

## AKI Sample Project: AKD BASIC Sprayer

### Overview

This HMI program is set up to work in conjunction with a basic program in the AKD BASIC drive. The BASIC program defines some user defined Modbus registers and maps variables to those registers. The application is for a sprayer machine. The motor will move to an initial spray position. A timer starts counting. After the timer completes, the motor will move back to the home position while the spray nozzles turn on for a specified distance.

### Features:

- Start homing (homing sequence handled in the Basic program)
- Display homing status
- Edit timer
- Edit speed
- Edit spray distance
- Display an alarm and show fault codes
- Clear faults
- Stop motion
- Enable/disable

### Requirements:

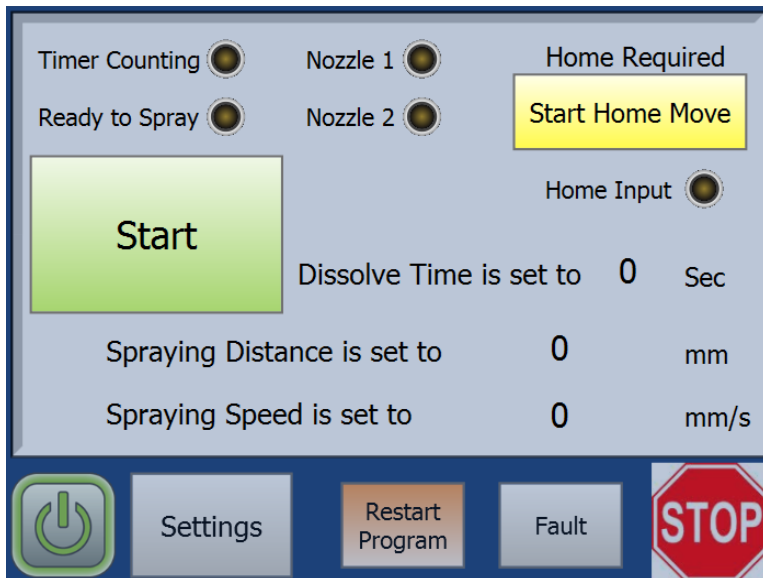
- HMI program is set up for the AKD to have IP Address 192.168.0.4.
- Must have MODBUS.SCALING = 0 in order to use normal drive units.
- Homing is handled in the Basic program.
- Input 1 is used as the home switch and must be configured as "Off".
- Inputs 2 and 3 are configured as limit switches.
- User units are configured by the Basic program.

# Application Note

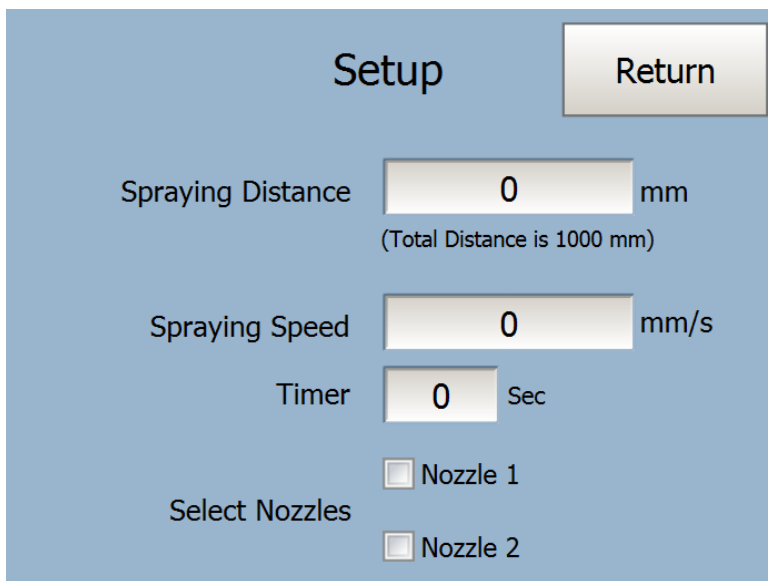
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## HMI Screenshots:



**Figure 1: Main**

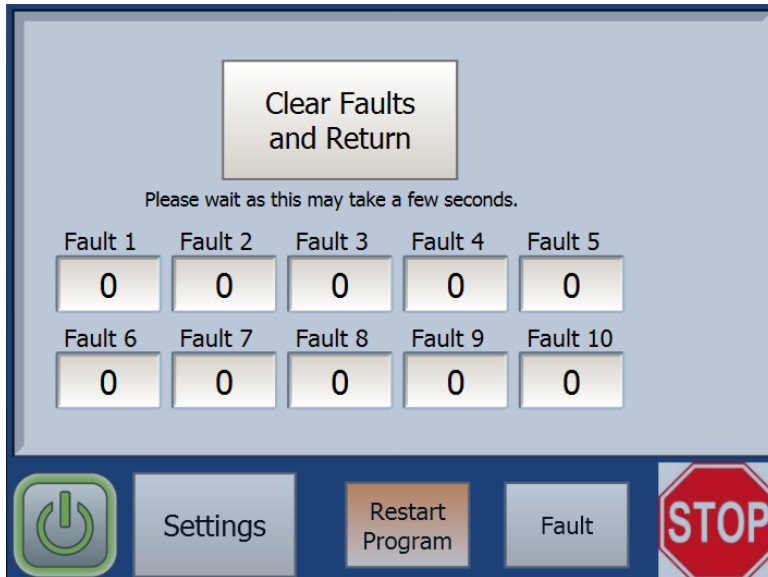


**Figure 2: Setup**

# Application Note

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**Figure 3: Fault Status**

## Script Programming in C#:

### Tags:

```
public partial class Tags
```

```
{  
    //Control the alarm indicator when an AKD fault is present.  
    //Create this code by expanding the tag name (MODBUS_FAULT1) in the tree,  
    //and double clicking on "ValueChanged".  
    void MODBUS_FAULT1_ValueChanged(System.Object sender,  
Neo.ApplicationFramework.Interfaces.Events.ValueChangedEventArgs e)  
    {  
if(Globals.Tags.MODBUS_FAULT1.Value != 0)//non-zero when a fault is present  
        {  
            Globals.Tags.Alarm.Value = 1;//turn alarm indicator on  
        }  
if(Globals.Tags.MODBUS_FAULT1.Value == 0)//no faults present  
        {  
            Globals.Tags.Alarm.Value = 0;//turn alarm indicator off  
        }  
    }  
}
```