

# General Specifications

## Model PM4S7780 PST Scheduler Package



GS 30B05A23-01EN

[Release 4]

### ■ GENERAL

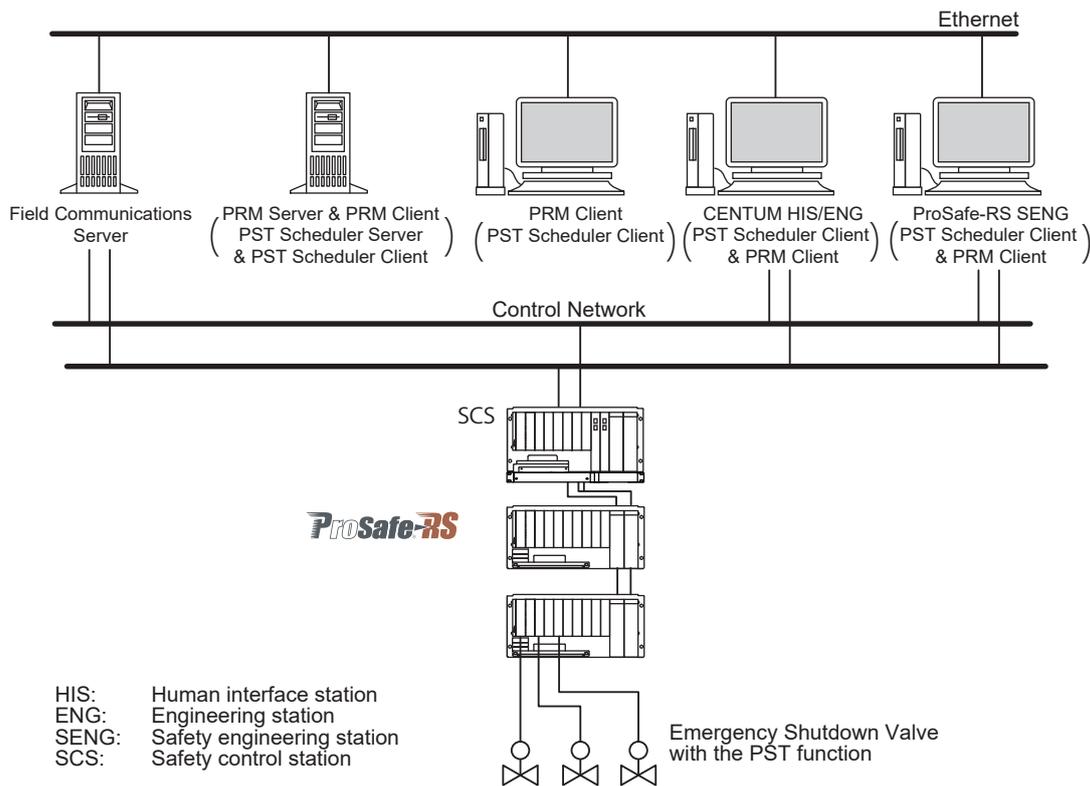
Safety standards such as IEC61508, IEC61511, and ANSI/ISA-84.00.01 require full stroke tests (FST) for emergency shutdown (ESD) valves at certain intervals depending on the safety integrity levels (SIL) to ensure they are functional in case of emergency. FST can only be done while the plant is shut down for maintenance.

A partial stroke test (PST), on the other hand, slightly operates ESD valves while the plant is running. By conducting PSTs, it is possible to extend the intervals of the FSTs, thus the plant operation time can be maximized, which means OPEX and TCO are reduced.

PST Scheduler is an optional function of Plant Resource Manager (PRM) and it brings precision, efficiency, and integration to the PST process. PST Scheduler can schedule an automatic, semi-automatic, or manual PST, and displays the schedules and test results in Gantt charts for ESD valves connected either to a ProSafe-RS or other safety instrumented systems.

### ■ SYSTEM CONFIGURATION

System configuration is as described below.



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PST Scheduler package consists of a PST Scheduler Server and a PST Scheduler Client. PST Scheduler Server supports multiple PST Scheduler Clients. A PST Scheduler Server and a PRM Server can reside in the same computer, or installed in separate computers.

In order to use PST Scheduler Client, it requires PRM Client. PST Scheduler Client is embedded in PRM Client, and it can reside with the following software packages on the same computer.

- PRM Client
- PST Scheduler Server
- CENTUM VP Human Interface Station (HIS)/Engineering Station (ENG)
- ProSafe-RS Safety Engineering Station (SENG)

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## ■ APPLICABLE EMERGENCY SHUTDOWN VALVES

PST Scheduler is applicable for ESD valves connected to ProSafe-RS Safety Instrumented System and Field Communications Server via HART multiplexers.

For details of the applicable ESD valves, please refer to “Interoperability/PST Scheduler Integration” website.

<http://www.yokogawa.com/library/documents-downloads/software/pst-scheduler-integration/>

## ■ FUNCTIONAL SPECIFICATIONS

### ● Device Registration

Registers ESD valves by importing the device list from PRM Client. PRM Client (PRM Server) exports an instrument list, and PST Scheduler imports it to PST Scheduler Client (PST Scheduler Server) for registration.

### ● PST Group

Organizes the ESD valves into groups. Up to 100 ESD valves can be registered to a PST group and up to 100 PST groups can be generated.

### ● User Management

Creates user account, user role, and user team independently from the PRM system. Every user must have a user account. The user role defines and restricts the level of access and responsibilities by the users, and a group of users with different roles can be assigned into a user team.

### ● Creating PST Schedules

Creates PST schedules for PST groups. The schedules can be periodic such as weekly, monthly, and yearly basis, or on demands.

### ● Performing PST by the Schedules

PST for ESD valves in the PST group can be performed in three modes: automatic, semi-automatic, and manual. In the semi-automatic mode, a reminder dialog pops up for a user to confirm if it is implemented or skipped when it comes to the pre-scheduled time.

### ● Manual PST

In the manual PST mode, only the reminder dialog pops up when it comes to the pre-scheduled time. Then a user initiates PST manually from the PST monitoring display. Where there is no predefined PST schedule or when the group PST mode is set to manual, PST can be performed manually for PST groups and individual devices.

### ● Monitoring PST Schedules

PST Scheduler client provides PST monitor for displaying and monitoring PST schedules in the Gantt chart. PST monitor also displays schedules and performance status of the PST in different colors. PST group can also be displayed by the PST monitor in a hierarchical tree view.

### ● Launching Device Type Manager (DTM)

DTM for each ESD valve is launched by PST Scheduler Client. With DTM, the PST Scheduler Client displays basic PST parameter setting such as valve open/close positions and PST performance statuses. DTM is provided by each device vendor.

### ● Displaying PST Performance Status on PRM Server

PST Scheduler Server notifies PRM Server the result of PST. The notified alarms & events can be displayed by PRM Client's maintenance alarm function. In case the PST results are abnormal, click the detailed message shown by the maintenance function to launch PST Scheduler Client and confirm the latest status. Or, DTM can be launched directly to display details of the errors.

### ● Operator Guide Message to CENTUM HIS

PST Scheduler transmits an operator guide message to CENTUM HIS notifying PST is started or ended. In order to use this optional function, it requires engineering.

## ■ OPERATING ENVIRONMENT

### ● Hardware Requirement

#### PST Scheduler Server

CPU: 2.8 GHz or more  
 Main memory: Refer to the table below.  
 Disk capacity: Refer to the table below.  
 Network: Ethernet card  
 Display: 256 colors or more  
 Others: DVD-ROM drive

	Number of registered devices			
	300 or less	1000 or less	3000 or less	6000 or less
Main memory	1 GB or more	1 GB or more	2 GB or more	4 GB or more
Hard disk space (*1)	1 GB or more	1 GB or more	2 GB or more	4 GB or more

\*1: The minimum free space required is inclusive of the PST database. The PST database size covers the required size for one year calculated with an assumption that PST is executed twice per month for each device.

#### PST Scheduler Client

CPU: 1 GHz or more  
 Main memory: 1 GB or more  
 Disk capacity: 2 GB or more  
 Network: Ethernet card  
 COM port (for Documenting Calibrator interface)  
 Display color: 256 or more  
 Display resolution: 1024 x 768 or more  
 Others: DVD-ROM drive  
 PRM Client package is required for using PST Scheduler Client.

## ■ MODEL AND SUFFIX CODE

### PST Scheduler Package

		Description
<b>Model</b>	PM4S7780	PST Scheduler Package
<b>Suffix Code</b>	-V	Software license
	1	Always 1
	1	English version

## ■ ORDERING INFORMATION

Specify model and suffix code.

## ■ TRADEMARKS

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