MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Amikon cover with selected ABB turbine catalogue pages; not an installation manual

800 Series Turbine / CPM810

CPM810

TURBINE COMMON PROCESSOR MODULE

OFFICIAL SOURCES

ABB 2VAA005340 en G and AS800 Rev B. Original reference pages; not a complete installation manual.

800 SERIES (DIN RAIL-BASED) TURBINE CONTROL SOLUTIONS

The S+ Turbine portfolio also includes the 800 Series Turbine Modules. These modules are well established in the turbine control market and are characterized by their universal and flexible nature. Their open communication capability (Profibus) allows for local or remote integration into many different DCS platforms. Their Stand Alone capability allows for operation without a DCS or through hardwired integration. S+ Turbine 800 Series comprises the AS800, VP800 and TP800 modules. Each module provides flexible mounting on a standard DIN rail and uses standard 24 VDC power supplies. They can be easily adapted to existing installations or new projects. The ability to remote-mount the modules and use PROFIBUS communications saves wiring costs and reduces design complexity for new installations.

Some of the key features of the PROFIBUS DP interface of S+ Turbine modules are:

- DP/V1 communication standard
- Up to 12 MD communication rate
- Conforms to PROFIBUS PNO slave specification system (master) redundancy and flying (line) redundancy
- 2 independent PROFIBUS slave hardware interfaces in each module

The building blocks of these turbine control solutions are:

CPM810
Executes the defined function of the module, interfaces with the ASM810 module and communicates to the control system via PROFIBUS DP

ASM810
Receives and conditions the field I/O signal, transfers the conditioned signal to the CPM810 module and provides an independent synchronization check

VPM810
Receives and conditions field I/O, converts input signals to digital output signals, and transfers the digital output signals to the CPM810 module

TPM810
Receives and conditions field I/O, converts signals to digital outputs, and transfers the digital signal to the CPM810 module

TBU810
Contains terminals for power, field connections, communication and connectors for modules

ROM810v2
Comprises a relay output module that provides digital output signals such as raise/lower volts, raise/lower frequency, close breaker and indicheck

ROM830
Voter module that can be used in combination with 3 ROM810v2 modules, turning the individual relay outputs into a single 2 out of 3 voted output.

PCM810
The Phase Current Module allows for the generator current signal from a current transformer to be brought into the TP800 module for power load unbalance calculations.

800 Series Turbine Modules

Auto Synchronizer AS800

Applicable Hardware

The Autosynchronizer AS800 has three main components, conveniently designed for simple integration and quick assembly.

- Common Processor Module (CPM810)

  Executes the autosynchronization software algorithms and communicates with the master controller via Profibus DP.

- Auto Synchronization Module (ASM810)

  Receives and digitizes the field inputs.

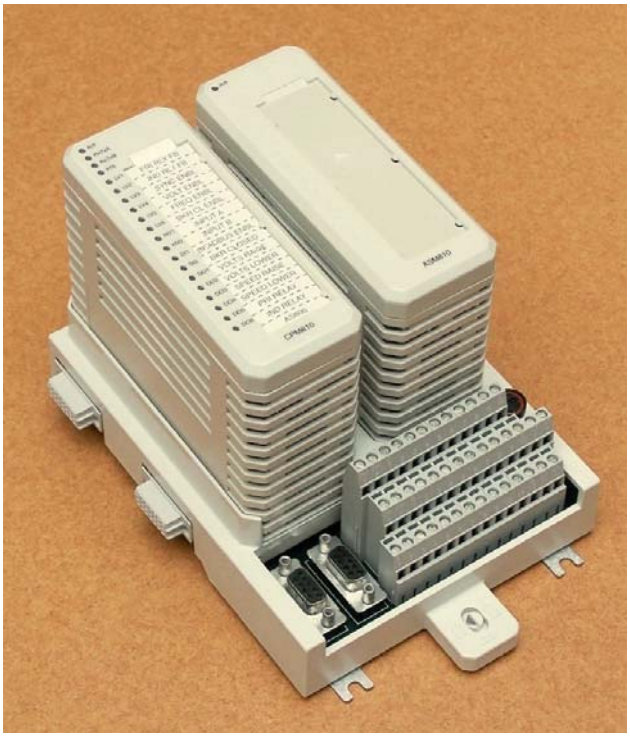
- Terminal Base Unit

  Houses the CPM810 and ASM810 modules and provides terminals for power, field inputs, and communication.

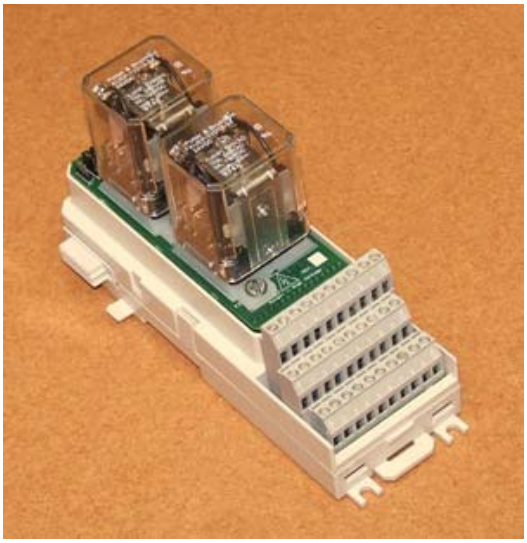
The AS800 can interface to one or more Relay Output Modules (ROM810), based on the requirements of each specific application.

AS800 Hardware

- 1 -CPM810 Common Processor Module
- 1 -ASM810 Auto Synchronization Module
- 1 -TBU810 Terminal Base Unit
- ROM810 Relay Output Module



AS800 (CPM810 + ASM810 + TBU810)



ROM810

800 Series Turbine Modules

The Next Way of Thinking

Profibus Interface to Control Processor

- Non-proprietary communication for true open architecture integration
- Master and Line Redundancy

Flexible Installation Configurations

- Din Rail Mountable
- Standard 24VDC power supplies
- Existing cabinet installation for retrofits
- Turbine deck mounting eliminates wiring for new installations

Component Commonality

- CPM810, TBU810 and ROM810 are common to all three turbine products (AS800, TP800, and VP800)
- Provides application flexibility and convenience
- Reduces spare part costs



ABB Inc.
Business Unit Power Generation

2 Acee Drive
Natrona Heights PA 15065-9700
Telephone: (724)295-6022
Fax: (724)295-6560
E-mail: camilo.lopez@us.abb.com

www.abb.com/powergeneration

NOTE:
We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail.
ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction – in whole or in parts – is forbidden without ABB's prior written consent.

Copyright© 2005 ABB
All rights reserved.