



Conveyor tracking addes " Abandoned
objects " use variable to records

Summary

➤ Purpose

1. Abandoned objects

When the workpiece exceeds the action range of the robot and the robot will give up it.

New version of the HMI is added the variables of abandoned objects.

➤ Equipment

1. TM5

2. Conveyor System

➤ Flow Example

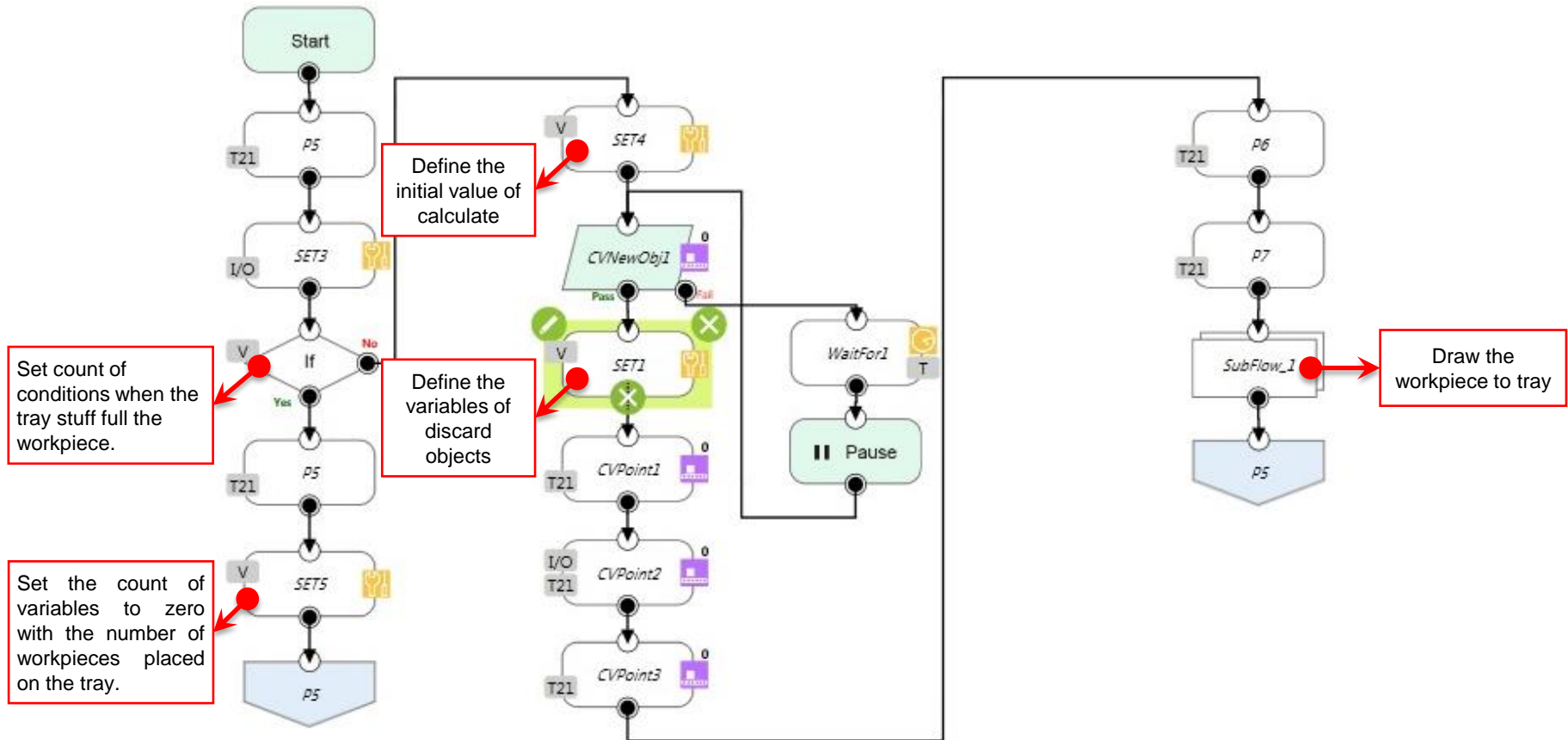
➤ Application Explain

Variables			
<div>Create Variable Create Array</div>			
int	CONV0_DR OP_TM	=	0
int	CONV1_DR OP_TM	=	0

OK

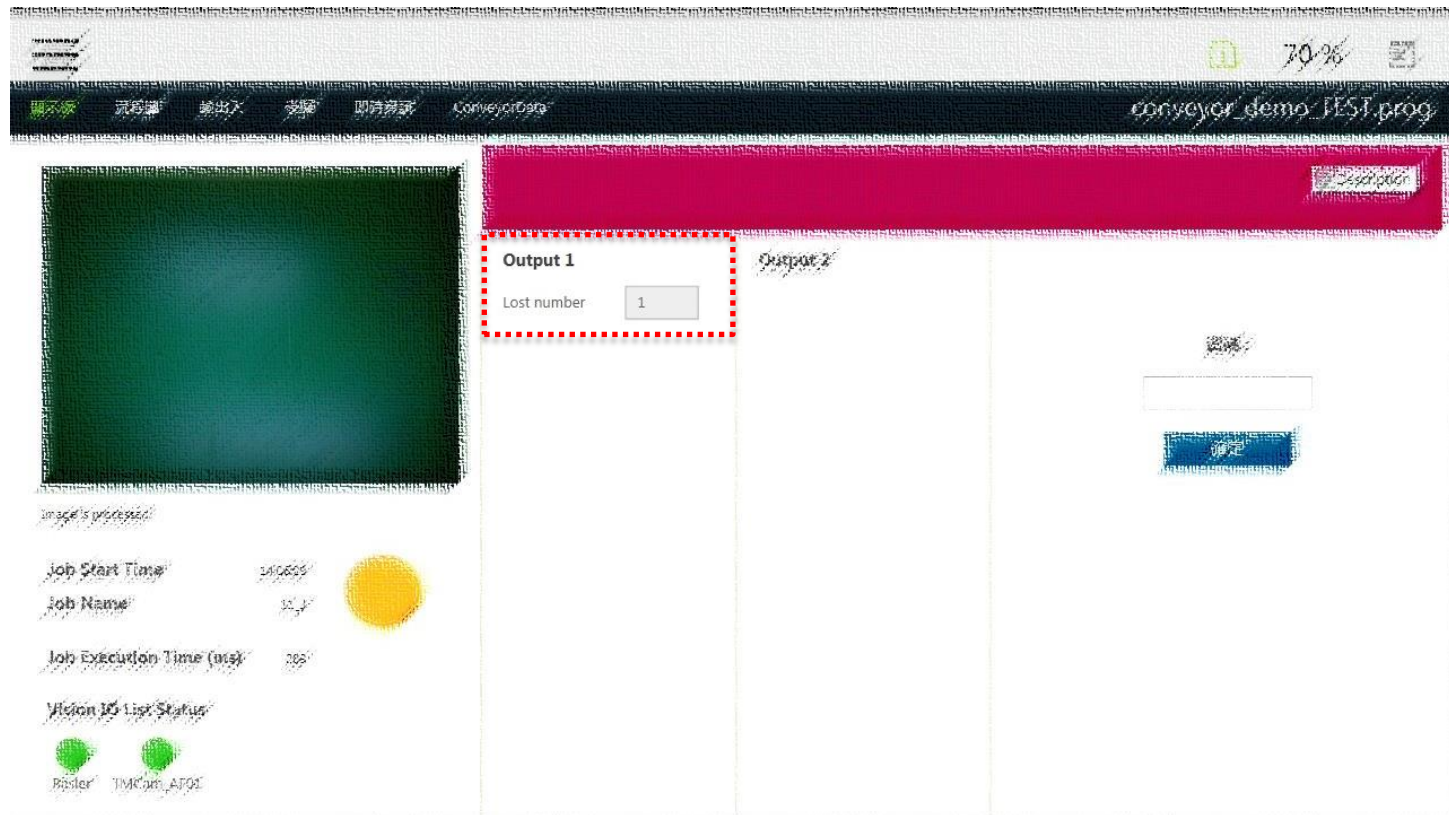
Flow Example

1. The main purpose of flow is draw the workpiece to tray on the flow of conveyor.
2. Use the variables of "Abandoned objects" to calculate the number of abandoned workpiece, and display in the execution screen.



Application Explain

1. When doing conveyor pick and place program, workpiece which is overstep the limit of robot working range will be abandon.
2. These abandon workpieces will be calculated by variable function and show the value on screen.



Application Explain

1. Choose Conveyor_0.

2. Edit Start.

3. Choose Boundary Setting.

Conveyor Tracking Setting

Conveyor_0

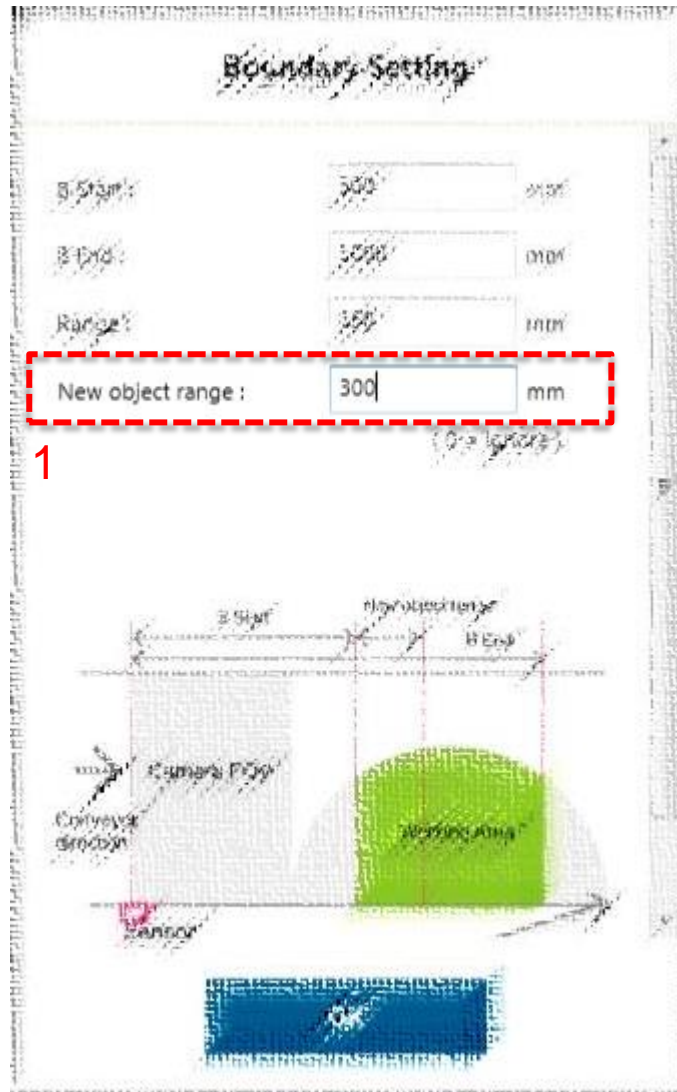
Encoder Setting >

Boundary Setting >

Advanced Setting >

OK

Application Explain



1. Set the new object range ◦

Application Explain

1

2

Variables

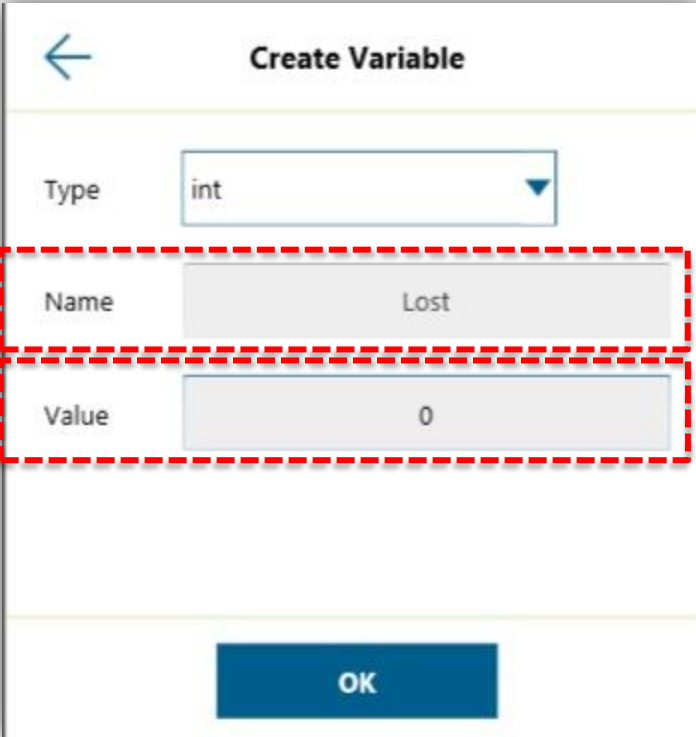
Create Variable Create Array

int	CONV0_DR	OP_TM	=	0
int	CONV1_DR	OP_TM	=	0

OK

1. Click variable.
2. Creat variable ◦

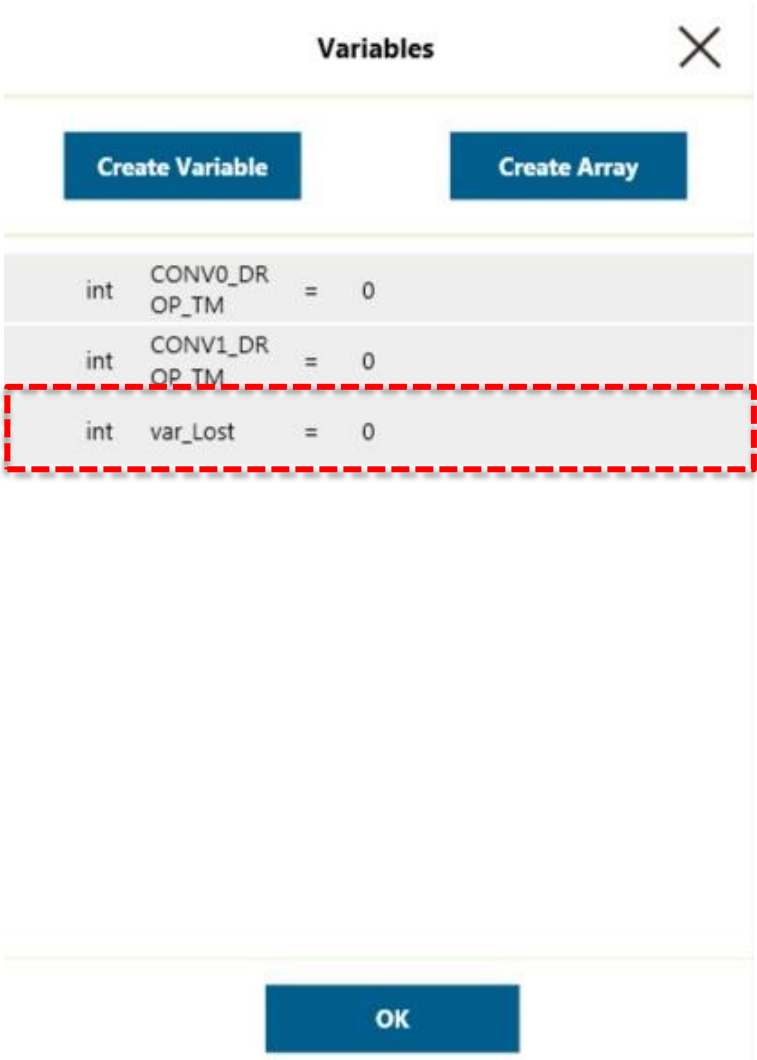
Application Explain



The 'Create Variable' dialog box is shown. It has a back arrow at the top left. The title is 'Create Variable'. Below the title, there is a 'Type' dropdown menu set to 'int'. Below that, there are two input fields: 'Name' with the value 'Lost' and 'Value' with the value '0'. These two input fields are enclosed in a red dashed box. At the bottom of the dialog is an 'OK' button.

1. Key in the variable name.

2. Set the discard objects to 0 → Click OK.



The 'Variables' list is shown. It has a close button (X) at the top right. Below the title, there are two buttons: 'Create Variable' and 'Create Array'. Below these buttons is a list of variables. The list contains three entries: 'int CONV0_DR OP_TM = 0', 'int CONV1_DR OP_TM = 0', and 'int var_Lost = 0'. The third entry is enclosed in a red dashed box. At the bottom of the list is an 'OK' button.

3. The variables just created are shown in the variable options.

1. Key in the variable name.
2. Set the discard objects to 0 → Click OK.
3. The variables just created are shown in the variable options.

Application Explain

1. Click Display.

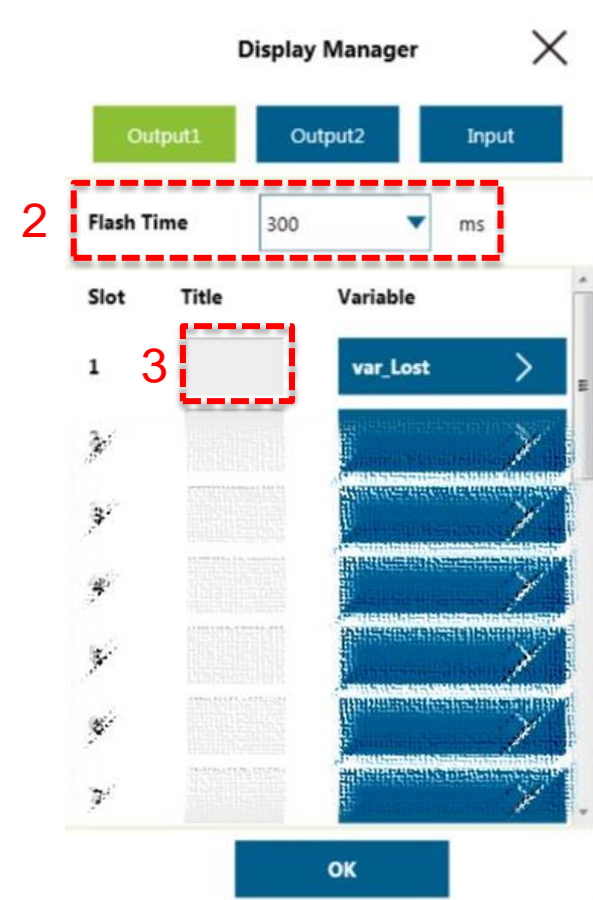
2. Choose the variable .

Slot	Title	Variable
1		>
2		>
3		>
4		>
5		>
6		>
7		>

Application Explain



A screenshot of a 'Variable' selection screen. It features a back arrow at the top left and a title 'Variable'. Below the title, there are two identical, faint, overlapping text boxes containing 'CONV_DROP_TM'. A red dashed box labeled '1' highlights a text field containing 'var_Lost'. At the bottom, there are two buttons: 'OK' (blue) and 'Clear' (pink).



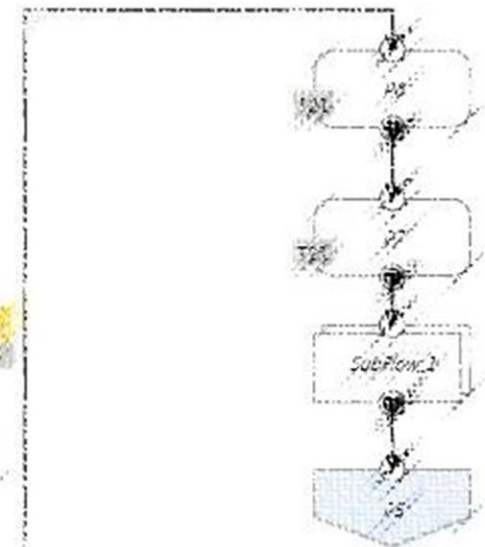
A screenshot of a 'Display Manager' screen. It has a close button (X) at the top right. Below the title, there are three buttons: 'Output1' (green), 'Output2' (blue), and 'Input' (blue). A red dashed box labeled '2' highlights a section containing 'Flash Time', a text field with '300', and a unit selector 'ms'. Below this is a table with three columns: 'Slot', 'Title', and 'Variable'. A red dashed box labeled '3' highlights the 'Title' column. The table has several rows, with the first row showing '1' in the 'Slot' column and 'var_Lost' in the 'Variable' column. At the bottom, there is an 'OK' button (blue).

Slot	Title	Variable
1		var_Lost

1. Choose the variable to create just a moment ago → OK.
2. Set Flash Time : 300 ms → Click OK.
3. Set Title (ex : Lost number).

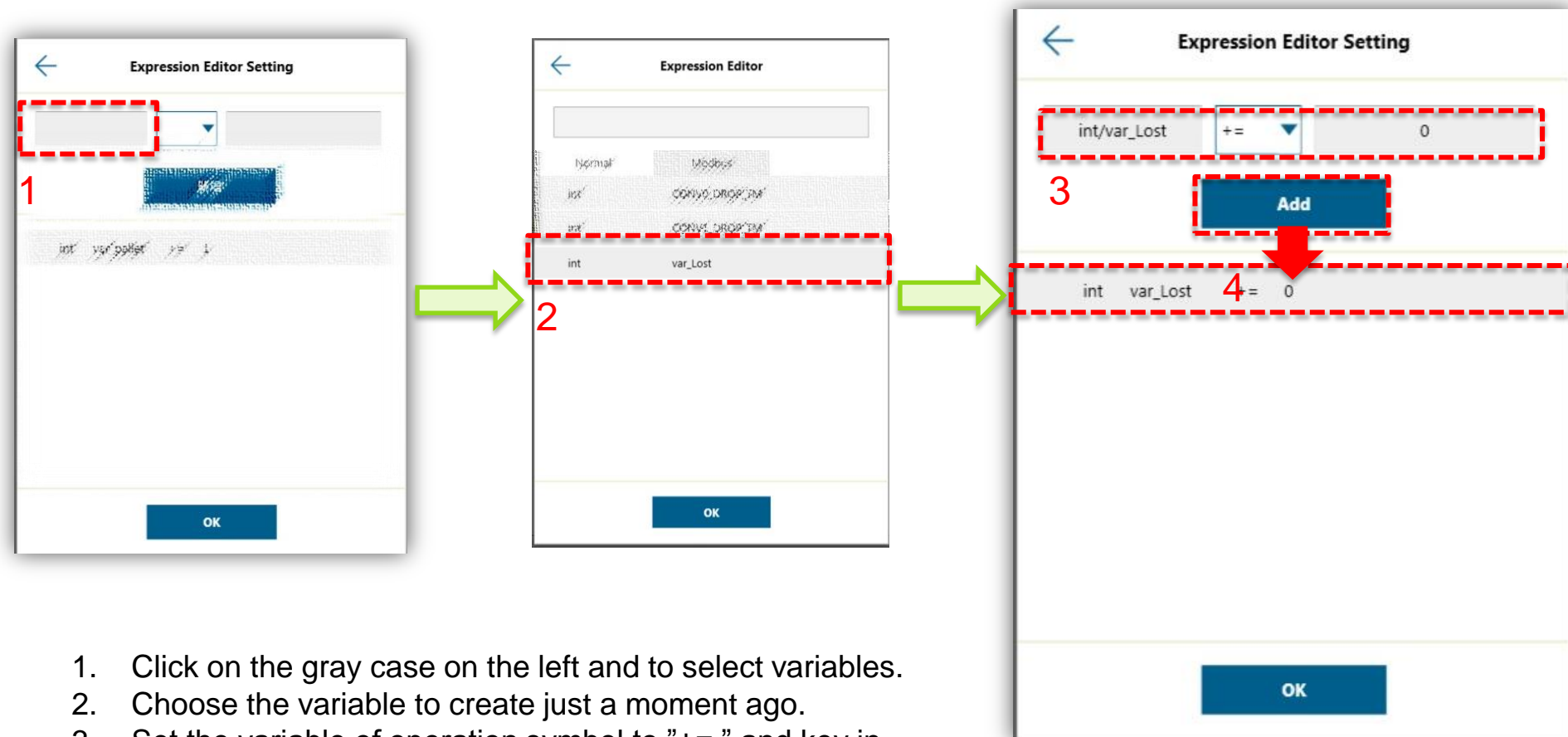
Application Explain

Define the initial value of calculate



1. In Flow, Before CVNewObj to add a new set, and edit it.
2. select variables → Click OK .

Application Explain



1. Click on the gray case on the left and to select variables.
2. Choose the variable to create just a moment ago.
3. Set the variable of operation symbol to "+=" and key in the value to "0".
4. Click Add → Click OK.

Application Explain

Define variables of discard objects

Set [X]

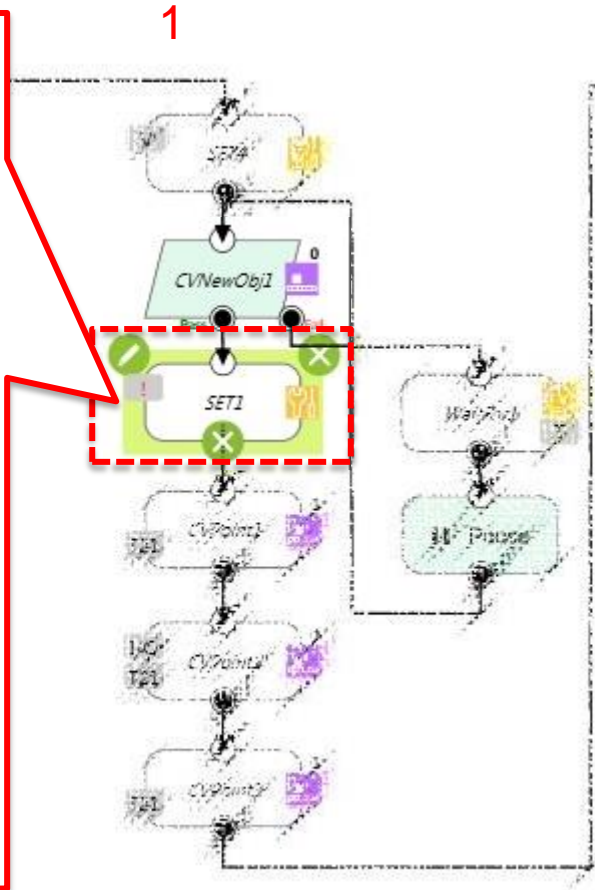
Node Name: SET1

Digital I/O: IO(0) [>]

Variables: Variables(0) [>]

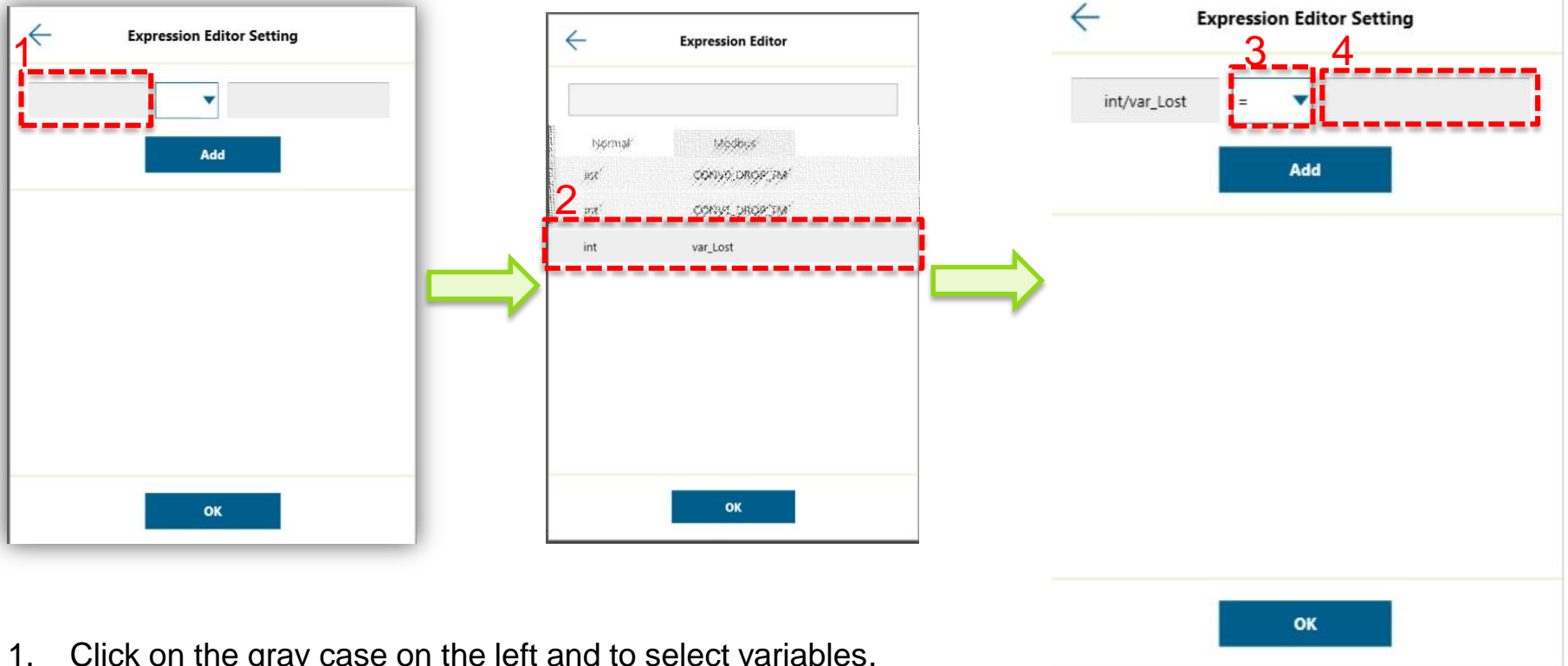
Analog I/O: AIO(0) [>]

OK [Delete this node]



1. In Flow, After CVNewObj to add a new set, and edit it.
2. select variables → Click OK .

Application Explain



1. Click on the gray case on the left and to select variables.
2. Choose the variable to create just a moment ago.
3. Set the operation symbol to "=".
4. Click on the gray case on the right and to select variables.

Application Explain

← Add Expression

2 var_Lost+CONVO_DROP_TM

Normal Modbus

Function Byte_ToInt16() Insert

Variable 1 int/CONVO_DROP_TM Insert

Boolean Value int/CONVO_DROP_TM int/var_Lost Insert

OK



← Expression Editor Setting

int/var_Lost = var_Lost+CONVO_DROP_TM

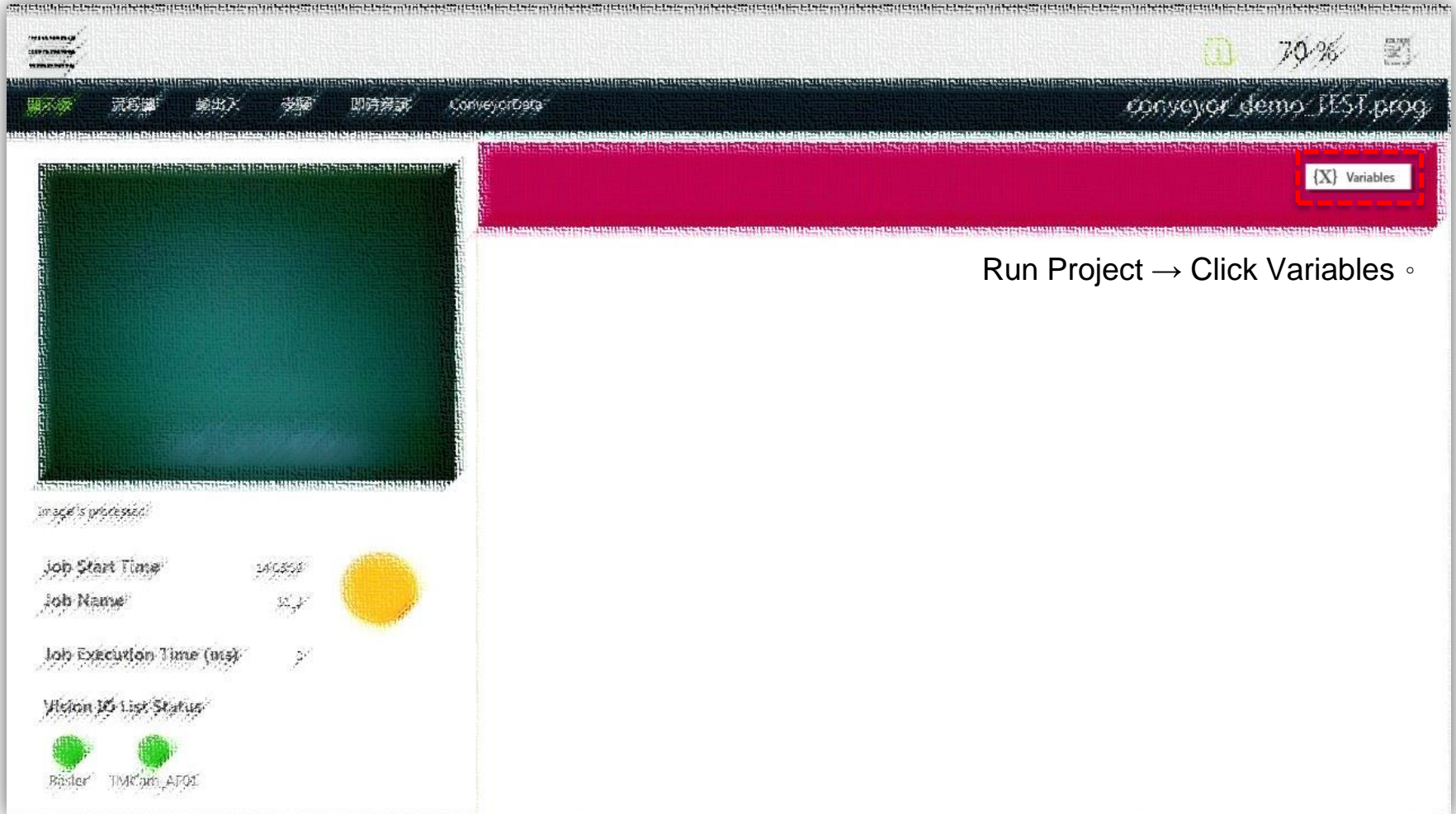
3 Add

int var_Lost = var_Lost+CONVO_DROP_TM

OK

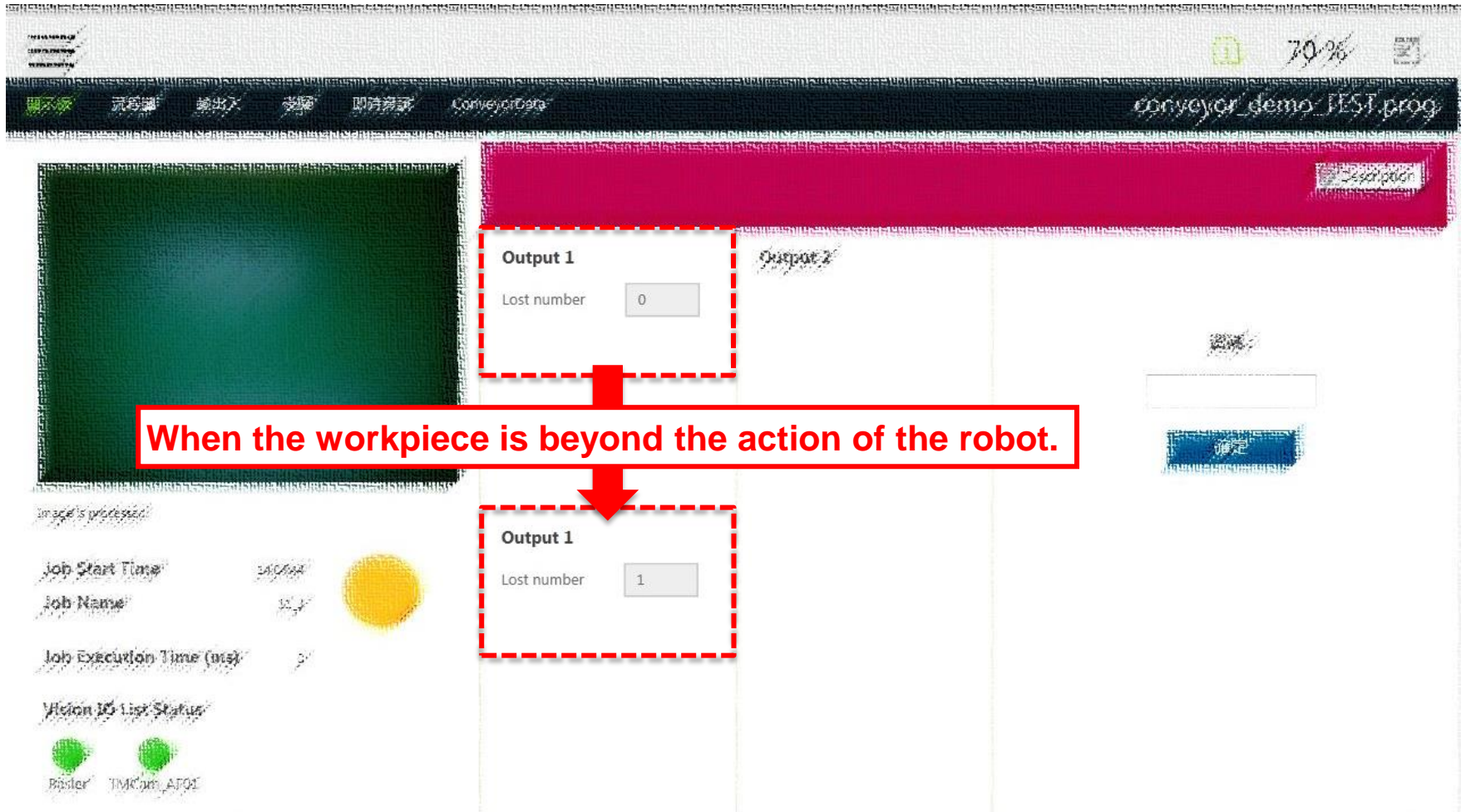
1. Insert "Lost" and "DROP_TM" variables.
2. Add operator "+" between two variables → Click OK.
3. Click Add → Click OK.

Application Explain



Run Project → Click Variables ◦

Application Explain



END