

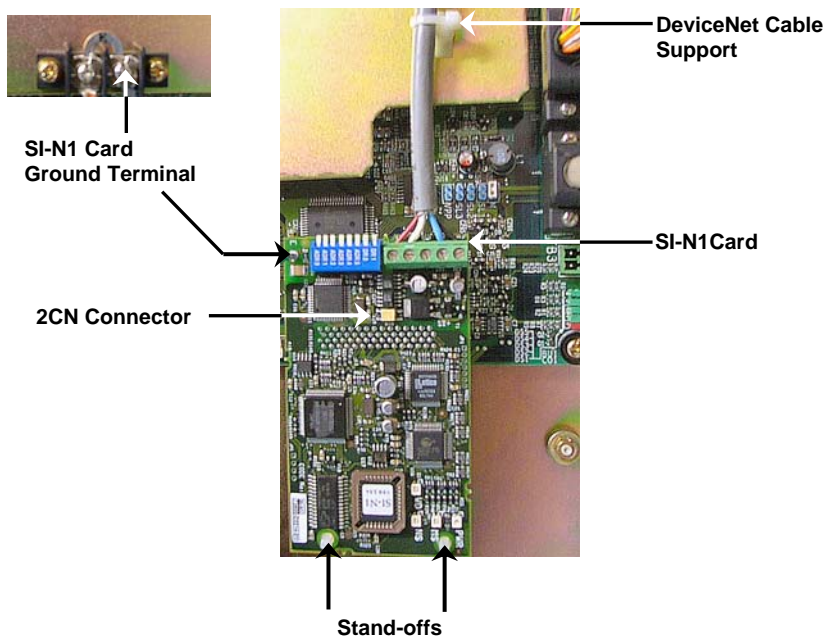
- This document applies to the Yaskawa G5HHP drive. Please disregard the installation guide packed in the option kit.
- Unpack the *CM059 DeviceNet Option* kit and verify that all components are present and undamaged.



CM059 DeviceNet Option Kit Parts List	Qty.
DeviceNet Option Card (SI-N1)	1
Installation Guide (IG.AFD.13) (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 *CM059 DeviceNet Option* (SI-N1 card) to the master control board.
  - Attach the *CM059 DeviceNet Option* ground wire to the ground terminal as shown. Make sure that the terminal is connected to a reliable, noise free ground.
  - Connect the *CM059 DeviceNet Option* card to the 2CN connector on the master control board.
  - Secure the DeviceNet cable to the support with a tie wrap to provide strain relief for the connector.
  - Attach the DeviceNet cable to the *CM059 DeviceNet Option* card as shown.
  - Fully engage the stand-offs in the mounting holes on the card.
  - Route the DeviceNet cable away from any power wires within the cabinet. When outside of the cabinet, run the DeviceNet cable in its own conduit. However, it may be run with low voltage signals such as feedback wiring.

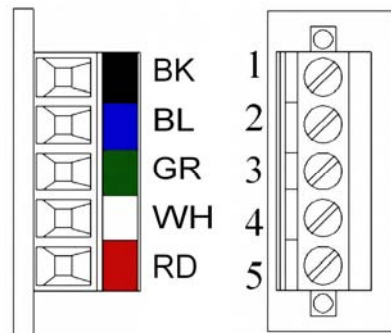


- Apply power to the drive and verify that the drive functions correctly.

Attaching the *CM059 DeviceNet Option* on a G5HHP master control board.

- Connect to the DeviceNet network as shown in the figure to the right.

Terminal	Color	Name	Wire Color	Description
1	Black	V-	Black	Communication GND
2	Blue	CAN_L	Blue	CAN Data Low
3	Green	Shield	Bare	Cable Shield
4	White	CAN_H	White	CAN Data High
5	Red	V+	Red	Communications +24Vdc



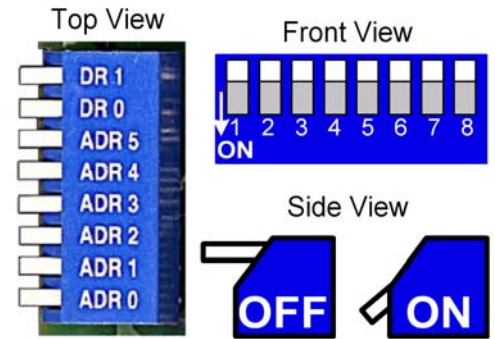
Set the *CM059 DeviceNet Option* Baud Rate

Set the Baud Rate for the *CM059 DeviceNet Option* to the network baud rate by setting DIP switches DR1 (1) and DR0 (2) as shown in the figure to the right. The baud rate must match the baud rate of the DeviceNet master (PC/PLC/Scanner) in order for the connection to function properly.

Set the *CM059 DeviceNet Option* MAC ID

Set the MAC ID of *CM059 DeviceNet Option* by setting DIP switches ADR 5 (3) through ADR 0 (8) as shown in the table below. Each device on the network must have a unique MAC ID, typically between 3 and 62. Addresses 0 and 1 are usually reserved for DeviceNet masters, address 2 for diagnostic/monitoring equipment and address 63 for vendor specific functions in some systems. Check the network schematic to verify the MAC ID setting.

Sw	MAC ID																															
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
ADR 5 (3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADR 4 (4)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADR 3 (5)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
ADR 2 (6)	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	1	
ADR 1 (7)	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	
ADR 0 (8)	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	



Sw	Baud Rate			
	125kbps	250kbps	500kbps	N/A
DR1 (1)	0	0	1	1
DR0 (2)	0	1	0	1

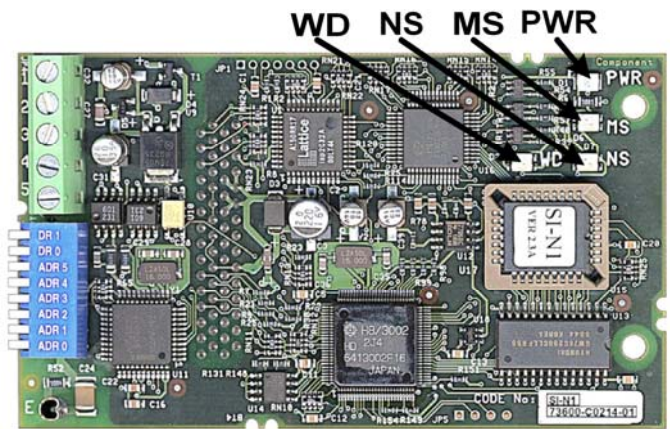
Sw	MAC ID																																																														
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63																															
ADR 5 (3)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																															
ADR 4 (4)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																															
ADR 3 (5)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1																																
ADR 2 (6)	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1																																
ADR 1 (7)	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1																																
ADR 0 (8)	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0																																

Verify LED Status

Refer to the table on the following page for a complete listing of LED states.

LED Power-Up Sequence		
LED	Color	Condition
PWR	GREEN	Steady
WD	RED	On for 0.25 sec
WD	NONE	Off for 0.25 sec
WD	GREEN	Blink at 0.1ms interval
MS	GREEN	On for 0.25 sec
MS	RED	On for 0.25 sec
MS	GREEN	On for 0.25 sec
NS	GREEN	On for 0.25 sec
NS	RED	On for 0.25 sec

LED normal operation Status	
LED	Condition
PWR	GREEN
MS	GREEN
NS	FLASH GREEN (no communication)
	REEN (communicating)
WD	FLASH GREEN



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 all drive covers and the operator keypad.

Apply power to the drive and wait for the power-up sequence to complete.

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

Param	Function	Data	Description	Dflt
b1-01	Reference Source Select	0	Digital Operator	1
		1	Terminals	
		2	Built-in Modbus RTU Terminals	
		3	<b>Option Card (CM059 DeviceNet Option)</b>	
b1-02	Run Command Source Select	0	Digital Operator	1
		1	Terminals	
		2	Built-in Modbus RTU Terminals	
		3	<b>Option Card (CM059 DeviceNet Option)</b>	

Install the EDS File and Configure the Drive on the DeviceNet Network

- To simplify drive configuration, the EDS files can be obtained at [www.yaskawa.com](http://www.yaskawa.com). Select **Downloads, Browse, By Inverter Drives, By Product, and Network Comms-DeviceNet**. Then select the appropriate EDS file of the latest version from those listed. EDS files for individual drive models are compressed into a single file named *EDS\_HHP\_G5U\_S1-N1\_V2\_03.zip*.
- Install the EDS file into the DeviceNet configuration tool (i.e. RSNetworx® for DeviceNet). There is a separate EDS file for each drive model, verify that the correct EDS file has been installed for the drive model configured. Refer to the documentation that came with the master configuration tool for information on installing EDS files and configuring a DeviceNet node.

LED Status Indicators and Diagnostics

LED Display				Content	Cause	Solution
PWR	MS	NS	WD			
Off	Off	Off	Off	Power Off	<ul style="list-style-type: none"> <li>■ The drive is not powered.</li> <li>■ The option board is not connected correctly or securely to the drive.</li> </ul>	<ul style="list-style-type: none"> <li>■ Check the drive main circuit wiring</li> <li>■ Turn power on.</li> <li>■ Turn Off drive power.</li> <li>■ Check the connection of the option board to the 2CN connector on the drive,</li> <li>■ Turn power on.</li> </ul>
Solid Green	Off	Off	Solid Red	CPU Fault	<ul style="list-style-type: none"> <li>■ The option board CPU is being initialized or has a fault.</li> </ul>	<ul style="list-style-type: none"> <li>■ Cycle power to the drive.</li> <li>■ If the fault persists, replace the option board.</li> </ul>
Solid Green	Flashing Green	Off	Flashing Green	Option Board Initialization	<ul style="list-style-type: none"> <li>■ Option board Initialization.</li> </ul>	<ul style="list-style-type: none"> <li>■ Wait for initialization to complete</li> <li>■ If initialization does not complete within several seconds, cycle power to the drive.</li> <li>■ If initialization does not complete after power cycling the drive, replace the option card</li> </ul>
Solid Green	Flashing Red	Off	Flashing Green	Recoverable Option Board Fault	<ul style="list-style-type: none"> <li>■ An incorrect DIP switch setting or other recoverable fault.</li> </ul>	<ul style="list-style-type: none"> <li>■ Check baud rate setting (DIP switch, DR1 and DR0), and then cycle power to the drive.</li> <li>■ If the fault persists, replace the option board.</li> </ul>
Solid Green	Solid Red	Off	Flashing Green	Unrecoverable Option Board Fault	<ul style="list-style-type: none"> <li>■ An un-recoverable fault.</li> </ul>	<ul style="list-style-type: none"> <li>■ Cycle power to the drive.</li> <li>■ If the fault persists, replace the option board.</li> </ul>
Solid Green	Solid Red	Solid Red	Flashing Green	Baud Rate Setting Fault	<ul style="list-style-type: none"> <li>■ DR1 and DR0 are both set to ON.</li> </ul>	<ul style="list-style-type: none"> <li>■ Set the baud rate switches correctly.</li> <li>■ Cycle power to the drive.</li> </ul>
Solid Green	Solid Green	Flashing Red	Flashing Green	Communication Timeout	<ul style="list-style-type: none"> <li>■ A master communication timeout.</li> </ul>	<ul style="list-style-type: none"> <li>■ Check network termination.</li> <li>■ Check network wiring.</li> <li>■ Check that the communication bus wiring is separated from the main circuit wiring.</li> </ul>
Solid Green	Solid Green	Solid Red	Flashing Green	Communication Error	<ul style="list-style-type: none"> <li>■ Unrecoverable communication fault.</li> </ul>	<ul style="list-style-type: none"> <li>■ Check if other device's MAC ID is not unique per the network.</li> <li>■ Check if the master is correctly configured.</li> <li>■ Check if the end termination resistor is correctly connected to the communication bus.</li> <li>■ Check if the communication device is correctly connected per wiring diagrams.</li> <li>■ Check if the communication bus wiring is separated from the main circuit wiring.</li> </ul>
Solid Green	Solid Green	Flashing Green	Flashing Green	Normal Not Communicating	<ul style="list-style-type: none"> <li>■ Connected to a DeviceNet network but not communicating.</li> </ul>	<ul style="list-style-type: none"> <li>■ Send explicit message or I/O message from the master as necessary.</li> </ul>
Solid Green	Solid Green	Solid Green	Flashing Green	Normal Communicating	<ul style="list-style-type: none"> <li>■ Connected to a DeviceNet network and communicating normally.</li> </ul>	<ul style="list-style-type: none"> <li>■ No action needed.</li> </ul>

- Note:** 1: Do not install, remove or handle a network card connected to the drive with power applied to 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.
- 2: When cycling power to the drive, make sure that the drive is fully discharged prior to reapplying power.

Assembly Objects

■ Modbus I/O Control Input Instance 100 (64h)

This I/O instance allows for the reading and writing of parameter data. This instance is for Yaskawa drives only and is not interchangeable with other DeviceNet drives. Refer to the parameter and monitor tables below for parameter and monitor addresses.

Class 4, Instance 64h, Attribute 3

Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
0	Function Code (03h read parameter -- 10h write parameter)							
1	Parameter Address (High Byte)							
2	Parameter Address (Low Byte)							
3	Parameter Data (High Byte)							
4	Parameter Data (Low Byte)							

■ Modbus I/O Control Output Instance 150 (96h)

This I/O instance is the return for instance 64h above. If a parameter has been read via the input instance above, the parameter data will be returned in bytes 3 and 4 of this output instance.

Class 4, Instance 96h, Attribute 3

Byte	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
0	Function Code							
1	Parameter Address (High Byte)							
2	Parameter Address (Low Byte)							
3	Parameter Data (High Byte)							
4	Parameter Data (Low Byte)							

Attribute Table

Name	Text	Limits	DeviceNet			Control Method
			Class	Instance	Attribute	
A1-01	Access Level Select	0 ~ 4	64	1	01	
A1-02	Control Mode Select	0 ~ 3	64	1	02	
b1-01	Reference Source Select	0 ~ 3	64	1	03	
b1-02	Run Command Source Select	0 ~ 3	64	1	04	
b1-03	Stopping Method Select	0 ~ 3	64	1	05	
b1-04	Reverse Prohibit Select	0 ~ 1	64	1	06	
b1-05	Zero Speed Mode Select	0 ~ 3	64	1	07	FV
b2-01	DC Injection Start Frequency	0.0 ~ 10.0	64	1	08	
b2-02	DC Injection Current Level	0 ~ 100	64	1	09	
b2-03	DC Injection Time at Start	0.00 ~ 10.00	64	1	0A	
b2-04	DC Injection Time at Stop	0.00 ~ 10.00	64	1	0B	
b3-01	Speed Search Mode Select	0 ~ 1	64	1	0C	
b3-02	Speed Search Current Level	0 ~ 200	64	1	0D	
b3-03	Speed Search Decel Time	0.1 ~ 10.0	64	1	0E	
b5-01	PID Mode Select	0 ~ 2	64	1	0F	
b5-02	PID P Gain	0.00 ~ 25.00	64	1	10	V/
b5-03	PID I Time	0.0 ~ 360.0	64	1	11	
b5-04	PID I Limit	0.00 ~ 25.00	64	1	12	
b5-05	PID D Time	0.0 ~ 360.0	64	1	13	
b5-06	PID Limit	0.0 ~ 100.0	64	1	14	
b5-07	PID Offset	-100 ~ +100	64	1	15	
b5-08	PID Delay	0.00 ~ 10.00	64	1	16	
b6-01	Dwell Reference at Start	0.0 ~ 150.0	64	1	17	
b6-02	Dwell Time at Start	0.0 ~ 10.0	64	1	18	
b6-03	Dwell Reference at Stop	0.0 ~ 150.0	64	1	19	
b6-04	Dwell Time at Stop	0.0 ~ 10.0	64	1	1A	
b7-01	Droop Gain	0.0 ~ 100.0	64	1	1B	FV
b7-02	Droop Delay	0.03 ~ 2.00	64	1	1C	FV
b8-01	Energy Savings Gain	0 ~ 100	64	1	1D	
b8-02	Energy Savings Reference	0.0 ~ 150.0	64	1	1E	
b9-01	Zero Servo Gain	0 ~ 100	64	1	1F	FV
b9-02	Zero Servo Completion Width	0 ~ 16383	64	1	20	FV
C1-01	Accel Time 1	0.0 ~ 6000.0	64	1	21	
C1-02	Decel Time 1	0.0 ~ 6000.0	64	1	22	
C1-03	Accel Time 2	0.0 ~ 6000.0	64	1	23	
C1-04	Decel Time 2	0.0 ~ 6000.0	64	1	24	
C1-05	Accel Time 3	0.0 ~ 6000.0	64	1	25	
C1-06	Decel Time 3	0.0 ~ 6000.0	64	1	26	
C1-07	Accel Time 4	0.0 ~ 6000.0	64	1	27	
C1-08	Decel Time 4	0.0 ~ 6000.0	64	1	28	
C1-09	Fast Stop Time	0.0 ~ 6000.0	64	1	29	
C2-01	S-Curve Accel at Start	0.0 ~ 2.5	64	1	2A	
C2-02	S-Curve Accel at End	0.0 ~ 2.5	64	1	2B	
C2-03	S-Curve Decel at Start	0.0 ~ 2.5	64	1	2C	
C2-04	S-Curve Decel at End	0.0 ~ 2.5	64	1	2D	
C3-01	Slip Comp Gain	0.0 ~ 2.5	64	1	2E	
C3-02	Slip Comp Time	0 ~ 1000	64	1	2F	
C3-03	Slip Comp Limit	0 ~ 250	64	1	30	
C3-04	Slip Comp Regen Select	0 ~ 1	64	1	31	

Name	Text	Limits	DeviceNet			Control Method
			Class	Instance	Attribute	
C3-05	Flux Select	0 ~ 1	64	1	32	OLV
C4-01	Torque Comp Gain	0.00 ~ 2.50	64	1	33	
C4-02	Torque Comp Time	0 ~ 10000	64	1	34	
C5-01	ASR P Gain	0.00 ~ 300.00	64	1	35	w/ PG
C5-02	ASR I Time	0.000 ~ 10.000	64	1	36	w/ PG
C5-03	ASR P Gain 2	0.00 ~ 300.00	64	1	37	w/ PG
C5-04	ASR I Time 2	0.000 ~ 10.000	64	1	38	w/ PG
C5-05	ASR Limit	0.0 ~ 20.0	64	1	39	V/f w/PG
C5-06	ASR Delay Time	0.000 ~ 0.500	64	1	3A	FV
C5-07	ASR Switchover Frequency	0.0 ~ 150.0	64	1	3B	FV
C5-08	ASR I Limit	0 ~ 400	64	1	3C	FV
C6-01	Carrier Frequency Upper Limit	0.4 ~ 2.0	64	1	3D	
C6-02	Carrier Frequency Lower Limit	0.4 ~ 2.0	64	1	3E	
C6-03	Carrier Frequency Gain	00 ~ 99	64	1	3F	
C7-01	Hunting Prevention Select	0 ~ 1	64	1	40	
C7-02	Hunting Prevention Gain	0.00 ~ 2.50	64	1	41	
C8-08	AFR Gain	0.00 ~ 10.00	64	1	42	OLV
d1-01	Frequency Reference 1	0.0 ~ 150.0	64	1	43	
d1-02	Frequency Reference 2	0.0 ~ 150.0	64	1	44	
d1-03	Frequency Reference 3	0.0 ~ 150.0	64	1	45	
d1-04	Frequency Reference 4	0.0 ~ 150.0	64	1	46	
d1-05	Frequency Reference 5	0.0 ~ 150.0	64	1	47	
d1-06	Frequency Reference 6	0.0 ~ 150.0	64	1	48	
d1-07	Frequency Reference 7	0.0 ~ 150.0	64	1	49	
d1-08	Frequency Reference 8	0.0 ~ 150.0	64	1	4A	-
d1-09	Jog Frequency Reference	0.0 ~ 150.0	64	1	4B	
d2-01	Frequency Reference Upper Limit	0.0 ~ 110.0	64	1	4C	
d2-02	Frequency Reference Lower Limit	0.0 ~ 109.0	64	1	4D	
d3-01	Jump Frequency 1	0.0 ~ 150.0	64	1	4E	
d3-02	Jump Frequency 2	0.0 ~ 150.0	64	1	4F	
d3-03	Jump Frequency 3	0.0 ~ 150.0	64	1	50	
d3-04	Jump Bandwidth	0.0 ~ 20.0	64	1	51	
d4-01	MOP Reference Memory Select	0 ~ 1	64	1	52	
d4-02	Trim Control Level	0 ~ 100	64	1	53	
d5-01	Torque Control Select	0 ~ 1	64	1	54	FV
d5-02	Torque Reference Filter	0 ~ 1000	64	1	55	FV
d5-03	Speed Limit Select	1 ~ 2	64	1	56	FV
d5-04	Speed Limit Value	-120 ~ +120	64	1	57	FV
d5-05	Speed Limit Bias	0 ~ 120	64	1	58	FV
d5-06	Speed/Torque Switchover Time	0 ~ 1000	64	1	59	FV
E1-01	Input Voltage	360 ~ 460	64	1	5A	
E1-02	Motor Overload Curve Select	0 ~ 1	64	1	5B	
E1-03	V/f Pattern Select	0 ~ F	64	1	5C	
E1-04	Maximum Output Frequency	50.0 ~ 150.0	64	1	5D	
E1-05	Maximum Output Voltage	0.0 ~ 510.0	64	1	5E	
E1-06	Base Frequency	0.0 ~ 150.0	64	1	5F	
E1-07	Mid Output Frequency A	0.0 ~ 150.0	64	1	60	
E1-08	Mid Output Voltage A	0.0 ~ 510.0	64	1	61	
E1-09	Minimum Output Frequency	0.0 ~ 150.0	64	1	62	



Name	Text	Limits	DeviceNet			Control Method
			Class	Instance	Attribute	
E1-10	Minimum Output Voltage	0.0 ~ 510.0	64	1	63	
E1-11	Mid Output Frequency B	0.0 ~ 150.0	64	1	64	
E1-12	Mid Output Voltage B	0.0 ~ 510.0	64	1	65	
E1-13	Base Voltage	0.0 ~ 510.0	64	1	66	
E2-01	Motor Rated Current	37.0 ~ 740.0	64	1	67	
E2-02	Motor Rated Slip	0.00 ~ 20.00	64	1	68	
E2-03	No-Load Current	0.0 ~ 2000.0	64	1	69	
E2-04	Number of Motor Poles	2 ~ 48	64	1	6A	w/ PG
E2-05	Motor Line-to-Line Resistance	0.000 ~ 65.000	64	1	6B	
E2-06	Leakage Inductance	0.0 ~ 30.0	64	1	6C	OLV, FV
E2-07	Saturation Coefficient 1	0.00 ~ 0.50	64	1	6D	OLV, FV
E2-08	Saturation Coefficient 2	0.00 ~ 0.75	64	1	6E	OLV, FV
E2-09	Mechanical Loss	0.0 ~ 10.0	64	1	6F	FV
F1-01	Encoder (PG) PPR	0 ~ 60000	64	1	70	w/ PG
F1-02	PG Feedback Loss Select	0 ~ 3	64	1	71	w/ PG
F1-03	PG Overspeed Select	0 ~ 3	64	1	72	w/ PG
F1-04	PG Deviation Select	0 ~ 3	64	1	73	w/ PG
F1-05	PG Rotation Select	0 ~ 1	64	1	74	w/ PG
F1-06	PG Output Monitor Ratio	1 ~ 132	64	1	75	w/ PG
F1-07	PG Integral Accel/Decel Select	0 ~ 1	64	1	76	V/f w/PG
F1-08	PG Overspeed Level		64	1	77	
F1-09	PG Overspeed Time		64	1	78	
F1-10	Speed Deviation Level	0 ~ 50	64	1	79	w/ PG
F1-11	Speed Deviation Delay Time	0.0 ~ 10.0	64	1	7A	w/ PG
F1-12	PG Gear Teeth 1	0 ~ 1000	64	1	7B	V/f w/PG
F1-13	PG Gear Teeth 2	0 ~ 1000	64	1	7C	V/f w/PG
F1-14	PG Loss Detection Delay Time	0.0 ~ 10.0	64	1	7D	w/ PG
H1-01	DI Terminal 11 Function Select	0 ~ 77h	64	1	7E	
H1-02	DI Terminal 12 Function Select	0 ~ 77h	64	1	7F	
H1-03	DI Terminal 13 Function Select	0 ~ 77h	64	1	80	
H1-04	DI Terminal 14 Function Select	0 ~ 77h	64	1	81	
H1-05	DI Terminal 15 Function Select	0 ~ 77h	64	1	82	
H1-06	DI Terminal 16 Function Select	0 ~ 77h	64	1	83	
H2-01	DO Terminal 53-57 Function	0 ~ 37h	64	1	84	
H2-02	DO Terminal 19-50 Function	0 ~ 37h	64	1	85	
H2-03	DO Terminal 20-50 Function	0 ~ 37h	64	1	86	
H3-01	AI Terminal 36 Signal Type Select	0 ~ 1	64	1	87	
H3-02	AI Terminal 36 Gain	0 ~ 1000	64	1	88	
H3-03	AI Terminal 36 Bias	-100 ~ +100	64	1	89	
H3-04	AI Terminal 42 Signal Type Select	0 ~ 1	64	1	8A	
H3-05	AI Terminal 42 Function Select	1 ~ 1Fh	64	1	8B	
H3-06	AI Terminal 42 Gain	0 ~ 1000	64	1	8C	
H3-07	AI Terminal 42 Bias	-100 ~ +100	64	1	8D	
H3-08	AI Terminal 39 Signal Type Select	0 ~ 2	64	1	8E	
H3-11	AI Terminal 39 Bias	-100 ~ +100	64	1	91	
H3-12	AI Terminals Filter Time	0.00 ~ 2.00	64	1	92	
H4-01	AO Terminal 45 Function Select	1 ~ 33h	64	1	93	
H4-02	AO Terminal 45 Gain	0.00 ~ 2.50	64	1	94	
H4-03	AO Terminal 45 Bias	-10 ~ +10	64	1	95	
H4-04	AO Terminal 48 Function Select	1 ~ 33h	64	1	96	
H4-05	AO Terminal 48 Gain	0.00 ~ 2.50	64	1	97	

Name	Text	Limits	DeviceNet			Control Method
			Class	Instance	Attribute	
H4-06	AO Terminal 48 Bias	-10 ~ +10	64	1	98	
H4-07	AO Terminal Signal Type Select	0 ~ 1	64	1	99	
L1-01	Motor Overload Fault Select	0 ~ 1	64	1	9A	
L1-02	Motor Overload Time Constant	0.1 ~ 5.0	64	1	9B	
L2-01	Power Loss Detection Select	0 ~ 2	64	1	9C	
L2-02	Power Loss Ride-Thru Time	0.0 ~ 2.0	64	1	9D	
L2-03	Minimum Baseblock Time	0.0 ~ 25.5	64	1	9E	
L2-04	Voltage Recovery Ramp Time		64	1	9F	
L2-05	Undervoltage Detection Level		64	1	A0	
L2-06	KEB Decel Time	0.0 ~ 100.0	64	1	A1	
L3-01	Stall Prevention Accel Select	0 ~ 2	64	1	A2	
L3-02	Stall Prevention Accel Level	0 ~ 200	64	1	A3	
L3-03	Stall Prevention Accel CHP Limit	0 ~ 100	64	1	A4	
L3-04	Stall Prevention Decel Select	0 ~ 2	64	1	A5	
L3-05	Stall Prevention Run Select	0 ~ 2	64	1	A6	
L3-06	Stall Prevention Run Level	30 ~ 200	64	1	A7	
L4-01	Speed Agree Level	0.0 ~ 150.0	64	1	A8	
L4-02	Speed Agree Width	0.0 ~ 20.0	64	1	A9	
L4-03	Speed Agree Detection Level	0.0 ~ 150.0	64	1	AA	
L4-04	Speed Agree Detection Width	0.0 ~ 20.0	64	1	AB	
L4-05	Reference Loss Detection Select	-150.0 ~ +150.0	64	1	AC	
L5-01	Number of Auto Restarts Select	0 ~ 10	64	1	AD	
L5-02	Auto Restart Fault Select	0 ~ 1	64	1	AE	
L6-01	Torque Detection Select 1	0 ~ 4	64	1	AF	
L6-02	Torque Detection Level 1	0 ~ 300	64	1	B0	
L6-03	Torque Detection Time 1	0.0 ~ 10.0	64	1	B1	
L6-04	Torque Detection Select 2	0 ~ 4	64	1	B2	
L6-05	Torque Detection Level 2	0 ~ 300	64	1	B3	
L6-06	Torque Detection Time 2	0.0 ~ 10.0	64	1	B4	
L7-01	Forward Torque Limit	0 ~ 300	64	1	B5	OLV, FV

 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	

Name	Addr	Text	Limits	Default	Cntrl Met
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	

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](http://www.yaskawa.com). Printed copies of any Yaskawa manual may be obtained by contacting the nearest Yaskawa office. Information on DeviceNet may be obtained from [www.odva.org](http://www.odva.org).

Reference documents:

*CM059 DeviceNet Technical Manual – TM.AFD.13*

*G5HHP Technical Manual – TM.G5HHP.01*

*GPD515/G5 Modbus® Technical Manual – TM.4025*

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