Specifications

GS 33J15P30-01EN

VP6F3210 PID with Packet Loss Compensation Package (for Field Wireless)



[Release 6]

■ GENERAL

General

This package provides a PID controller block with packet loss compensation for Field Wireless.

FUNCTION SPECIFICATIONS

This package provides the following function block:

• PID Controller with Output Loss Compensation for Wireless

• PID Controller with Output Loss Compensation for Wireless

In an IA control system using the ISA100.11a Field Wireless, when a packet loss occurs in the communication between DCS (CENTUM VP) and a field wireless device, this is a PID controller block with the mechanism of compensating it. By using this function block, the process response at the time of wireless communications recovering from the packet loss can be stabilized.



Figure The effect of PID controller with output loss compensation for wireless

Types of PID Control Computation

The PID Controller with Output Loss Compensation for Wireless block performs packet loss compensation computation on the following PID control algorithms:

- Basic type PID control (PID)
- PV proportional and derivative type PID control (I-PD)
- PV derivative type PID control (PI-D)
- Automatic determination type
- Automatic determination type 2 (Default)

These PID control algorithms are of the same type as those of the standard PID controller blocks.

Block Mode

The packet loss compensation computation is performed in AUT/CAS/RCAS. This compensation computation is not effective in the other modes.

Connection Object

The output destination of PID Controller with Output Loss Compensation for Wireless block should be an AO(Analog Output) which is in conformity with "ISA100 Wireless Compliance Institute ISA100.11a Device Profile for Process Control Analog Output Object Extension". To determine whether or not an AO of an object device is based on this specification, contact the vendor of each AO.



Connection Specification

The OUT terminal of the PID Controller with Output Loss Compensation for Wireless block should be connected directly to %W/%X which is assigned the OP (output) of the wireless field device's AO.

The RBS terminal of the PID Controller with Output Loss Compensation for Wireless block should be connected directly to %W/%X which is assigned the data quality status of READBACK.

If all of the connection specifications are not satisfied, compensation computation is not executed.



Figure An example of a connection for PID Controller with Output Loss Compensation for Wireless

Communication Method

You must use the star topology and Duocast for a field wireless network.

In other case, the compensation computation may not have effects.

OPERATING ENVIRONMENT

Hardware Requirements

Model VP6F3210 PID with Packet Loss Compensation Package (for Field Wireless) can work with the following FCS: AFV30S, AFV30D, AFV40S, AFV40D A2FV50S, A2FV50D, A2FV70S, A2FV70D, and A2FVX1 (*1)

*1: This is the model for FCU kit that Processor Module (CP471), Power Module (PW481/PW482/PW484), and Baseplate(A2BE1D) can be ordered collectively as a unit.

Software Requirements

Model VP6F3210 PID with Packet Loss Compensation Package (for Field Wireless) can run on the following software:

- Model VP6F1700 Control Function for Field Control Station (for AFV30□/AFV40□)
- Model VP6F1705 Control Function for FCS Simulator (for AFV30□/AFV40□)

Model VP6F1800 Control Function for Field Control Station (for A2FV50□)

- Model VP6F1805 Control Function for FCS Simulator (for A2FV50□)
- Model VP6F1900 Control Function for Field Control Station (for A2FV70□)
- Model VP6F1905 Control Function for FCS Simulator (for A2FV70) Model VP6F8100 Compressor Control for FCS

Model VP6E8105 Compressor Control for ECC C

Model VP6F8105 Compressor Control for FCS Simulator

MODEL AND SUFFIX CODES

		Description
Model	VP6F3210	PID with Packet Loss Compensation Package (for Field Wireless)
Suffix Codes	-V	Software License
	1	Always 1
	1	English Version

ORDERING INFORMATION

Specify model and suffix codes.

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