YASKAWA AC Drive 1000-Series PROFIBUS-DP Option SI-P3
YASKAWA AC Drive-V1000 PROFIBUS-DP Option SI-P3/V
Supplemental Technical Manual

Introduction

This supplemental technical manual describes the functions added with an SI-P3, SI-P3/V software upgrade, and should be read to ensure proper usage. Read this manual together with the SI-P3 Technical Manual (manual No. SIEP C730600 42B) or SI-P3/V Technical Manual (manual No. SIEP C730600 23B).

Always observe the safety warnings and precautions to ensure correct application of the product.

Applicable Software Version

This supplemental technical manual applies to SI-P3, SI-P3/V software versions PRG: 2104 or later.

The software version is indicated on SI-P3 (SI-P3/V) or the side of the package.

The parameters and functions stated in this manual are available with inverters of the following software version.

A1000 : software version 1021 or later.

V1000 : software version 1024 or later.

◆Parameters Added or Modified by Software Upgrade

■New Parameters

No. (MEMOBUS /Modbus Register Address)	Name	Description	Setting
F6-14 (3BBH)	bUS Error Auto Reset	0: Disabled 1: Enabled	Default：0 Range：0，1
F7-16 (3F4H)	Communication Loss Time-out	Sets the time-out value for communication loss detection in tenths of a second. A value of 0 disables the connection time-out.	Default：0 Min：0 Max：30.0
F7-60 (780H)	PDZ Write 1	MEMOBUS/Modbus Address for PZD 1 Write (PPO Write). A value of 0~2 makes PZD 1 Write act as STW.	Default：0H Min：0H Max：FFFFH
F7-61 (781H)	PDZ Write 2	MEMOBUS/Modbus Address for PZD 2 Write (PPO Write). A value of 0~2 makes PZD 2 Write act as HIW.	Default：0H Min：0H Max：FFFFH
F7-62 (782H)	PDZ Write 3	MEMOBUS/Modbus Address for PZD 3 Write (PPO Write). A value of 0~2 disables PZD 3 Write.	Default：0H Min：0H Max：FFFFH
F7-63 (783H)	PDZ Write 4	MEMOBUS/Modbus Address for PZD 4 Write (PPO Write). A value of 0~2 disables PZD 4 Write.	Default：0H Min：0H Max：FFFFH
F7-64 (784H)	PDZ Write 5	MEMOBUS/Modbus Address for PZD 5 Write (PPO Write). A value of 0~2 disables PZD 5 Write.	Default：0H Min：0H Max：FFFFH
F7-65 (785H)	PDZ Write 6	MEMOBUS/Modbus Address for PZD 6 Write (PPO Write). A value of 0~2 disables PZD 6 Write.	Default：0H Min：0H Max：FFFFH
F7-66 (786H)	PDZ Write 7	MEMOBUS/Modbus Address for PZD 7 Write (PPO Write). A value of 0~2 disables PZD 7 Write.	Default：0H Min：0H Max：FFFFH
F7-67 (787H)	PDZ Write 8	MEMOBUS/Modbus Address for PZD 8 Write (PPO Write). A value of 0~2 disables PZD 8 Write.	Default：0H Min：0H Max：FFFFH
F7-68 (788H)	PDZ Write 9	MEMOBUS/Modbus Address for PZD 9 Write (PPO Write). A value of 0~2 disables PZD 9 Write.	Default：0H Min：0H Max：FFFFH

F7-69 (789H)	PDZ Write 10	MEMOBUS/Modbus Address for PZD 10 Write (PPO Write). A value of 0~2 disables PZD 10 Write.	Default：0H Min：0H Max：FFFFH
F7-70 (78AH)	PDZ Read 1	MEMOBUS/Modbus Address for PZD 1 Read (PPO Read). A value of 0 makes PZD 1 Read act as ZSW.	Default：0H Min：0H Max：FFFFH
F7-71 (78BH)	PDZ Read 2	MEMOBUS/Modbus Address for PZD 2 Read (PPO Read). A value of 0 makes PZD 2 Read act as HSW.	Default：0H Min：0H Max：FFFFH
F7-72 (78CH)	PDZ Read 3	MEMOBUS/Modbus Address for PZD 3 Read (PPO Read). A value of 0 disables PZD 3 Read.	Default：0H Min：0H Max：FFFFH
F7-73 (78DH)	PDZ Read 4	MEMOBUS/Modbus Address for PZD 4 Read (PPO Read). A value of 0 disables PZD 4 Read.	Default：0H Min：0H Max：FFFFH
F7-74 (78EH)	PDZ Read 5	MEMOBUS/Modbus Address for PZD 5 Read (PPO Read). A value of 0 disables PZD 5 Read.	Default：0H Min：0H Max：FFFFH
F7-75 (78FH)	PDZ Read 6	MEMOBUS/Modbus Address for PZD 6 Read (PPO Read). A value of 0 disables PZD 6 Read.	Default：0H Min：0H Max：FFFFH
F7-76 (790H)	PDZ Read 7	MEMOBUS/Modbus Address for PZD 7 Read (PPO Read). A value of 0 disables PZD 7 Read.	Default：0H Min：0H Max：FFFFH
F7-77 (791H)	PDZ Read 8	MEMOBUS/Modbus Address for PZD 8 Read (PPO Read). A value of 0 disables PZD 8 Read.	Default：0H Min：0H Max：FFFFH
F7-78 (792H)	PDZ Read 9	MEMOBUS/Modbus Address for PZD 9 Read (PPO Read). A value of 0 disables PZD 9 Read.	Default：0H Min：0H Max：FFFFH
F7-79 (793H)	PDZ Read 10	MEMOBUS/Modbus Address for PZD 10 Read (PPO Read). A value of 0 disables PZD 10 Read.	Default：0H Min：0H Max：FFFFH

Note: Parameters shown above are applicable for
A1000 : software version 1021 or later.
V1000 : software version 1024 or later.

■Parameter Changes

No. (MEMOBUS /Modbus Register Address)	Name	Description	Setting
F6-01 (3A2H)	Communications Error Operation Selection	Determines drive response when a bUS error is detected during communications with the option 0: Ramp to Stop 1: Coast to Stop 2: Fast-Stop 3: Alarm Only <1> 4: Alarm and Run at d1-04 <1><5> 5: Alarm and Ramp to stop <5>	Default：1 Range：0 ～ 5
F6-32 (3CDH) <2>	PROFIBUS-DP Data Format Selection	0: PPO Type 1: Conventional 2: PPO (w/bit 0) <3><6> 3: PPO Type (Auto Enter) <4><5> 4: Conventional (Auto Enter) <4><5> 5: PPO (w/bit0, Auto Enter) <3> <4><5>	Default：0 Range：0 ～ 5

<1> Take proper safety measures, such as installing an emergency stop switch, as the drive will continue operation when detecting an bUS error.
<2> Cycle power for setting changes to take effect.
<3> Run when both the bit 0 and the bit 4 of the register STW are 1. Refer to "PPO Formats STW bit0/bit4" for details.
<4> When writing the parameter of the drive by SI-P3, an Enter command is executed automatically and the written parameter is activated. Refer to "Auto Enter function" for details.
<5> These settings are applicable for
A1000 : software version 1021 or later.
V1000 : software version 1024 or later.
Note: The shaded areas are the changes of PRG : 2104.

◆PPO Formats STW bit0/bit4

F6-32 = 0 or 3 <1>

Bit	PPO Write STW	PPO Read ZSW
0	OFF1: reserved	Ready to switch on: always 1
1	OFF2: reserved	Ready: always 1
2	OFF3: reserved	1:Ready
3	Enable to RUN 0: Baseblock + Stop 1: Not Baseblock	0: No fault condition 1: Fault condition
4	0: STOP 1: RUN	always 1
5	Ramp function generation enable: reserved	always 1
6	Enable ramp function generator set-point: reserved	Switch-on inhibit: always 0
7	1: Fault Reset	0: No alarm condition 1: Alarm condition
8	0: Stop 1: JOG RUN forward (Fmax/10 speed)	0: No speed agree 1: Speed agree condition
9	0: Stop 1: JOG RUN reverse (Fmax/10 speed)	0: Local control 1: Control from PROFIBUS
10	0: Local control 1: Control from PROFIBUS	always 0
11 ～ 15	reserved	

<1> F6-32 = 3 is applicable for

A1000 : software version 1021 or later.

V1000 : software version 1024 or later.

F6-32 = 2 or 5 <1>

Bit	PPO Write STW	PPO Read ZSW
0	0: STOP 1: RUN <2>	Ready to switch on: always 1
1	OFF2: reserved	Ready: always 1
2	OFF3: reserved	1:Ready
3	Enable to RUN 0: Baseblock + Stop 1: Not Baseblock	0: No fault condition 1: Fault condition
4	0: STOP 1: RUN <2>	always 1
5	Ramp function generation enable: reserved	always 1
6	Enable ramp function generator set-point: reserved	Switch-on inhibit: always 0
7	1: Fault Reset	0: No alarm condition 1: Alarm condition
8	0: Stop 1: JOG RUN forward (Fmax/10 speed)	0: No speed agree 1: Speed agree condition
9	0: Stop 1: JOG RUN reverse (Fmax/10 speed)	0: Local control 1: Control from PROFIBUS
10	0: Local control 1: Control from PROFIBUS	always 0
11 ～ 15	reserved	

<1> The settings, F6-32 = 2, 5 are applicable for

A1000 : software version 1021 or later.

V1000 : software version 1024 or later.

<2> RUN when both bit 0 and bit 4 are 1

◆Auto Enter function

When F6-32 = 3 or 5

When writing the parameter of the drive by PKE or PZD, an Enter command is executed automatically in the drive and the written parameter is activated.

When F6-32 = 4

When writing the parameter of the drive by write command of MEMOBUS/Modbus Command Message, an Enter command is executed automatically in the drive and the written parameter is activated.

When F6-32 = 0 or 1 or 2

An Enter command is needed in order to activate parameter changes in the drive