



PHASES OF THE DCS PACKAGE

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TECHNICAL MANUAL

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Introduction

This documentation contains important information how to configure and adapt phase building blocks of the DCS Phase Package including information about actions that need to be performed in FactoryTalk® ProductionCentre and PharmaSuite. A DCS is a Distributed Control System.

The manual is an addition to the "Technical Manual Configuration and Extension" [A2]-[A6] (page 7).

In order to use the DCS phases, the following prerequisites apply:

- Rockwell Automation's DCS Adapter has to be installed and configured. For details, please refer to "Functional Requirement Specification DCS Adapter" [A8] (page 7) and "Technical Manual DCS Adapter" [A9] (page 7).
- A Distributed Control System has to be set up and configured. The alarms processed by the DCS phase are completely based on the alarms provided by the DCS.

The information is structured in the following sections:

CONFIGURATION AND EXTENSION

In this part you will find information for system engineers who implement customer-specific configurations and extensions.

- Configuration keys
 - **Create DCS batch, Get DCS alarms, DCS alarm-based trigger, Set order context, Show consumed material, Show produced material, Wait for event (OES), Wait for event, Send event, Get DCS parameters, and Set DCS parameters** phases (page 5)

Finally, the Reference Documents section provides a list of all the documentation that is referenced in this manual.

Intended Audience

This manual is intended for system engineers and phase developers who maintain phase building blocks of the DCS Phase Package.

They need to have a thorough working knowledge of FactoryTalk ProductionCentre, PharmaSuite, and PharmaSuite building blocks. Thus, we highly recommend to participate in a FactoryTalk ProductionCentre and PharmaSuite training before starting

on the tasks described in this manual.

For more information on S88, EBR, and phase building blocks, see also "Technical Manual Developing System Building Blocks" [A7] (page 7).

Naming Recommendations

When naming your artifacts (e.g. objects in Process Designer, classes, interfaces, methods, functions, building blocks) consider the following recommendation:

- Define and make use of a vendor code consisting of up to three uppercase letters as prefix (e.g. MYC for My Company).
- Prefix your artifacts with your vendor code, separated by _.
X_ and **RS_** are reserved for PharmaSuite.
- Observe the naming conventions defined in "Technical Manual Developing System Building Blocks" [A7] (page 7).

Typographical Conventions

This documentation uses typographical conventions to enhance the readability of the information it presents. The following kinds of formatting indicate specific information:

Bold typeface	Designates user interface texts, such as <ul style="list-style-type: none">■ window and dialog titles■ menu functions■ panel, tab, and button names■ box labels■ object properties and their values (e.g. status).
<i>Italic typeface</i>	Designates technical background information, such as <ul style="list-style-type: none">■ path, folder, and file names■ methods■ classes.
CAPITALS	Designate keyboard-related information, such as <ul style="list-style-type: none">■ key names■ keyboard shortcuts.
Monospaced typeface	Designates code examples.



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Configuration and Extension

This chapter applies to the **Create DCS batch**, **Get DCS alarms**, **DCS alarm-based trigger**, **Set order context**, **Show consumed material**, **Show produced material**, **Wait for event (OES)**, **Wait for event**, **Send event**, **Get DCS parameters**, and **Set DCS parameters** phases. You will learn which phase-specific configuration keys and extension use cases are available.

For general information on configuration keys, see chapter "Managing Configurations" in Volume 4 of the "Technical Manual Configuration and Extension" [A5] (page 7).

TIP

Configuration keys are modified and defined in Process Designer.

Configuration Keys Specific to the DCS Phases

This section describes the configuration keys specific to the **Create DCS batch**, **Get DCS alarms**, **DCS alarm-based trigger**, **Set order context**, **Show consumed material**, **Show produced material**, **Wait for event (OES)**, **Wait for event**, **Send event**, **Get DCS parameters**, and **Set DCS parameters** phases.

TIP

Please note that for the **Get DCS alarms** phase, there is an additional exception recording-specific configuration key available: *Phase/GetDCSAlarms/TooLongAlarmExceptionRisk*. For more information, see chapter "Configuration Keys of PharmaSuite", section "Configuration Keys for Exception Recording" in Volume 4 of the "Technical Manual Configuration and Extension" [A5] (page 7).

Phase/DCS/DCSMessageBrokerURL

- **Type:** String
- **Value:** tcp://<hostname>:<port>
- **Description:** Specifies the URL of the messaging server used for DCS communication. Replace <hostname> with the name of the host to be used and <port> with the port number of the host to be used.
If no value is set, the URL defined in the PharmaSuite **MessageBrokerURL** configuration key is used.
- **Evaluated:** When a DCS phase communicates with a DCS.
- **Range:** N/A

Phase/DCS/DCSMessageTimeToLive

- **Type:** Long
- **Value:** 1000*60*5; //5 min
- **Description:** Specifies in milliseconds how long the message system shall retain a message after it has been dispatched and determines how long the system shall wait for a reply message, if one is expected.
Default setting = 5 min,
Unlimited time = 0
- **Evaluated:** TimeToLive of DCS message.
- **Range:** N/A

Phase/DCS/DCSMessagingTimeout

- **Type:** Long
- **Value:** 2
- **Description:** The messaging timeout for DCS communication in seconds and the time how long a produced DCS message shall be retained by the messaging system after it has been dispatched.
If no value is set, the timeout defined in the PharmaSuite **MessagingTimeout** configuration key is used (converted into seconds).
- **Evaluated:** When a DCS phase communicates with a DCS.
- **Range:** N/A

Reference Documents

The following documents are available from the Rockwell Automation Download Site.

No.	Document Title	Part Number
A2	PharmaSuite Technical Manual Configuration & Extension - Volume 1	PSCEV1-GR010B-EN-E
A3	PharmaSuite Technical Manual Configuration & Extension - Volume 2	PSCEV2-GR010B-EN-E
A4	PharmaSuite Technical Manual Configuration & Extension - Volume 3	PSCEV3-GR010B-EN-E
A5	PharmaSuite Technical Manual Configuration & Extension - Volume 4	PSCEV4-GR010B-EN-E
A6	PharmaSuite Technical Manual Configuration & Extension - Volume 5	PSCEV5-GR007B-EN-E
A7	PharmaSuite Technical Manual Developing System Building Blocks	PSBB-PM009A-EN-E
A8	Functional Requirement Specification DCS Adapter	DCFRSAD-RM002B-EN-E
A9	Technical Manual DCS Adapter	DCTMAD-GR003A-EN-E

TIP

To access the Rockwell Automation Download Site, you need to acquire a user account from Rockwell Automation Sales or Support.

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Revision History

The following tables describe the history of this document.

Changes related to the document:

Object	Description	Document
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Changes related to "Introduction" (page [1](#)):

Object	Description	Document
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Changes related to "Configuration and Extension" (page [5](#)):

Object	Description	Document
Configuration Keys Specific to the DCS Phases (page 5)	Added Phase/DCS/DCSMessageTimeToLive configuration key.	1.0

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