (Min Product Length, PE Position Offset, Default Destination). A highlighted section contains settings for 'Area 1' and 'Area 2', including Divert Offset, Divert Mode (set to 'Trailing Edge'), Divert Distance Override, and Activation Delay Override. A 'Submit' button is located at the bottom of this section. A red callout box with a white border points to the 'Submit' button, containing the text: 'Click "Submit" button to implement changes'. The footer of the page provides system information: © Intralox 2021, IP Address: 192.168.1.254, MAC Address: 00:07:46:8c:0b:c5, SW Version: V1.0, DPE Model: S4500 DARB, S/N: 2296406 E2021DSW332.

- **Divert OffSet**

Divert area distance from the position defined by Intralox. See Mechanical Drawing.

- **Divert Mode**

Predefine setting for triggering start of movement for diverting/sorting the products. See image in next page for explanation

- **Divert Distance Override**

Applicable to divert area, not divert zone

Divert distance: Lateral travel distance of the product (perpendicular to belt travel direction) measured with the encoder pluses. See image in next page for explanation.

Default: length of the activation area

- **Activation Delay Override**

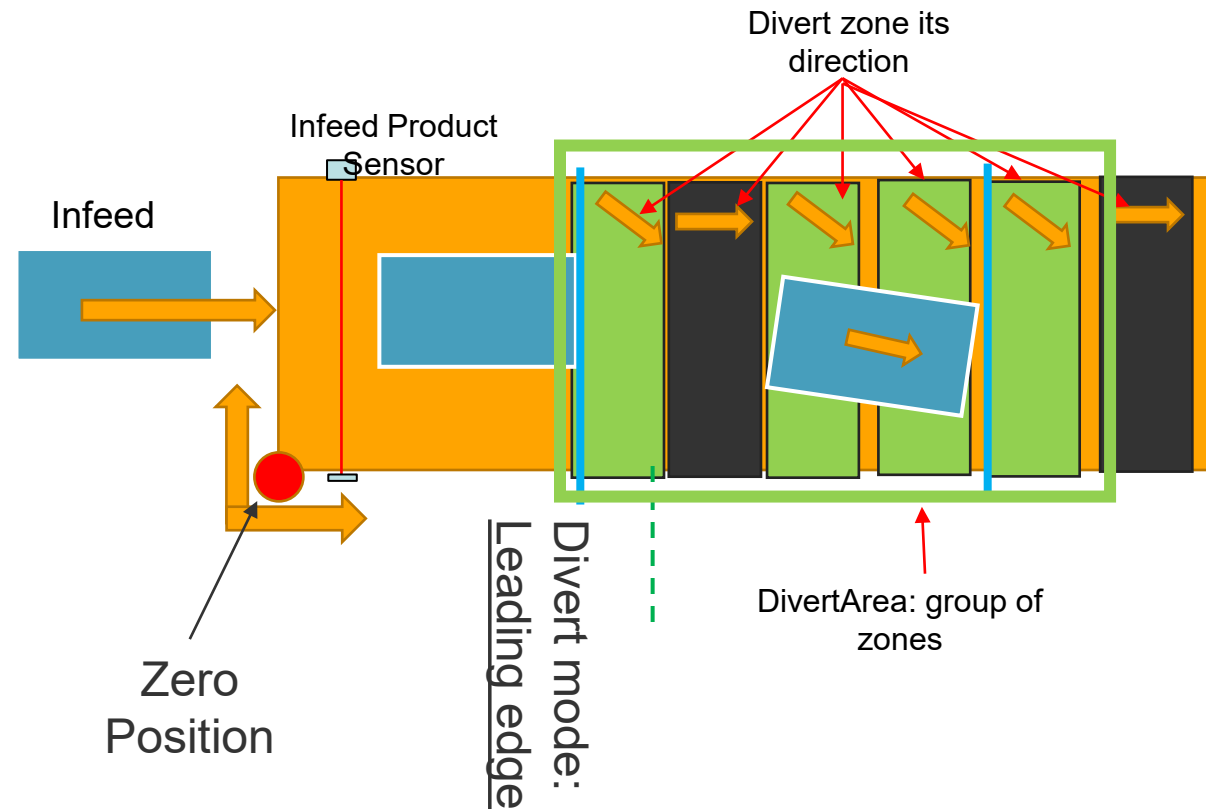
This value considers mechanical delays of the activation system of the Intralox equipment.

- **SUBMIT BUTTON**

Click button for making the modifications on the ISC CAM firmware effective.

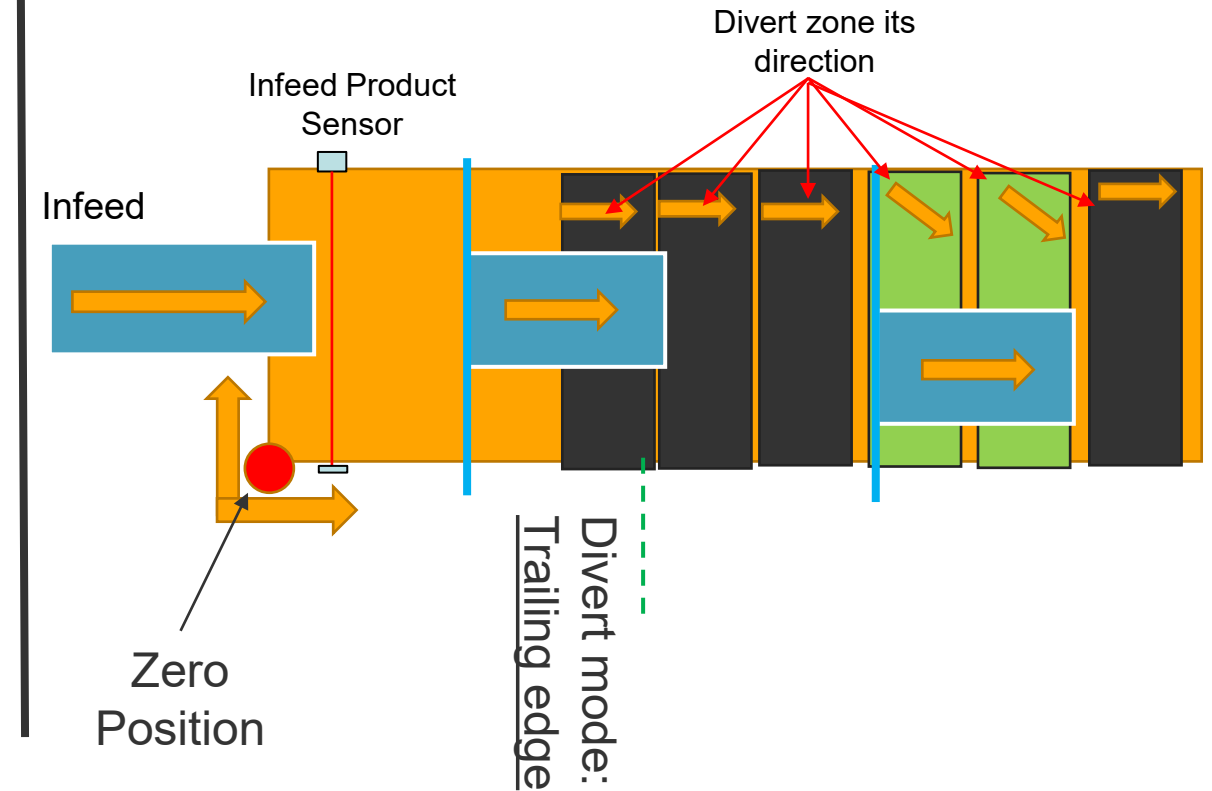
Divert Modes RnR

Leading Edge



Leading Edge [Standard]: activation is triggered when leading edge of the product reaches the end of divert area/zone. Use this setting for maximizing the total divert angle of the product trajectory.

Trailing Edge



Trailing Edge: activation is triggered when trailing edge of the product reaches the start of divert area/zone. Use this setting for minimizing the skewing of the product while moving on the Intralox equipment

3. Maintenance Page

End in Mind

- Display the 'equipment log' with absolute counter values
- 'Read only', ability to export counter files.
- Intended users: maintenance.

Maintenance

ISC CAM CONFIGURATION

Maintenance

Filename: Save Counters

Status: no file loaded

Counters		
Up Time:	12 min	Belt Runtime: 24 min
Product Count:	0	Belt Usage: 0 m
	GAP Fault Count: 0	Divert 0 Count: 0
Divert 1 Count:	0	Divert 2 Count: 0

© Intralox 2021 IP Address: 192.168.1.254 MAC Address: 00:07:46:8c:0b:c5 SW Version: V1.0 DPE Model: S800 AIM S/N: 2087281 E2020ASO457

- **Up time**

Time elapsed since the ISC CAM was powered on. It resets to zero when the ISC CAM is powered off.

- **Belt Run Time**

Time elapsed since the ISC CAM received the first encoder pulse. It only increments when the ISC CAM receives encoder pulses. It never resets to zero

- **Belt Usage**

Total distance travelled by the belt since first encoder pulse. It never resets to zero

- **Product Count**

Total count number of products that passed the infeed product sensor (absolute value) since first encoder pulse.

- **GAP Fault Count**

Total number of 'Gap Not OK' since the first encoder pulse. See page faults for definition of GAP not "OK".

- **Divert 0, 1, 2**

Total number of activations of each divert since first encoder pulse .

- **Save Counters BUTTON**

Click button to export the counter values. File extension is 'cnt' and requires Intralox tool to make it readable.

4. Machine Page

End in Mind

- Ability to modify key operating parameters (settings) of the Intralox equipment to optimise the trajectory of products.
- ‘Read and write’
 - Read: read the Intralox equipment mechanical dimensions relevant for the automation of the carryway
 - Write: upload files with the mechanical dimensions of the Intralox equipment
- Intended users
 - Controls engineers integrating the ISC CAM into the Line network (communication)
 - Maintenance operators troubleshooting
- See Functional Layout and Mechanical Drawing

Machine -Application Data

ISC CAM CONFIGURATION

Machine

Select File: No file chosen
Status: no file loaded

Application Data

Application: Activation Type: Belt Type: Minimum GAP:
Hardwired Signal: Run Mode: Sensor Mode: Fault Override:

Belt Data

Conveyor Length: Belt Width: Sprocket Teeth: Pitch:
Encoder Resolution: Belt Traveled/Pulse: Maximum Speed: Minimum Speed:

Divert Data

Divert Area Count: Zone Length: Inf. Sensor Count: PE Position:

Area 1

Position: Activation Delay:
Zone Count:

Area 2

Position: Activation Delay:
Zone Count:

© Intralox 2021 IP Address: 192.168.1.254 MAC Address: 00:07:46:8c:bd:f7 SW Version: V1.0 DPE Model: S4500 DARB S/N: 2296406 E2021DSW332

- **Application**

Type of functionality that the Intralox equipment is performing when diverting products: Sorter or Switch

- **Activation Type**

Type of mechanical activation mechanism used for engaging with Intralox belt for diverting products: PopUp, RnR or AIM

- **Belt Type**

Intralox Belt series used in the Intralox equipment.

- **Minimum Gap**

Minimum distance between products at the infeed of Intralox See Functional Layout

- **Hardware Signal**

Selections: enable or disable.

Hardwire signal “enable” results that ONLY the 1st divert reacts to the discrete signal of 24VDC to activate. The discrete signal has priority over the ethernet signal. Use hardware signal when the Intralox equipment has a high-speed reject

- **Run Mode**

Selections: Internal or external

Internal Mode: ISC CAM operates in autonomous mode with an internal counter for diverting products

External Mode: ISC CAM requires the input signal from the Line PLC for diverting (or not) each product.

- **Sensor Mode**

Selection: Light On / Dark On

Applicable to infeed product sensor. Use only for replacement

- **Fault Override**

Selection: number, overrides faults. See HMI Page “Faults”.

Machine –Belt Data

ISC CAM CONFIGURATION

Machine

Select File: No file chosen
Status: no file loaded

Application Data

Application: Activation Type: Belt Type: Minimum GAP:

Hardwired Signal: Run Mode: Sensor Mode: Fault Override:

Belt Data

Conveyor Length: Belt Width: Sprocket Teeth: Pitch:

Encoder Resolution: Belt Traveled/Pulse: Maximum Speed: Minimum Speed:

Divert Data

Divert Area Count: Zone Length: Inf. Sensor Count: PE Position:

Area 1

Position: Activation Delay: Zone Count:

Area 2

Position: Activation Delay: Zone Count:

© Intralox 2021 IP Address: 192.168.1.254 MAC Address: 00:07:46:8c:bd:f7 SW Version: V1.0 DPE Model: S4500 DARB S/N: 2296406 E2021DSW332

- **Conveyor Length**
Length in [mm] of the frame of the Intralox equipment.
- **Width**
Belt width
- **Sprocket Teeth**
Number of teeth of the sprocket
- **Pitch**
Length of the module of the belt.
- **Encoder Resolution**
Number of pulses generated by the encoder per revolution. Standard = 64 pulse/rev
- **Belt Travel/pulse**
Conversion of the belt travel distance in [1/10mm] for each encoder pulse. Dependant of the belt pitch
- **Maximum Speed**
Recommended Maximum belt speed of the Intralox equipment. Functional Layout.
- **Minimum Speed**
Recommended minimum belt speed of Intralox equipment. Functional Layout

Machine Divert Data

The screenshot displays the 'Machine' configuration page for an Intralox system. The interface includes a navigation sidebar on the left with options: LIVE INFO, SETTINGS, MAINTENANCE, MACHINE (highlighted), IO-COMM, and FAULT. The main content area is titled 'Machine' and contains several data sections:

- Application Data:** Application: Sorter, Activation Type: R&R 1-2, Belt Type: S7000 ARB, Minimum GAP: 0 mm.
- Hardware Settings:** Hardwired Signal: Enable, Run Mode: Internal, Sensor Mode: Light On, Fault Override: 59.
- Belt Data:** Conveyor Length: 2000 mm, Belt Width: 584 mm, Sprocket Teeth: 10, Pitch: 81 mm, Encoder Resolution: 64, Belt Traveled/Pulse: 3.18 mm/P, Maximum Speed: 90 m/min, Minimum Speed: 30 m/min.
- Divert Data (highlighted in orange):** Divert Area Count: 1, Zone Length: 152 mm, Inf. Sensor Count: 1, PE Position: 0, Valve Placement: Right.
- Area 1:** Position: 0 mm, Activation Delay: 70 ms, Zone Count: 8.
- Area 2:** Position: 0 mm, Activation Delay: 70 ms, Zone Count: 0.

A red callout box with a white border points to the 'Submit' button at the bottom of the configuration area, containing the text: "Click 'Submit' button to implement changes".

At the bottom of the page, the following information is displayed: © Intralox 2021, IP Address: 192.168.1.254, MAC Address: 00:07:46:8c:0b:c5, SW Version: V1.0, DPE Model: S7000 ARB, S/N: 2568548 E2020SW7001.

- **Divert Area Count**
Area # starts from infeed of the Intralox equipment. See image in next page.
- **Zone Length**
Length of the divert zone
- **Inf Sensor Count**
Number of Infeed product sensor.
- **PE Position**
Infeed Product Sensor distance from the Zero Position.
- **Valve Placement**
Mounting side of the Intralox equipment where the valve terminal is mounted

Machine Divert Data

The screenshot displays the 'Machine' configuration page for an ISC CAM. The interface includes a sidebar with navigation options: LIVE INFO, SETTINGS, MAINTENANCE, MACHINE (highlighted), IO-COMM, and FAULT. The main content area is titled 'Machine' and contains several sections of data:

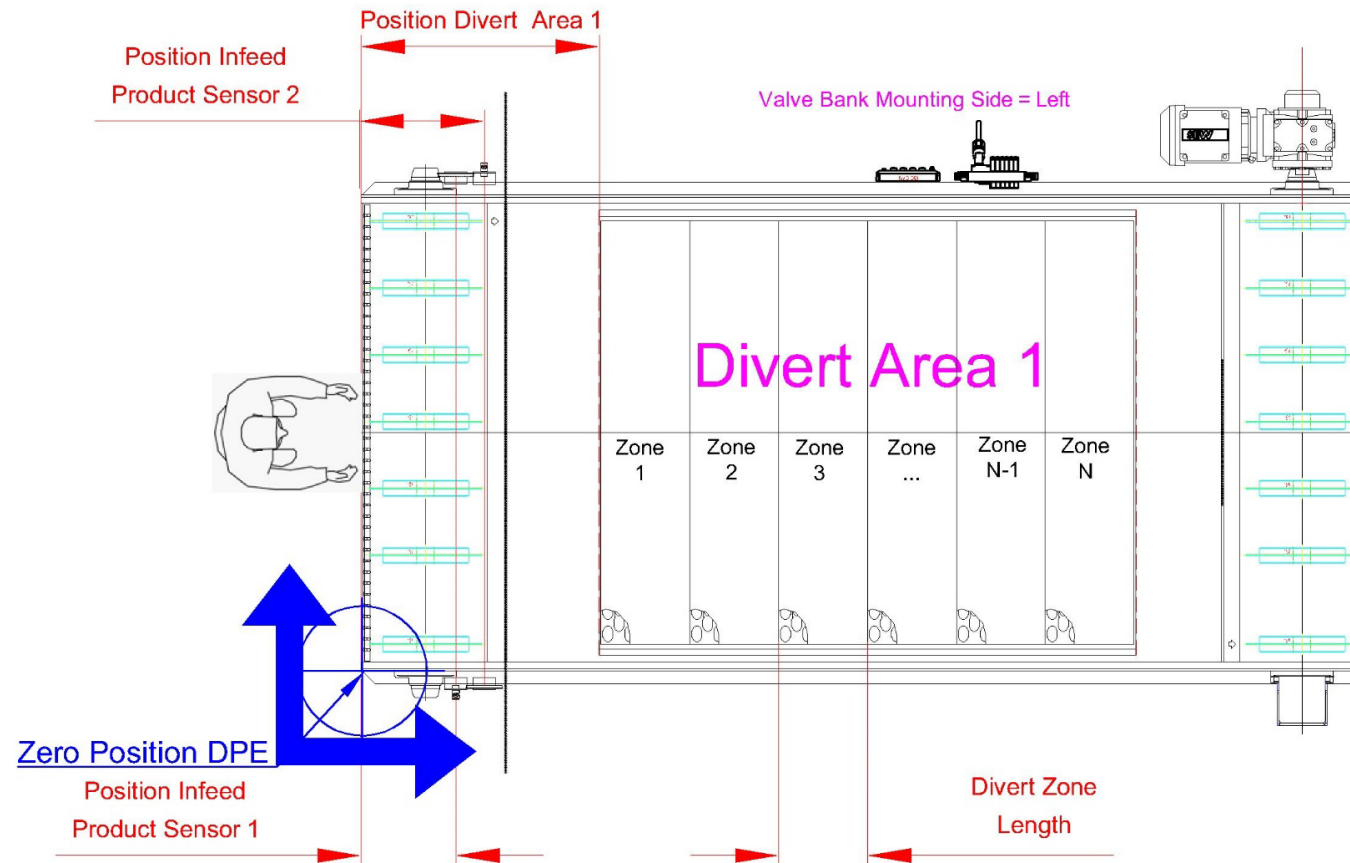
- Application Data:** Application: Sorter, Activation Type: R&R 1-2, Belt Type: S7000 ARB, Minimum GAP: 0 mm.
- Hardware Settings:** Hardwired Signal: Enable, Run Mode: Internal, Sensor Mode: Light On, Fault Override: 59.
- Belt Data:** Conveyor Length: 2000 mm, Belt Width: 584 mm, Sprocket Teeth: 10, Pitch: 81 mm, Encoder Resolution: 64, Belt Traveled/Pulse: 3.18 mm/P, Maximum Speed: 90 m/min, Minimum Speed: 30 m/min.
- Divert Data:** Divert Area Count: 1, Zone Length: 152 mm, Inf. Sensor Count: 1, PE Position: 0.
- Valve Placement:** Right.
- Area 1:** Position: 0 mm, Activation Delay: 70 ms, Zone Count: 8.
- Area 2:** Position: 0 mm, Activation Delay: 70 ms, Zone Count: 0.

A red callout box with the text 'Click "Submit" button to implement changes' points to the 'Submit' button at the bottom of the configuration area. The footer of the page provides system information: © Intralox 2021, IP Address: 192.168.1.254, MAC Address: 00:07:46:8c:0b:c5, SW Version: V1.0, DPE Model: S7000 ARB, S/N: 2568548 E2020SW7001.

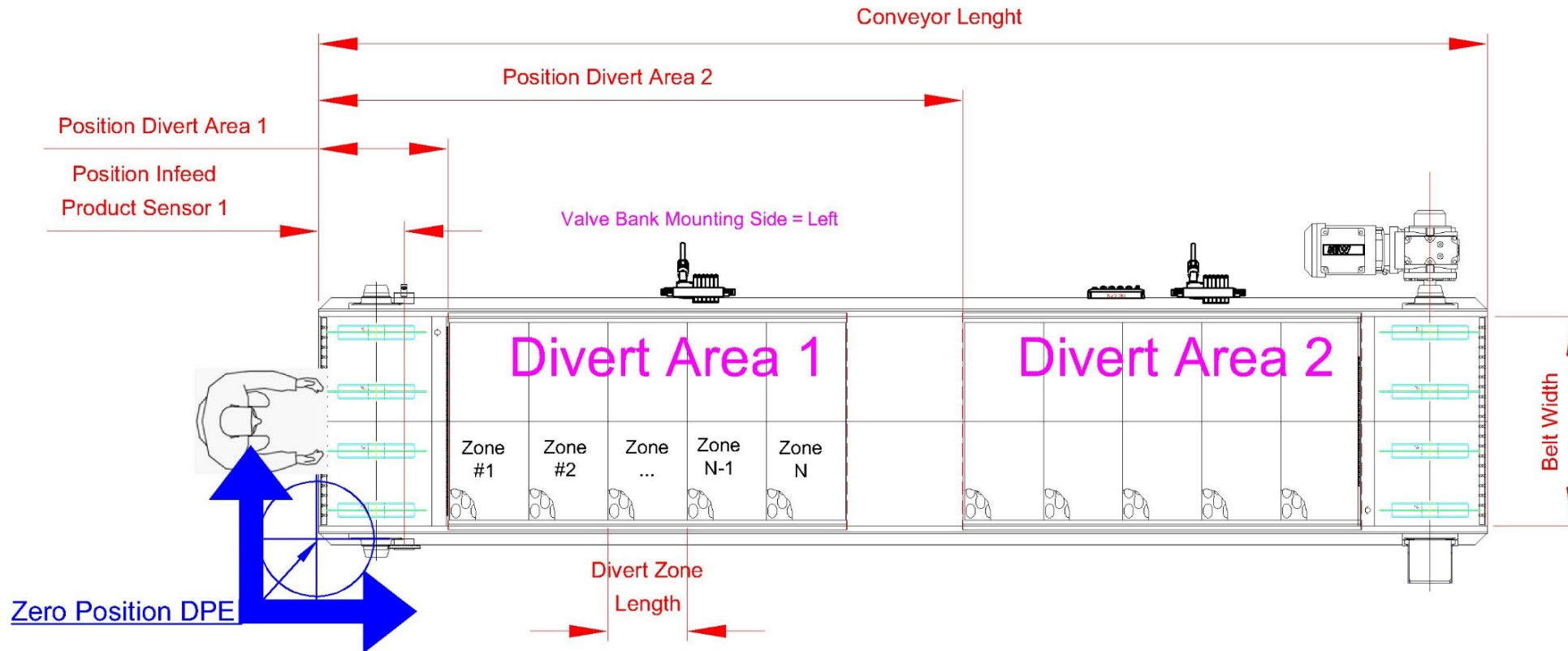
- **Position**
(Start of) divert area distance from the Zero Position
- **Activation Delay**
Standard mechanical activation delay between a signal is received by the ISC CAM and the product starts moving on the belt.
- **Zone Count**
Number of zones of each divert area.
- **SUBMIT BUTTON**
Push button for making the modifications in the ISC CAM firmware effective.

NOTE: Area 2 is optional

Rack 'n Roll Switch Technology



Rack 'n Roll Sorter Technology



5.10-COMM Page

End in Mind

- Detail the communication status between the ISC CAM with the field components and the line PLC. Please refer to the ISC CAM Interlocks Document for additional information and ISC Troubleshooting document actions
- ‘read only’
- Intended users
 - Line control engineers

IO-COMM Status

ISC CAM CONFIGURATION

IO & Communication Status

Hardware Input Status

Encoder: Positive Infeed PE: CLEAR Reject Signal: OFF Peg Sensor 1: CLEAR Peg Sensor 2: CLEAR

IO-Link Output Status

Output Port1 Value: 0 Output Port2 Value: 0 Valve 1: OFF Valve 2: OFF

Hardwired Output Status

Communication Input Words (From PLC to ISC)

WORD 00:	0	WORD 01:	0	WORD 02:	0	WORD 03:	0	WORD 04:	0	WORD 05:	0
WORD 06:	0	WORD 07:	0	WORD 08:	0	WORD 09:	0	WORD 10:	0	WORD 11:	0
WORD 12:	0	WORD 13:	0	WORD 14:	0	WORD 15:	0				

Communication Output Words (From ISC To PLC)

WORD 00:	18	WORD 01:	65535	WORD 02:	0	WORD 03:	0	WORD 04:	0	WORD 05:	0
WORD 06:	255	WORD 07:	0	WORD 08:	0	WORD 09:	0	WORD 10:	12	WORD 11:	0
WORD 12:	0	WORD 13:	0	WORD 14:	0	WORD 15:	0				

© Intralox 2021 IP Address: 192.168.1.254 MAC Address: 00:07:46:8c:0b:c5 SW Version: V1.0 DPE Model: S800 AIM S/N: 2087281 E2020ASO457

- **Encoder**

Status of encoder, blinking with each pulse

- **Infeed PE**

Status of infeed product sensor

- **Reject Signal**

Status of hardwire reject signal

- **Peg Sensor 1**

Only applicable for AIM applications. Status of peg sensor of divert 1, blinking with each peg passing the beam the peg sensor (belt has to move)

- **Peg Sensor 2**

Only applicable for AIM applications. Status of peg sensor of divert 2, blinking with each peg passing the beam the peg sensor (belt has to move)

IO-COMM Status

ISC CAM CONFIGURATION

IO & Communication Status

Hardware Input Status

Encoder: **Positive** Infeed PE: **CLEAR** Reject Signal: **OFF** Peg Sensor 1: **CLEAR** Peg Sensor 2: **CLEAR**

IO-Link Output Status **Hardwired Output Status**

Output Port1 Value: **0** Output Port2 Value: **0** Valve 1: **OFF** Valve 2: **OFF**

Communication Input Words (From PLC to ISC)

WORD 00:	0	WORD 01:	0	WORD 02:	0	WORD 03:	0	WORD 04:	0	WORD 05:	0
WORD 06:	0	WORD 07:	0	WORD 08:	0	WORD 09:	0	WORD 10:	0	WORD 11:	0
WORD 12:	0	WORD 13:	0	WORD 14:	0	WORD 15:	0				

Communication Output Words (From ISC To PLC)

WORD 00:	18	WORD 01:	65535	WORD 02:	0	WORD 03:	0	WORD 04:	0	WORD 05:	0
WORD 06:	255	WORD 07:	0	WORD 08:	0	WORD 09:	0	WORD 10:	12	WORD 11:	0
WORD 12:	0	WORD 13:	0	WORD 14:	0	WORD 15:	0				

© Intralox 2021 IP Address: 192.168.1.254 MAC Address: 00:07:46:8c:0b:c5 SW Version: V1.0 DPE Model: S800 AIM S/N: 2087281 E2020ASO457

- **IO-Link Output Status**

- **Out Port 1 valve**

- Only applicable to RnR technology. Status of valve bank.

- **Out Port 2 valve (optional)**

- Only applicable to RnR technology. Status of valve bank.

- **Hardware Output Status**

- **Valve 1**

- Only applicable to Popup and AIM technology

- OFF: valve is off

- ON: valve is on.

- **Valve 2 (optional)**

- Only applicable to Popup and AIM technology

- OFF: valve is off

- ON: valve is on.

IO-COMM Input Words

The screenshot displays the 'IO & Communication Status' page in the Intralox ISC CAM configuration software. The interface includes a navigation menu on the left with options: LIVE INFO, SETTINGS, MAINTENANCE, MACHINE, IO-COMM (selected), and FAULT. The main content area is divided into several sections:

- Hardware Input Status:** Encoder: Positive, Infeed PE: CLEAR, Reject Signal: OFF, Peg Sensor 1: CLEAR, Peg Sensor 2: CLEAR.
- IO-Link Output Status:** Output Port1 Value: 0, Output Port2 Value: 0.
- Hardwired Output Status:** Valve 1: OFF, Valve 2: OFF.
- Communication Input Words (From PLC to ISC):** A table showing 16 words, all currently set to 0.
- Communication Output Words (From ISC To PLC):** A table showing 16 words with various values: WORD 00: 18, WORD 01: 65535, WORD 02: 0, WORD 03: 0, WORD 04: 0, WORD 05: 0, WORD 06: 255, WORD 07: 0, WORD 08: 0, WORD 09: 0, WORD 10: 12, WORD 11: 0, WORD 12: 0, WORD 13: 0, WORD 14: 0, WORD 15: 0.

At the bottom of the interface, system information is provided: © Intralox 2021, IP Address: 192.168.1.254, MAC Address: 00:07:46:8c:0b:c5, SW Version: V1.0, DPE Model: S800 AIM, S/N: 2087281 E2020ASO457.

1. Words sent by the ISC CAM to the Line PLC through the ethernet network
2. See ISC CAM Interlocks file for details

IO-COMM Output Words

The screenshot displays the 'IO & Communication Status' page of the ISC CAM configuration interface. The page is divided into several sections:

- Hardware Input Status:** Encoder: Positive, Infeed PE: CLEAR, Reject Signal: OFF, Peg Sensor 1: CLEAR, Peg Sensor 2: CLEAR.
- IO-Link Output Status:** Output Port1 Value: 0, Output Port2 Value: 0.
- Hardwired Output Status:** Valve 1: OFF, Valve 2: OFF.
- Communication Input Words (From PLC to ISC):** A table showing 16 words, all with a value of 0.
- Communication Output Words (From ISC To PLC):** A table showing 16 words with various values: WORD 00: 18, WORD 01: 65535, WORD 02: 0, WORD 03: 0, WORD 04: 0, WORD 05: 0, WORD 06: 255, WORD 07: 0, WORD 08: 0, WORD 09: 0, WORD 10: 12, WORD 11: 0, WORD 12: 0, WORD 13: 0, WORD 14: 0, WORD 15: 0.

The bottom of the interface shows system information: © Intralox 2021, IP Address: 192.168.1.254, MAC Address: 00:07:46:8c:0b:c5, SW Version: V1.0, DPE Model: S800 AIM, S/N: 2087281 E2020ASO457.

1. Words received by the ISC CAM from the Line PLC through the ethernet network
2. See ISC CAM Interlocks file for details

6. Fault Page

End in Mind

- Display the status of the faults generated by the ISC CAM in human readable interface.
- Refer to the ISC CAM Interlocks Document for details and ISC Troubleshooting document for actions
- ‘Read only’
- Intended users: all users

Fault 0-7

ISC CAM CONFIGURATION

Fault Overview

- Fault Code 0 : Encoder Fault OK ✓
- Fault Code 1 : Motor Signal is Off OK ✓
- Fault Code 2 : Belt too Slow OK ✓
- Fault Code 3 : Belt Too Fast OK ✓
- Fault Code 4 : JAM Product Sensor 1 OK ✓
- Fault Code 5 : JAM Product Sensor 2 OK ✓
- Fault Code 6 : JAM Product Sensor 3 OK ✓
- Fault Code 7 : Peg Sensor Blocked OK ✓
- Fault Code 8 : Peg not seen while expected OK ✓
- Fault Code 9 : GAP Fault OK ✓
- Fault Code 10 : Power Supply (Low Voltage) OK ✓
- Fault Code 11 : Current Draw High OK ✓
- Fault Code 12 : IO-Link Fault port C0 OK ✓
- Fault Code 13 : IO-Link Fault port C1 OK ✓
- Fault Code 14 : IO-Link Fault port C2 OK ✓
- Fault Code 15 : IO-Link Fault port C3 OK ✓

© Intralox 2021 IP Address: 192.168.1.254 MAC Address: 00:07:46:8c:bd:f7 SW Version: V1.0 DPE Model: S4500 DARB S/N: 2296406 E2021DSW332

- **Fault Code 0**
No encoder signal received from encoder
- **Fault Code 1**
Encoder pulsing but no signal received from Line PLC for motor on.
- **Fault Code 2**
Belt speed is slower than minimum recommended speed. See Functional Layout for minimum speed.
- **Fault Code 3**
Belt speed is faster than maximum recommended speed. See Functional Layout for maximum speed
- **Fault Code 4**
Infeed Product sensor blocked , see ISC troubleshooting guide.
- **Fault Code 5**
Optional. See Functional Layout for configuration of Intralox Equipment
- **Fault Code 6**
Optional. See Functional Layout for configuration of Intralox Equipment
- **Fault Code 7**
Only applicable to AIM technology. Peg sensor blocked 1 or 2 (if applicable), see ISC troubleshooting guide.

Fault 8-15

ISC CAM CONFIGURATION

Fault Overview

Fault Code 0 : Encoder Fault	OK	✓
Fault Code 1 : Motor Signal is Off	OK	✓
Fault Code 2 : Belt too Slow	OK	✓
Fault Code 3 : Belt Too Fast	OK	✓
Fault Code 4 : JAM Product Sensor 1	OK	✓
Fault Code 5 : JAM Product Sensor 2	OK	✓
Fault Code 6 : JAM Product Sensor 3	OK	✓
Fault Code 7 : Peg Sensor Blocked	OK	✓
Fault Code 8 : Peg not seen while expected	OK	✓
Fault Code 9 : GAP Fault	OK	✓
Fault Code 10 : Power Supply (Low Voltage)	OK	✓
Fault Code 11 : Current Draw High	OK	✓
Fault Code 12 : IO-Link Fault port C0	OK	✓
Fault Code 13 : IO-Link Fault port C1	OK	✓
Fault Code 14 : IO-Link Fault port C2	OK	✓
Fault Code 15 : IO-Link Fault port C3	OK	✓

© Intralox 2021 IP Address: 192.168.1.254 MAC Address: 00:07:46:8c:bd:f7 SW Version: V1.0 DPE Model: S4500 DARB S/N: 2296406 E2021DSW332

- **Fault Code 8**
Only applicable to AIM Technology
Peg missing in the belt.
- **Fault Code 9**
See Functional Layout for min gap value
- **Fault Code 10**
Power supply low voltage. See ISC troubleshooting guide.
- **Fault Code 11**
Current draw too high. , see ISC troubleshooting guide.
- **Fault Code 12**
Only applicable to RnR Technology
Optional. See Functional Layout for configuration of Intralox equipment
- **Fault Code 13**
Only applicable to RnR Technology
See Functional Layout for configuration of Intralox equipment and ISC troubleshooting guide.
- **Fault Code 14**
Only applicable to RnR Technology
Optional. See Functional Layout for configuration of Intralox equipment , and ISC troubleshooting guide.
- **Fault Code 15**
Only applicable to RnR Technology
Optional. See Functional Layout for configuration of Intralox equipment and ISC troubleshooting guide.