User Manual

A·B QUALITY **Allen-Bradley**

Using the Mining, Mineral, and Cement Library (MMCL) in FactoryTalk View Site Edition Applications

A·B QUALITY *Allen-Bradley* · *Rockwell Software*

Rockwell Automation

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

⚠	**WARNING:** Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.
⚠	**ATTENTION:** Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence
⚡	**SHOCK HAZARD:** Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.
♨	**BURN HAZARD:** Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.
IMPORTANT	Identifies information that is critical for successful application and understanding of the product.

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Introduction

This document provides a description of how to create an application with FactoryTalk View Site Edition based on the Mining, Mineral, and Cement Library (MMCL). It does not show product installation or setup of IT infrastructure.

Requirements

Item	Requirements
Software	• FactoryTalk View Site Edition 5.0 or higher • RSLinx Enterprise 5.0 • FactoryTalk Services Platform 2.10 or higher
Hardware	• HMI/Data Servers • Client Computers • Engineering Computer with FactoryTalk View Studio
Skills	• Windows Domain administering • FactoryTalk View Site Edition 5.0 development • FactoryTalk directory configuration • Visual Basic for Application programming

Before You Begin

Before starting application development, the following information must be obtained.

Item	Requirements
IT infrastructure	• Definition of HMI servers (names) • Definition of Data Servers (FactoryTalk) • Definition of Clients • Definition of user groups/users (domain controller)
ControlLogix controllers	Definition of shortcuts for communication
Data Retrieval Tool data files	For each shortcut, a FactoryTalk View SE Tag file and a FactoryTalk View SE Alarm file must be created with the Data Retrieval Tool. Data Retrieval Tool data must be complete prior to using the HMI development environment.
Application files	Contact your local Rockwell Account Manager for files.

MMCL Deliverables

The MMCL project contains display templates for the following modules.

Module	Description	Display Template Names
MotorN	Normal Motor DOL	03_MotorN_small 03_MotorN_large 03_MotorN_param 000_Sim_MotorN
MotorN & E3p	Normal Motor DOL with E3plus	03_MotorN_E3_small 03_MotorN_E3_large 000_Sim_MotorN_E3p
MotorR	Reverse Motor	03_MotorR_small 03_MotorR_large 03_MotorR_param 000_Sim_MotorR
MotorR & E3p	Reverse Motor with E3plus	03_MotorR_E3_small 03_MotorR_E3_large 000_Sim_MorotR_E3p
MotorD	Damper Motor	03_MotorD_small 03_MotorD_large 03_MotorD_param 000_Sim_MotorD
MotorD & E3p	Damper Motor with E3plus	03_MotorD_E3_small 03_MotorD_E3_large 000_Sim_MotorD_E3p
SubSys	Subsystem	03_SubSys_large 03_SubSys_small 03-SubSys_param
DigInp	Digital Input	04_DigInp 04_DigInp_param 000_sim_DigInp
DigInp2	Drift switch/Digital input module with 2 inputs	04_DigInp2 04_DigInp2_param 000_Sim_DigInp2
Valve1	Valve with 1 position	03_Valve1_small 03_Valve1_large 03_Valve1_param 000_Sim_Valve1
Valve2	Valve with 2 positions	03_Valve2_small 03_Valve2_large 03_Valve2_param 000_Sim_Valve2
AnInp	Analog input	05_AnaInp 05_AnaInp_param 000_Sim_AnaInp
AnInpC	Analog input module with enhanced Control	05_AnaInpC_small 05_AnaInpC_large 05_AnaInpC_param

Module	Description	Display Template Names
ActMod	Actuator Module	05_ActMod_small 05_ActMod_large 05_ActMod_param 000_Sim_ActMod
PidMod	PID Module	06_PidMod 06_PidMod_param 000_Sim_PidMod
CtrlGrp	Control Group Module	11_CtrlGrp 11_CtrlGrp_param
SysGrp	System Group	11_SysGrp 11_SysGrp_param
IPCom	Inter Process Communication Module	NA
Motor2N	Two Speed Motor	03_Motor2N_small 03_Motor2N_large
Valve3	Valve with 3 positions	03_Valve3_large 03_Valve3_small
DigPulse	Digital Pulse Input	04_DigPulse 04_DigPulse_param 000_Sim_DigPulse

The MMCL project also provides the following sample displays.

Sample Display Provided	Description
Alarms	Alarm screen
Main	Main Screen for startup purpose
E50 Test Group	E50 Test Group screen
Crusher Group	Crusher Screen
RA_CEM_Library	Library screen with sample elements
Library_Graphics	Graphics Library for industrial applications
Network	Sample screen for Network supervision
System	Sample Screen of a system information screen
TrendA, TrendB	Sample Screen of a trend
Footer, Alarm Footer, Trend Footer	Sample Screen of a Footer
Header	Sample Screen of a Header

Reference Documents

- FactoryTalk View Site Edition User's Guide, publication VIEWSE-UM006

- Integrating the Mining, Mineral, and Cement Library (MMCL) into RSLogix 5000 Applications, publication RA-RM002A-EN-P

- Using the Mining, Mineral, and Cement Library (MMCL) in RSLogix 5000 Applications, publication RA-UM002B-EN-P

Developing an HMI Application

Prerequisites

The creation of a HMI Application is based on the following files.

File	Source
MMCLibrary (FactoryTalk View Site Edition Project)	Library
HMITag-[shortcut name].csv	Data Retrieval Tool
Alarms-[shortcut name].csv	Data Retrieval Tool
HMIDerivedTags-[shortcut name].csv	HDRS Data Retrieval Tool

Create a New Project

Complete the following procedure to create a new project.

1. Start FactoryTalk View Studio.

The Application Type selection dialog box opens.
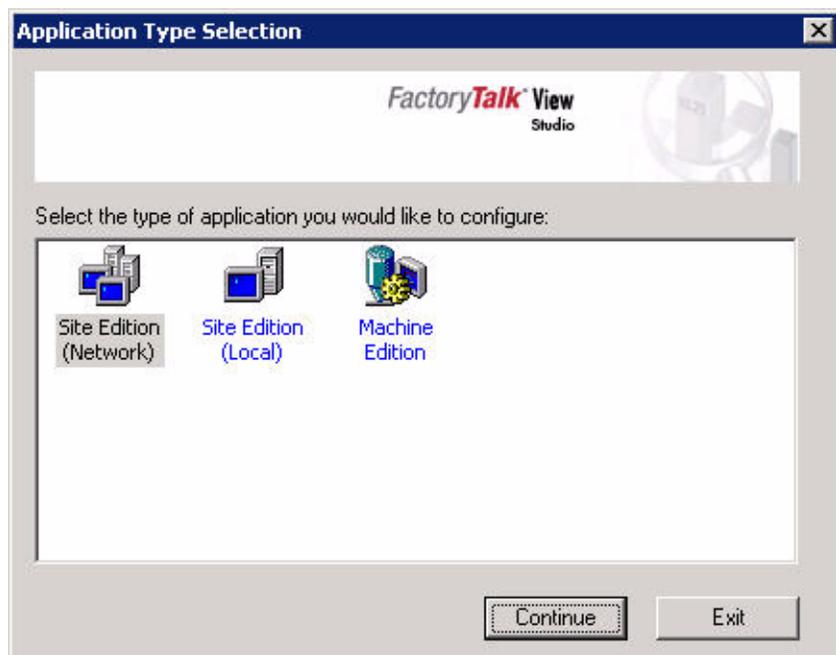
2. Select Site Edition (Network) and click Continue.

The Log On to FactoryTalk dialog box opens.

3. Enter your User name and Password and click OK.

The New/Open Site Edition (Network) Application dialog box opens.
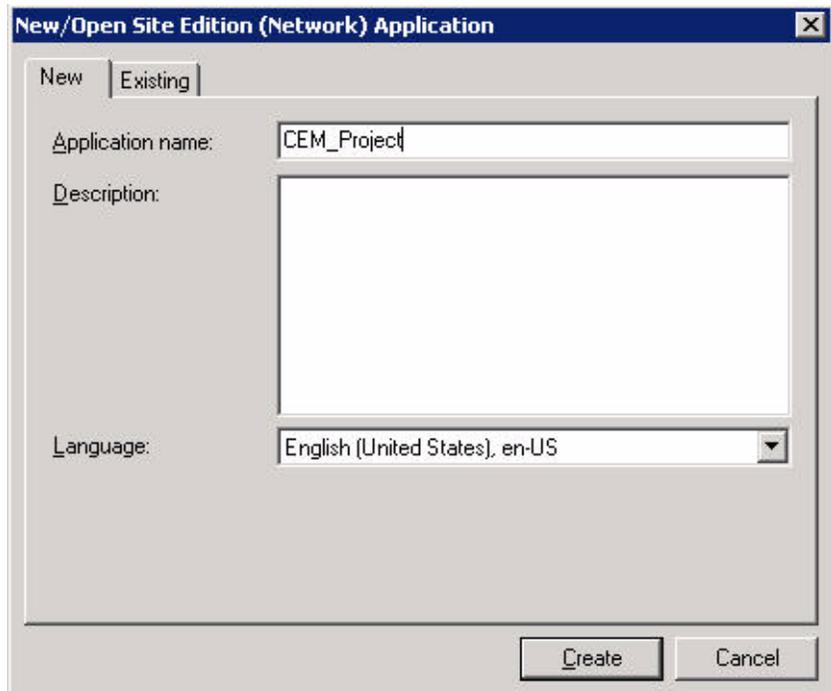
4. On the New tab, enter a name for the overall project.

5. Select the language which corresponds to the regional setting of the computer.

You will be able to translate the application into any other language at a later state of development.

6. Click Create.

The FactoryTalk View window opens.

7. To split the project into different areas hosting an HMI Server, right-click the CEM project and select New Area.
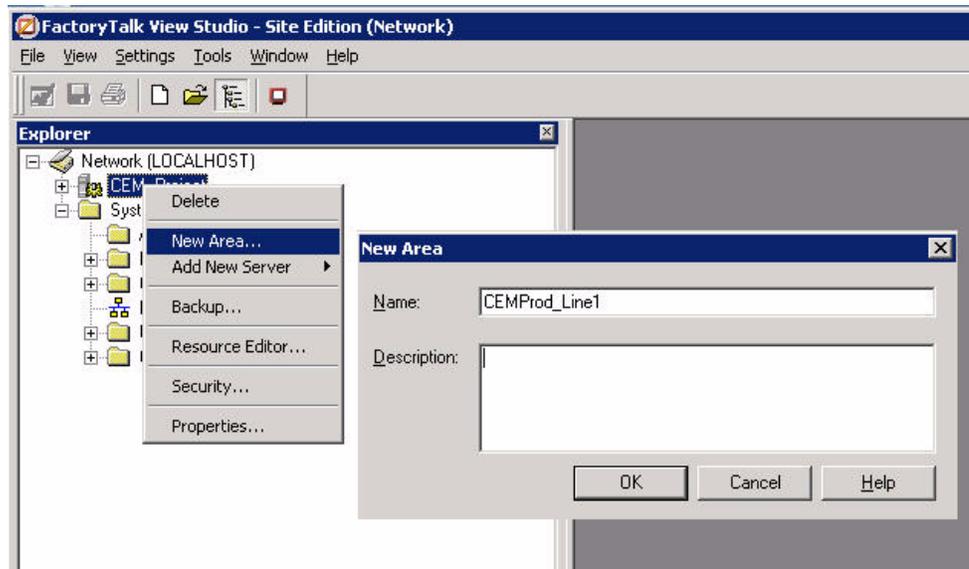
8. Type an area name and click OK.

9. Right-click the newly created area and select Add New Server > HMI Server.
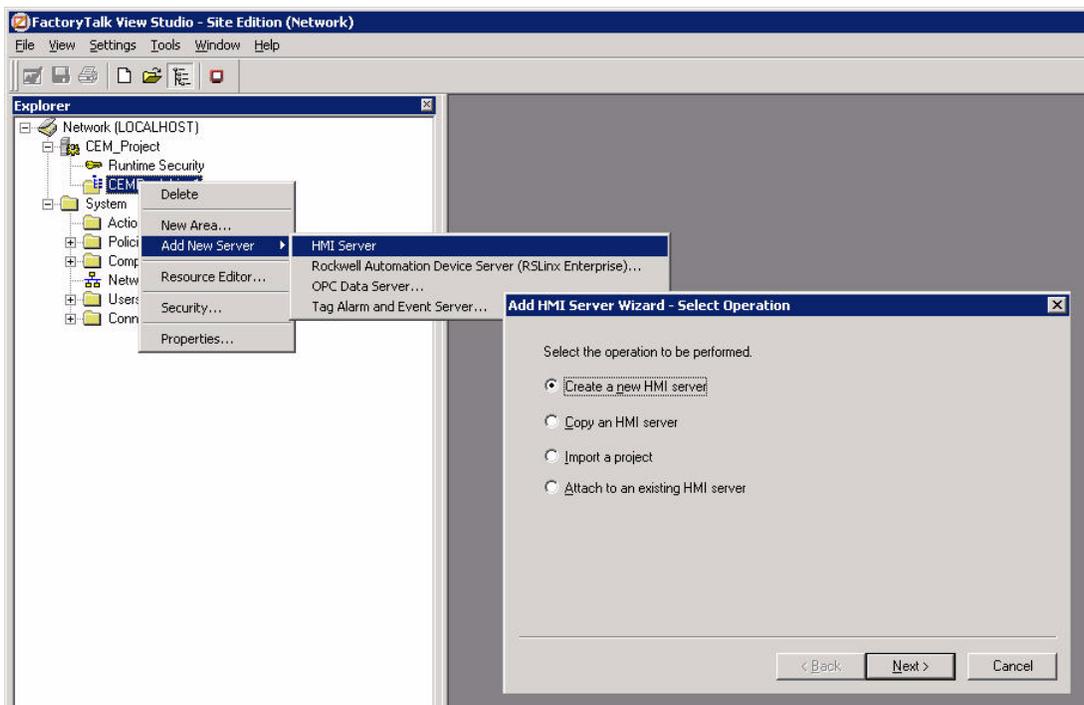
10. Select Create a new HMI server and click Next.

11. Type a name and description for the new HMI server.
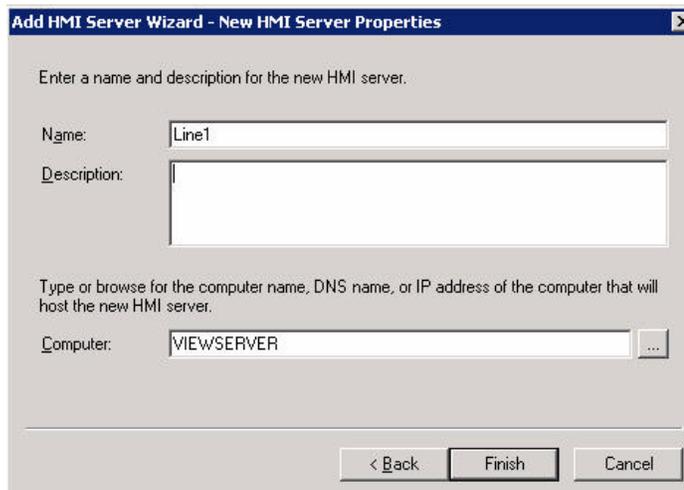
12. Type or browse to the computer name that will host the new server.

13. Click Finish.

Data Server Setup

To communicate with the different controllers on the network, a data server must be configured. For communication with ControlLogix processors, we are using RSLinx Enterprise software.

A data server can be created for each area or per project.

Complete the following procedure to create a new data server.

1. Right-click the newly created area and select Add New Server > Rockwell Automation Device Server (RSLinx Enterprise).
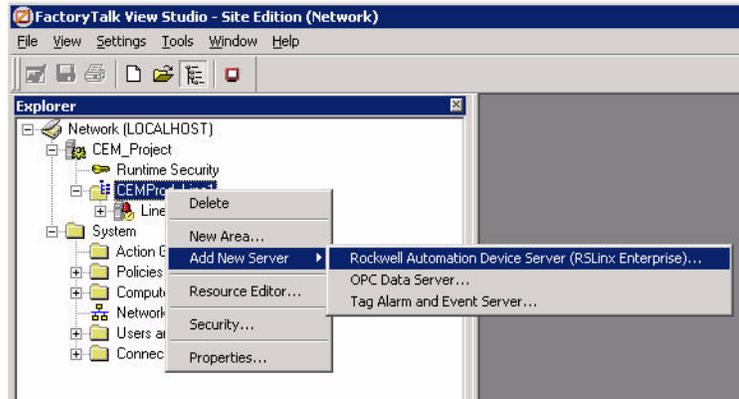
The new data server is created.
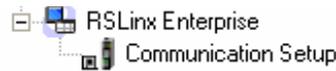
2. To add a new driver, double-click Communication Setup.

The Communication Setup dialog box opens.

3. Right-click RSLinx Enterprise and select Add Driver
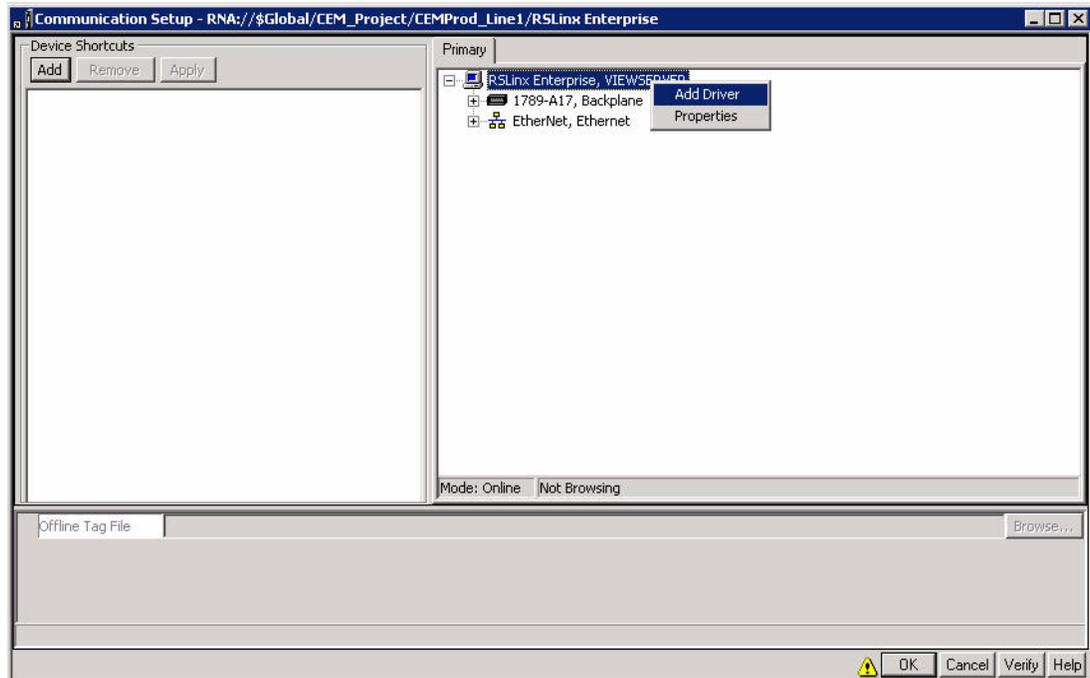
The Add Driver Selection dialog box opens.
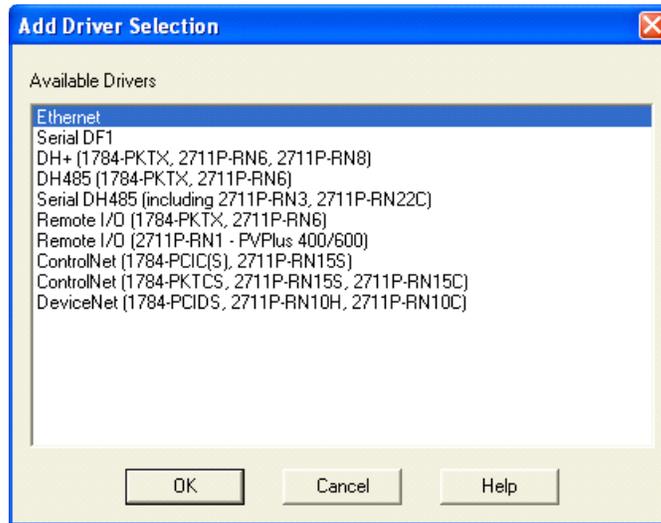
4. Select Ethernet and click OK.

   The Ethernet Properties dialog box opens.

5. Click OK to keep the default name or enter a new name and click OK.

6. Right-click the Ethernet driver and select Add Device.

   The Add Device Selection dialog Box opens.
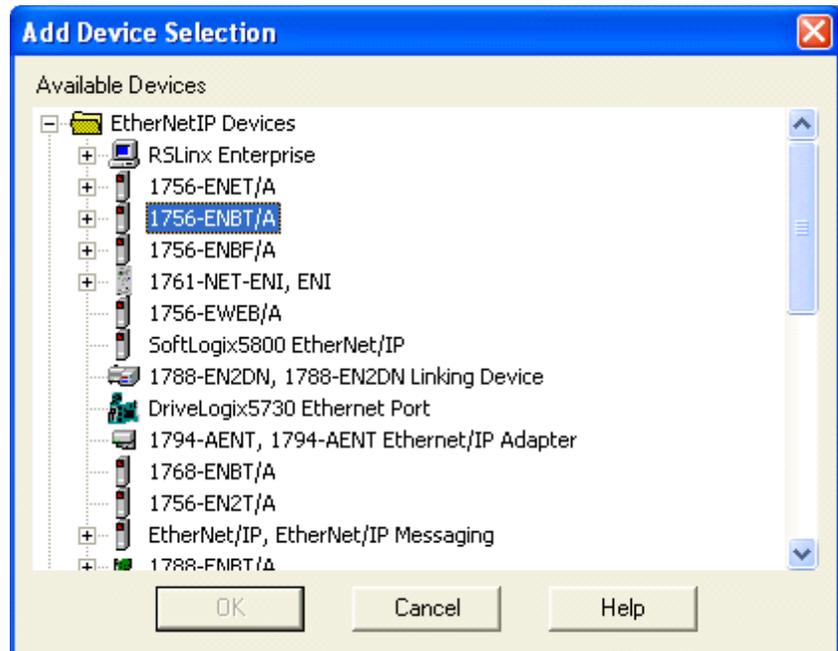
7. Browse to the Ethernet device that is connected to the controller (for example, the 1756-ENBT/A) and expand it.

8. Select the revision that corresponds to your Ethernet device and click OK.

| TIP | In the following steps you create shortcuts to the HMI tags in your controllers. |

9. Browse to the controller and select it.
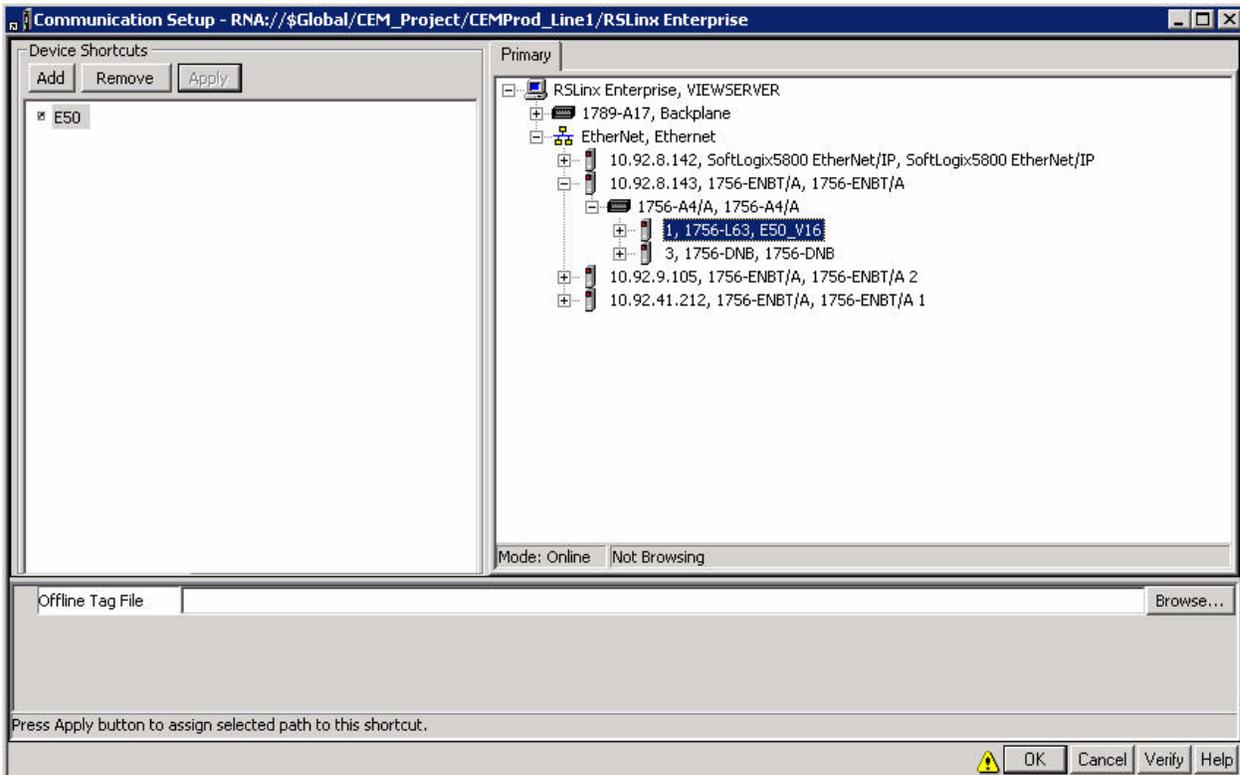
10. Click Add.

11. Type a shortcut name (do not use spaces) which corresponds to name defined in the Data Retrieval Tool.

| IMPORTANT | The shortcut name must correspond to the defined name in the Data Retrieval Tool. These defined names can be found within the file names of the files exported by the Data Retrieval Tool (for example, |
| | HMITag-[shortcut name].csv). The exported files are in the Data Retrieval Tool directory. |

12. Click Apply.

13. Repeat steps 1–12 for each controller.

Import Templates from the Library Project

In this section, the display templates are loaded into the empty HMI project.

Displays

1. Expand the project until the Graphics folder is expanded.
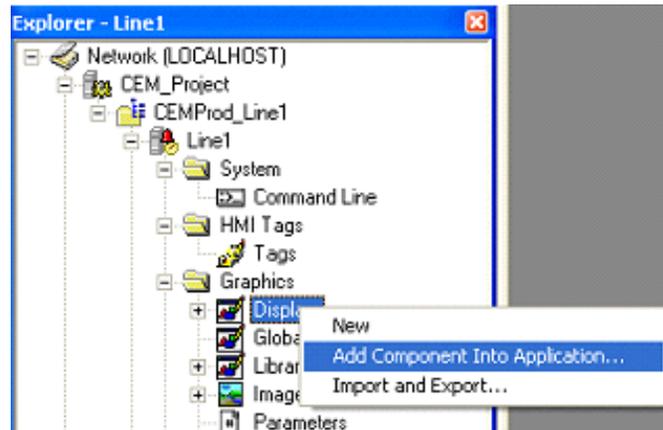
2. Right-click Display and select Add Component Into Application.

3. Browse to the Library Project and open the Gfx folder.

4. Select all the files in the folder and click Open.
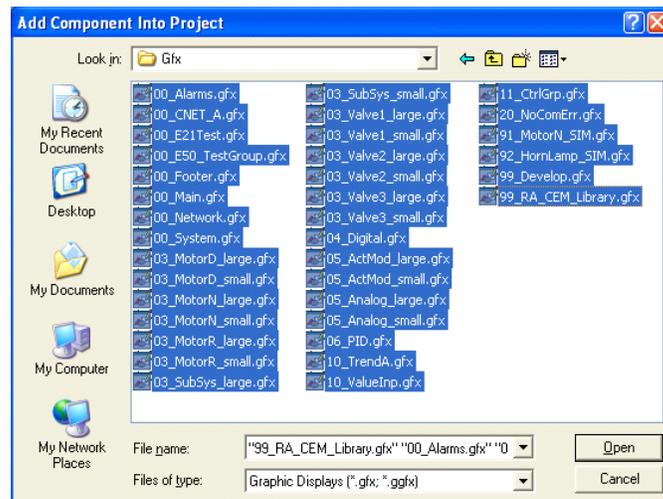
The display templates and sample screens are imported into your project.

Note: To properly utilize some graphic files migrated from Process Control group, before adding display graphics Global Object graphics should be added first. The steps to add Global Object graphics are the same to adding display graphics. The Global Object graphics are stored in the GGfx folder.

Images

In this section bitmap images, which are used in the display templates, are imported into the project.

1. Right-click Images and select Add Component Into Application.

2. Browse in the Library Project to the Images folder.

3. Select all the files in the folder and click Open.

   The images are imported into your project.

Macros

In this section macros, which provide Startup and Shutdown batch commands, are imported into the project.

1. Right-click Macro and select Add Component Into Application.

2. Browse in the Library Project and open the Mcr folder.

3. Select all the files in the folder and click Open.

   The macros are imported into your project.

Events

In this section an event file, for communication supervision, is imported into the project.

1. Right-click Events and select Add Component Into Application.

2. Browse in the Library Project and open the EDS folder.

3. Select the .eds file and click Open.

   The event file is imported into your project.

Derived Tags

In this section, a derived tag file, for heartbeat handshake with a ControlLogix controller, is imported into the project.

1. Right-click Derived Tags and select Add Component Into Application.

2. Browse in the Library Project and open the DTS folder.

3. Select the heartbeatfct.dts file and click Open.

4. The derived file is imported into your project.

Import Tags with the Data Retrieval Tool

The Data Retrieval Tool can export all the required tag and alarm settings for each object used in FactoryTalk View SE. The following three files are generated for each processor:

- HMITag-[shortcut name].csv
- Alarms-[shortcut name].csv
- HMIDerivedTags-[shortcut name].csv

Where [shortcut name] is the shortcut created in the Communication Setup.

1. Under Tools select Tag Import and Export Wizard.

   The Tag Import and Export Wizard dialog box opens.
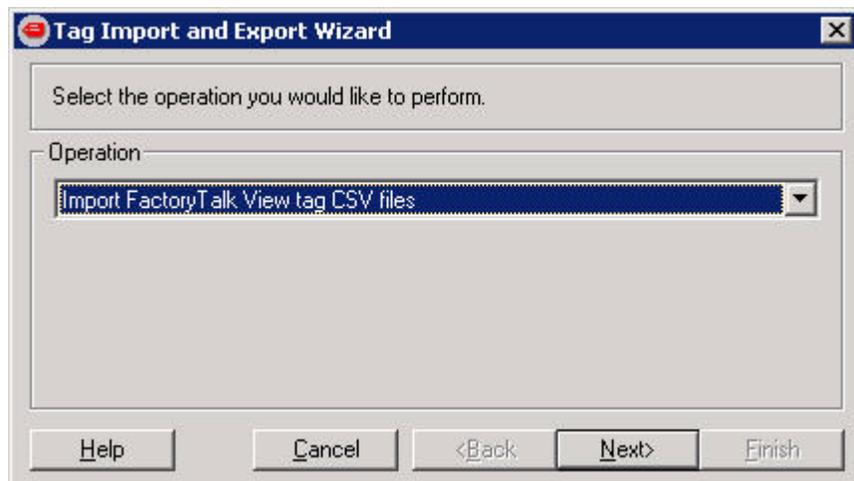
2. Verify that Import FactoryTalk View tag CSV files is selected and click Next.
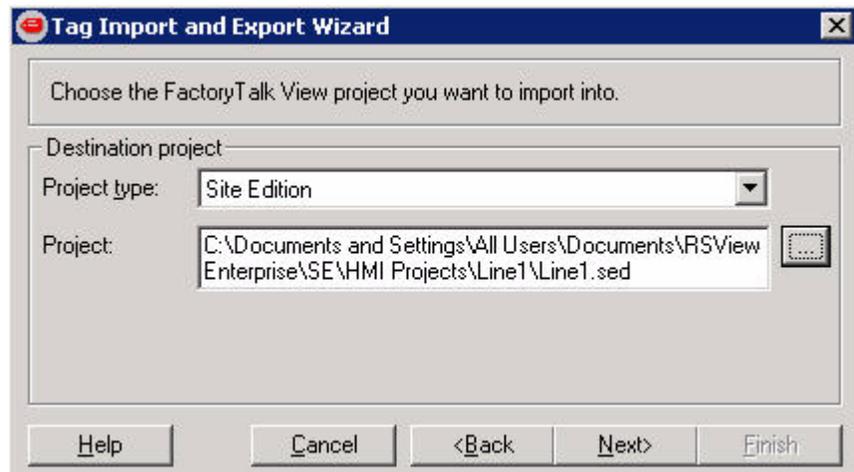
3. Verify that Site Edition is selected for the Project type and click Next.

4. Browse to the .eds file for the project into which you want to import the tags and click Next.
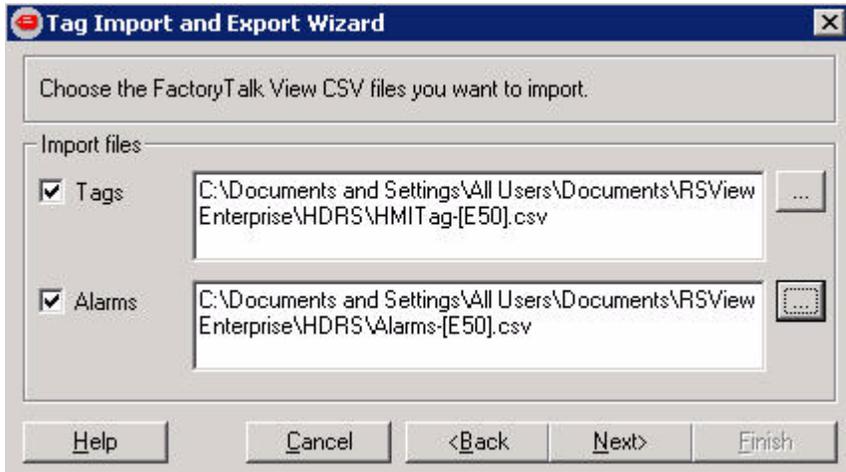
5. Browse to the .csv files for the Tags and Alarms which you want to import and click Next.

Manually Created Tags

The following memory tags must be created manually in FactoryTalk View SE. These tags are used for some MMCL functionalities. To open this dialog box, select HMI Tags > Tags.
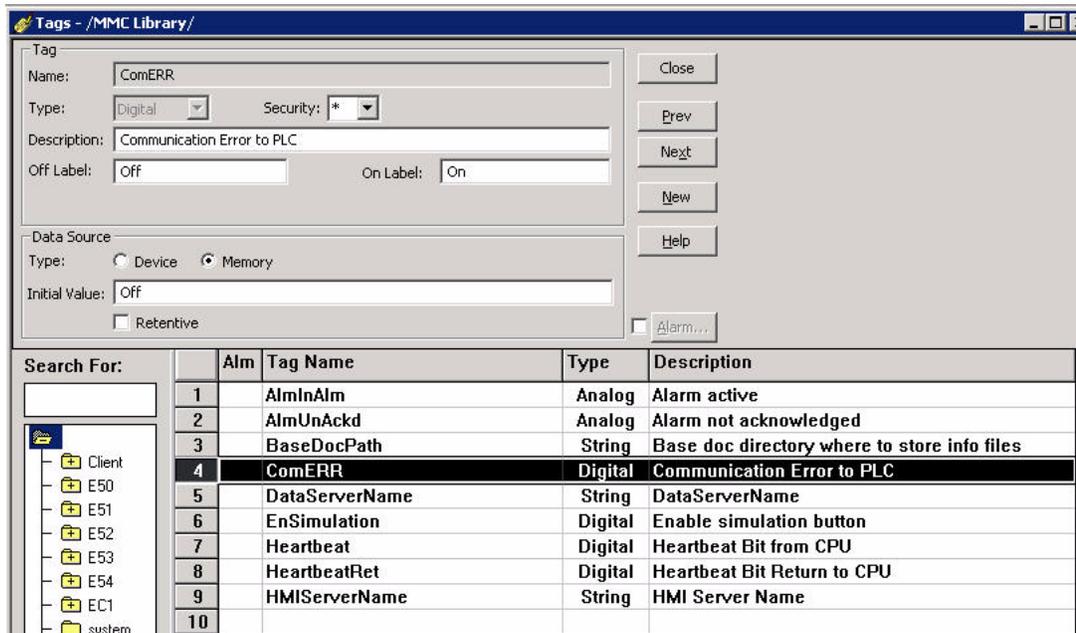
Also, a Client folder with its sub folders (depends on how many HMI clients) and memory tags need to be created to allow navigation to work properly.

User Accounts

The following five security accounts must be created in FactoryTalk View SE for the library templates:

- Administrators
- Engineers
- Electricians
- Operators
- Viewers

To open this dialog box, under Settings, select Runtime Security.
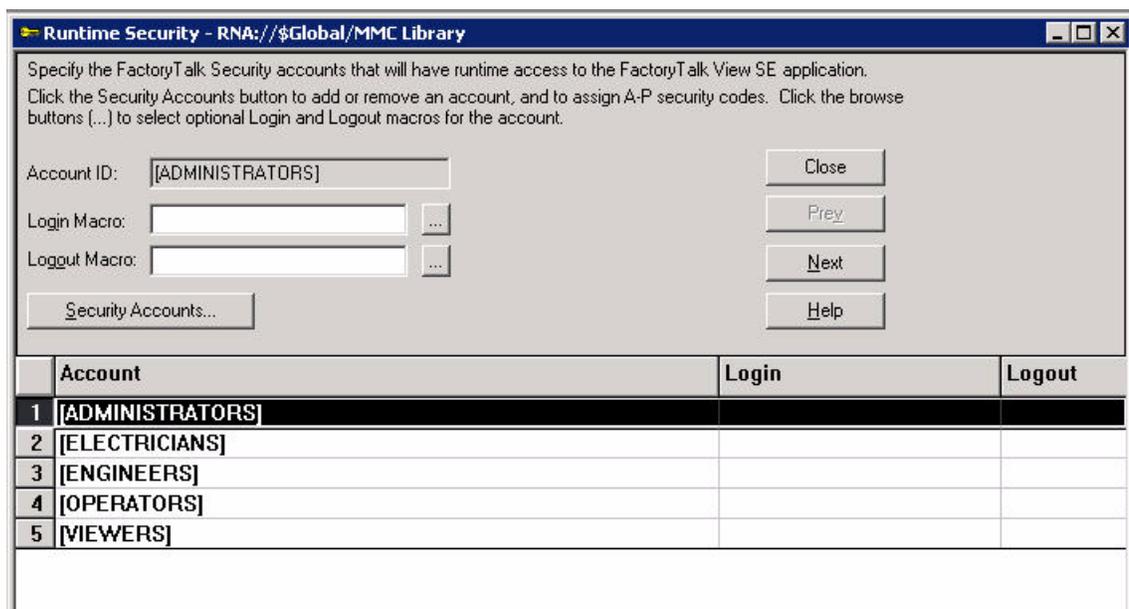
To assign security codes to different accounts, press Security Accounts button and the Security window opens. The security code assignment to each account is as follows:

- Administrators: A-P
- Engineers: A-E
- Electricians: A-C
- Operators: A,B
- Viewers: A
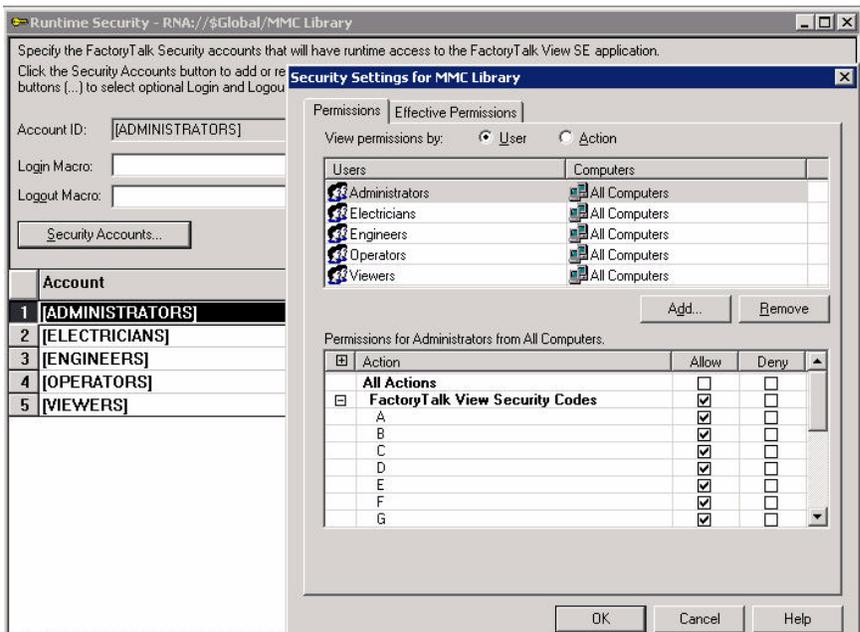
Import the MMCL Project

Instead of importing the individual elements of the MMCL project one-by-one, the entire project can be imported and used as a base project. Complete the following steps to import the project.

1. Copy the MMCL_HMI_Server_V2.zip file (or appropriate version) from the MMCL CD to your hard drive.

2. Unzip the file into the working directory of FactoryTalk View SE. For example: C:\Documents and Settings\All Users\Documents\RSView Enterprise\SE\HMI Projects

3. In FactoryTalk View Studio, create a new Application if you do not already have one open.

4. Right-click the Application name (in this example, CEM_Plant) and select New Area.
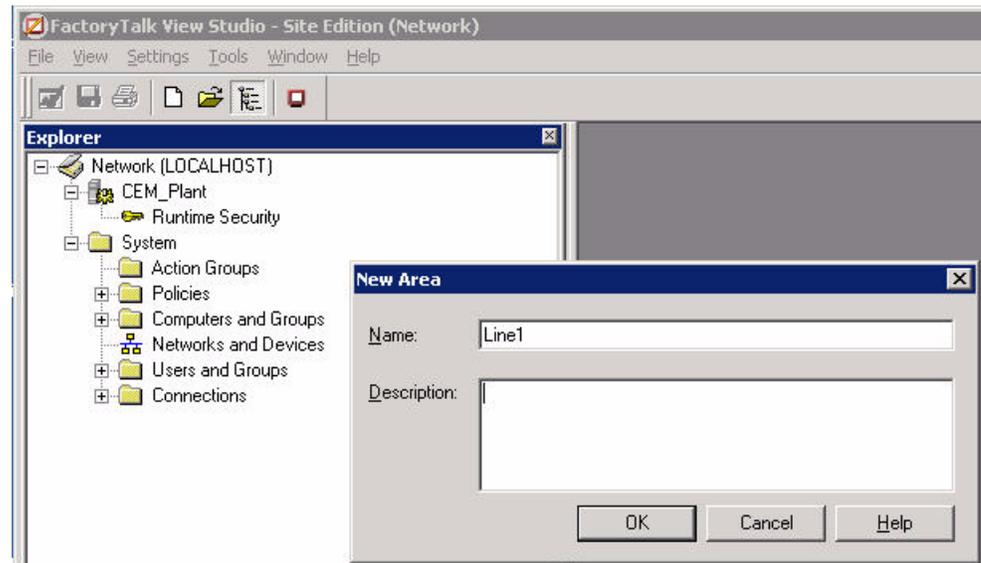
5. Enter a name and click OK.

6. Right-click the new area and select Add New Server > HMI Server.
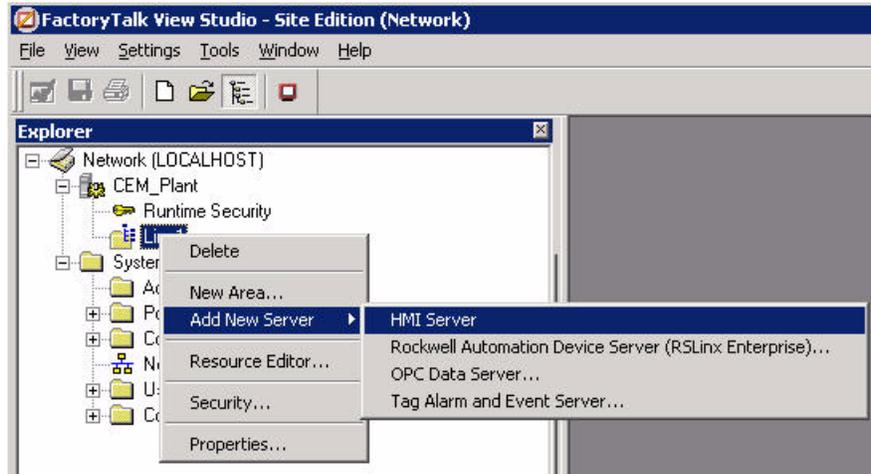
7. Select Copy an HMI server.
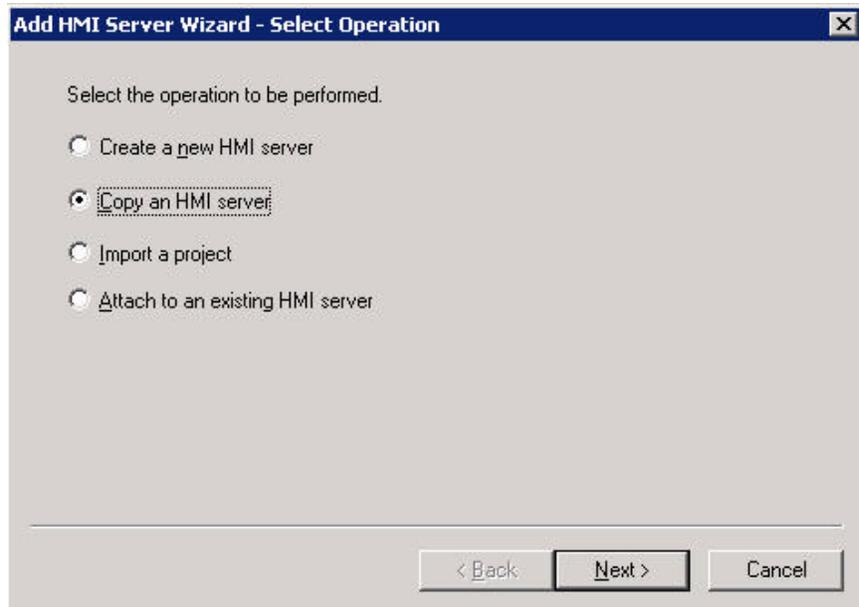
8. Click Next.

9. Browse to or enter the name of the computer that hosts the existing HMI server.

10. Click Next.

11. Select MMCLibrary_v2 which was unzipped in step 2 from the MMCL CD.
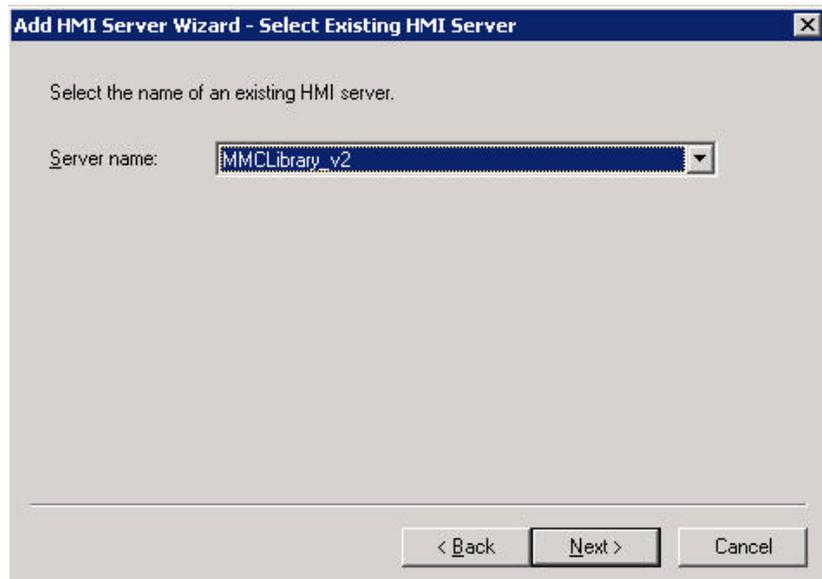
12. Click Next.

13. Enter a name for the new server.
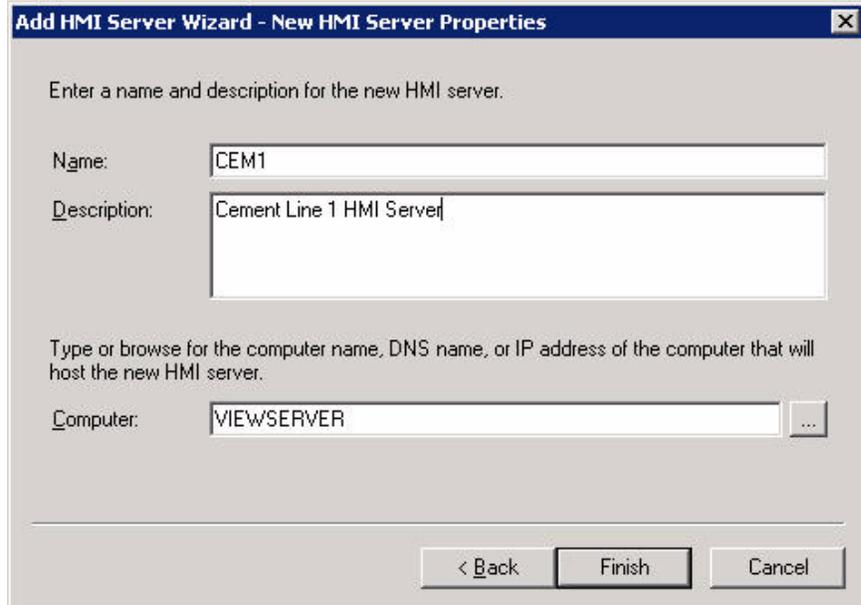
14. Click Finish.

15. Follow the steps in Data Server Setup on page 12 to add a new Data Server.

Note: MMCL_HMI_Server_V2.zip also contains four other HMI server folders which store overview graphics for different areas/departments in Cement Industry for user reverence. They are MMC_Auxiliaries, MMC_CementMills, MMC_Kiln, and MMC_RawMaterials.

Creating New FactoryTalk View SE Displays

00_Header

00_Header Display must be configured always as startup page and may not be closed at any time. This page contains Visual Basic code for supervising the communication to the controller(s). It is monitoring the HMI tag "ComERR" and popup the screen "20_ComErr".

The HMI Tag ComErr is generated by the ComErr Event which is monitoring the Heartbeat tag for communication errors.

	Enabled?	Action	Expression	Description	
1	Y	&Set ComERR 1	comm_err(Heartbeat) ==1	Call Error Display	

If you want to monitor several processors for a communication error, additional tags and expressions must be added to the Visual Basic code in the 00_Header Display and the ComErr Event.

Communication Supervision of a Controller and FactoryTalk View SE

HMI Tag
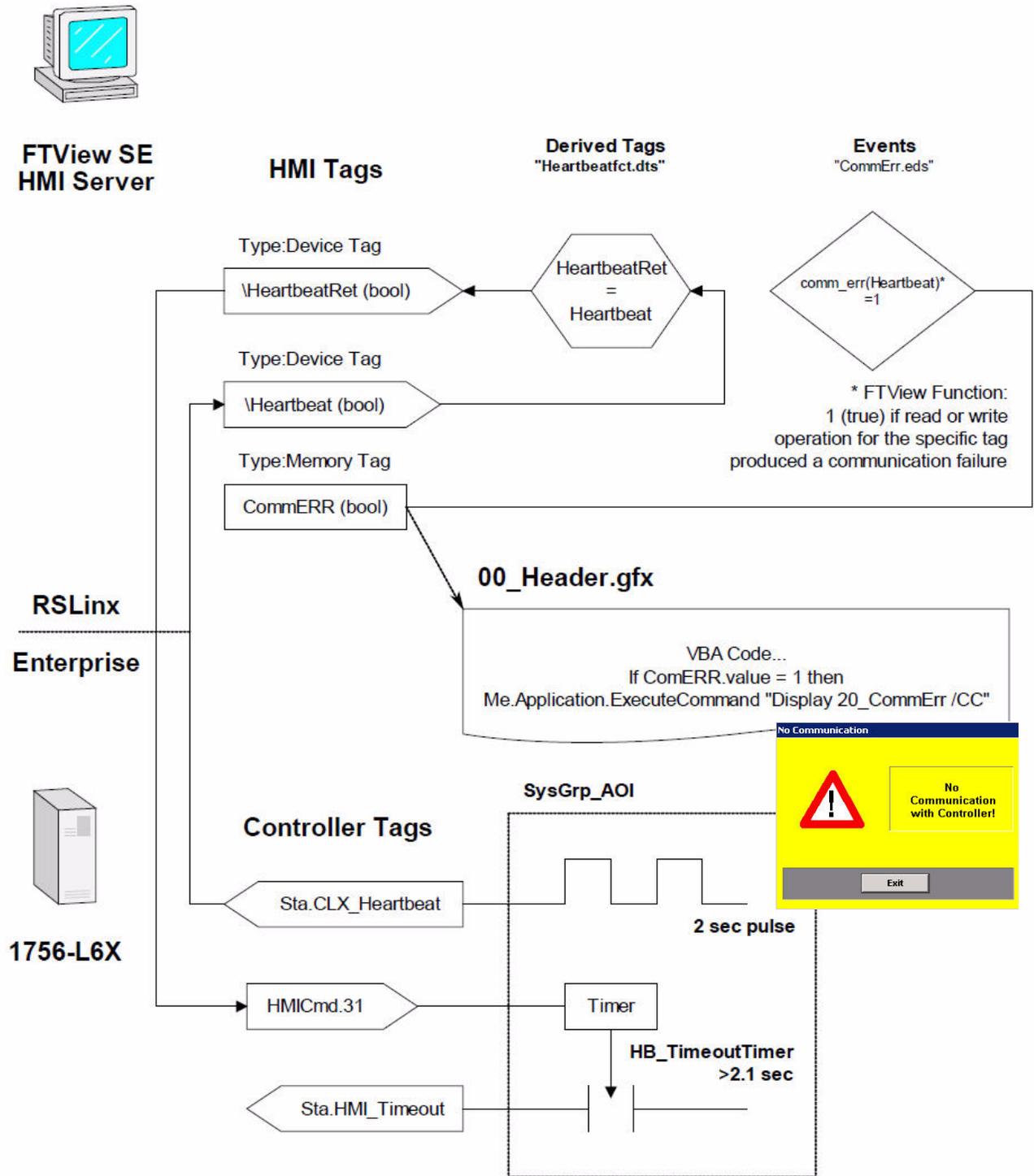
00_Footer

The 00_FTUserLogon macro opens the 00_Footer display at startup. You can place a plant overview onto this display in order to jump to any sub-displays.

This display is a sample display which can be modified for quick access to any location in the project.

User displays

The user displays are created using the library objects on the 99_RA_CEM_Library display. The displays are designed for screen resolutions of 1280x1024. These are the default settings of the display.
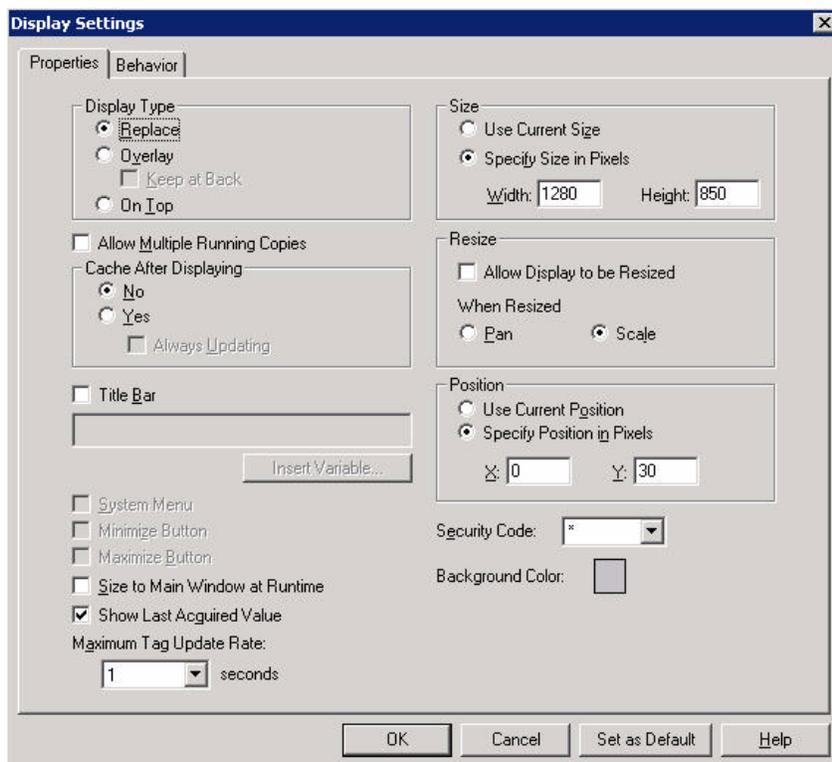
Tag Substitution

Use the following procedure to replace the standard placeholders in the modules on the following pages.

1. Drag the module group to your new display.

2. Right-click the module and select Tag Substitution.

3. Replace the following placeholders with the appropriate Asset Code (AC).

Placeholder	Replace with	For example
[topic]	Shortcut name to the appropriate processor	E50_V16
H123	AC Group Number of the module	E51
H456	AC Asset Unit	BC1
H78	AC Component	S1
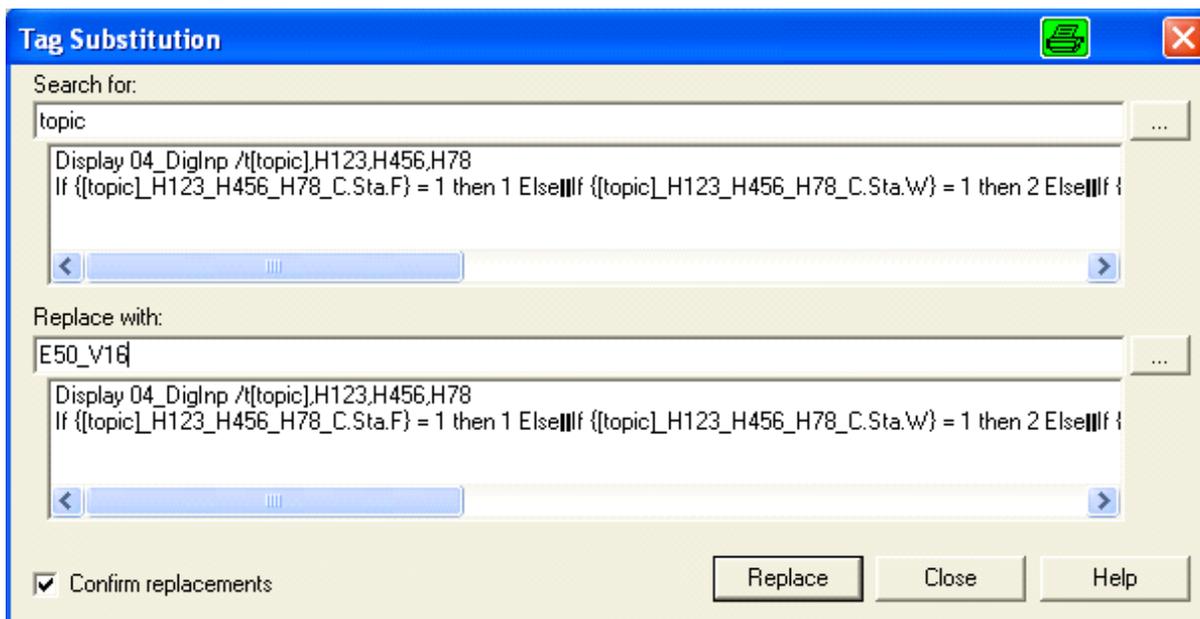
Digital Input Module
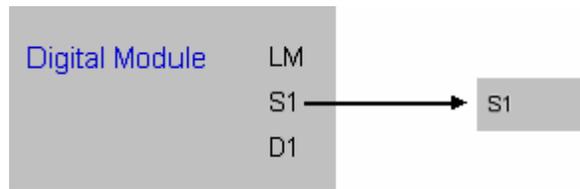
To replace placeholders in the module, see Tag Substitution on page 30.

When the project is running, click on the module to open the 04_DigInp display. The module is not visible when it is in normal state. The module is visible when it is in any abnormal state:
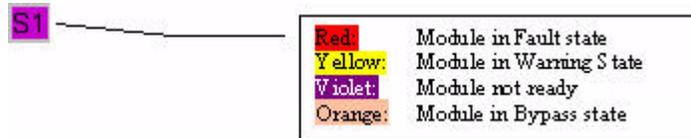
MotorN Module
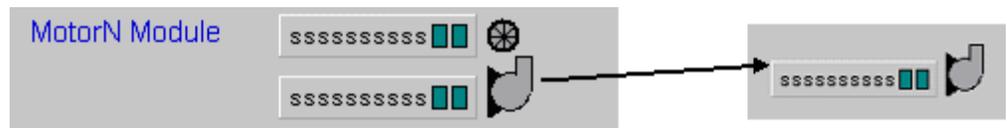
To replace placeholders in the module, see Tag Substitution on page 30.

When the project is running, click on the module to open the 03_MotorN_small display. If the motor is in Single start mode, the 03_MotorN_large opens.
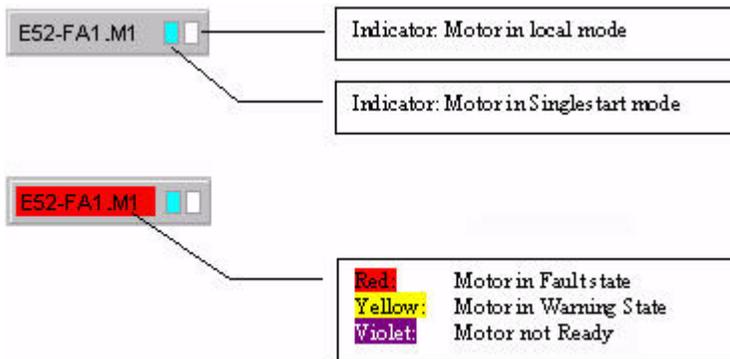
The motor symbol turns green to indicate the running state.

MotorR Module

To replace placeholders in the module, see Tag Substitution on page 30.

When the project is running, click on the module to open the 03_MotorR_small display. If the motor is in Single start mode, the 03_MotorR_large display opens. If necessary, you can replace the symbol assigned to the group.
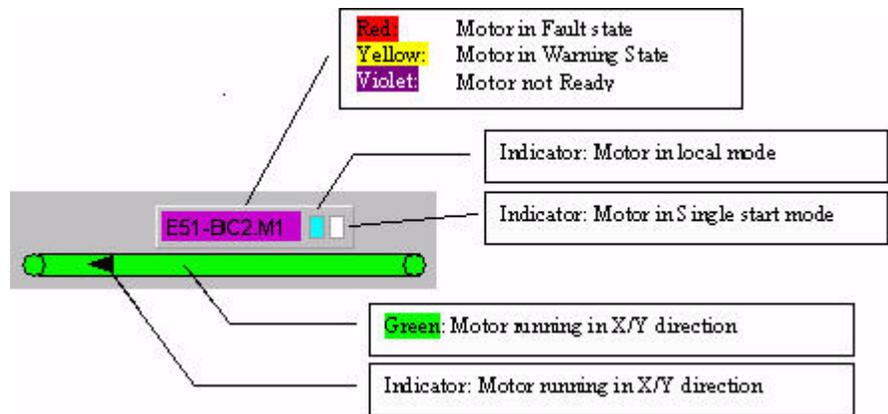
MotorD Module
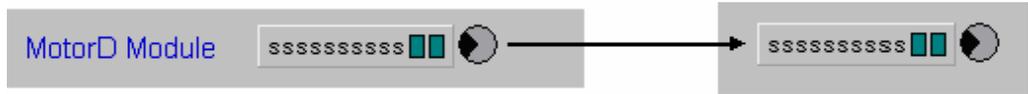
To replace placeholders in the module, see Tag Substitution on page 30.

When the project is running, click on the module to open the 03_MotorD_small display. If the motor is in Single start mode, the 03_MotorD_large display opens. If necessary, you can replace the symbol assigned to the group.
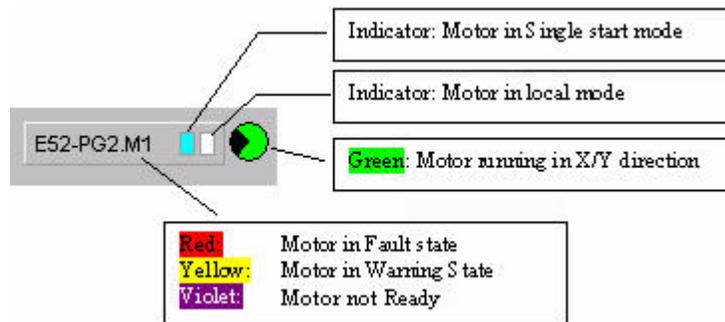
SubSys Module

To replace placeholders in the module, see Tag Substitution on page 30.

When the project is running, click on the module to open the 03_SubSys_small display. If the motor is in Single start mode, the 03_SubSys_large display opens. If necessary, you can replace the symbol assigned to the group.
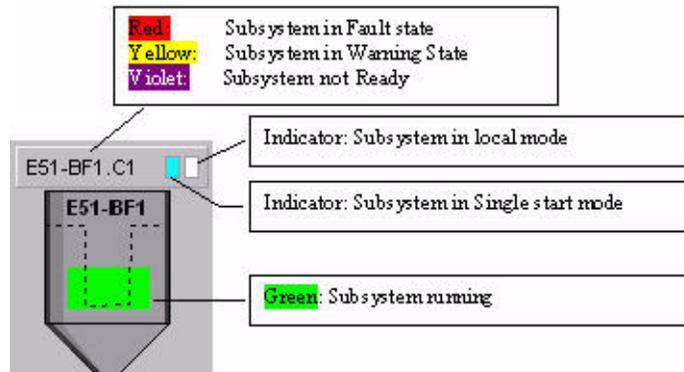
Valve1, Valve2, Valve3 Module
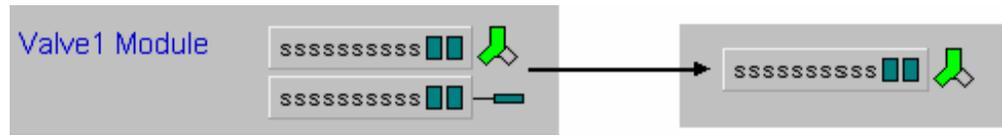
To use Valve 2 or Valve 3, choose the appropriate module.

To replace placeholders in the module, see Tag Substitution on page 30.

When the project is running, click on the module to open the 03_Valve1_small display. If the motor is in Single start mode, the 03_Valve1_large display opens. If needed, you can replace the symbol assigned to the group.
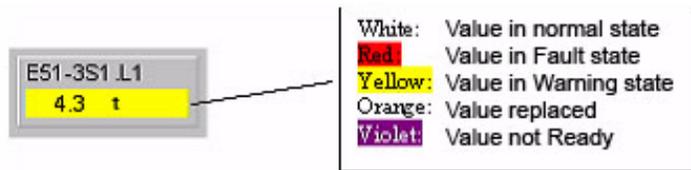
AnaInp or AnaInpC Module
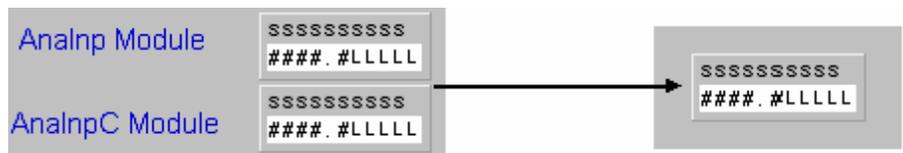
To replace placeholders in the module, see Tag Substitution on page 30.

When the project is running, click on the module to open the 05_AnaInp_small or 05_AnaInpC-small display.

ActMod Module
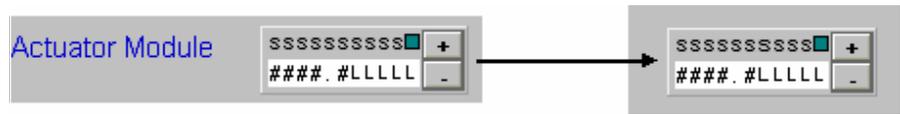
To replace placeholders in the module, see Tag Substitution on page 30.

When the project is running, click on the module to open the 05_ActMod_small display.
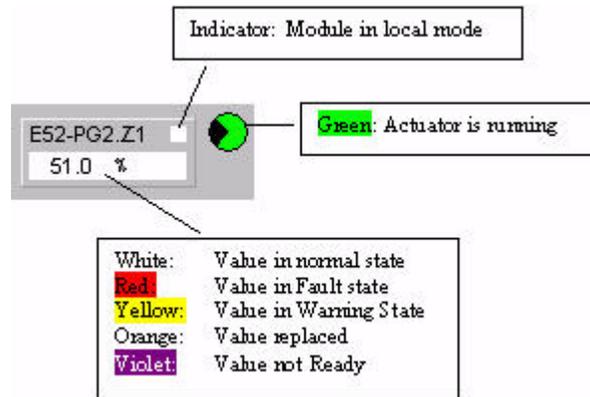
PID Module
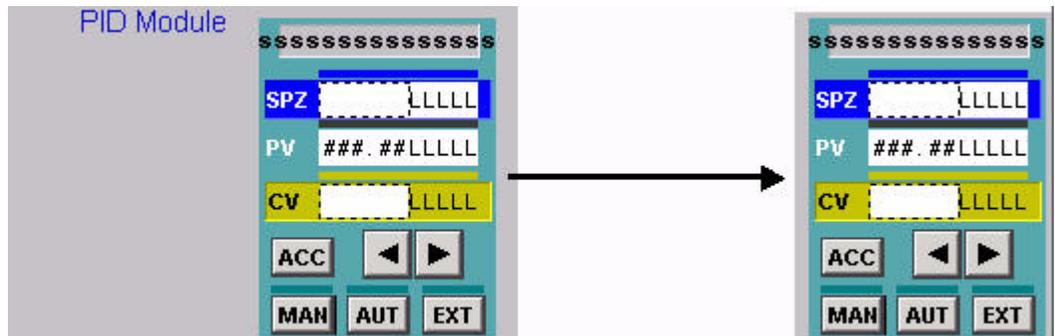
To replace placeholders in the module, see Tag Substitution on page 30.

Click on the touch zone to open the 06_PIDMod display. You can find a description of this faceplate in the operation description of the display.
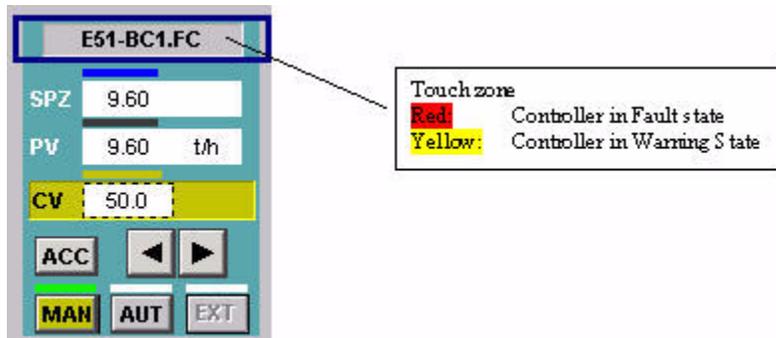
Control Group Module
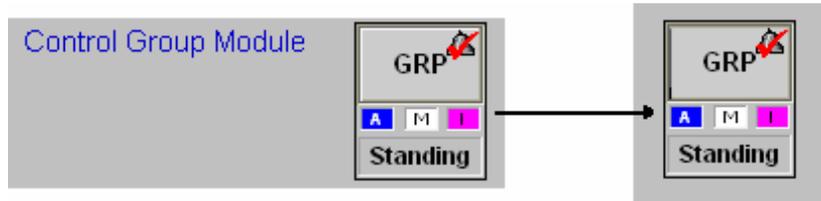
Change the caption of the button from GRP to the AC Group Number of the module (the H123 placeholder, for example, E51).

To replace placeholders in the module, see Tag Substitution on page 30.

The display is based on the assumption that a Control Group is always named _H123_H456_H78 where H123 is the HAC Group Number, 456 is the AC Asset Unit and H78 is the AC Component (for example, E51_000_00). If needed, you can replace the name with a name of your choice.

When the project is running, click the button to open the 11_CtrlGrp display.
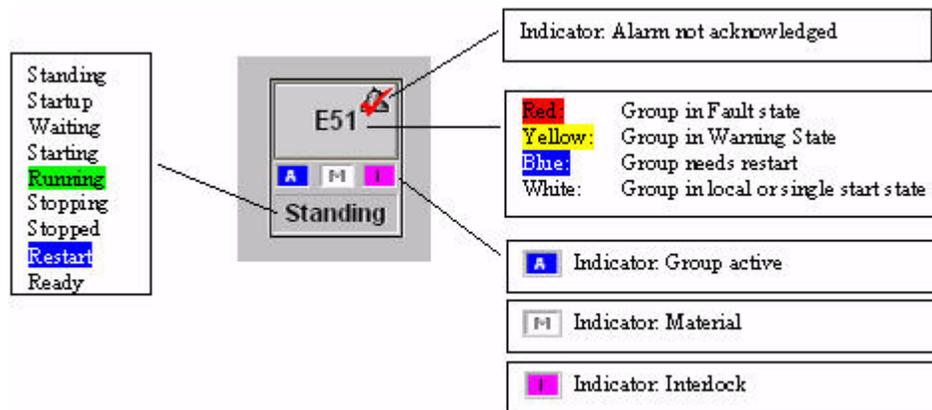
System Group Module

Change the caption of the button from GRP to the AC Group Number of the module (the H123 placeholder, for example, E50).

To replace placeholders in the module, see Tag Substitution on page 30.

The display is based on the assumption that a System Group is always named H123_H456_H78. Where H123 is the HAC Group Number, H456 is the AC Asset Unit and H78 is the AC Component (for example, E50_000_000). If needed, you can replace the name with a name of your choice.

When the project is running, click the button to open the 11_SysGrp display.
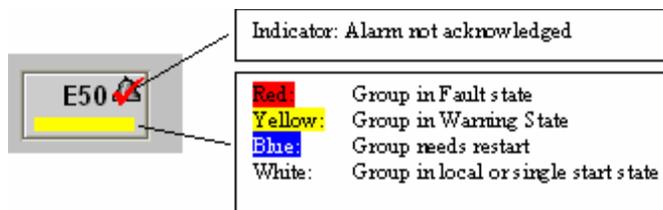
Creating Equipment

There are some preconfigured pieces of equipment, which can be dragged to the user display.

Each piece of equipment is composed of several objects.
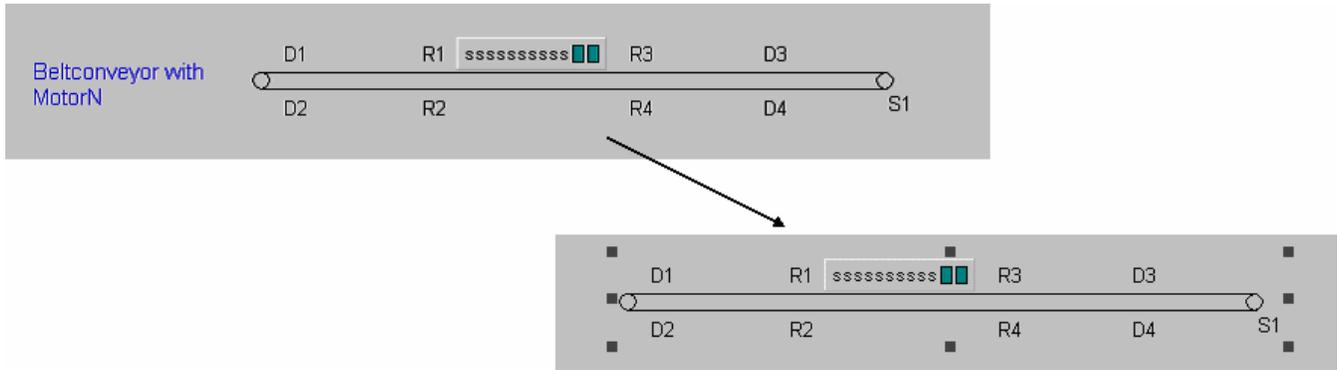
To replace placeholders in the equipment, see Tag Substitution on page 30. Some pieces of equipment may not require all of the substitutions listed in the procedure. For example, the belt conveyor, above, only requires that the H123 and H456 substitutions are made.
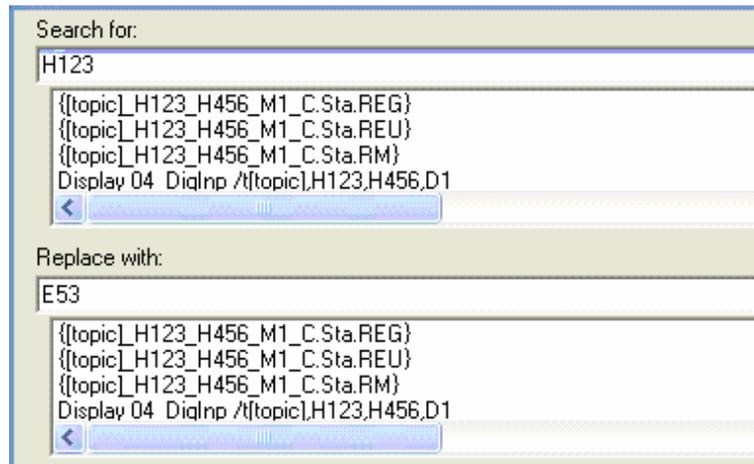
Modifying Graphic Objects

When you are using template graphics, do not modify the whole template to change the shape or size of individual objects. This distorts fonts and other objects in the graphic. Instead, only modify that object which needs to be changed. See the example below for further explanation.
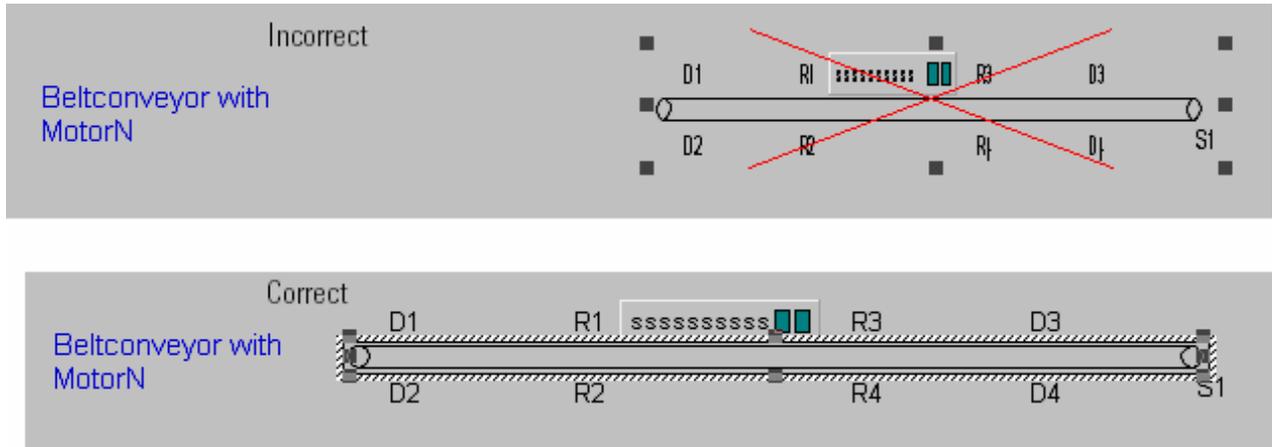
Selection Buttons for Machine Groups (MaGrp)

There are many ways to generate selection buttons or switches. This section describes how to add template buttons.

Change the caption of the button as needed.

Use the Tag Substitution procedure on page 30 to replace the following placeholders.

Placeholder	Replace with	For example
TOPIC	The appropriate shortcut name	E50_V16
MaGrp_	The appropriate Machine Group name	E51_000_02
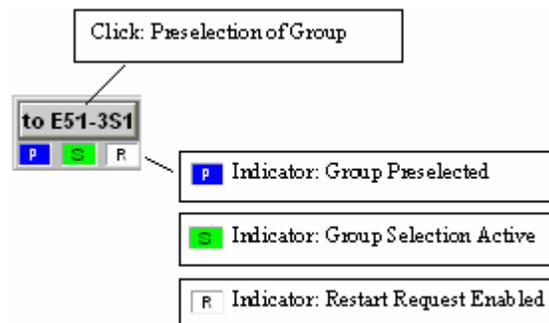
System Display

The system display is used for diagnostic purposes and is just an example. It could be a base for creating system displays applying to the plant application.

- Server diagnostic for each HMI-, Data Server and FactoryTalk directory
- RSLinx Enterprise Diagnostic Counter for each shortcut
- System messages of each controller

Communication Supervision

Heartbeat
from PLC

The heartbeat mechanism is used to check if the FactoryTalk View SE Data Server is still alive. The HMI tag **Heartbeat** reads a pulse from the ControlLogix software. The derived tag function **HeartbeatFct** writes the status of the **Heartbeat** tag to the derived tag **HeartbeatRet**. The ControlLogix software monitors this tag for timeouts and generates an alarm.
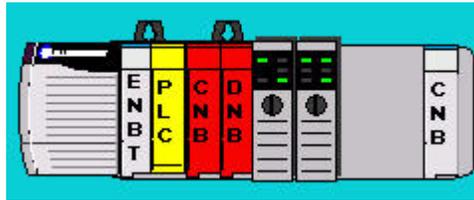
Diagnostic

The ControlLogix software provides a tag indication for proper Network Communication {[E50_V16]NetworkOK.0}. On Network error, the module color changes to RED. Clicking on the module opens a Network diagnostic display for this network.

Clicking on the two processor modules next to DNB module in the chassis also opens two different Controller Diagnostic faceplates. One is RSLinx software-based and the other one is L_CPU_AOI instruction-based. Both are provided as a user reference.

Network Screen
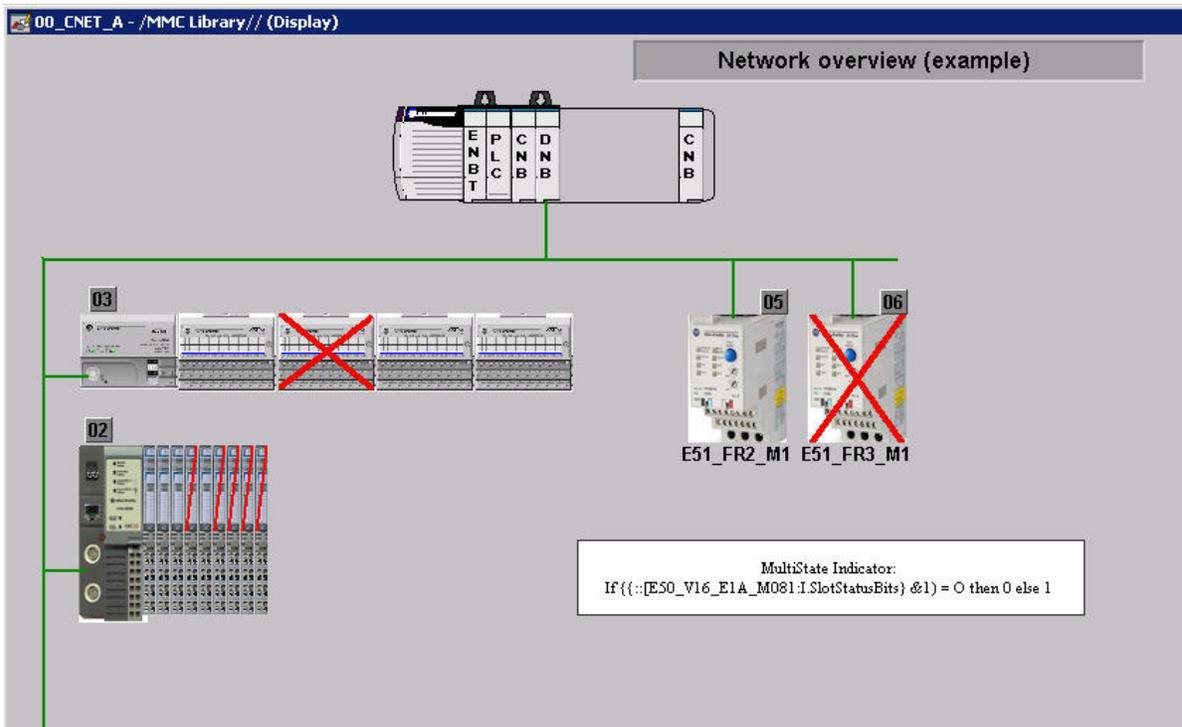
There is a direct reference tag used to indicate whether a module it is healthy/available or not. For further information about the module status bits, please refer to the RSLogix 5000 Online Help and search under Module-Defined Data Types for the desired module.

The large red X indicates that modules are unhealthy/not available.

Trends

To use the trend ActiveX in FactoryTalk View SE, the trend data must be configured in an Data Log Model in order to be visible in the displays. The following tags must be added to the Data Log Model named 'day'.

Display Template	Tag
AnaInp	H123\H456\H78\Val\PV
ActMod	H123\H456\H78\Val\PV
PidMod	H123\H456\H78\Val\PV H123\H456\H78\Val\BCZ H123\H456\H78\Val\CV H123\H456\H78\Val\SPZ
Trend Displays	Any other tag as required
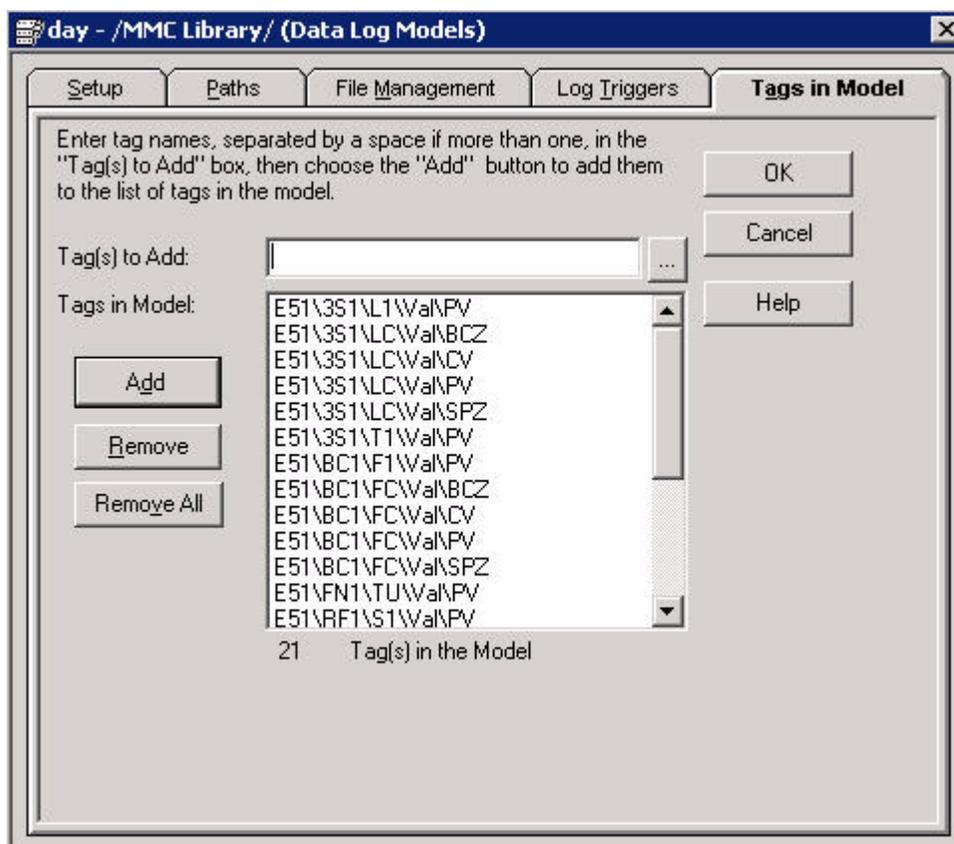
Alarming

When the files from the Data Retrieval Tool (HMITag-[shortcut name].csv and Alarms-[shortcut name].csv) have been imported, all the necessary alarm configuration of the Tags from the Data Retrieval Tool is complete.

The imported alarms use the configuration in the Alarm Setup (double-click the Alarm Setup) on the User Msgs tab.
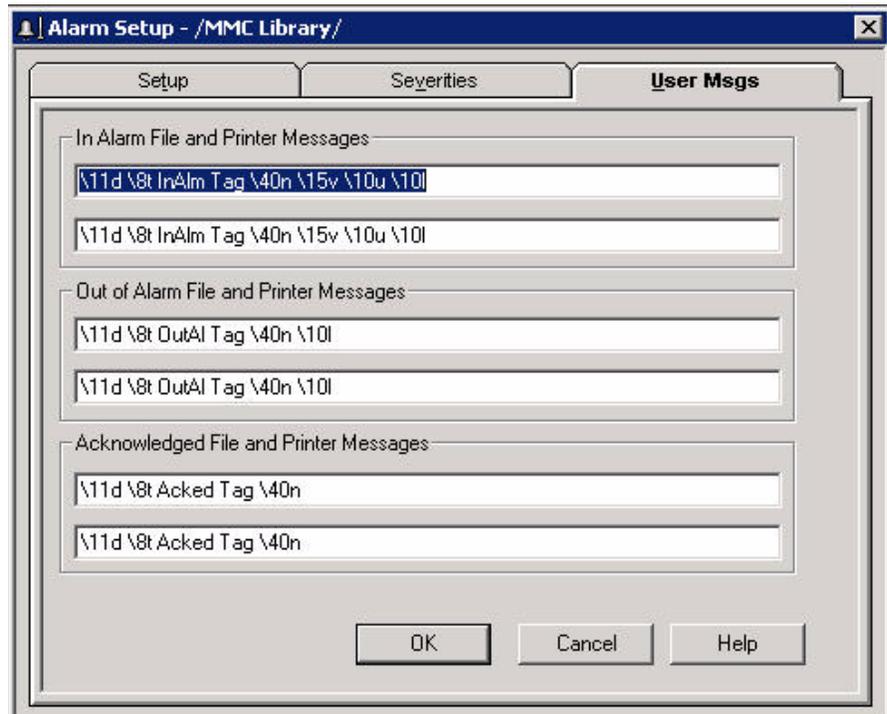
Where,

- Alarm date = 11d
- Alarm time = 8t
- Alarm Label = 10l
- Alarm tag name = 40n
- Alarm threshold value = 15v
- Alarm units = 10u

Additional alarms must be configured accordingly.

Digital Alarms

The standard configuration is defined as follows.
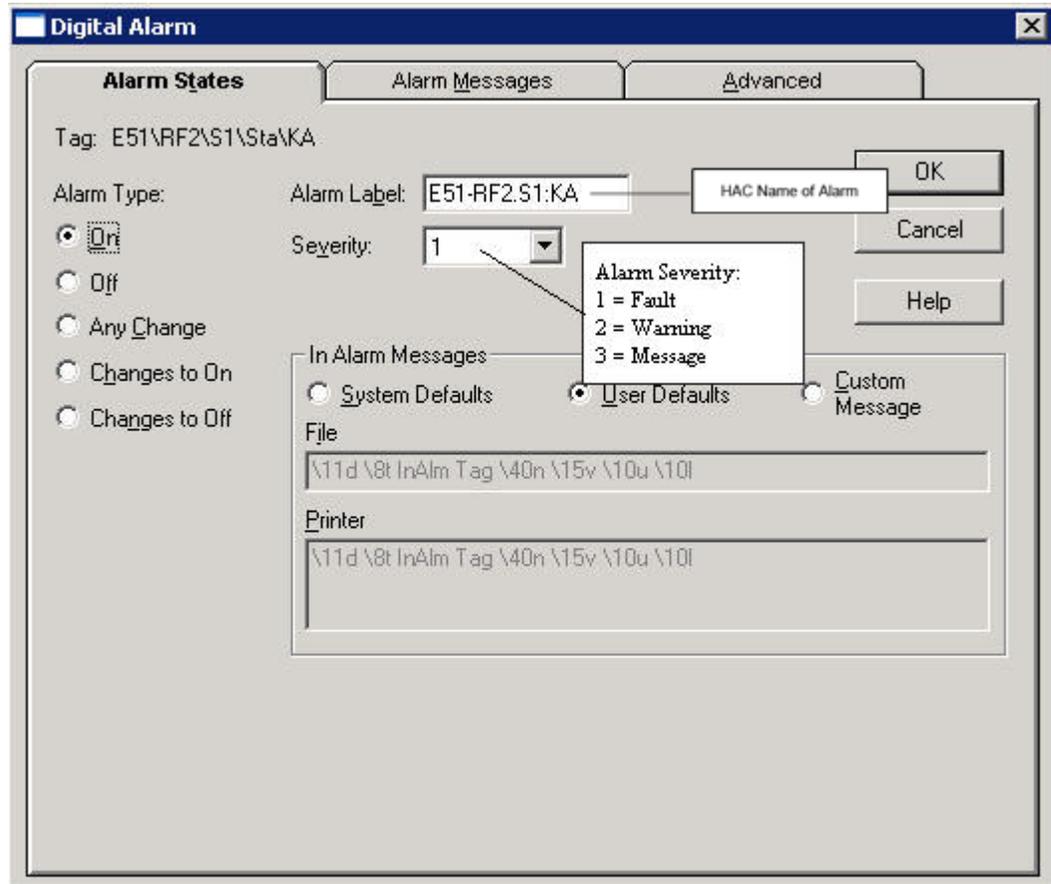
These settings can be modified according to the project application's requirements.

Analog Alarm

The standard configuration uses four thresholds, defined as follows.
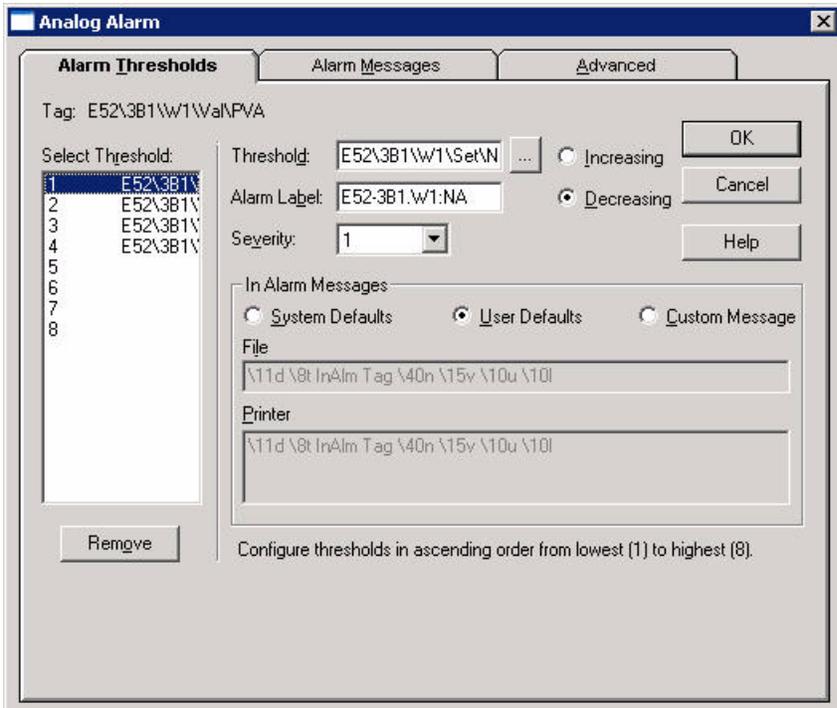
Threshold	Severity	Alarm Label	Direction
H123\H456\H78\Set\NV	1	H123-H456.H78:NA	Decreasing
H123\H456\H78\Set\LV	2	H123-H456.H78:LA	Decreasing
H123\H456\H78\Set\HV	2	H123-H456.H78:HA	Increasing
H123\H456\H78\Set\MV	1	H123-H456.H78:MA	Increasing

An alarm is not clearable until the device in alarm is back in a normal state. The analog alarm value H123\H456\H78\Val\PVA stays at the alarm level, until it has been acknowledged by the operator with the display acknowledge button. An analog alarm counts as 1 alarm, even if two messages are visible in the alarm list (for example, High-alarm and Max-alarm).

Derived Tags - Alarming

The last step to configure the alarm is to create a derived tag file named 'Alarming'. One file from the HDRS Data Retrieval Tool (HMIDerivedTags-[shortcut name].csv could be used to copy and paste Derived Tag Name and Expression into this file.

Notes:

Runtime Operation

Common Operations

Singlestart

Click the Manual/Auto button to switch between the small and large versions of the display. The large version of the display includes the Singlestart buttons. This Manual/Auto button is enabled only if the user is logged in as Electrician, Engineer, or Administrator. Singlestart mode is indicated when the button is cyan.
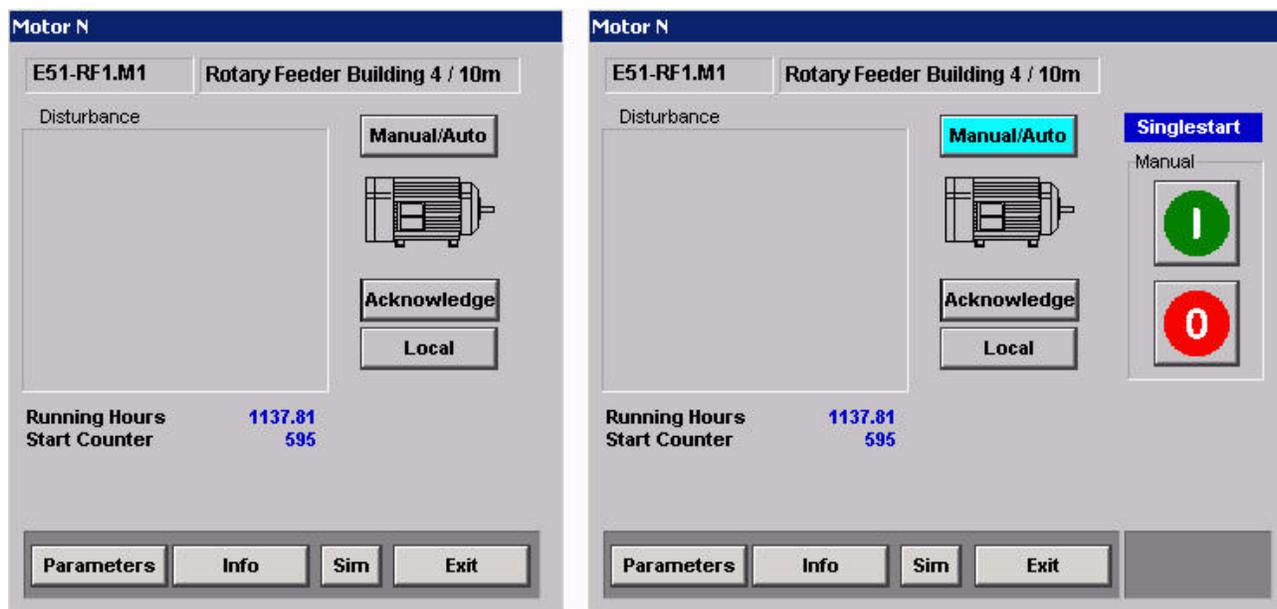
When the Singlestart mode is terminated by the Group module, the buttons are not accessible.
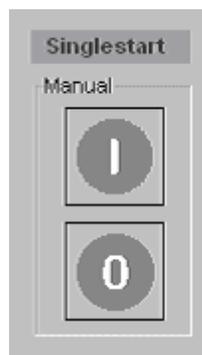
Acknowledge

If an object has an unacknowledged alarm, that object's Acknowledge button is blue. Clicking this button sends an ACK command to the controller and acknowledges alarms for the object or the group in the alarm function.

Local Mode

Clicking the Local button enables the Local mode of the object. This means that the object can be controlled at the motor by the Start and Stop buttons.

The Local Mode is active when the button is white. This function can be switched on or off by the Group module.

Info Function

Info

Clicking the Info button brings up another popup faceplate to enter user information for the device

Notepad - \\viewserver\InfoFiles\E51\E51_RF1_M1.txt

Enter your information below

Accept   Exit
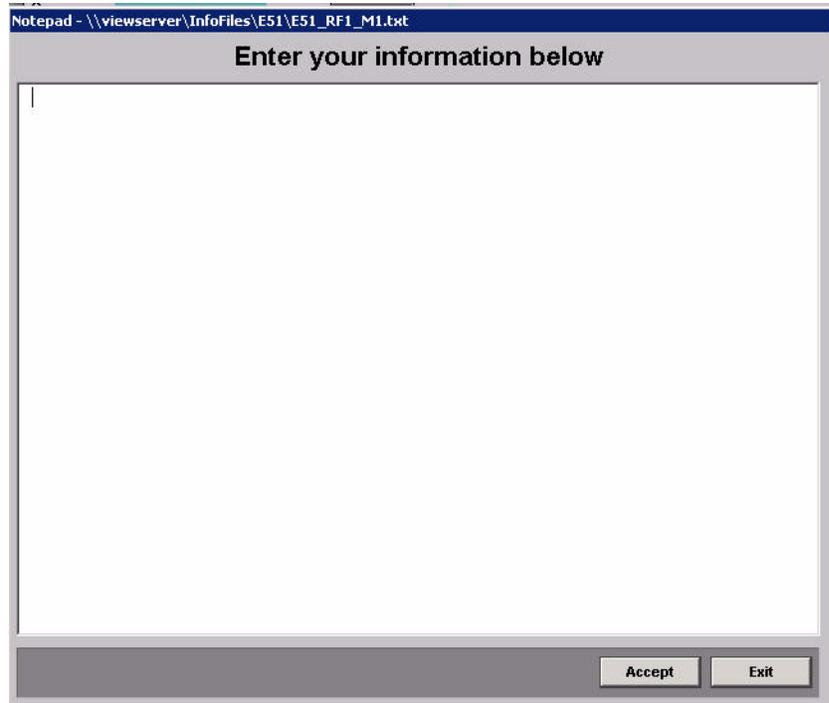
Value Input

The value input is used for the Analog and ActMod modules. Use the arrow buttons to change the values within the range indicated. Each click changes the value by 1% of the range in either direction.

Value Input

**E51-3S1.L1
Substitution Value**

Range: 0.0...5.0

2.4   t

◄ ►   Exit

You can also change the value by entering the desired number within the input field.

Analog/Actuator Module

When the replacement value is active, the Replacement button and bar graph are orange.
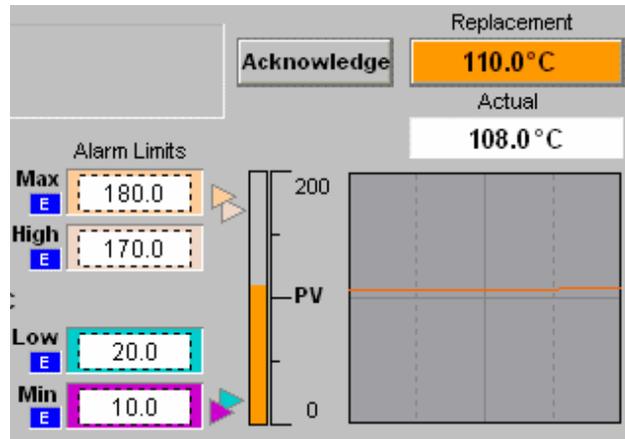
PID Module
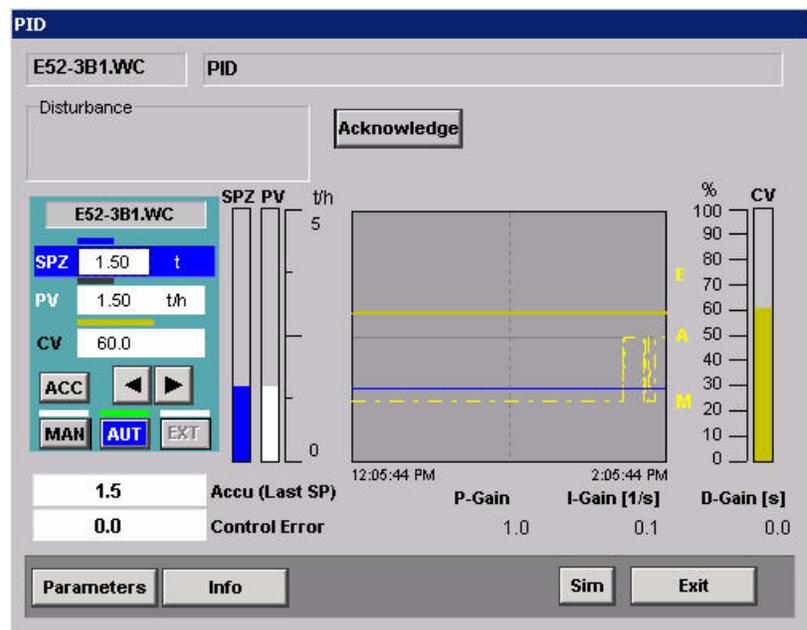
Manual Mode
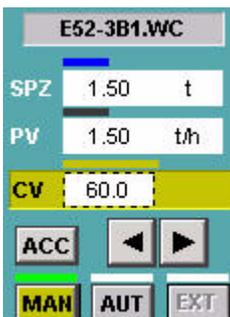
Click the MAN button to select the Manual Mode of the PID Controller. Manual Mode is preselected when the MAN button is yellow. The Controller is running in Manual Mode when the indicator above the MAN button is green. In Manual Mode, the Controlled Variable can be adjusted by using the arrow keys or entering the desired value in the input field.

Click the ACC button to restore the last stored setpoint.

Automatic Mode
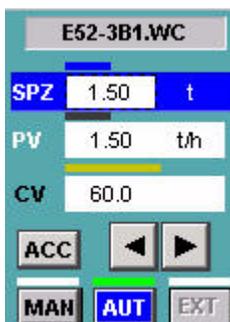
Click the AUT button to select the Automatic Mode of the PID Controller. Automatic Mode is preselected when the AUT button is blue. The controller is running in Automatic Mode when the indicator above the AUT button is green. In Automatic Mode, the Setpoint Variable can be adjusted by using the arrow keys or entering the desired value in the input field.

Click the ACC button to restore the last stored setpoint.

When the Automatic mode is selected, the actual setpoint is stored for later use.

External Mode
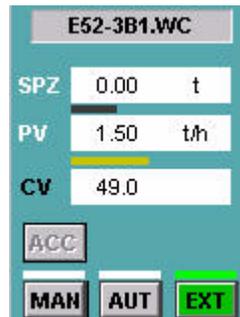
Click the EXT button to select the External Mode of the PID Controller. External Mode is preselected when the EXT button is green. The controller is running in External Mode when the indicator above the EXT button is green. In External Mode, the Setpoint Variable is controlled by an external setpoint and cannot be adjusted.

E50 Example

Display Tag Reference

This appendix describes the tag references in the MMCL display templates.

Control Group

52

54

22

35, 36

22

33

38

28

25

23

30/29

24

31

I00–131

40

41

37

21

50

2/CurrentUserHasCode(B)

4/32/CurrentuserHasCode(B)

16/34/CurrentUserHasCode(D)

15/26/CurrentUserHasCode(B)

18/42/62

1/CurrentUserHasCode(B)

7/CurrentUserHasCode(B)

17/60/CurrentUserHasCode(B)

5/27/CurrentUserHasCode(B)

Set 3, Ack #2*/#2AlmUnAckd/
CurrentUserHasCode(B)

Vis If (#2\AlmUnAckd)=0) and
((#1_#2_#3_#4_C.Sta.W or
#1_#2_#3_#4_C.Sta.F)=1) then 1 else 0

25 or 28 or 23 or 29

55/23/61

28

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(B)

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, and #3 = [Shortcut name]Global.

Commands	Status	Status (cont.)	MSGText	MSGText (cont.)
1=#1.Cmd.0	21=#1.Sta.ACT	37=#1.Sta.MAT	100=#2\MSGText\IntlStart00	116=#2\MSGText\IntlStop00
2=#1.Cmd.1	22=#1.Sta.RRQ	38=#1.Sta.CK	101=#2\MSGText\IntlStart01	117=#2\MSGText\IntlStop01
3=#1.Cmd.3	23=#1.Sta.STA		102=#2\MSGText\IntlStart02	118=#2\MSGText\IntlStop02
4=#1.Cmd.4	24=#1.Sta.STP	40=#1.Sta.PP	103=#2\MSGText\IntlStart03	119=#2\MSGText\IntlStop03
5=#1.Cmd.6	25=#1.Sta.WAI	41=#2\COMText\MsgDisp00…15	104=#2\MSGText\IntlStart04	120=#2\MSGText\IntlStop04
7=#1.Cmd.8	26=#1.Sta.RSB		105=#2\MSGText\IntlStart05	121=#2\MSGText\IntlStop05
15=#1.Cmd.2	27=#1.Sta.IMS	42=#1.Sta.GrpIdentify	106=#2\MSGText\IntlStart06	122=#2\MSGText\IntlStop06
16=#1.Cmd.7	28=#1.Sta.STU		107=#2\MSGText\IntlStart07	123=#2\MSGText\IntlStop07

Commands	Status	Status (cont.)	MSGText	MSGText (cont.)
17=#1.Cmd.9	29=#1.Sta.RDY	**Values**	108=#2\MSGText\IntlStart08	124=#2\MSGText\ImmStop00
18=#1.Cmd.10	30=#1.Sta.RUN	50=#1.Val.RT	109=#2\MSGText\IntlStart09	125=#2\MSGText\ImmStop01
	31=#1.Sta.STD	51=#1.Val.INR	110=#2\MSGText\IntlStart10	126=#2\MSGText\ImmStop02
	32=#1.Sta.REU	52=#2\Name	111=#2\MSGText\IntlStart11	127=#2\MSGText\ImmStop03
	33=#1.Sta.OCC	54=#2\Text	112=#2\MSGText\IntlStart12	128=#2\MSGText\ImmStop04
	34=#1.Sta.RIR	55=#1.Val.STA_RT	113=#2\MSGText\IntlStart13	129=#2\MSGText\ImmStop05
	35=#1.Sta.W	60=#1.Par.AllowStartPause	114=#2\MSGText\IntlStart14	130=#2\MSGText\ImmStop06
	36=#1.Sta.F	61=#1.Par.StartingTimeOutPreset	115=#2\MSGText\IntlStart15	131=#2\MSGText\ImmStop07
		62=#3.Par.EnGrpIdentify		

MotorN

52

28

29

30

26

27

31

32

**24 yellow,
25 red**

54

5/34/CurrentUserHasCode(C)
Alarm remark: Single Mode ON/OFF
MotorN_small: Display MotorN_large
MotorN_large: Display MotorN_small
Vis: #1.Par.DisableSingle

**Vis: 34 and CurrentUser
HasCode(C)**

2

1

**Set 3, Ack #3*/#2\AlmUnAck
/CurrentUserHasCode(B)
4/33/CurrentUserHasCode(B)**
Vis: #1.Par.DisableLocal

#1.Sta.IntlkOK/#1.Sta.NbintlOK/
#1.Sta.IntlkBypActive
Vis.#1.Par.HasIntlObj

#1.Sta.PermOK/#1.Sta.NBPermOK
/#1.Sta.PermBypActive
Vis.#1.Par.HasPermObj

35 or 23

35

22

Vis: [Shortcut name]
Global HeavyStartup
AND (NOT #1.Par.
HeavyStartupIgn)
AND #1.Aux.Stopped

50

51

Vis: 55>0

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, and #3 = H123/H456.

Commands	Status	Status (cont.)	Values
1=#1.Cmd.0	20=#1.Sta.RP	28=#1.Sta.TAM	50=#1.Val.RT
2=#1.Cmd.1	21=#1.Sta.RU	29=#1.Sta.RAM	51=#1.Val.DC
3=#1.Cmd.3	22=#1.Sta.RM	30=#1.Sta.SAM	52=#2\Name
4=#1.Cmd.4	23=#1.Sta.WAI	31=#1.Sta.IDS	54=#2\Text
5=#1.Cmd.5	24=#1.Sta.W	32=#1.Sta.IDP	55=#1.Val.RST_RT
	25=#1.Sta.F	33=#1.Sta.REU	
	26=#1.Sta.UAM	34=#1.Sta.REG	
	27=#1.Sta.KAM	35=#1.Sta.STU	

MotorN_E3

**24 yellow,
25 red**   **54**

5/34/CurrentUserHasCode(C)
Alarm remark: Single Mode ON/OFF
    MotorN_E3_small: Display
    MotorN_E3_large
    MotorN_E3_large: Display

52

28
29
30
26
27
31
32

**Vis: 34 and
CurrentUserHasCode (C)**

2
1

Vis: {Shortcut
name}Global
HeavyStartup
AND [NOT
#1.Par.HeavyStartupIgn)
AND#1.Aux.Stopped

**Set 3, Ack #4*/#2\AlmUnAckd/
CurrentUserHasCode(B)**

4/33/CurrentUserHasCode(B)
Vis: #1.Par.DisableLocal

#1.Sta.IntlkOK/#1.Sta.NBIntlkOK/
#1.Sta.IntlkbypActive
Vis: #1.Par.HasIntlkObj

80
81
82
83

#1.Sta.PermOK/#1.Sta.NBPermOK/
#1.Sta.PermbypActive
Vis: #1.Par.HasPermObj

50
51
55

Vis: CurrentUserhasCode(C)   **Vis: CurrentUserhasCode(C)**   **35**   **35 or 23**

Vis: CurrentUserhasCode(B)

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, #3 = [shortcut name]_H123_H456_H78_e3,
and #4 = H123/H456.

Commands	Status	Status (cont.)	Values	E3
1=#1.Cmd.0	20=#1.Sta.RP	28=#1.Sta.TAM	50=#1.Val.RT	80=#3.DeviceStatus.1
2=#1.Cmd.1	21=#1.Sta.RU	29=#1.Sta.RAM	51=#1.Val.DC	81=#3.TripStatus
3=#1.Cmd.3	22=#1.Sta.RM	30=#1.Sta.SAM	52=#2\Name	82=#3.AverageCurrent
4=#1.Cmd.4	23=#1.Sta.WAI	31=#1.Sta.IDS	54=#2\Text	83=#3.ThermUtilized
5=#1.Cmd.5	24=#1.Sta.W	32=#1.Sta.IDP	55 = #1.Val.RST_RT	

Commands	Status	Status (cont.)	Values	E3
	25=#1.Sta.F	33=#1.Sta.REU		
	26=#1.Sta.UAM	34=#1.Sta.REG		
	27=#1.Sta.KAM	35=#1.Sta.STU		

MotorR

24 yellow, 25 red

55

5/34/CurrentUserHasCode(C)

53

Alarm remark: Single Mode ON/OFF
MotorR_small: Display MotorR_large
MotorR_large: Display MotorR_small
Vis: #1.Par.DisableSingle

Vis: 34 and CurrentUserHasCode(C)

28

29

30

26

27

31

32

Disturbance
Thermal Overload
Contactor Feedback
Local Stop
Safety Switch
Not Available
Safety Interlock
Machine Interlock
Heavy Startup

Manual/Auto

56   6

57   7

58   1

**Set 3, Ack #3*/#2\AlmUnAckd/
CurrentUserHasCode(B)**

4/33/CurrentUserHasCode(B)
Vis: #1.Par.DisableLocal

Acknowledge

Local

50

50

52

Vis: 59>0

59

Running Hours ######. ##
Start Counter X   #####
Start Counter Y   #####
Before Restart (sec)   ###

35

35 or 23

#1.Sta.IntlkOK/#1.Sta.NBIntlkOK/
#1.Sta.IntlkbypActive
Vis:#1.Par.HasIntlkObj

#1.Sta.PermOK/#1.Sta.NBPermOK/
#1.Sta.PermbypActive
Vis:#1.Par.HasPermObj

Vis:{Shortcut name}Global
HeavyStartup:
AND {NOT #1.Par.HeavyStaturIgn}
AND#1.AuxStopped

Parameters   Info   Sim   Exit

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(C[1])

Vis: CurrentUserHasCode(B)

21 or 22

20

21

20

**21
0 = gray
1 = green**

**20
0 = gray
1 = green**

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, and #3 = H123/H456

Commands	Status	Status (cont.)	Values
1=#1.Cmd.0	20=#1.Sta.RXM	28=#1.Sta.TAM	50=#1.Val.RT
3=#1.Cmd.3	21=#1.Sta.RYM	29=#1.Sta.RAM	51=#1.Val.DCX
4=#1.Cmd.4	22=#1.Sta.RM	30=#1.Sta.SAM	52=#1.Val.DCY
5=#1.Cmd.5	23=#1.Sta.WAI	31=#1.Sta.IDS	53=#2\Name
6=#1.Cmd.1	24=#1.Sta.W	32=#1.Sta.IDP	55=#2\Text
7=#1.Cmd.2	25=#1.Sta.F	33=#1.Sta.REU	56=#2\XText
	26=#1.Sta.UAM	34=#1.Sta.REG	57=#2\YText
	27=#1.Sta.KAM	35=#1.Sta.STU	58=#2\0Text
			59=#1.Val.RST_RT

MotorR_E3

24 yellow,
25 red

55

5/34 /CurrentUserHasCode(C)
Alarm remark: Single Mode ON/OFF
MotorR_E3_small: Display MotoR_E3_large
MotoR_E3_large: Display MotorR_E3_small
Vis: #1.Par.DisableSingle

53

28
29
30
26
27
31
32

Vis: 34 and CurrentUserHasCode(C)

56   6

57   7

58   1

Set 3, Ack #4* /#2\AlmUnAckd
/CurrentUserHasCode(B)
4/33/CurrentUserHasCode(B)
Vis: #1.Par.DisableLocal

50
51
52

80   81

82
83

35

35 or 23

#1.Sta.IntlkOK/#1.Sta.NBIntlkOK/
#1.Sta.IntlkbypActive
Vis:#1.Par.HasIntlkObj

#1.Sta.PermOK/#1.Sta.NBPermOK/
#1.Sta.PermbypActive
Vis:#1.Par.HasPermObj

Vis: 59>0

59

Vis: [Shortcut name]
Global.HeavyStartup
AND (NOT #1.Par.HeavyStartupIgn)
AND #1.Aux.Stopped

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

21 or 22

21

20

21
0 = gray
1 = green

20
0 = gray
1 = green

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, #3 = [shortcut name]_H123_H456_H78_e3, and #4
= H123\H456.

Commands	Status	Status (cont.)	Values	E3
1=#1.Cmd.0	20=#1.Sta.RXM	28=#1.Sta.TAM	50=#1.Val.RT	80=#3.DeviceStatus.1
3=#1.Cmd.3	21=#1.Sta.RYM	29=#1.Sta.RAM	51=#1.Val.DCX	81=#3.TripStatus
4=#1.Cmd.4	22=#1.Sta.RM	30=#1.Sta.SAM	52=#1.Val.DCY	82=#3.AverageCurrent
5=#1.Cmd.5	23=#1.Sta.WAI	31=#1.Sta.IDS	53=#2\Name	83=#3.ThermUtilized

Commands	Status	Status (cont.)	Values	E3
6=#1.Cmd.1	24=#1.Sta.W	32=#1.Sta.IDP	55=#2\Text	
7=#1.Cmd.2	25=#1.Sta.F	33=#1.Sta.REU	56=#2\XText	
	26=#1.Sta.UAM	34=#1.Sta.REG	57=#2\YText	
	27=#1.Sta.KAM	35=#1.Sta.STU	58=#2\0Text	
			59=#1.Val.RST_RT	

MotorD

24 yellow, 25 red

53

55

5/34 CurrentUserHasCode(C)
Alarm remark: Single Mode ON/OFF
MotorD_small: Display MotorD_large
MotorD_large: Display MotorD_small
Vis: #1.Par.DisableSingle

Vis: 34 and CurrentUserHasCode(C)

56   6

57   7

58   1

28
29
30
26
27
31
32
36, 37
38, 39
40, 41
50
51
52
Vis: 59>0
59

03_MotorD_large - /MMC Library// (Display)

sssssssss   ssssssssssssssssssssssssssssssss

Disturbance
Thermal Overload
Contactor Feedback
Local Stop
Safety Switch
Not Available
Safety Interlock
Machine Interlock
Internal Torque Switch X
Internal Limit Switch X
External Limit Switch X
Heavy Startup

Running Hours ######. ##
Start Counter X #####
Start Counter Y #####
Before Restart (sec) ###

Manual/Auto

Y Ty
X Tx

Y ◄──► X

Acknowledge

Local

Singlestart
Manual
ssssssssss

X

ssssssssss

Y

ssssssssss

0

Set 3, Ack #3* /#2\AlmUnAckd /CurrentUserHasCode(B)
4/33/CurrentUserHasCode(B)
Vis: #1.Par.DisableLocal

#1.Sta.IntlkOK/#1.Sta.NBIntlkOK/
#1.Sta.IntlkbypActive
Vis:#1.Par.HasIntlkObj

35 or 23
35

#1.Sta.PermOK/#1.Sta.NBPermOK/
#1.Sta.PermbypActive
Vis:#1.Par.HasPermObj

Parameters   Info   Sim   Exit

Vis: [Shortcut name]
Global.HeavyStartup
AND (NOT #1.Par.HeavyStartupIgn)
AND #1.Aux.Stopped

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

Vis: 39
Vis: 38
43

Y Ty
X Tx
Y ◄──► X

Vis: 37
20 or 21
Vis: 36
42

21
0 = gray
1 = green

20
0 = gray
1 = green

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78 and #3 = H123/H456

Commands	Status	Status (cont.)	Status (cont.)	Values
1=#1.Cmd.0	20=#1.Sta.RXM	29=#1.Sta.RAM	37=#1.Sta.TYAM	50=#1.Val.RT
3=#1.Cmd.3	21=#1.Sta.RYM	30=#1.Sta.SAM	38=#1.Sta.XAM	51=#1.Val.DCX
4=#1.Cmd.4	23=#1.Sta.WAI	31=#1.Sta.IDS	39=#1.Sta.YAM	52=#1.Val.DCY
5=#1.Cmd.5	24=#1.Sta.W	32=#1.Sta.IDP	40=#1.Sta.ZXAM	53=#2\Name
6=#1.Cmd.1	25=#1.Sta.F	33=#1.Sta.REU	41=#1.Sta.ZYAM	55=#2\Text
7=#1.Cmd.2	26=#1.Sta.UAM	34=#1.Sta.REG	42=#1.Sta.ZX	56=#2\XText

Commands	Status	Status (cont.)	Status (cont.)	Values
	27=#1.Sta.KAM	35=#1.Sta.STU	43=#1.Sta.ZY	57=#2\YText
	28=#1.Sta.TAM	36=#1.Sta.TXAM		58=#2\0Text
				59=#1.Val.RST_RT

MotorD_E3

24 yellow,
25 red

55

5/34/CurretnUserHasCode(C)
Alarm remark: Single Mode On/Off
MotorD_E3_small: Display MotorD_E3_large
MotorD_E3_large: Display MotorD_E3_small
Vis: #1.Par.DisableSingle

53

Vis: 34 and CurrentUserHasCode(C)

03_MotorD_E3_large - /MMC Library// (Display)   V2.03

SSSSSSSSSS   SSSSSSSSSSSSSSSSSSSSSSSSSSSSS

Disturbance

28 E3 Fault
29 Contactor Feedback
30 Local Stop
26 Safety Switch
27 Not Available
31 Safety Interlock
32 Machine Interlock
36, 37 Internal Torque Switch X
38, 39 Internal Limit Switch X
40, 41 External Limit Switch X
Heavy Startup

Manual/Auto

Singlestart

56

Manual

Y Ty
X Tx

SSSSSSSSSS   **6**
57
X   **7**

SSSSSSSSSS
Y   **58**

Y ⟷ X

Acknowledge

Local

SSSSSSSSSS
U   **1**

Set 3, Ack #4*/#2/AlmUnAckd/
CurrentUserHasCode(B)

Motor Control

80 Warning   Overload
81 Trip   Overload
82 Av. Current   ######. ## A
83 Therm. Utilized   ##### %

0   %   100

50 Running Hours   ######. ##
51 Start Counter X   #####
52 Start Counter Y   #####
Before Restart (sec)   ###

Vis: 59>0

59

P   I

35 or 23

35

4/33/CurrentUserHasCode(B)
Vis: #1.Par.DisableLocal

#1.Sta.IntlkOK/#1.Sta.NBIntlkOK/
#1.Sta.IntlkbypActive
Vis:#1.Par.HasIntlkObj

#1.Sta.PermOK/#1.Sta.NBPermOK/
#1.Sta.PermbypActive
Vis:#1.Par.HasPermObj

Vis:[Shortcutname]
Global.HeavyStartup AND
(NOT #1.Par.HeavyStartupIgn)
AND #1.Aux.Stopped

Parameters   Info   Sim   Exit

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

Vis: 37

Vis: 39
Y Ty
X Tx
Vis: 38

20 or 21

Vis: 36

Y ⟷ X

43
21
0 = gray
1 = green

42
20
0 = gray
1 = green

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, #3=[Shortcut name]_H123_H456_H78_e3,
and #4 = H123/H456

Commands	Status	Status (cont.)	Values	E3
1=#1.Cmd.0	20=#1.Sta.RXM	32=#1.Sta.IDP	50=#1.Val.RT	80=#3.DeviceStatus.1
3=#1.Cmd.3	21=#1.Sta.RYM	33=#1.Sta.REU	51=#1.Val.DCX	81=#3.TripStatus
4=#1.Cmd.4	23=#1.Sta.WAI	34=#1.Sta.REG	52=#1.Val.DCY	82=#3.AverageCurrent
5=#1.Cmd.5	24=#1.Sta.W	35=#1.Sta.STU	53=#2\Name	83=#3.ThermUtilized
6=#1.Cmd.1	25=#1.Sta.F	36=#1.Sta.TXAM	55=#2\Text	
7=#1.Cmd.2	26=#1.Sta.UAM	37=#1.Sta.TYAM	56=#2\XText	
	27=#1.Sta.KAM	38=#1.Sta.XAM	57=#2\YText	
	28=#1.Sta.TAM	39=#1.Sta.YAM	58=#2\0Text	
	29=#1.Sta.RAM	40=#1.Sta.ZXAM	59=#1.Val.RST_RT	
	30=#1.Sta.SAM	41=#1.Sta.ZYAM		
	31=#1.Sta.IDS	42=#1.Sta.ZX		
		43=#1.Sta.ZY		

SubSys

**24 yellow,
25 red**

54

52

5/34 /CurrentUserHasCode(C)
Alarm remark: Single Mode ON/OFF
SubSys_small: Display SubSys_large
SubSys_large: Display SubSys_small
Vis: #1.Par.DisableSingle

28
29
30
26
27
31
32
36
37
50
51

Vis: 55>0
55

Vis:[Shortcutname]
Global.HeavyStartup
AND (NOT #1.Par.HeavyStartupIgn)
AND #1.Aux.Stopped

Vis: 34 and CurrentUserHasCode(C)
22
2
1

Set 3, Ack #3* /#2\ AlmUnAckd
/CurrentUserHasCode(B)

Vis: #1.Par.DisableLocal

#1.Sta.IntlkOK/#1.Sta.NBIntlkOK/
#1.Sta.IntlkbypActive
Vis:#1.Par.HasIntlkObj

#1.Sta.PermOK/#1.Sta.NBPermOK/
#1.Sta.PermbypActive
Vis:#1.Par.HasPermObj

35   **35 or 23**

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, and #3 = H123_H456

Commands	Status	Status (cont.)	Values
1=#1.Cmd.0	20=#1.Sta.RP	29=#1.Sta.RAM	50=#1.Val.RT
2=#1.Cmd.1	21=#1.Sta.RU	30=#1.Sta.SAM	51=#1.Val.DC
3=#1.Cmd.3	22=#1.Sta.RM	31=#1.Sta.IDS	52=#2\Name
4=#1.Cmd.4	23=#1.Sta.WAI	32=#1.Sta.IDP	54=#2\Text
5=#1.Cmd.5	24=#1.Sta.W	33=#1.Sta.REU	55=#1.Val.RST_RT
	25=#1.Sta.F	34=#1.Sta.REG	
	26=#1.Sta.UAM	35=#1.Sta.STU	
	27=#1.Sta.KAM	36=#2\Sta\WAM_0…7 Vis: #1.Sta.WAM.0...7	
	28=#1.Sta.TAM	37=#2\Sta\CAM_0…7 Vis: #1.Sta.CAM.0...7	

Analog Enhanced

**24 yellow,
25 red**

Set 3, Ack #2*/#2\AlmUnAckd/CurrentUserHasCode(B)

Set 1, 21/41/CurrentUserHasCode(C)

54

Vis: #1.Par.EnBypass or 21

52

56/20 and CurrentUserHasCode(C)

05_AnaInpC_large - /MMC Library// (Display)

SSSSSSSSS   SSSSSSSSSSSSSSSSSSSSSSSSSSSSS

Setpoint

Disturbance

32 — **Not Available**

Replacement

33 — **Sensor Error**

Acknowledge   ##### LLLLL

38 — **Parameter Error**

57

40/59/39

Actual

LLLLL

#####LLLLL

60

Control Limits   Alarm Limits

**46/Current
UserHasCode(C)**

E

#####

**47/Current
UserHasCode(C)**

E

Replacement

PV

Unit: LLLLL

SP

**48/Current
UserHasCode(C)**

E

61

**49/Current
UserHasCode(C)**

E

#####

#####LLLLL

Parameters   Info   Sim   Exit

<< Reduce

Vis: CurrentUserHasCode(B)

Display AnaInpC_small

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(C)

41/#1.Par.EnBypass and CurrentUserHasCode(C)

42/CurrentUserHasCode(C)

42   **43**

34

Alarm Limits

60

43/CurrentUserHasCode(C)

E

#####

35

E

50/21/39

LLLL

PV

44/CurrentUserHasCode(C)

E

36

E

61

45

#####

37

44

45/CurrentUserHasCode(C)

In the following table, #1 = [shortcut name]_H123_H456_H78_C, #2 = H123\H456\H78, and #3=[shortcut name]_H123_H456_H78

Commands	Status (cont.)	Status (cont.)	Set (cont.)	Values
1=#1.Cmd.0	25=#1.Sta.F	34=#3.EMA	42=#1.Set.MV	50=#1.Val.PV
3=#1.Cmd.3	26=#1.Sta.KA	35=#3.EHA	43=#1.Set.HV	51=#1.Val.PVA
	27=#1.Sta.MA	36=#3.ELA	44=#1.Set.LV	52=#2\Name
Status	28=#1.Sta.HA	37=#3.ENA	45=#1.Set.NV	54=#2\Text
20=#1.Sta.ESP	29=#1.Sta.LA	38=#1.Sta.ParErr	46=#1.Set.CMV	56=#1.Val.SPZ
21=#1.Sta.RZ	30=#1.Sta.NA	39=#1.Sta.NegGrad	47=#1.Set.CHV	57=#1.Val.PVY
22=#1.Sta.KM	31=#1.Sta.EnBypass	**Set**	48=#1.Set.CLV	58=#1.Val.PVZ
23=#1.Sta.ERR	32=#1.Sta.KAM	40=#1.Set.SP	49=#1.Set.CNV	60=#1.Val.MZ
24=#1.Sta.W	33=#1.Sta.ERRM	41=#1.Set.PVZ		61=#1.Val.NZ

Analog
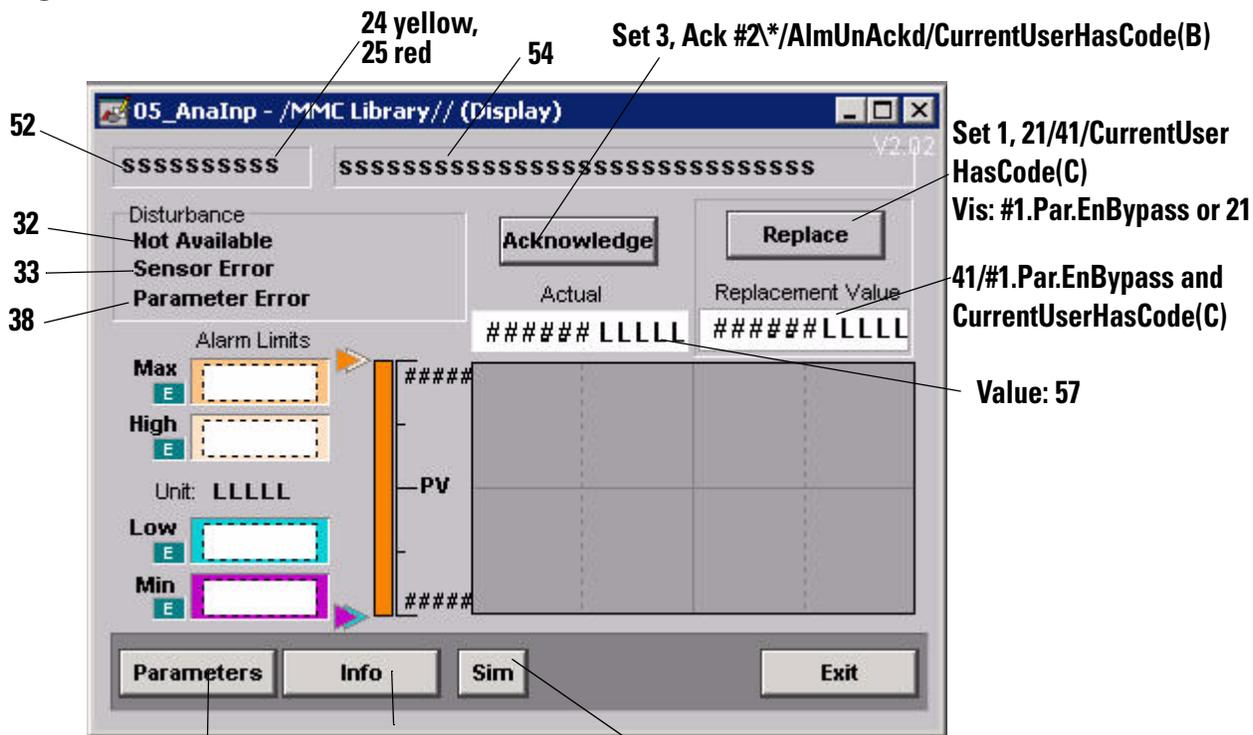
24 yellow,
25 red

54

Set 3, Ack #2*/AlmUnAckd/CurrentUserHasCode(B)

52

Set 1, 21/41/CurrentUser
HasCode(C)
Vis: #1.Par.EnBypass or 21

32

33

38

41/#1.Par.EnBypass and
CurrentUserHasCode(C)

Value: 57

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(C)

42/CurrentUserHasCode(C)

42   43

34

43/CurrentUserHasCode(C)

60

50/21/39

44/CurrentUserHasCode(C)

35

36

61

37

45/CurrentUserHasCode(C)   45   44
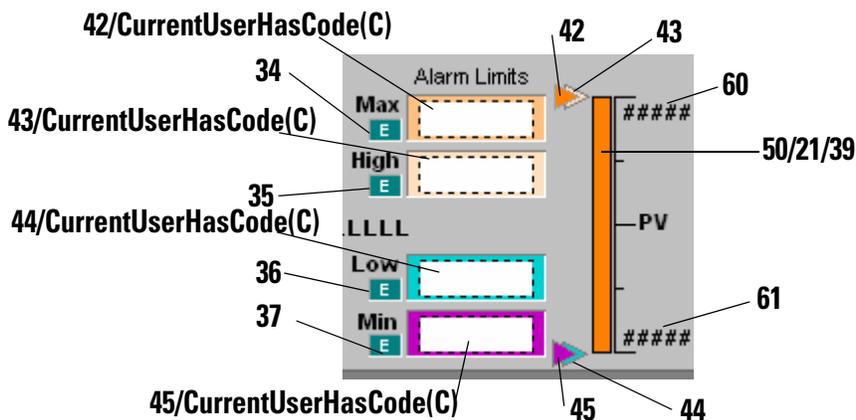
In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, and #3 = [shortcut name]_H123_H456_H78

Commands	Status (cont.)	Status (cont.)	Set	Values
1=#1.Cmd.0	25=#1.Sta.F	34=#3.EMA	40=#1.Set.SP	50=#1.Val.PV
3=#1.Cmd.3	26=#1.Sta.KA	35=#3.EHA	41=#1.Set.PVZ	51=#1.Val.PVA
	27=#1.Sta.MA	36=#3.ELA	42=#1.Set.MV	52=#2\Name
Status	28=#1.Sta.HA	37=#3.ENA	43=#1.Set.HV	54=#2\Text
20=#1.Sta.ESP	29=#1.Sta.LA	38=#1.Sta.ParErr	44=#1.Set.LV	56=#1.Val.SPZ
21=#1.Sta.RZ	30=#1.Sta.NA	39=#1.Sta.NegGrad	45=#1.Set.NV	57=#1.Val.PVY

Commands	Status (cont.)	Status (cont.)	Set	Values
22=#1.Sta.KM	31=#1.Sta.EnBypass			58=#1.Val.PVZ
23=#1.Sta.ERR	32=#1.Sta.KAM			60=#1.Val.MZ
24=#1.Sta.W	33=#1.Sta.ERRM			61=#1.Val.NZ

ActMod

Set 3, Ack #2*/#2\AlmUnAckd/CurrentUserHasCode(B)

**24 yellow,
25 red**

54

Set 4, 38/CurrentUserHasCode(B)
Vis: #1.Par.DisableLocal

Set 1, 21/41/CurrentUserHasCode(C)
Vis: #1.Par.EnBypass or 21
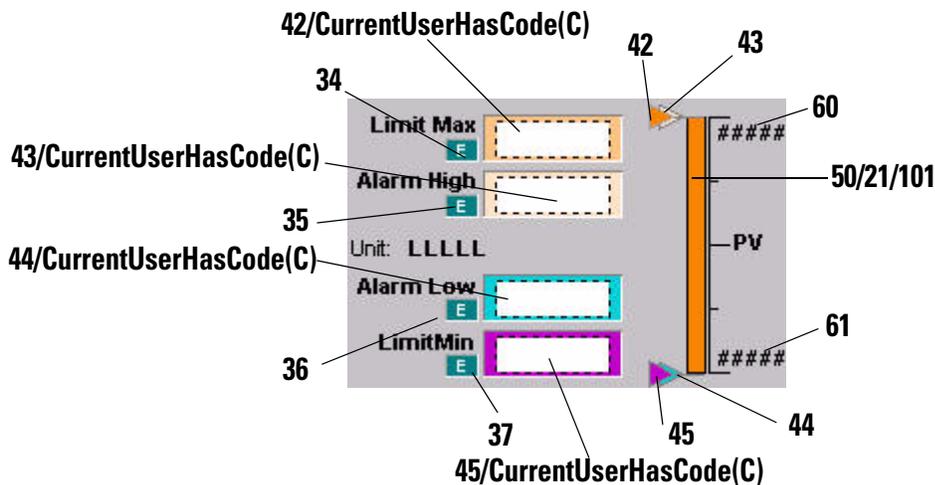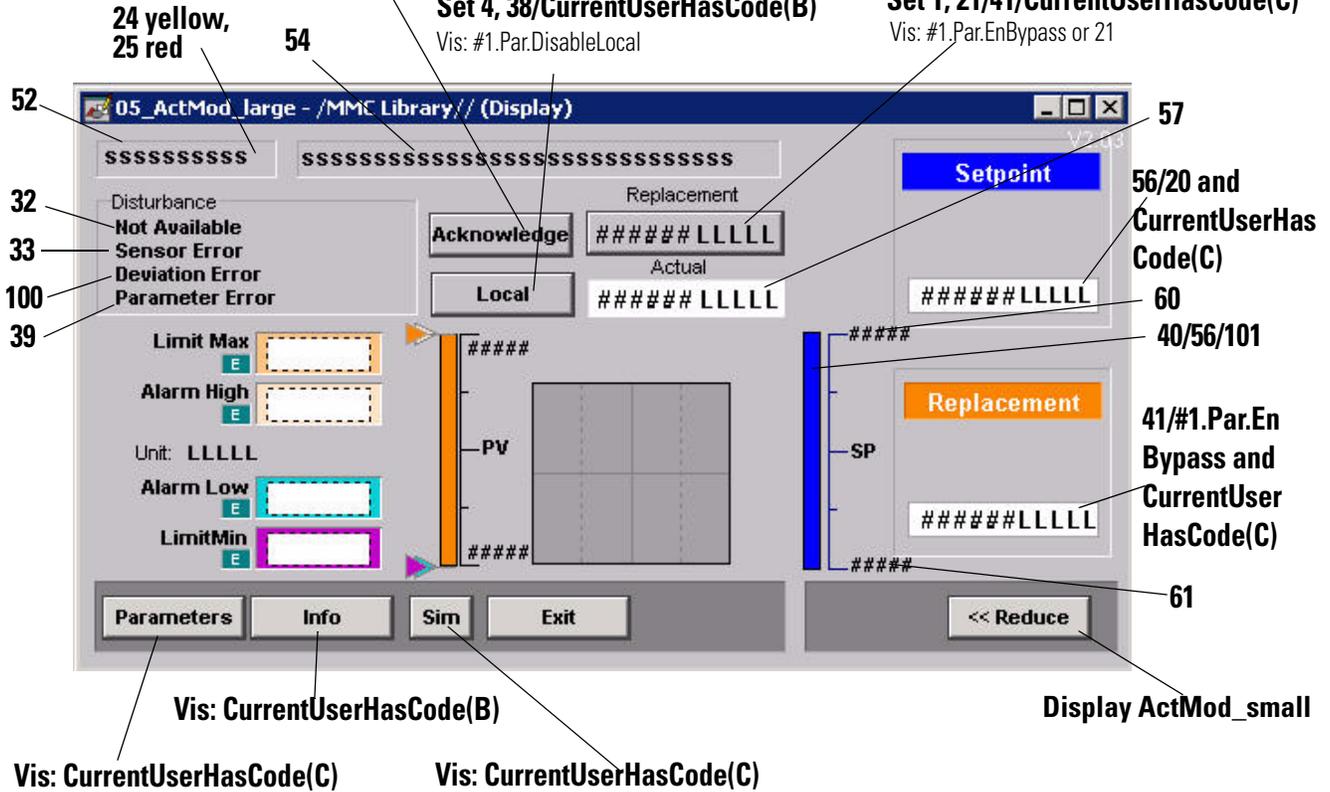
52

57

**56/20 and
CurrentUserHas
Code(C)**

32

33

100

39

60

40/56/101

**41/#1.Par.En
Bypass and
CurrentUser
HasCode(C)**

61

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(C)

Display ActMod_small

42/CurrentUserHasCode(C)

42   **43**

34

60

43/CurrentUserHasCode(C)

50/21/101

35

44/CurrentUserHasCode(C)

36

61

37

45   **44**

**45/CurrentUserHasCode(C)**

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, and #3 = [shortcut name]_H123_H456_H78

Commands	Status (cont.)	Status (cont.)	Set	Values
1=#1.Cmd.0	24=#1.Sta.W	33=#1.Sta.ERRM	40=#1.Set.SP	50=#1.Val.PV
3=#1.Cmd.3	25=#1.Sta.F	34=#3.EMA	41=#1.Set.PVZ	51=#1.Val.PVA
4=#1.Cmd.4	26=#1.Sta.KA	35=#3.EHA	42=#1.Set.MV	52=#2\Name
	27=#1.Sta.MA	36=#3.ELA	43=#1.Set.HV	54=#2\Text
Status	28=#1.Sta.HA	37=#3.ENA	44=#1.Set.LV	56=#1.Val.SPZ
20=#1.Sta.ESP	29=#1.Sta.LA	38=#1.Sta.REU	45=#1.Set.NV	57=#1.Val.PVY
21=#1.Sta.RZ	30=#1.Sta.NA	39=#1.Sta.ParErr	46=#1.Set.CMV	58=#1.Val.PVZ
22=#1.Sta.KM	31=#1.Sta.EnBypass	100=#1.Sta.DevErrM	47=#1.Set.CHV	60=#1.Val.MZ
23=#1.Sta.ERR	32=#1.Sta.KAM	101=#1.Sta.NegGrad	48=#1.Set.CLV	61=#1.Val.NZ
			49=#1.Set.CNV	

PIDMod

24 yellow, 25 red

53

Set 3, Ack #2*/#2\AlmUnAckd /CurrentUserHasCode(B)

52

26

23

51

50

61

56

57

60

**50
51
58
62**

58

44

43

42

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(C)

**Val 51
Vis 21 and 33 and CurrentUserHasCode(B)
Color 33
Set 40
Label 51**

Color: #20

**Set 7, Set 40
Vis 22 and CurrentUserHasCode(B)**

**Val 50
Label 50**

**Val 58
Vis 34 and CurrentUserHasCode(B)
Color 34
Set 41
Label 58**

Vis: 33 AND 21 AND CurrentUserHasCode(B)
If 40>61 Then 40 = 40 - ((60-61)/100)
Else 40 = 61 Endif
Vis: 34 AND CurrentUserHasCode(B)
If 41>0 Then 41 = 41 - 1 Else 41 = 0 Endif

**Set 5
Set 41
Vis 31 and
CurrentUserHasCode(B)
Color 37
Ind 35**

**Set 4, Set 40
Vis 30 and
CurrentUserHasCode(B)
Color 36
Ind 33**

**Set 6
Vis 32 and
CurrentUserHasCode(B)
Color 38
Ind 35**

**Vis: 33 AND 21 AND
CurrentUserHasCode(B)**
If 40<60 Then 40 = 40 + ((60-61)/100) Else 40 =
60 Endif
Vis: 34 AND CurrentUserHasCode(B)
If 41<100 Then 41 = 41 + 1 Else 41 = 100 Endif

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, and #3 = AC numbers for CV.

Commands	Status	Set	Values
3=#1.Cmd.3	20=#1.Sta.E	40=#1.Set.SP	50=#1.Val.PV
4=#1.Cmd.1	21=#1.Sta.ESP	41=#1.Set.CVS	51=#1.Val.SPZ
5=#1.Cmd.0	22=#1.Sta.EAC	42=#1.Set.CP	52=#2\NamePID
6=#1.Cmd.2	23=#1.Sta.ERR	43=#1.Set.CI	53=#2\Text
7=#1.Cmd.4	24=#1.Sta.W	44=#1.Set.CD	56=#1.Val.ACC
	25=#1.Sta.F		57=#1.Val.CE
	26=#1.Sta.CDA		58=#1.Val.CV
	27=#1.Sta.CFF		60= #1.Par.MZ
	28=#1.Sta.RZ		61= #1.Par.NZ
	30=#1.Sta.ECC		62=#2\Val\BCZ
	31=#1.Sta.ECU		
	32=#1.Sta.ECX		
	33=#1.Sta.RCC		
	34=#1.Sta.RCU		
	35=#1.Sta.RCX		
	36=#1.Sta.BCC		
	37=#1.Sta.BCU		
	38=#1.Sta.BCX		

Valve1

**25 yellow,
26 red**

54

5/37/CurrentUserHasCode(C)
Alarm remark: Single Mode ON/OFF
Valve1_small: Display Valve1_large
Valve1_large: Display Valve1_small
Vis: #1.Par.DisableSingle

52

31

27

28

34

35

32

33

51

Vis: 37 and CurrentUserHasCode(C)

2

**Set 3, Ack #3*/#2\AlmUnAckd/
CurrentUserHasCode(B)**

1

4/36/CurrentUserHasCode(B)
Vis: #1.Par.DisableLocal

6/45/CurrentUserHasCode(C)
Vis: #1.Par.EnBypass
#1.Sta.IntlkOK/#1.Sta.NBIntlkOK/
#1.Sta.IntlkbypActive
Vis:#1.Par.HasIntlkObj

38 or 24

38

#1.Sta.PermOK/#1.Sta.NBPermOK/
#1.Sta.PermbypActive
Vis:#1.Par.HasPermObj

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

44/45

43/45

22

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, and #3 = H123_H456

Commands	Status	Status (cont.)	Values
1=#1.Cmd.0	20=#1.Sta.RPX	33=#1\.Sta.ZYAM	51=#1.Val.DCX
2=#1.Cmd.1	21=#1.Sta.RUX	34=#1.Sta.IDS	52=#2\Name
3=#1.Cmd.3	22=#1.Sta.RXM	35=#1.Sta.IDP	54=#2\Text

Commands	Status	Status (cont.)	Values
4=#1.Cmd.4	23=#1.Sta.KM	36=#1.Sta.REU	
5=#1.Cmd.5	24=#1.Sta.WAI	37=#1.Sta.REG	
6=#1.Cmd.6	25=#1.Sta.W	38=#1.Sta.STU	
	26=#1.Sta.F	39=#1.Sta.SA	
	27=#1.Sta.UAM	40=#1.Sta.KA	
	28=#1.Sta.KAM	41=#1.Sta.ZXA	
	29=#1.Sta.TAM	42=#1.Sta.ZYA	
	30=#1.Sta.RAM	43=#1.Sta.ZX	
	31=#1.Sta.SAM	44=#1.Sta.ZY	
	32=#1.Sta.ZXAM	45=#1.Sta.BA	

Valve2

28 yellow, 29 red

54

52

5/40 /CurrentUserHasCode(C)
Alarm remark: Single Mode ON/OFF
Valve2_small: Display Valve2_large
Valve2_large: Display Valve2_small
Vis: #1:Par.DisableSingle

34 Local Stop
30 Safety Switch
31 Not Available
37 Safety Interlock
38 Machine Interlock
35 Limit X Alarm
36 Limit Y Alarm

Vis: 40 and CurrentUserHasCode(C)

56
6
57
7
58
1

Set 3, Ack #3*/#2\AlmUnAckd / CurrentUserHasCode(B)

51 Start Counter X
55 Start Counter Y

4/39/CurrentUserHasCode(B)
Vis: #1.Par.DisableLocal

8/48/CurrentUserHasCode(C)
Vis: #1.Par.EnBypass

#1.Sta.IntlkOK/#1.Sta.NBIntlkOK/
#1.Sta.Intlkbyp Active
Vis:#1.Par.HasIntlkObj

Vis: CurrentUserHasCode(C)

41

41 or 27

#1.Sta.PermOK/#1.Sta.NBPermOK/
#1.Sta.PermbypActive
Vis:#1.Par.HasPermObj

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

47/48   **46/48**
**25**   **24 or 25**
24

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, and #3=H123/H456

Commands	Status	Status (cont.)	Status (cont.)
1=#1.Cmd.0	20=#1.Sta.RPX	32=#1.Sta.TAM	44=#1.Sta.ZXA
3=#1.Cmd.3	21=#1.Sta.RPY	33=#1.Sta.RAM	45=#1.Sta.ZYA
4=#1.Cmd.4	22=#1.Sta.RUX	34=#1.Sta.SAM	46=#1.Sta.ZX
5=#1.Cmd.5	23=#1.Sta.RUY	35=#1.Sta.ZXAM	47=#1.Sta.ZY
6=#1.Cmd.1	24=#1.Sta.RXM	36=#1\.Sta.ZYAM	48=#1.Sta.BA
7=#1.Cmd.2	25=#1.Sta.RYM	37=#1.Sta.IDS	**Values**
8=#1.Cmd.6	26=#1.Sta.KM	38=#1.Sta.IDP	51=#1.Val.DCX

Commands	Status	Status (cont.)	Status (cont.)
	27=#1.Sta.WAI	39=#1.Sta.REU	52=#2\Name
	28=#1.Sta.W	40=#1.Sta.REG	54=#2\Text
	29=#1.Sta.F	41=#1.Sta.STU	55=#1.Val.DCX
	30=#1.Sta.UAM	42=#1.Sta.SA	56=#2\XText
	31=#1.Sta.KAM	43=#1.Sta.KA	57=#2\YText
			58=#2\0Text
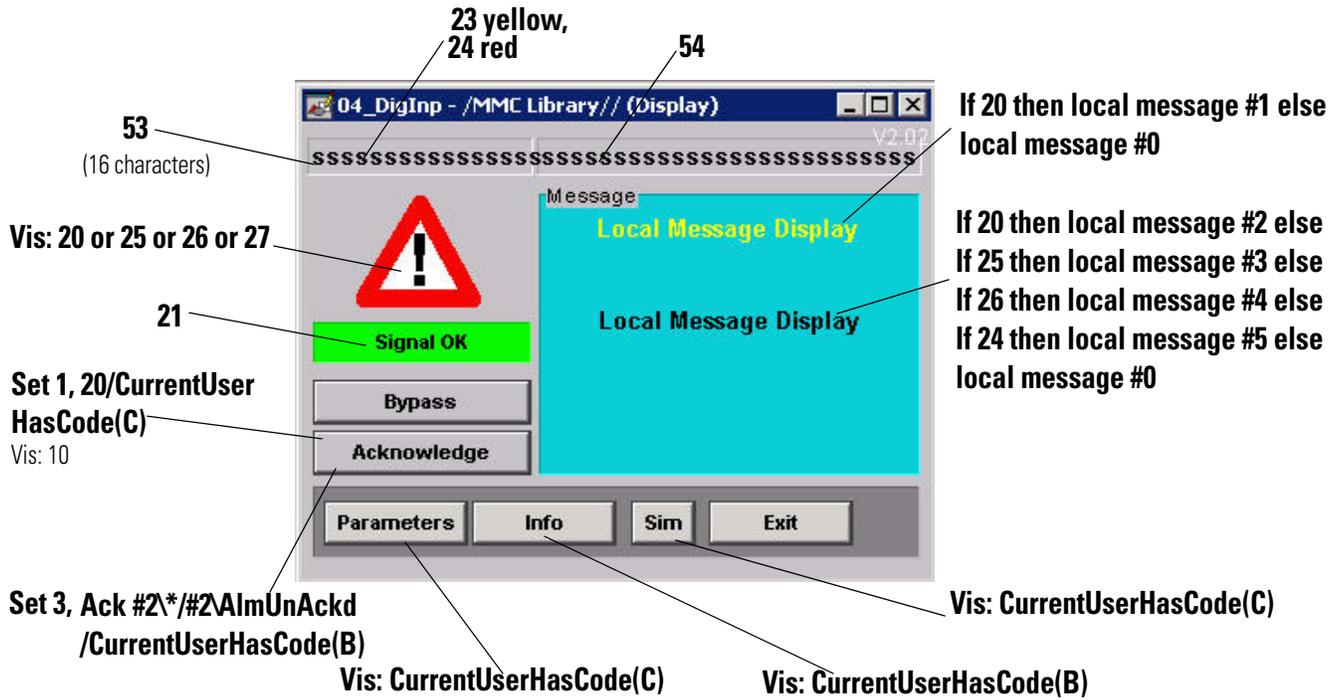
DigInp

**23 yellow,
24 red**

54

53
(16 characters)

Vis: 20 or 25 or 26 or 27

21

**Set 1, 20/CurrentUser
HasCode(C)**
Vis: 10

**If 20 then local message #1 else
local message #0**

**If 20 then local message #2 else
If 25 then local message #3 else
If 26 then local message #4 else
If 24 then local message #5 else
local message #0**

**Set 3, Ack #2*/#2\\AlmUnAckd
/CurrentUserHasCode(B)**

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(B)

In the following table, #1 = [shortcut name]_H123_H456_H78_C, and
#2 = H123\\H456\\H78

Commands	Status	Values
1=#1.Cmd.0	20=#1.Sta.BA	53=#2\\Name
3=#1.Cmd.3	21=#1.Sta.RB	54=#2\\Text
	22=#1.Sta.KM	
Parameters	23=#1.Sta.W	
10=#1.Par.EnBypass	24=#1.Sta.F	
	25=#1.Sta.KA	
	26=#1.Sta.WA	
	27=#1.Sta.MA	

DigInp2
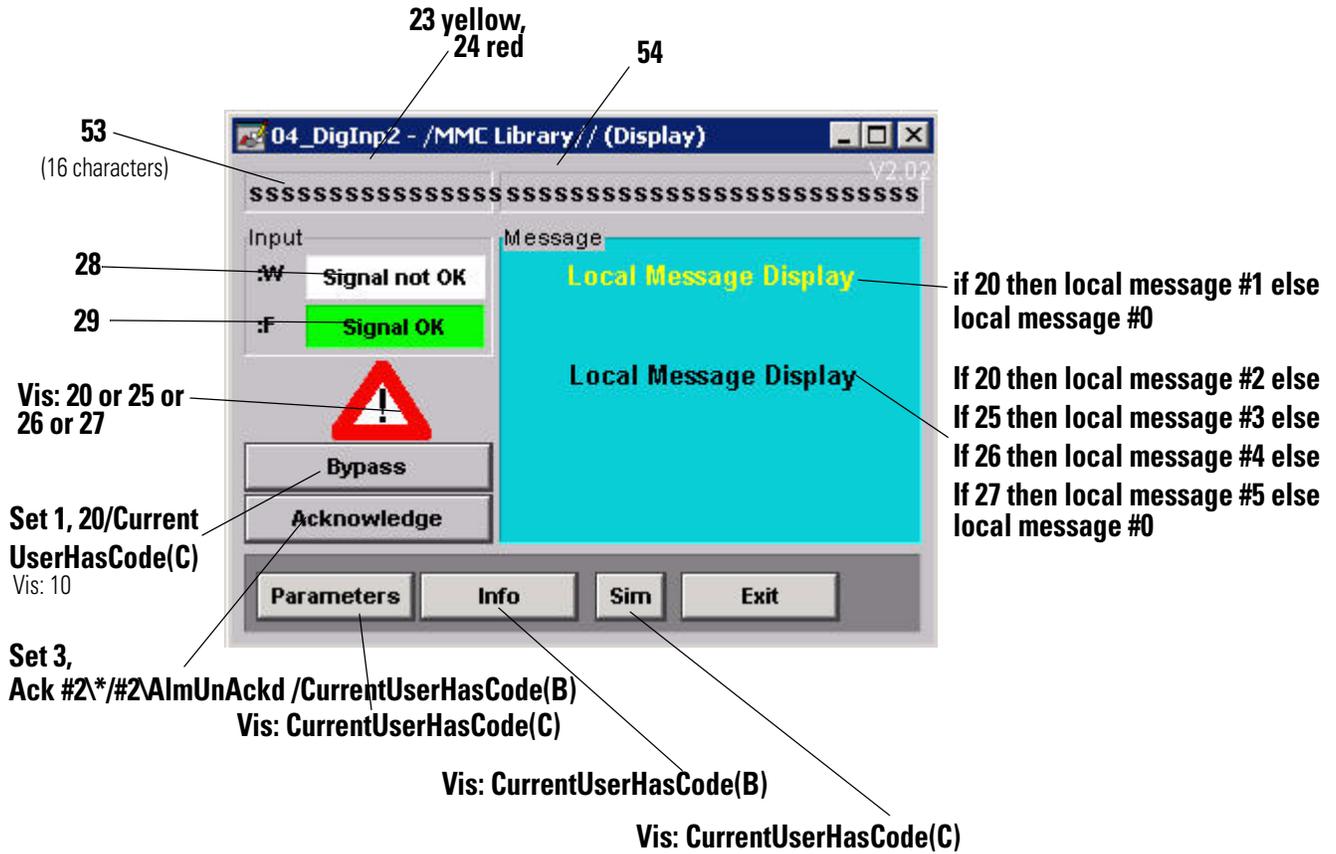
**23 yellow,
24 red**

54

53
(16 characters)

28

29

**Vis: 20 or 25 or
26 or 27**

**Set 1, 20/Current
UserHasCode(C)**
Vis: 10

**Set 3,
Ack #2*/#2\AlmUnAckd /CurrentUserHasCode(B)**

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

**if 20 then local message #1 else
local message #0**

**If 20 then local message #2 else
If 25 then local message #3 else
If 26 then local message #4 else
If 27 then local message #5 else
local message #0**

In the following table, #1 = [shortcut name]_H123_H456_H78_C, and
#2 = H123\H456\H78

Commands	Status	Status (cont.)
1=#1.Cmd.0	20=#1.Sta.BA	27=#1.Sta.MA
3=#1.Cmd.3	21=#1.Sta.RB	28=#1.Sta.WM
	22=#1.Sta.KM	29=#1.Sta.FM
Parameters	23=#1.Sta.W	
10=#1.Par.EnBypass	24=#1.Sta.F	**Values**
	25=#1.Sta.KA	53=#2\Name
	26=#1.Sta.WA	54=#2\Text

DigPulse
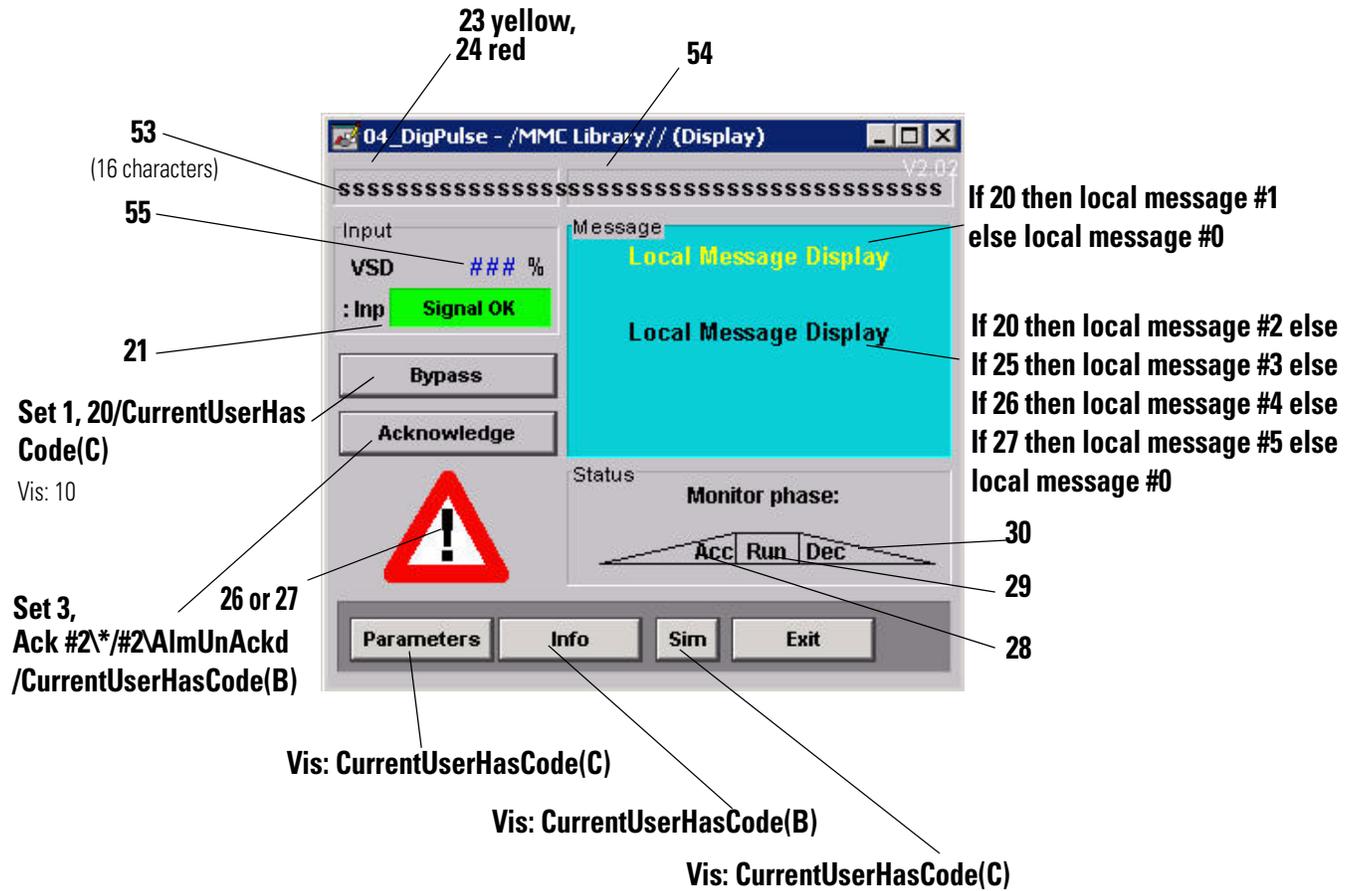
**23 yellow,
24 red**

54

53
(16 characters)

55

**If 20 then local message #1
else local message #0**

21

**If 20 then local message #2 else
If 25 then local message #3 else
If 26 then local message #4 else
If 27 then local message #5 else
local message #0**

**Set 1, 20/CurrentUserHas
Code(C)**
Vis: 10

30

29

**Set 3,
Ack #2*/#2\AlmUnAckd
/CurrentUserHasCode(B)**

26 or 27

28

Vis: CurrentUserHasCode(C)

Vis: CurrentUserHasCode(B)

Vis: CurrentUserHasCode(C)

In the following table, #1 = [shortcut name]_H123_H456_H78_C,
#2 = H123\H456\H78, and #3 = [shortcut name]_H123_H456_H78

Commands	Status	Values
1=#1.Cmd.0	20=#1.Sta.BA	53=#2\Name
3=#1.Cmd.3	21=#1.Sta.RB	54=#2\Text
	22=#1.Sta.KM	
Parameters	23=#1.Sta.W	**Inputs**
10=#1.Par.EnBypass	24=#1.Sta.F	55=#3.VSD
	25=#1.Sta.KA	
	26=#1.Sta.WA	
	27=#1.Sta.MA	
	28=#1.Sta.Acc	
	29=#1.Sta.Run	
	30=#1.Sta.Dec	

Local Message Display

CommErr

&Set CommERR 0 Abort

Value Input

{#2\#3\#4\Name}

SSSSSSSSSS
LLLLLLLLLLLLLLL

{#2\#3\#4\Set\#5}

Range: ####.#...####.#

#1_#2_#3_#4_C.Set.#5

LLLLL

#1_#2_#3_#4_C.Val.NZ

#1_#2_#3_#4_C.Val.MZ

Exit

If {#1_#2_#3_#4_C.Set.#5}<{#1_#2_#3_#4_C.Val.MZ} Then
{#1_#2_#3_#4_C.Set.#5} = {#1_#2_#3_#4_C.Set.#5} +
(({#1_#2_#3_#4_C.Val.MZ}-{#1_#2_#3_#4_C.Val.NZ})/100)
Else #1_#2_#3_#4_C.Set.#5 = {#1_#2_#3_#4_C.Val.MZ}
Endif
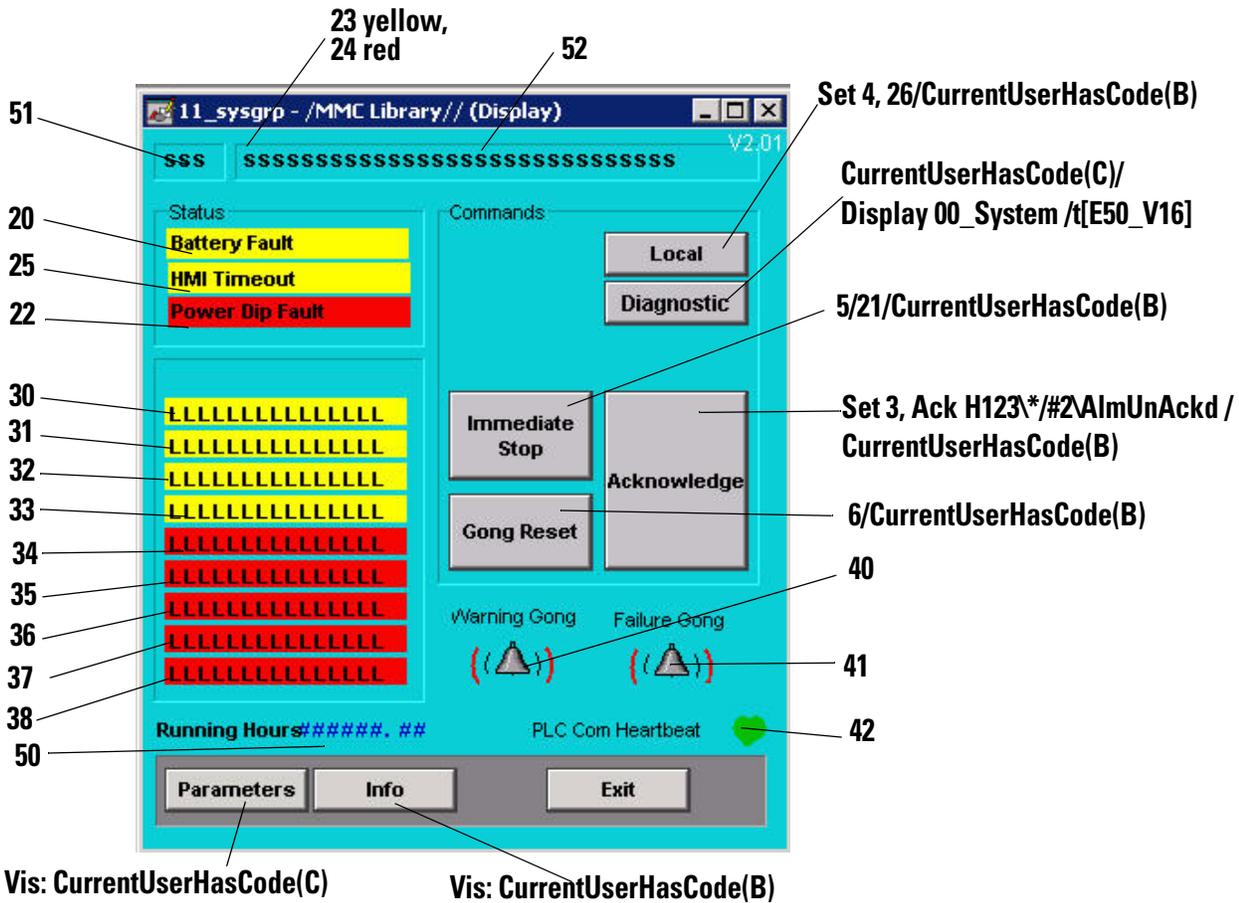
If {#1_#2_#3_#4_C.Set.#5}>{#1_#2_#3_#4_C.Val.NZ} Then
{#1_#2_#3_#4_C.Set.#5} = {#1_#2_#3_#4_C.Set.#5} -
(({#1_#2_#3_#4_C.Val.MZ}-{#1_#2_#3_#4_C.Val.NZ})/100) Else
{#1_#2_#3_#4_C.Set.#5} = {#1_#2_#3_#4_C.Val.NZ} Endif

SysGrp

In the following table, #1 = [shortcut name]_H123_H456_H78_C, and
#2 = H123\H456\H78

Commands	Status	Status (cont.)	Values
3=#1.Cmd.3	20=#1.Sta.BatteryFault	33=#2\MSGText\WA04	50=#1.Val.RT
4=#1.Cmd.4	21=#1.Sta.IMS	34=#2MSGText\FA00	51=#2\Name
5=#1.Cmd.6	22=#1.Sta.PowerDipFault	35=#2\ MSGText\FA01	52=#2\Text
6=#1.Cmd.2	23=#1.Sta.W	36=#2\MSGText\FA02	
	24=#1.Sta.F	37=#2\MSGText\FA03	
	25=#1.Sta.HMI_Timeout	38=#2\MSGText\FA04	
	26=#1.Sta.REU		
	30=#2\MSGText\WA01	40=#1.Sta.WGong	
	31=#2\MSGText\WA02	41=#1.Sta.FGong	
	32=#2\MSGText\WA03	42=#2.Sta.CLX_Heartbeat}	

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products.
At http://www.rockwellautomation.com/support/, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit http://www.rockwellautomation.com/support/.

Installation Assistance

If you experience a problem within the first 24 hours of installation, review the information that is contained in this manual. You can contact Customer Support for initial help in getting your product up and running.

United States or Canada	1.440.646.3434
Outside United States or Canada	Use the Worldwide Locator at http://www.rockwellautomation.com/support/americas/phone_en.html, or contact your local Rockwell Automation representative.

New Product Satisfaction Return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (call the phone number above to obtain one) to your distributor to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

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