Section 1 Introduction

Product Overview

AC 800M – General

AC 800M is a hardware platform comprising individual hardware units, which can be configured and programmed to perform multiple functions.

Once configured and programmed, the AC 800M effectively becomes the AC 800M or AC 800M HI controller.

The hardware units that form the AC 800M and AC 800M HI Controllers are:

- Processor units (including baseplate)
  (PM851/PM851A/PM856/PM856A/PM858/PM860/PM860A/PM861/
  PM861A/PM862/PM864/PM864A/PM865/PM866/PM866A/PM867/PM891)

- High Integrity Processor Unit
  (consists of PM865 with SM810/SM811 or PM867/SM812 with corresponding baseplates)

- Communication interfaces for different protocols (including baseplates)
  (CI853/CI854/CI854A/CI854B/CI855/CI856/CI857/CI858/
  CI860/ CI862/CI865/CI867/CI868/CI869/CI871/CI872/CI873)

- CEX-Bus Interconnection Unit
  (BC810/BC820)

- Power supply units, providing various power output levels
  SD831/SD832/SD833/SD834/SS823/SS832)

- Battery back-up unit
  (SB821/SB822)
  The SB821 is not supported with PM891.

PM851A is equivalent with PM851 unless stated otherwise.

PM856A is equivalent with PM856 unless stated otherwise.

PM860A is equivalent with PM860 unless stated otherwise

PM861A is equivalent to PM861 unless stated otherwise.

PM864A is equivalent to PM864 unless stated otherwise.

PM866A is equivalent to PM866 unless stated otherwise.

When equipped with the specified Control Software, the AC 800M Controller acts either as a stand-alone process controller, or as a controller performing local control tasks in a control network consisting of many interconnected controllers, operator stations and servers.

Various I/O systems can be connected to the AC 800M Controller, either directly (S800 I/O) or via PROFIBUS DP or FOUNDATION Fieldbus.

The AC 800M is delivered without Control Software. To provide the controller with Control Software, first load the firmware and then create the application separately using the Control Builder M engineering tool.

The AC 800M Controller consists of a selection of units mounted on horizontal DIN-rails, which can be housed within an enclosure. The majority of units consist of a base mounting plate and removable cover attached with screws.

The baseplate, which is always mounted onto the DIN-rail, carries the majority of the connections to processor, power supplies and communication interfaces, as well as the connections to the external buses and systems.

The AC 800M Controller provides a cost-effective, low-maintenance solution for applications ranging from small Programmable Logic Controller (PLC) to advanced Distributed Control Systems (DCS) control applications and combined DCS, and High Integrity systems control applications.

In the AC 800M High Integrity Controller, it is possible to run both non-SIL and SIL classified applications. The AC 800M HI consist of PM865 with SM810/SM811 or PM867 with SM812 and a High Integrity version of Control Software, and is also available in redundant configuration. AC 800M HI requires the use of SIL certified S800 I/O units in SIL classified applications. If the application