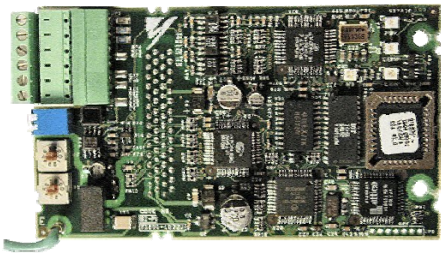
Profibus-DP® Option Card CM061 (SI-P1)

❑ This document applies to the Yaskawa G5HHP drive. Please disregard the installation guide packed in the option kit.

❑ Unpack the *CM061 Profibus-DP Option* kit and verify that all components are present and undamaged.

CM061 Profibus-DP Option Kit Parts List	Qty.
Profibus-DP Option Card (SI-P1)	1
Installation Guide (IG.AFD.12) (Disregard for G5HHP)	1

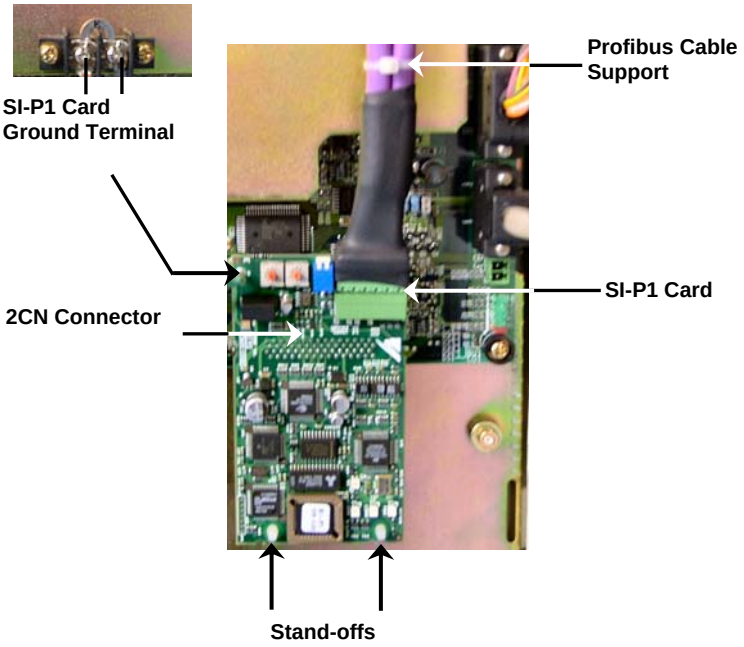


❑ Connect power to the drive and verify that the drive functions correctly. This includes running the drive from the operator keypad. Refer to the appropriate drive technical manual for information on connecting and operating the drive.

❑ Remove power from the drive and wait for the charge lamp to be completely extinguished. Wait at least five additional minutes for the drive to be completely discharged. Measure the DC bus voltage and verify that it is at a safe level.

❑ Attach the *CM061 Profibus-DP Option* (SI-P1 card) to the master control board.

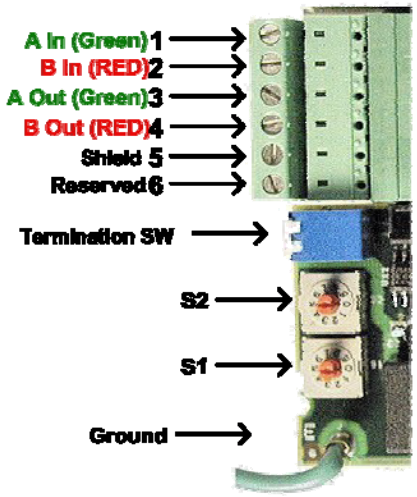
- Attach the *CM061 Profibus-DP Option* ground wire to the ground terminal as shown. Make sure that the terminal is connected to a reliable, noise free ground.
- Connect the *CM061 Profibus-DP Option* card to the 2CN connector on the master control board.
- Secure the Profibus cable to the support with a tie wrap to provide strain relief for the connector.
- Attach the Profibus cable to the *CM061 Profibus-DP Option* card as shown (this picture shows the standard Phoenix connector shrink-wrapped for additional protection).
- Fully engage the stand-offs in the mounting holes on the card.
- Route the Profibus cable away from any power wires within the cabinet. When outside of the cabinet, run the Profibus cable in its own conduit. However, it may be run with low voltage signals such as feedback wiring.



Attaching the *CM061 Profibus-DP Option* on a G5HHP master control board.

❑ Connect the drive to the Profibus-DP communication network.

- Connect the Profibus-DP network cable as shown in the figure to the right.
- The cable shield must be contiguous between the beginning and end of any network segment. It is recommended that the shield of the **in** cable and the **out** cable be twisted together. Do not connect the shield to the shield connector, rather fold it back and secure it to the cable.
- Use the pluggable connector that came with the *CM061 Profibus-DP Option*. The pluggable connector contains a circuit board that remaps the terminal connections. **Do not use an alternate connector.** Damage to the *CM061 Profibus-DP Option* and/or associated network devices could be damaged if an alternate connector is used.



Plug		
Pin	**Description**	**Definition**
1	A In (Green)	Negative
2	B In (Red)	Positive
3	A Out (Green)	Negative
4	B Out (Red)	Positive
5	Shield	Shield
6	Reserved	No Connection

Socket		
Pin	**Description**	**Definition**
1	Reserved	No Connection
2	Reserved	No Connection
3	A In/Out (Green)	Negative
4	B In/Out (Red)	Positive
5	Shield	Shield
6	Reserved	No Connection

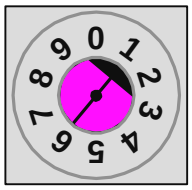
❑ Set the node address.

- Set the node address for the drive by setting the 10‘s digit with S2 and the 1’s digit with S1.
- All devices on the network must have unique node addresses. Check the network layout to verify that the node address selected is unique and falls between 3 – 99.
- Node addresses 0 and 1 are typically reserved for master controllers.
- Node address 2 is typically reserved for diagnostic equipment.

Address = S2 (x10) + S1

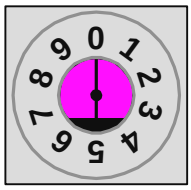
Example: Set node address to 15

Set address switch 2 to "1"



S2

Set address switch 1 to "5"



S1

❑ Set network termination.

- If this drive is either the first or the last device on the network, including any PLC and/or Profibus-DP Master, and active termination is not used, set the termination resistor switch to ON.
- If this device is not the first or last device on the network or active termination is used, set the termination resistor switch to OFF.
- Active termination is the recommended termination method and is required for networks operating above 1.5Mbps. Active termination will eliminate the possibility of network failure due to the removal of a terminated device.
- The Siemens Profibus Terminator part number is 6ES7 972-0DA00-0AA0.

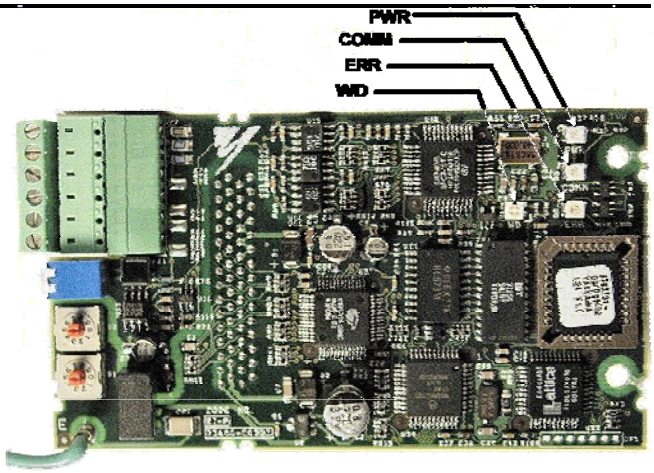
OFF

ON

❑ Configure the Profibus-DP network for the drive. Refer to the documentation included with the Profibus configuration utility supplied with the Profibus-DP Master controller.

❑ Apply power to the drive and verify that the diagnostic LEDs on the front of the *CM061 Profibus-DP Option* are in their correct state.

LED Display				Content	Cause
PWR	COM	ERR	WD		
Solid Green	Solid Green	OFF	Flashing Green	Normal	Normal communication



❑ Remove power from the drive and wait for the charge lamp to be completely extinguished. Wait at least five additional minutes for the drive to be completely discharged. Measure the DC bus voltage and verify that it is at a safe level.

❑ Reinstall the operator keypad and all drive covers. Apply power to the drive.

❑ Set parameters b1-01 and b1-02 to their appropriate values. Refer to the table below for available b1-01 and b1-02 values.

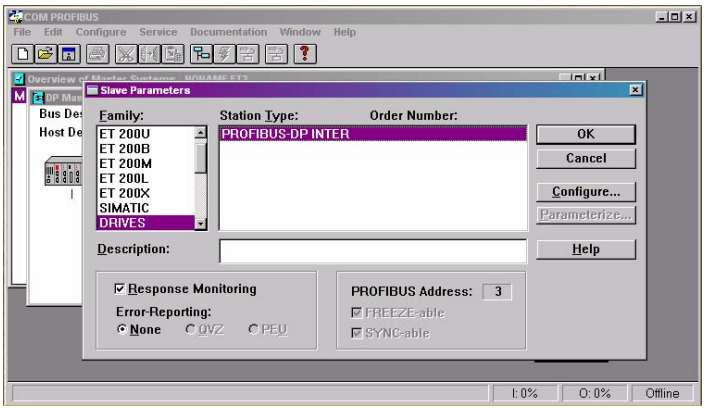
Parameter	Function	Data	Description	Default
b1-01	Reference Source Select	0	Digital Operator	1
		1	Terminals	
		2	Built-in Modbus RTU Terminals	
		3	**Option Card (*CM061 Profibus-DP Option*)**	
b1-02	Run Command Source Select	0	Digital Operator	1
		1	Terminals	
		2	Built-in Modbus RTU Terminals	
		3	**Option Card (*CM061 Profibus-DP Option*)**	

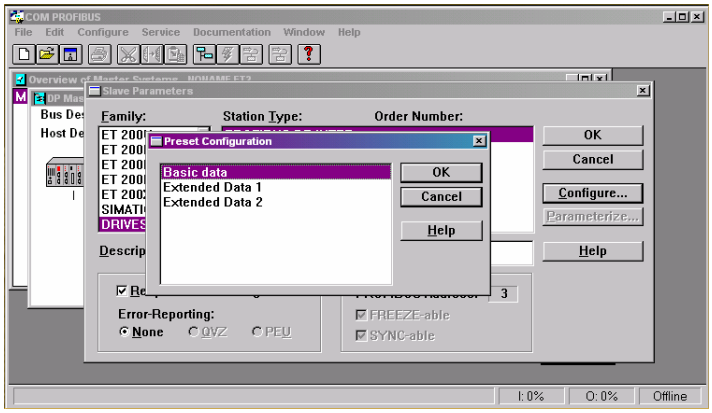
❑ LED Status Indicators and Diagnostics

LED Display				Content	Cause	Solution
PWR	COM	ERR	WD			
OFF	OFF	OFF	OFF	Power OFF	Option is not powered	• Check the main circuit wiring on the drive. • Cycle drive power.
					Poor connection to drive	• Turn of the drive power. • Check the Profibus-DP Option connection to the drive 2CN connector, • Cycle drive power.
Solid Green	OFF	Solid Red	Solid Red	CPU Error	Option unit CPU error	• Cycle drive power. • Replace Profibus-DP Option if fault persists.
Solid Green	OFF	Solid Red	Flashing Red	Drive Error	Error in Drive unit	• Cycle drive power. • Replace Profibus-DP Option if fault persists. • Replace drive if fault persists.
Solid Green	OFF	Flashing Red	Solid Green	Com Error	Communication Failure	• Check whether the address set in the Profibus-DP Master differs from the address of the option unit. • Check that the master is functioning properly. • Check that the termination resistor is correctly connected to the communication line. • Check whether the communication line is correctly connected (disconnected or poor connection). • Check that the communication line is separated from the main power line.
Solid Green	Solid Green	Flashing Red	Solid Green	Com Error	Communication Fault	• Check whether the address is duplicated with any other devices on the Profibus-DP network.
Solid Green	Solid Green	OFF	Solid Green	CPU Init	Initialization	• Wait until WD LED is flashing.
Solid Green	Solid Green	OFF	Flashing Green	Normal	Normal	—

Profibus-DP Configuration

- To simplify the drive configuration, the GSD file can be obtained at **www.yaskawa.com**. Select **Downloads**, **Browse, By Inverter Drives, By Product**, and **Network Comms-Profibus**. Then select the file ***YASK00CA.GSD***.
- Load the GSD file, ***YASK00CA.GSD***, into the proper directory for the configuration tool used. Retrieve the GSD file from either **www.yaskawa.com** or **www.profibus.org** to make sure that the latest GSD file is loaded.
- Select the Profibus-DP INTER device when adding Yaskawa drives to the Profibus configuration. See the figure to the right.
- The *CM061 Profibus-DP Option* supports three configuration options: Extended Data 1 (32 words of input and output), Extended Data 2 (12 words of input and output) and Basic Data (3 words of I/O). Refer to the ***Profibus-DP Option Technical Manual (TM.AFD.12)*** for further information on each configuration. See the figure to the right.





Parameter Table

Name	Addr	Text	Limits	Default	Cntrl Met
A1-00	100	Language Select	0 ~ 1	0	
A1-01	101	Access Level Select	0 ~ 4	2	
A1-02	102	Control Mode Select	0 ~ 3	0	
A1-03	103	Initialization Select	0 ~ 3330	0	
A1-04	104	Password	0 ~ 9999	0	
A1-05	105	Password	0 ~ 9999	0	
A2-01	106	User Parameter 01	180h ~	0	
A2-02	107	User Parameter 02	180h ~	0	
A2-03	108	User Parameter 03	180h ~	0	
A2-04	109	User Parameter 04	180h ~	0	
A2-05	10A	User Parameter 05	180h ~	0	
A2-06	10B	User Parameter 06	180h ~	0	
A2-07	10C	User Parameter 07	180h ~	0	
A2-08	10D	User Parameter 08	180h ~	0	
A2-09	10E	User Parameter 09	180h ~	0	
A2-10	10F	User Parameter 10	180h ~	0	
A2-11	110	User Parameter 11	180h ~	0	
A2-12	111	User Parameter 12	180h ~	0	
A2-13	112	User Parameter 13	180h ~	0	
A2-14	113	User Parameter 14	180h ~	0	
A2-15	114	User Parameter 15	180h ~	0	
A2-16	115	User Parameter 16	180h ~	0	
A2-17	116	User Parameter 17	180h ~	0	
A2-18	117	User Parameter 18	180h ~	0	
A2-19	118	User Parameter 19	180h ~	0	
A2-20	119	User Parameter 20	180h ~	0	
A2-21	11A	User Parameter 21	180h ~	0	
A2-22	11B	User Parameter 22	180h ~	0	
A2-23	11C	User Parameter 23	180h ~	0	
A2-24	11D	User Parameter 24	180h ~	0	
A2-25	11E	User Parameter 25	180h ~	0	
A2-26	11F	User Parameter 26	180h ~	0	
A2-27	120	User Parameter 27	180h ~	0	
A2-28	121	User Parameter 28	180h ~	0	
A2-29	122	User Parameter 29	180h ~	0	
A2-30	123	User Parameter 30	180h ~	0	
A2-31	124	User Parameter 31	180h ~	0	
A2-32	125	User Parameter 32	180h ~	0	
b1-01	180	Reference Source Select	0 ~ 3	1	
b1-02	181	Run Command Source Select	0 ~ 3	1	
b1-03	182	Stopping Method Select	0 ~ 3	0	
b1-04	183	Reverse Prohibit Select	0 ~ 1	0	
b1-05	184	Zero Speed Mode Select	0 ~ 3	0	FV
b1-06	185	I/O Scan Time Select	0 ~ 1	1	
b1-07	186	Local/Remote Select	0 ~ 1	0	
b2-01	187	DC Injection Start Frequency	0.0 ~ 10.0	0.5	
b2-02	188	DC Injection Current Level	0 ~ 100	50	
b2-03	189	DC Injection Time at Start	0.00 ~ 10.00	0.00	
b2-04	18A	DC Injection Time at Stop	0.00 ~ 10.00	0.00	

Name	Addr	Text	Limits	Default	Cntrl Met
b3-01	18E	Speed Search Mode Select	0 ~ 1	0	
b3-02	18F	Speed Search Current Level	0 ~ 200	150	
b3-03	190	Speed Search Decel Time	0.1 ~ 10.0	10.0	
b4-01	192	Timer On Delay	0.0 ~ 300.0	0.0	
b4-02	193	Timer Off Delay	0.0 ~ 300.0	0.0	
b5-01	194	PID Mode Select	0 ~ 2	0	
b5-02	195	PID P Gain	0.00 ~ 25.00	1.00	
b5-03	196	PID I Time	0.0 ~ 360.0	1.0	
b5-04	197	PID I Limit	0.00 ~ 100.0	100.0	
b5-05	198	PID D Time	0.0 ~ 10.00	0.00	
b5-06	199	PID Limit	0.0 ~ 100.0	100	
b5-07	19A	PID Offset	-100.0 ~ +100.0	0.0	
b5-08	19B	PID Delay	0.00 ~ 10.00	0.00	
b6-01	19C	Dwell Reference at Start	0.0 ~ 150.0	0.0	
b6-02	19D	Dwell Time at Start	0.0 ~ 10.0	0.0	
b6-03	19E	Dwell Reference at Stop	0.0 ~ 150.0	0.0	
b6-04	19F	Dwell Time at Stop	0.0 ~ 10.0	0.0	
b7-01	1A0	Droop Gain	0.0 ~ 100.0	0.0	FV
b7-02	1A1	Droop Delay	0.03 ~ 2.00	0.05	FV
b8-01	1A2	Energy Savings Gain	0 ~ 100	80	
b8-02	1A3	Energy Savings Reference	0.0 ~ 150.0	0.0	
b9-01	1A4	Zero Servo Gain	0 ~ 100	5	FV
b9-02	1A5	Zero Servo Completion Width	0 ~ 16383	10	FV
C1-01	200	Accel Time 1	0.0 ~ 6000.0	30.0	
C1-02	201	Decel Time 1	0.0 ~ 6000.0	30.0	
C1-03	202	Accel Time 2	0.0 ~ 6000.0	30.0	
C1-04	203	Decel Time 2	0.0 ~ 6000.0	30.0	
C1-05	204	Accel Time 3	0.0 ~ 6000.0	30.0	
C1-06	205	Decel Time 3	0.0 ~ 6000.0	30.0	
C1-07	205	Accel Time 4	0.0 ~ 6000.0	30.0	
C1-08	207	Decel Time 4	0.0 ~ 6000.0	30.0	
C1-09	208	Fast Stop Time	0.0 ~ 6000.0	30.0	
C1-10	209	Accel/Decel Unit Select	0 ~ 1	0	
C1-11	20A	Accel/Decel Switch Frequency	0.0 ~ 150.0	0.0	
C2-01	20B	S-Curve Accel at Start	0.00 ~ 2.50	0.20	
C2-02	20C	S-Curve Accel at End	0.00 ~ 2.50	0.20	
C2-03	20D	S-Curve Decel at Start	0.00 ~ 2.50	0.20	
C2-04	20E	S-Curve Decel at End	0.00 ~ 2.50	0.20	
C3-01	20F	Slip Comp Gain	0.00 ~ 2.50	0.00	
C3-02	210	Slip Comp Time	0 ~ 10000	2000	
C3-03	211	Slip Comp Limit	0 ~ 250	200	
C3-04	212	Slip Comp Regen Select	0 ~ 1	0	
C3-05	242	Flux Select	0 ~ 1	0	OLV
C4-01	213	Torque Comp Gain	0.00 ~ 2.50	1.00	
C4-02	214	Torque Comp Time	0 ~ 10000	1000	
C5-01	215	ASR P Gain	0.00 ~ 300.00	20.00	w/ PG
C5-02	216	ASR I Time	0.000 ~ 10.000	0.500	w/ PG
C5-03	217	ASR P Gain 2	0.00 ~ 300.00	20.00	w/ PG
C5-04	218	ASR I Time 2	0.000 ~ 10.000	0.500	w/ PG

Name	Addr	Text	Limits	Default	Cntrl Met
C5-05	219	ASR Limit	0.0 ~ 20.0	5.0	V/f w/PG
C5-06	21A	ASR Delay Time	0.000 ~ 0.500	0.004	FV
C5-07	21B	ASR Switchover Frequency	0.0 ~ 150.0	0.0	FV
C5-08	241	ASR I Limit	0 ~ 400	400	FV
C6-01	21C	Carrier Frequency Upper Limit	0.4 ~ 2.0	2.0	
C6-02	21D	Carrier Frequency Lower Limit	0.4 ~ 2.0	1.0	
C6-03	21E	Carrier Frequency Gain	00 ~ 99	36	
C7-01	21F	Hunting Prevention Select	0 ~ 1	1	
C7-02	220	Hunting Prevention Gain	0.00 ~ 2.50	1.00	
C8-08	22A	AFR Gain	0.00 ~ 10.00	1.00	OLV
C8-09	22B	AFR Time	0 ~ 200	50	OLV
C8-30	240	Carrier Frequency in Auto Tune	0 ~ 1	0	OLV
C9-04	24B	CT/VT Operation Mode Select	0 ~ 1		
d1-01	280	Frequency Reference 1	0.0 ~ 150.0	0.0	
d1-02	281	Frequency Reference 2	0.0 ~ 150.0	0.0	
d1-03	282	Frequency Reference 3	0.0 ~ 150.0	0.0	
d1-04	283	Frequency Reference 4	0.0 ~ 150.0	0.0	
d1-05	284	Frequency Reference 5	0.0 ~ 150.0	0.0	
d1-06	285	Frequency Reference 6	0.0 ~ 150.0	0.0	
d1-07	286	Frequency Reference 7	0.0 ~ 150.0	0.0	
d1-08	287	Frequency Reference 8	0.0 ~ 150.0	0.0	
d1-09	288	Jog Frequency Reference	0.0 ~ 150.0	6.0	
d2-01	289	Frequency Reference Upper Limit	0.0 ~ 110.0	100.0	
d2-02	28A	Frequency Reference Lower Limit	0.0 ~ 109.0	0.0	
d3-01	28B	Jump Frequency 1	0.0 ~ 150.0	0.0	
d3-02	28C	Jump Frequency 2	0.0 ~ 150.0	0.0	
d3-03	28D	Jump Frequency 3	0.0 ~ 150.0	0.0	
d3-04	28E	Jump Bandwidth	0.0 ~ 20.0	1.0	
d4-01	28F	MOP Reference Memory Select	0 ~ 1	0	
d4-02	290	Trim Control Level	0 ~ 100	10	
d5-01	291	Torque Control Select	0 ~ 1	0	FV
d5-02	292	Torque Reference Filter	0 ~ 1000	0	FV
d5-03	293	Speed Limit Select	1 ~ 2	1	FV
d5-04	294	Speed Limit Value	-120 ~ +120	0	FV
d5-05	295	Speed Limit Bias	0 ~ 120	10	FV
d5-06	296	Speed/Torque Switchover Time	0 ~ 1000	0	FV
E1-01	300	Input Voltage	360 ~ 460	460	
E1-02	301	Motor Overload Curve Select	0 ~ 1	0	
E1-03	302	V/f Pattern Select	0 ~ F	F	
E1-04	303	Maximum Output Frequency	50.0 ~ 150.0	60.0	
E1-05	304	Maximum Output Voltage	0.0 ~ 510.0	460.0	
E1-06	305	Base Frequency	0.0 ~ 150.0	60.0	
E1-07	306	Mid Output Frequency A	0.0 ~ 150.0	3.0	
E1-08	307	Mid Output Voltage A	0.0 ~ 510.0	27.6	
E1-09	308	Minimum Output Frequency	0.0 ~ 150.0	1.5	
E1-10	309	Minimum Output Voltage	0.0 ~ 510.0	13.8	
E1-11	30A	Mid Output Frequency B	0.0 ~ 150.0	0.0	
E1-12	30B	Mid Output Voltage B	0.0 ~ 510.0	0.0	
E1-13	30C	Base Voltage	0.0 ~ 510.0	0.0	
E2-01	30E	Motor Rated Current	80.0 ~ 1600.0	740.0	
E2-02	30F	Motor Rated Slip	0.00 ~ 20.00	1.30	

Name	Addr	Text	Limits	Default	Cntrl Met
E2-03	310	No-Load Current	0.0 ~ 2000.0	192.0	
E2-04	311	Number of Motor Poles	2 ~ 48	4	w/ PG
E2-05	312	Motor Line-to-Line Resistance	0.000 ~ 65.000	0.010	
E2-06	313	Leakage Inductance	0.0 ~ 30.0	5.0	OLV, FV
E2-07	314	Saturation Coefficient 1	0.00 ~ 0.50	0.50	OLV, FV
E2-08	315	Saturation Coefficient 2	0.00 ~ 0.75	0.75	OLV, FV
E2-09	316	Mechanical Loss	0.0 ~ 10.0	0.0	OLV, FV
E3-01	317	Motor 2 Control Mode Select	0 ~ 1	1	
E4-01	318	Motor 2 Max Output Frequency	50.0 ~ 150.0	60.0	
E4-02	319	Motor 2 Max Output Voltage	0.0 ~ 510.0	460.0	
E4-03	31A	Motor 2 Base Frequency	0.0 ~ 150.0	60.0	
E4-04	31B	Motor 2 Mid Output Frequency A	0.0 ~ 150.0	3.0	
E4-05	31C	Motor 2 Mid Output Voltage A	0.0 ~ 510.0	27.6	
E4-06	31D	Motor 2 Min Output Frequency	0.0 ~ 150.0	1.5	
E4-07	31E	Motor 2 Min Output Voltage	0.0 ~ 510.0	13.8	
E5-01	31F	Motor 2 Rated Current	0.0 ~ 2000.0	740.0	
E5-02	320	Motor 2 Rated Slip	0.00 ~ 20.00	1.30	
E5-03	321	Motor 2 No-Load Current	0.0 ~ 2000.0	192.0	
E5-05	323	Motor 2 Line-to-Line Resistance	0.000 ~ 65.000	0.010	
F1-01	380	Encoder (PG) PPR	0 ~ 60000	1024	w/ PG
F1-02	381	PG Feedback Loss Select	0 ~ 3	1	w/ PG
F1-03	382	PG Overspeed Select	0 ~ 3	1	w/ PG
F1-04	383	PG Deviation Select	0 ~ 3	3	w/ PG
F1-05	384	PG Rotation Select	0 ~ 1	0	w/ PG
F1-06	385	PG Output Monitor Ratio	1 ~ 132	1	w/ PG
F1-07	386	PG Integral Accel/Decel Select	0 ~ 1	0	V/f w/PG
F1-08	387	PG Overspeed Level	0 ~ 120	115	w/ PG
F1-09	388	PG Overspeed Time	0.0 ~ 2.0	0.0	w/ PG
F1-10	389	Speed Deviation Level	0 ~ 50	10	w/ PG
F1-11	38A	Speed Deviation Delay Time	0.0 ~ 10.0	0.5	w/ PG
F1-12	38B	PG Gear Teeth 1	0 ~ 1000	0	V/f w/PG
F1-13	38C	PG Gear Teeth 2	0 ~ 1000	0	V/f w/PG
F1-14	397	PG Loss Detection Delay Time	0.0 ~ 10.0	2.0	w/ PG
F2-01	38D	A1-14B Input Select	0 ~ 1	0	
F3-01	38E	DI-08/DI-16H2 Input Select	0 ~ 7	0	
F4-01	38F	AO-08/AO-12 Channel 1 Select	1 ~ 33	2	
F4-02	390	AO-08/AO-12 Channel 1 Gain	0.00 ~ 2.50	1.00	
F4-03	391	AO-08/AO-12 Channel 2 Select	1 ~ 33	3	
F4-04	392	AO-08/AO-12 Channel 2 Gain	0.00 ~ 2.50	0.50	
F5-01	393	DO-02C Channel 1 Select	0 ~ 37	0	
F5-02	394	DO-02C Channel 2 Select	0 ~ 37	1	
F6-01	395	DO-08 Output Select	0 ~ 1	0	
F7-01	396	PO-36F Output Select	0 ~ 4	1	
F8-01	398	SI-F/G E-15 Detection Select	0 ~ 3	1	
F9-01	399	EF0 Fault Select	0 ~ 1	0	
F9-02	39A	EF0 Detection Select	0 ~ 1	0	
F9-03	39B	EF0 Response Select	0 ~ 3	1	
F9-04	39C	Trace Sample Time	0 ~ 60000	0	
F9-06	39F	BUS Fault Select	0 ~ 3	1	
H1-01	400	DI Terminal 11 Function Select	0 ~ 77h	24	
H1-02	401	DI Terminal 12 Function Select	0 ~ 77h	14	

Name	Addr	Text	Limits	Default	Cntrl Met
H1-03	402	DI Terminal 13 Function Select	0 ~ 77h	3	
H1-04	403	DI Terminal 14 Function Select	0 ~ 77h	4	
H1-05	404	DI Terminal 15 Function Select	0 ~ 77h	6	
H1-06	405	DI Terminal 16 Function Select	0 ~ 77h	8	
H2-01	406	DO Terminal 53-57 Function	0 ~ 37h	0	
H2-02	407	DO Terminal 19-50 Function	0 ~ 37h	1	
H2-03	408	DO Terminal 20-50 Function	0 ~ 37h	2	
H3-01	409	AI Terminal 36 Signal Type Select	0 ~ 1	0	
H3-02	40A	AI Terminal 36 Gain	0.0 ~ 100.0	100.0	
H3-03	40B	AI Terminal 36 Bias	-100.0 ~ +100.0	0.0	
H3-04	40C	AI Terminal 42 Signal Type Select	0 ~ 1	0	
H3-05	40D	AI Terminal 42 Function Select	1 ~ 1Fh	0	
H3-06	40E	AI Terminal 42 Gain	0.0 ~ 100.0	100.0	
H3-07	40F	AI Terminal 42 Bias	-100.0 ~ +100.0	0.0	
H3-08	410	AI Terminal 39 Signal Type Select	0 ~ 2	2	
H3-09	411	AI Terminal 39 Function Select	1 ~ 1Fh	1F	
H3-10	412	AI Terminal 39 Gain	0.0 ~ 100.0	100.0	
H3-11	413	AI Terminal 39 Bias	-100.0 ~ +100.0	0.0	
H3-12	414	AI Terminals Filter Time	0.00 ~ 2.00	0.00	
H4-01	415	AO Terminal 45 Function Select	1 ~ 33h	2	
H4-02	416	AO Terminal 45 Gain	0.00 ~ 2.50	1.00	
H4-03	417	AO Terminal 45 Bias	-10 ~ +10	0.0	
H4-04	418	AO Terminal 48 Function Select	1 ~ 33h	3	
H4-05	419	AO Terminal 48 Gain	0.00 ~ 2.50	0.50	
H4-06	41A	AO Terminal 48 Bias	-10.0 ~ +10.0	0.0	
H4-07	41B	AO Terminal Signal Type Select	0 ~ 1	0	
H5-01	41C	Modbus Node Address	0 ~ 20	1F	
H5-02	41D	Modbus Baud Rate Select	0 ~ 3	3	
H5-03	41E	Modbus Parity Select	0 ~ 2	0	
H5-04	41F	Serial Fault Stopping Method	0 ~ 3	3	
H5-05	420	Serial Fault Detection Select	0 ~ 1	1	
L1-01	480	Motor Overload Fault Select	0 ~ 1	1	
L1-02	481	Motor Overload Time Constant	0.1 ~ 5.0	1.0	
L2-01	482	Power Loss Detection Select	0 ~ 2	0	
L2-02	483	Power Loss Ride-Thru Time	0.0 ~ 2.0	1.0	
L2-03	484	Minimum Baseblock Time	0.0 ~ 25.5	10.0	
L2-04	485	Voltage Recovery Ramp Time	0.0 ~ 5.0	3.0	
L2-05	486	Undervoltage Detection Level	300 ~ 420	380	
L2-06	487	KEB Decel Time	0.0 ~ 100.0	0.0	
L3-01	488	Stall Prevention Accel Select	0 ~ 2	1	
L3-02	489	Stall Prevention Accel Level	0 ~ 200	150	
L3-03	48A	Stall Prevention Accel CHP Limit	0 ~ 100	50	
L3-04	48B	Stall Prevention Decel Select	0 ~ 2	1	
L3-05	48C	Stall Prevention Run Select	0 ~ 2	1	
L3-06	48D	Stall Prevention Run Level	30 ~ 200	160	
L4-01	490	Speed Agree Level	0.0 ~ 150.0	0.0	
L4-02	491	Speed Agree Width	0.0 ~ 20.0	2.0	
L4-03	492	Speed Agree Detection Level	0.0 ~ 150.0	0.0	
L4-04	493	Speed Agree Detection Width	0.0 ~ 20.0	2.0	
L4-05	494	Reference Loss Detection Select	0 ~ 1	0	
L5-01	495	Number of Auto Restarts Select	0 ~ 10	0	
L5-02	496	Auto Restart Fault Select	0 ~ 1	0	
L6-01	498	Torque Detection Select 1	0 ~ 4	0	
L6-02	499	Torque Detection Level 1	0 ~ 300	150	
L6-03	49A	Torque Detection Time 1	0.0 ~ 10.0	0.1	
L6-04	49B	Torque Detection Select 2	0 ~ 4	0	
L6-05	49C	Torque Detection Level 2	0 ~ 300	150	
L6-06	49D	Torque Detection Time 2	0.0 ~ 10.0	0.1	
L7-01	49E	Forward Torque Limit	0 ~ 300	200	OLV, FV
L7-02	49F	Reverse Torque Limit	0 ~ 300	200	OLV, FV
L7-03	4A0	Forward Regen Torque Limit	0 ~ 300	200	OLV, FV
L7-04	4A1	Reverse Regen Torque Limit	0 ~ 300	200	OLV, FV
L8-01	4A4	DB Resistor Protection Select	0 ~ 1	0	
L8-02	4A5	OH Pre-Alarm Level	50 ~ 110	95	
L8-03	4A6	OH Pre-Alarm Select	0 ~ 3	3	
L8-05	4A8	Input Phase Loss Select	0 ~ 1	0	
L8-07	4AA	Output Phase Loss Select	0 ~ 1	1	
o1-01	500	User Monitor Select	4 ~ 33	6	
o1-02	501	Power-On Monitor Select	1 ~ 4	1	
o1-03	502	Display Scaling Select	0 ~ 39999	0	
o1-04	503	V/f Pattern Unit Select	0 ~ 1	0	
o1-05	504	Modbus Address Display Select	0 ~ 1	6	
o2-01	505	Local/Remote Key Select	0 ~ 1	1	
o2-02	506	Stop Key Function Select	0 ~ 1	1	
o2-03	507	User Initialize Default Select	0 ~ 2	0	
o2-04	508	Drive Model kVA Select	0 ~ FFh	4400	
o2-05	509	Operator MOP Function Select	0 ~ 1	0	
o2-06	50A	Operator Detection Select	0 ~ 1	1	
o2-07	50B	Elapsed Time Initial Setting	0 ~ 65535	0	
o2-08	50C	Elapsed Time Function Select	0 ~ 1	0	
o2-09	50D	Initialization Mode Select	0 ~ 2	1	

Note: 1: Default values were determined through a 2-wire reset on drive model 4400. Default values may be different for different drive models.

2: Use address FFDDh for the ACCEPT command.

3: Use address FFFDh for the ENTER command.

CAUTION!

Limit the use of the ENTER command. The drive has limited writes when using the ENTER command.

Copies of this Installation Guide along with all technical manuals in ".pdf" format and support files may be obtained from either the CD supplied with the drive or from **www.yaskawa.com**. Printed copies of any Yaskawa manual may be obtained by contacting the nearest Yaskawa office. Information on Profibus-DP may be obtained from **www.profibus.org**.

Reference documents:

***Profibus-DP Technical Manual* – TM.AFD.12**
***G5HHP Technical Manual* – TM.G5HHP.01**
***GPD515/G5 Modbus® Technical Manual* – TM.4025**

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