

Product Transition Guide GPD 515/G5 to G7



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Feature Overview

This document details differences between the GPD515/G5 and G7 product to assist in product transition and new product introduction.



GPD515/G5 Drive

The GPD 515/G5 drive is a general-purpose drive, intended for a broad range of applications in Industrial Automation. Accordingly, it is available with many choices of I/O, communications, and software. It is available in constant torque ratings, 3/4 to 500 horsepower. The G5 HHP is available to 1500 HP.



G7 Drive

The G7 AC drive is the ultimate performance solution with increased speed and torque response to provide servo-like performance from an induction motor. The 480V G7 drive has the world's first commercial 3-Level Inverter architecture for total system protection. This patented 3-Level architecture can eliminate peripheral components typically required to solve installation problems. G7 drive performance makes it the ideal drive for high performance speed, torque, or position control

applications. The G7 is available in constant torque/heavy duty ratings 0.5 to 500HP. The G7 is not intended for the simple, routine AC drive application, it is for the challenges.

(Refer to Yaskawa document "TR.G7.01 Technology Review G7 Drive" for more details on new G7 Technology.)

G7 Benefits vs. G5

Enhanced G7 Performance

- Auto-tuning 3-Methods (R1/Static/Dynamic)
- World's first commercial 3-Level Inverter architecture (480V)
- Static no load auto-tuning offers same torque accuracy performance as dynamic auto-tuning at base speed & below
- DC input compatible (all models) simplified connection to DC power, removal of internal DC bus choke not required.
- Open-loop torque control
- Improved closed-loop speed response: 60Hz vs. 30Hz
- Improved open-loop speed response: 10Hz vs. 5Hz
- Improved open-loop speed range: 200:1 vs. 100:1
- Higher output frequency resolution: 0.001% vs. 0.01%
- Improved torque response: 300Hz vs. 150Hz
- Improved open loop starting torque: 0.3Hz vs. 0.5Hz
- Improved input voltage specification: 240 vs. 230 and 480 vs. 460.

New Keypad/Digital Operator

- Enhanced digital operator with copy function
- Simplified parameter menu navigation
- New LCD contrast adjustment
- Standard RJ-45 CAT-5 cable connection

New Functions

- New PID sleep function
- More preset speed selections: 17 vs. 9
- New automatic derating based on ambient temperature setting
- New Bi-directional speed search with speed estimation mode

New Functions (continued)

- Six additional monitor parameters
- Improved Energy Savings- manual/automatic modes
- High Slip Braking
- New cooling fan on/off control and elapsed time and cassette replacement design
- New 12-pulse diode bridge 18.5-300kW
- Built-in DC-link choke 18.5-300kW

Improved Input/Output Functions

- Analog outputs with new 4-20mA selection and 10 bit resolution.
- More digital inputs: 12 vs. 8
- Inputs now support sinking or sourcing (PNP/NPN)
- Inputs now support internal or external power supply
- More digital outputs 6 vs. 4
- More versatile analog outputs
- New pulse I/O (32kHz)
- New quick disconnect terminal I/O block
- New motor temperature analog input
- New motor overheat alarm outputs
- Additional under-torque and over-torque selection points
- Built-in RS485 Modbus RTU communication with self test mode

Main Specification Differences G5 G7

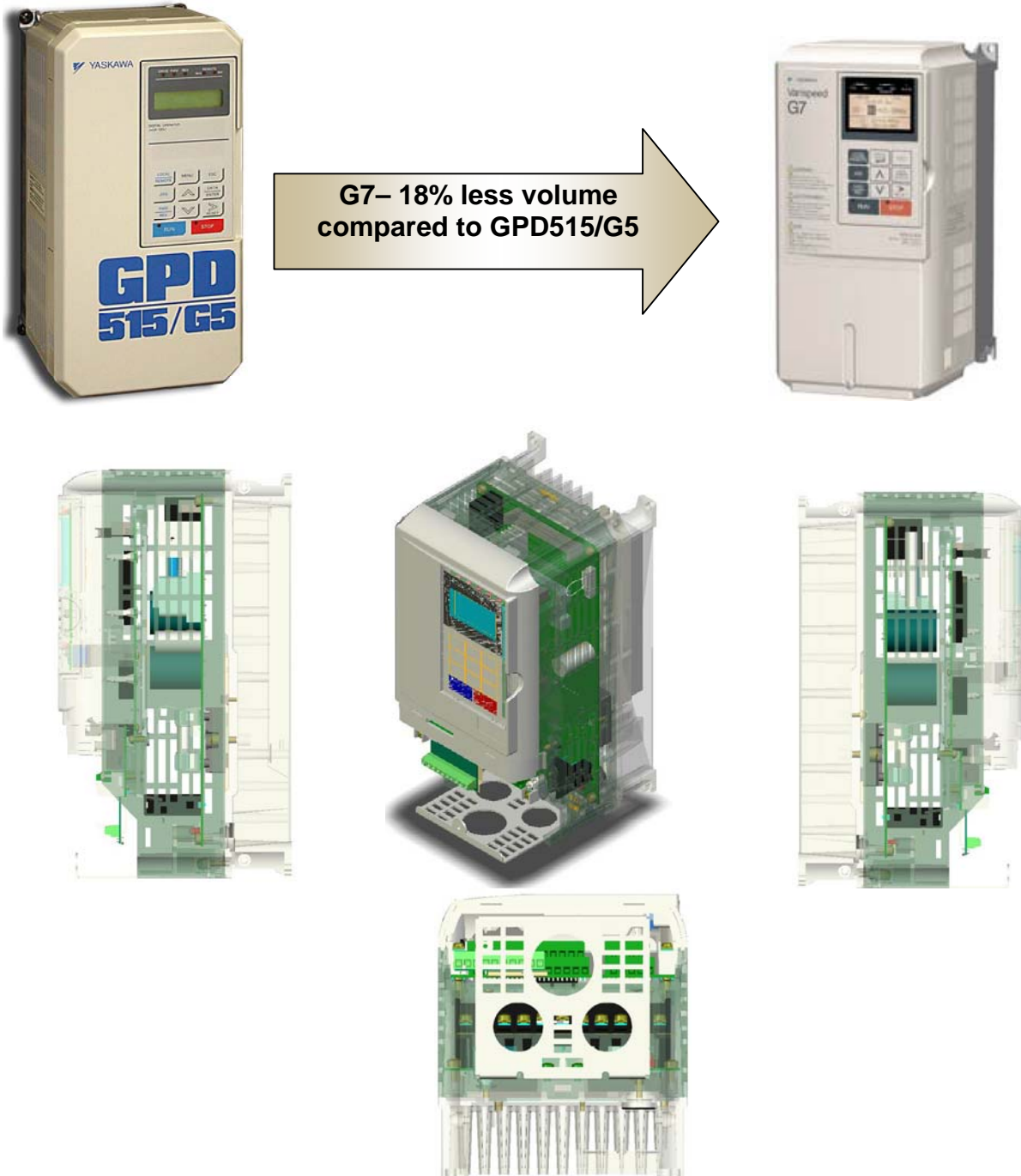
| Specification | | G5 Specification | G7 Specification |
|----------------------|----------------------------------|---|---|
| Ratings | Control mode | V/f, V/f w/ PG, Open-loop vector, Closed-loop flux vector | V/f, V/f w/ PG, Open-loop vector, Closed-loop flux vector, Open-loop vector 2 |
| | Inverter capacity range | 460V 0.4kW to 300kW (0.5 to 400HP) 230V 0.4kW to 110kW (0.5 to 150HP) 575V 1.5kW to 160kW (2 to 200HP) Modular: 300 to 1800HP (VT) | 480V 0.4kW to 300kW (0.5 to 400HP) 240V 0.4kW to 110kW (0.5 to 150HP) |
| | Main power circuit configuration | 2-Level | 3-Level |
| | Rated output current | Example: 240V class, 3.7kW, 17.5A | Example: 240V class, 3.7kW, 18A |
| Performance Features | ASR scan time | 2msec | 1.25msec (except Open-loop vector 2) |
| | CASE scan time | 5msec | 2.5msec (except Open-loop vector 2) |
| | I/O Sequence Scan Time | 5msec | 2.5msec (except Open-loop vector 2) |
| | Microprocessor | First generation | Second generation |
| | Output current limit protection | Hardware | Hardware, Software |
| | Output frequency resolution | 0.01Hz | 0.001Hz |
| | Speed control accuracy | Open-loop vector: $\pm 0.2\%$, Closed-loop flux vector: $\pm 0.02\%$ | Open-loop vector 2: $\pm 0.1\%$, Closed-loop flux vector: $\pm 0.01\%$ |
| | Speed control range | Open-loop vector: 100:1 | Open-loop vector 2: 200:1 |
| | Speed response | Open-loop vector: 5Hz Closed-loop flux vector: 30Hz | Open-loop vector 2: 10Hz Closed-loop flux vector: 60Hz |
| | Starting torque | Open-loop vector: 150% at 1Hz | Open-loop vector 2: 150% at 0.3Hz |
| | Motor surge protection (480V) | No | Yes (3-Level) |
| | Open loop torque control | No | Yes (Open-loop vector 2) |
| | Torque reference scan time | 2msec | 1.25msec (except Open-loop vector 2) |
| | Torque response | 150Hz (Closed-loop flux vector) | 300Hz (Closed-loop flux vector) |

| Specification | | G5 Specification | G7 Specification |
|-----------------|--------------------------------|---|---|
| I/O | Quick disconnect I/O terminals | No | Yes |
| Analog Inputs | Programmable functions | 39 | 45 |
| Analog Outputs | Quantity | 0-±10VDC x 2 | 0-±10VDC/4-20mA x 2 |
| | Type | -10-10VDC x 2 (8 bit plus sign) | -10-10VDC or 4-20mA x 2 (8 bit plus sign) |
| | Programmable functions | 27 | 30 |
| Digital Inputs | Quantity | 8 | 12 |
| | Type | 24VDC, NPN Photo coupler isolation, 8mA | 24VDC, sinking or sourcing (NPN/PNP) Photo coupler isolation, 8mA Internal or external power supply |
| | Programmable functions | 45 | 51 |
| Digital Outputs | Quantity | 4 | 6 |
| | Type | <ul style="list-style-type: none"> Qty 1: Programmable: Form A, 250VAC, 1A, 30VDC, 1A Qty 1: Dedicated Fault, Form C, 250VAC, 1A, 30VDC, 1A Qty 2: Programmable, photo-coupler (open collector output), 48V, 50mA, common emitter connection | <ul style="list-style-type: none"> Qty 3: Programmable: Form A, 250VAC, 1A, 30VDC, 1A Qty 1: Dedicated Fault, Form C, 250VAC, 1A, 30VDC, 1A Qty 2: Programmable, photo-coupler (open collector output), 48V, 50mA, separate emitter connection |
| Pulse Input | Quantity | 0 | 1 |
| | Signal level | ~ | 0-32kHz, low level: 0.0-0.8VDC high level: 3.5-13.2VDC, duty cycle: 30-70%, 3kohm |
| | Programmable functions | ~ | 4 |
| Pulse Output | Quantity | 0 standard (1 with option) | 1 |
| | Signal level | ~ | 0-32kHz, 9.0VDC, 2.2kohm |
| | Programmable functions | ~ | 6 |
| Stopping | Braking DB transistor | Built-in to G5M27P5 (10HP) Built-in to G5M4015 (25HP) | Built-in to G7U2015 (20HP) Built-in to G7U4015 (25HP) |
| | Flux/High slip braking | No | Yes |
| Cooling Fan | Modular replacement | No | Yes |
| | On/Off control | No | Yes |
| | Cumulative fan operation time | No | Yes |
| Design Features | Auto-tuning | Rotational | Rotational Stationary Stationary (primary resistance only) |

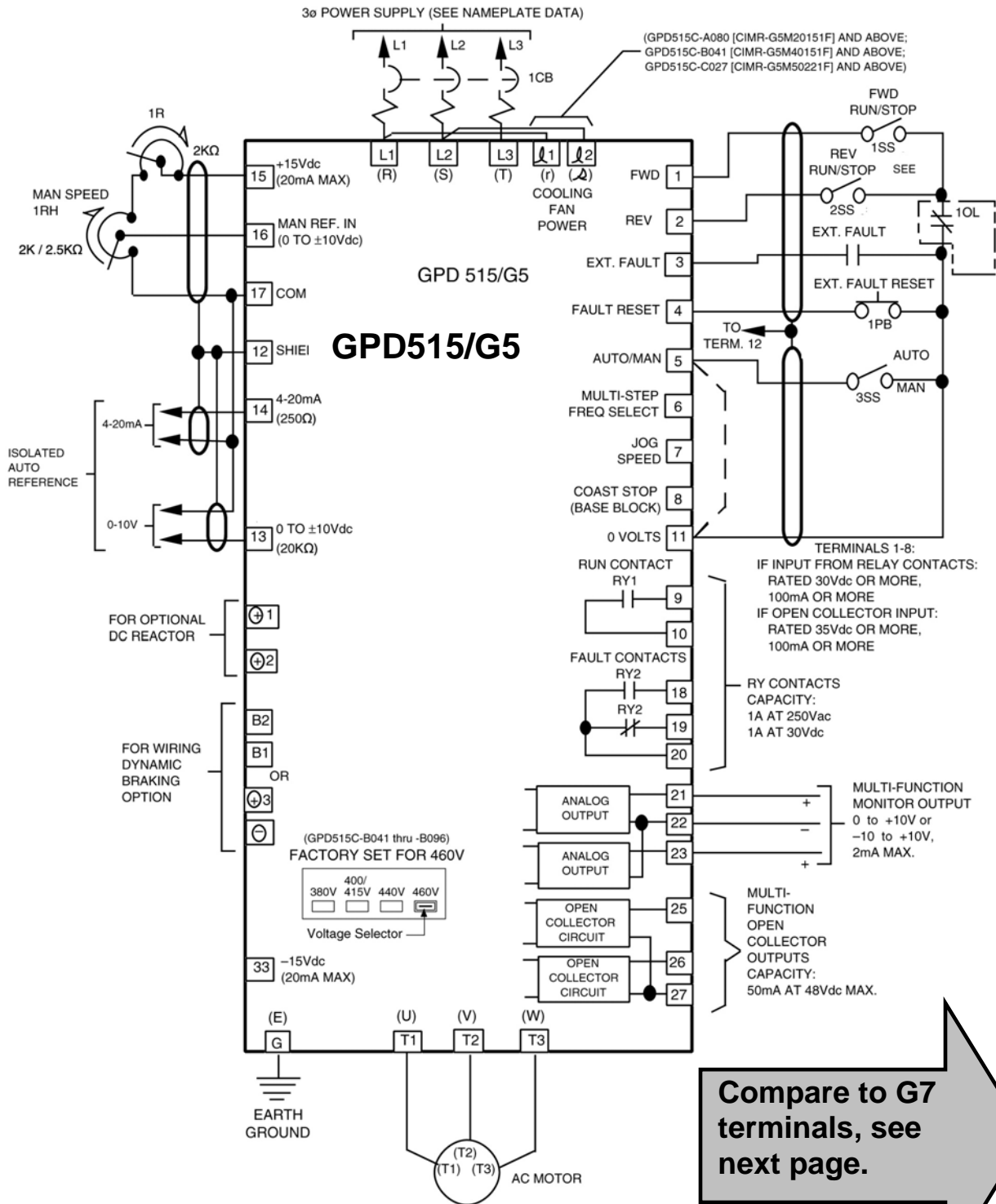
| Specification | | G5 Specification | G7 Specification |
|------------------------|---------------------------------|---|---|
| | Multi-step speed operation | 9-step speeds | 17-step speeds |
| | PID sleep mode | No | Yes |
| | User customized programming | No | Yes (DriveWorks EZ) |
| Design Features | Speed search | Current Detection Uni-Directional | Current Detection or Speed Estimation Bi-directional for Speed Estimation |
| | Split front cover | No | Yes |
| | Timer Function | On/Off delay (0.0-25.5sec) | On/Off delay (0.0-300.0sec) |
| | Run permissive | No | Yes |
| | Motor temperature input | No | Yes |
| | Undertorque detection | No | Yes |
| Harmonics | 12-phase rectification input | No | 240V, G7U2018-G7U2110 480V, G7U4018-G7U4300 |
| | DC choke built-in | 230V, G5M2018-G5M2075 460V, G5M4018-G5M4160 | 240V, G7U2018-G7U2110 480V, G7U4018-G7U4300 |
| Keypad/Operator | Constant access level selection | 3-level selectable (Quick-Start, Basic, Advanced) | 2-level selectable (Quick-Program, Advanced) |
| | Copy function | No (optional keypad) | Yes |
| | Display | 2 Line x 16 Character LCD | 5 Line x 16 Character LCD (Contrast Adjustable) |
| | Monitoring | 1 monitor | 3 sequential monitors at same time |
| | Verify function | Yes | Modified constants can be displayed. |
| | Viewable monitors | 35 | 40 |
| Network Communications | Built-in | Modbus RTU (RS-232, 9.6kbps) | Modbus RTU (RS-232/422/485, 19.2kbps) |
| | Option Card | Modbus RTU (RS-422/485), Ethernet (Modbus/ TCP/IP), DeviceNet, Profibus-DP, Modbus Plus | Ethernet (Modbus/ TCP/IP), DeviceNet, Profibus-DP, Modbus Plus, LonWorks |
| Service Conditions | Input specifications | 3-phase, 200-230VAC 3-phase, 380-460VAC, Tolerance: +10 to -15% | 3-phase, 200-240VAC 3-phase, 380-480VAC Tolerance: +10 to -15% |
| | Vibration/Shock | ~ | 240V: 60HP (2037) and Below, 480V: 75HP (4045) and Below 1.0G (9.8m/s ²) 10 to 20Hz 0.6G (5.9m/s ²) 20 to 55Hz 240V: 60HP (2045) and Above, 480V: 100HP (4055) and Above 1.0G (9.8m/s ²) 10 to 20Hz 0.2G (2.0m/s ²) 20 to 55Hz |
| Storage Temp | °C | -10°C ~ +60°C | -20°C ~ +60°C |

Physical Dimensions

Between 20 - 200 HP, the G7 is 18% smaller volume on average than the equivalent GPD515/G5.
(See appendix 1) Based on meeting NEC full load amp requirements, the G7 footprint can offer a space savings over the GPD515/G5.



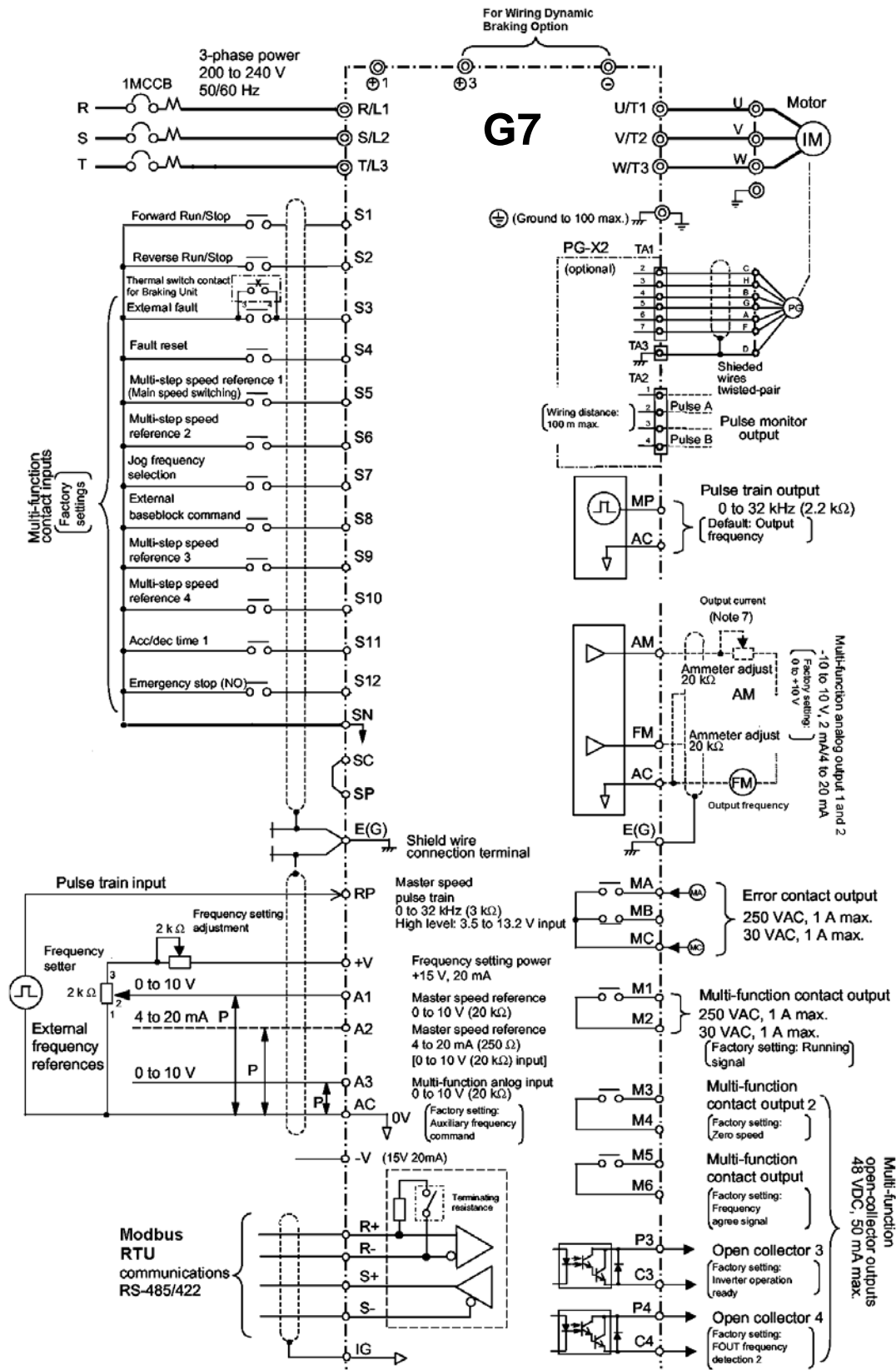
GPD515/G5 Terminal Description



Compare to G7 terminals, see next page.

BASIC INTERCONNECT DIAGRAM FOR 2-WIRE CONTROL

G7 Terminal Description



I/O Terminal Cross Reference G5 G7

| GPD515/G5 Terminal | | | G7 Terminal | | |
|-----------------------|-------------------------------|---|-------------------------|--|---|
| Type | GPD515/G5 Terminal | Default Function | G7 Terminal | Default Function | G7 Description |
| Digital Input Signals | 1 | Forward run/stop Signal level: (Photo-coupler insulated input: +24VDC, 8mA) | S1 | Forward run/stop command | – |
| | 2 | Reverse run/stop | S2 | Reverse run/stop command | – |
| | 3 | External fault input | S3 | External fault input | Multi-function digital inputs Functions set by: H1-01 to H1-10. +24VDC, 8mA Photo coupler isolation |
| | 4 | Fault reset input | S4 | Fault reset | |
| | 5 | Master/Aux. change | S5 | Multi-step speed reference 1 (Master/auxiliary switch) | |
| | | Multi-step speed ref. 1 | | | |
| | 6 | Multi-step speed ref.2 | S6 | Multi-step speed reference 2 | |
| | 7 | Jog reference | S7 | Jog frequency reference | |
| | 8 | External baseblock | S8 | External baseblock N.O. | |
| | | – | S9 | Multi-step speed reference 3 | |
| | | – | S10 | Multi-step speed reference 4 | |
| | | – | S11 | Accel/Decel time select | |
| | | – | S12 | Emergency Stop N.O. | |
| 11 | Sequence control input common | SN | Digital input common | Factory connected for internal supply, sinking mode. Refer to G7 User Manual for other methods. | |
| | – | SC | Factory connected to SP | | |
| | – | SP | Factory connected to SC | | |
| Analog Input Signals | 15 | +15VDC Power supply (20mA maximum) | +V | +15VDC power supply | +15VDC (20mA maximum) |
| | 33 | -15VDC Power supply (20mA maximum) | -V | -15VDC power supply | -15VDC (20mA maximum) |
| | 13 | Master frequency ref. (voltage) -10 to +10VDC (20kohm) 0 to +10VDC (20kohm) | A1 | Master frequency reference | 0 to +10VDC=100% 0 to +/-10VDC=100% (H3-01) (20kohm) |
| | 14 | Master frequency ref. (current) 4 to 20mA (250ohm) | A2 | Add to terminal A1 | 4 to 20mA=100% (250ohm) 0 to +10VDC=100% (20kohm) Function set by H3-09. |
| | 16 | Multi-function analog input -10 to +10VDC (20kohm), 0 to +10VDC (20kohm) | A3 | Auxiliary frequency reference 1 | 0 to +10Vdc=100%/(20kohm) 0 to +/-10Vdc=100% Function set by H3-05 |
| | 17 | Common for control circuit 0V | AC | Analog common | – |
| | 12 | Connection to shield sheath of signal lead | E(G) | Shield wire, optional ground line connection point | – |

I/O Terminal Cross Reference G5 → G7

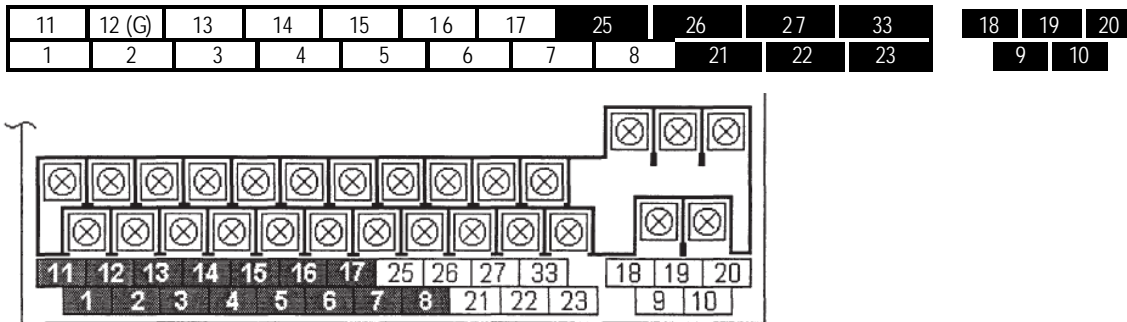
| GPD515/G5 Terminal | | | G7 Terminal | | |
|------------------------|--------------------|--|-------------|-----------------------------------|---|
| Type | GPD515/G5 Terminal | Default Function | G7 Terminal | Default Function | G7 Description |
| Digital Output Signals | 9 | During run (NO contact) Form A dry contact 250VAC1A | M1 | During run (N.O. contact) | Multi-function digital output Form A dry contact 250VAC, 1A 30VDC, 1A Function set by H2-01 |
| | 10 | 30VDC, 1A | M2 | | |
| | 25 | Zero speed detection Open collector output, 48V, 50mA | P3 | Factory setting: Drive ready | Multi-function open collector output 48VDC, 50mA Function set by H2-04 |
| | 27 | Open collector output common | C3 | Open collector output common | |
| | 26 | Speed agree detection Open collector output 48V, 50mA or less | P4 | Factory setting: Fout detect 2 | Multi-function open collector output 48VDC, 50mA Function set by H2-05 |
| | 27 | Open collector output common | C4 | Open collector output common | |
| | 18 | Dedicated fault contact Form C dry contact 250VAC, 1A 30VDC, 1A | MA | Fault contact output | Dedicated fault contact Form C dry contact: 250VAC, 1A 30VDC, 1A |
| | 19 | | MB | | |
| 20 | MC | | | | |
| | ~ | ~ | M3 | Zero speed (N.O. contact) | Multi-function digital output Form A dry contact 250VAC, 1A 30VDC, 1A Function set by H2-02. |
| | | | M4 | | |
| | ~ | ~ | M5 | Frequency agree (N.O. contact) | Multi-function digital output Form A dry contact 250VAC, 1A 30VDC, 1A Function set by H2-03 |
| | | | M6 | | |
| Analog Output Signals | 21 | Frequency monitor 10VDC=100% output frequency (2mA maximum) | FM | Output frequency | 0 to +10VDC or 0 to ±10VDC (Max current 2mA) (500ohm) 10VDC or 20mA=100% output frequency Function set by H4-01 |
| | 23 | Current monitor 5VDC=drive rated current (2mA maximum) | AM | Output current | 0 to +10VDC or 0 to ±10VDC (2mA maximum) (500ohm) 5VDC or 12mA=100% drive rated current Function set by H4-04 |
| | 22 | Common (Current Monitor) | AC | Analog common | – |

I/O Terminal Cross Reference G5 → G7

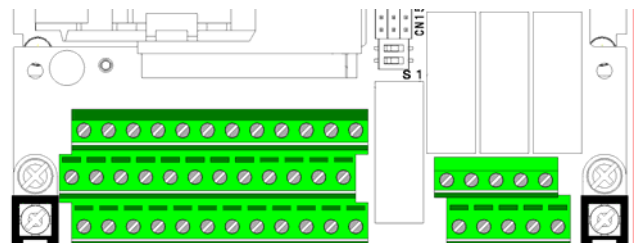
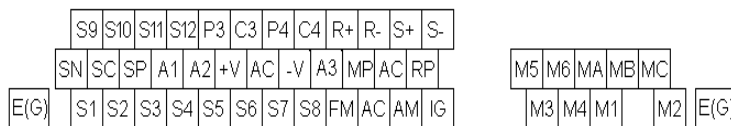
| GPD515/G5 Terminal | | | G7 Terminal | | |
|--------------------|--------------------|------------------|-------------|--|---|
| Type | GPD515/G5 Terminal | Default Function | G7 Terminal | Default Function | G7 Description |
| Pulse I/O | | - | RP | Pulse input | 0-32kHz (3kohm) ±5% High level: 3.5-13.2VDC Low level: 0.0-0.8VDC Duty Cycle: 30%-70% Function set by H6-01 |
| | | - | MP | Pulse output | 0-32kHz Output: +5VDC Load: 1.5kohm Function set by H6-06 |
| RS-485/422 | | - | R+ | Modbus RTU protocol Differential input | - |
| | | - | R- | Differential input PHC isolation | |
| | | - | S+ | Modbus RTU protocol Differential output | |
| | | - | S- | Differential output PHC isolation | |
| | | - | IG | Signal common | |

Physical I/O Block Terminal Layout

G5 Terminal Block



G7 Terminal Block






Main Power Terminal Comparison

| G5 terminal | G7 terminal | Function |
|-------------|-------------|--|
| R L1 | R/L1 | Main circuit power supply input |
| S L2 | S/L2 | |
| T L3 | T/L3 | |
| | R1/L11 | Main circuit power supply input (12-pulse units) |
| | S1/L21 | |
| | T1/L31 | |
| U T1 | U/T1 | Drive output |
| V T2 | V/T2 | |
| W T3 | W/T3 | |
| B1 | B1 | Braking resistor unit connection |
| B2 | B2 | |
| ⊖ | ⊖ | DC power supply input (Connection ⊕ 1 to ⊖) |
| ⊕ 1 | ⊕ 1 | DC power supply connection (Connection ⊕ 1 to ⊖) DC reactor connection (Connection ⊕ 1 to ⊕ 2) |
| ⊕ 2 | ⊕ 2 | DC reactor connection (Connection ⊕ 1 to ⊕ 2) |
| ⊕ 3 | ⊕ 3 | Braking unit connection (Connection ⊕ 3 to ⊖) |
| r | r | Cooling fan and control power supply |
| s200 | | Cooling fan power supply |
| s400 | | Control power supply |
| | s | Cooling fan power supply |

Feature availability is model dependant. Refer to the table below.

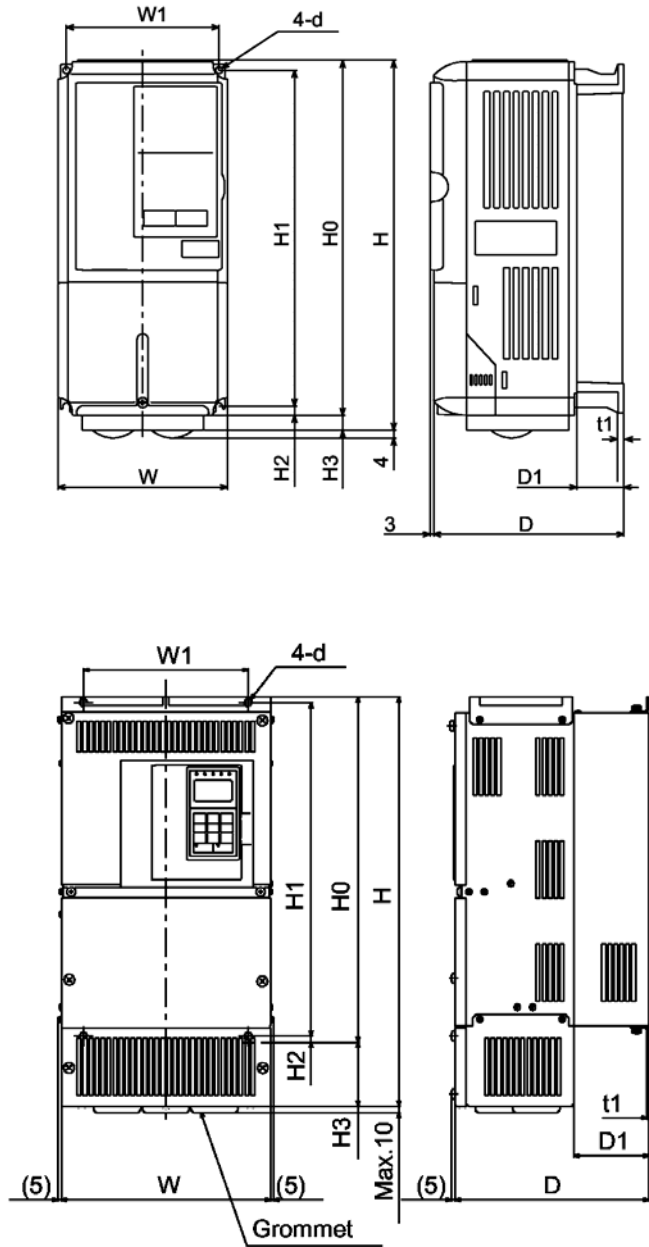
| Function | Terminal | Product Series | Voltage Class | Power Rating | | | | | | | | | | | | | | | | | | |
|---------------------------------|------------|----------------|---------------------------|---------------------------|--------------|-------------|---------------|---------------|-------------------------|-------------------------|-------------|-------------|---------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|---------------|---------------|
| | | | | 0.4kW (0.5HP) | 0.75kW (1HP) | 1.5kW (2HP) | 2.2kW (3HP) | 3.7kW (5HP) | 5.5kW (7.5HP) | 7.5kW (10HP) | 11kW (15HP) | 15kW (20HP) | 18.5kW (25HP) | 22kW (30HP) | 30kW (40HP) | 37kW (50HP) | 45kW (60HP) | 55kW (75HP) | 75kW (100HP) | 90kW (125HP) | 110kW (150HP) | 132kW (200HP) |
| 12-pulse diode bridge | R1, S1, T1 | G5 | 230V | Not Available | | | | | | | | | | | No Product | | | | | | | |
| | | | 460V | Not Available | | | | | | | | | | | No Product | | | | | | | |
| | G7 | 240V | Not Available | | | | Available | | | | | | | No Product | | | | | | | | |
| | | 480V | Not Available | | | | Available | | | | | | | No Product | | | | | | | | |
| Braking resistor connection | B1, B2 | G5 | 230V | Available | | | | Not Available | | | | No Product | | | | | | | | | | |
| | | | 460V | Available | | | | Not Available | | | | No Product | | | | | | | | | | |
| | G7 | 240V | Available | | | | Not Available | | | | No Product | | | | | | | | | | | |
| | | 480V | Available | | | | Not Available | | | | No Product | | | | | | | | | | | |
| DC power supply input | ⊕ 1 | G5 | 230V | Available | | | | | | Not Available | | | | | No Product | | | | | | | |
| | | | 460V | Available | | | | | | Not Available | | | | | No Product | | | | | | | |
| | G7 | 240V | Available | | | | | | Not Available | | | | | No Product | | | | | | | | |
| | | 480V | Available | | | | | | Not Available | | | | | No Product | | | | | | | | |
| DC reactor connection | ⊕ 1 | G5 | 230V | Available | | | | | | N.A. (Reactor Built-in) | | | | Special | No Product | | | | | | | |
| | | | 460V | Available | | | | | | N.A. (Reactor Built-in) | | | | No Product | | | | | | | | |
| | G7 | 240V | Available | | | | | | N.A. (Reactor Built-in) | | | | No Product | | | | | | | | | |
| | | 480V | Available | | | | | | N.A. (Reactor Built-in) | | | | No Product | | | | | | | | | |
| Braking chopper unit connection | (B1) | G5 | 230V | Available | | | | | | Not Available | | | | | No Product | | | | | | | |
| | | | 460V | Available | | | | | | Not Available | | | | | No Product | | | | | | | |
| | G7 | 240V | Available | | | | | | Not Available | | | | | No Product | | | | | | | | |
| | | 480V | Available | | | | | | Not Available | | | | | No Product | | | | | | | | |
| NEMA1 Enclosure | G5 | G5 | 230V | Standard | | | | | | Not Available | | | | | No Product | | | | | | | |
| | | | 460V | Standard | | | | | | Not Available | | | | | N.A. | | | | | | | |
| | G7 | 240V | Standard | | | | | | Optional | | | | N.A. | | No Product | | | | | | | |
| | | 480V | Standard | | | | | | Optional | | | | N.A. | | No Product | | | | | | | |
| Open Type Enclosure | G5 | G5 | 230V | Remove Upper/Lower Covers | | | | | | Not Available | | | | | No Product | | | | | | | |
| | | | 460V | Remove Upper/Lower Covers | | | | | | Not Available | | | | | Standard | | | | | | | |
| | G7 | 240V | Remove Upper/Lower Covers | | | | | | Standard | | | | No Product | | | | | | | | | |
| | | 480V | Remove Upper/Lower Covers | | | | | | Standard | | | | No Product | | | | | | | | | |

Available Network Communications

| Yaskawa Network Communication Options | | | | |
|---------------------------------------|---|---------------------------------------|---------------------------------------|----------------|
| Market | Protocol | G5 | G5 HHP | G7 |
| Industrial |  | CM061 | CM061 | CM061 |
| |  | CM053 CM059 | n/a | CM057 CM059 |
| | Ethernet Modbus TCP/IP | CM090 | n/a | CM090 |
| | Modbus Plus | CM071 | CM071 | CM071 |
| General Purpose | Modbus RTU | Built-in RS-232 [CM085 for RS-485] | Built-in RS-232 [CM085 for RS-485] | Built-in |
| Commercial |  | CM048 | n/a | CM048 |

Appendix 1

Amps, Carriers, Overload, Heat loss and Dimension Comparison



Output Amps, Carrier and Overload Comparison 240V Ratings GPD515/G5 → G7

| 240V | | | | | | | | | |
|-------------------|----------------|--------------------------|-------------|--------|------|-------------------|-------------|--------|------------|
| GPD515/G5 | | | | | | G7 | | | |
| NEC Motor HP 240V | NEC Motor Amps | GPD515 G5 Model CIMR-G5M | Output Amps | Fc kHz | OL % | G7 Model CIMR-G7U | Output Amps | Fc KHz | Overload % |
| 0.5 | 2.2 | 20P41 | 3.2 | 15 | 150 | 20P41 | 3.2 | 15 | 150 |
| 0.75 | 3.2 | | | | | | | | |
| 1 | 4.2 | 20P71 | 6 | 15 | 150 | 20P71 | 6 | 15 | 150 |
| 1.5 | 6 | | | | | | | | |
| 2 | 6.8 | 21P51 | 8 | 15 | 150 | 21P51 | 8 | 15 | 150 |
| 3 | 9.6 | 22P21 | 11 | 15 | 150 | 22P21 | 12 | 15 | 150 |
| 5 | 15.2 | 23P71 | 17.5 | 15 | 150 | 23P71 | 18 | 15 | 150 |
| 7.5 | 22 | 25P51 | 25 | 15 | 150 | 25P51 | 27 | 15 | 150 |
| 10 | 28 | 27P51 | 33 | 15 | 150 | 27P51 | 34 | 15 | 150 |
| 15 | 42 | 20111 | 49 | 15 | 150 | 20111 | 49 | 15 | 150 |
| 20 | 54 | 20151 | 64 | 15 | 150 | 20151 | 66 | 15 | 150 |
| 25 | 68 | 20181 | 80 | 15 | 150 | 20181 | 80 | 15 | 150 |
| 30 | 80 | | | | | | | | |
| | | 20221 | 96 | 10 | 150 | 20221 | 96 | 10 | 150 |
| 40 | 104 | 20301 | 130 | 10 | 150 | 20300 | 130 | 10 | 150 |
| 50 | 130 | | | | | | | | |
| 60 | 154 | 20371 | 160 | 10 | 150 | 20370 | 160 | 10 | 150 |
| | | 20450 | 183 | 10 | 150 | 20450 | 183 | 10 | 150 |
| 75 | 192 | 20551 | 224 | 10 | 150 | 20550 | 224 | 10 | 150 |
| 100 | 248 | 20751 | 300 | 10 | 150 | 20750 | 300 | 10 | 150 |
| 125 | 312 | - | - | - | - | 20900 | 358 | 2 | 150 |
| 150 | 360 | - | - | - | - | 21100 | 415 | 2 | 150 |

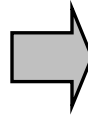
Output Amps, Carrier and Overload Comparison

480V Ratings GPD515/G5 ➡ G7

| 480V | | | | | | | | | |
|-------------------|----------------|--------------------------|-------------|--------|-----|-------------------|-------------|--------------------------|------------|
| GPD515/G5 | | | | | | G7 | | | |
| NEC Motor HP 480V | NEC Motor Amps | GPD515/G5 Model CIMR-G5M | Output Amps | Fc kHz | OL% | G7 Model CIMR-G7U | Output Amps | Fc kHz (3-Level Control) | Overload % |
| 0.5 | 1.1 | 40P41 | 1.8 | 15 | 150 | 40P41 | 1.8 | 8 | 150 |
| 0.75 | 1.6 | | | | | | | | |
| 1 | 2.1 | 40P71 | 3.4 | 15 | 150 | 40P71 | 3.4 | 8 | 150 |
| 1.5 | 3 | | | | | | | | |
| 2 | 3.4 | | | | | | | | |
| 3 | 4.8 | 41P51 | 4.8 | 15 | 150 | 41P51 | 4.8 | 8 | 150 |
| | | | | | | 42P21 | 6.2 | 8 | 150 |
| 5 | 7.6 | 43P71 | 8 | 15 | 150 | 43P71 | 9 | 8 | 150 |
| 7.5 | 11 | 44P01 | 11.7 | 15 | 150 | 44P01 | 11 | 8 | 150 |
| 10 | 14 | 45P51 | 14 | 15 | 150 | 45P51 | 15 | 8 | 150 |
| 15 | 21 | 47P51 | 21 | 12.5 | 150 | 47P51 | 21 | 8 | 150 |
| 20 | 27 | 40111 | 27 | 12.5 | 150 | 40111 | 27 | 8 | 150 |
| 25 | 34 | 40151 | 34 | 10 | 150 | 40151 | 34 | 8 | 150 |
| 30 | 40 | 40181 | 41 | 10 | 150 | 40181 | 42 | 8 | 150 |
| 40 | 52 | 40221 | 52 | 8 | 150 | 40221 | 52 | 8 | 150 |
| 50 | 65 | 40301 | 65 | 8 | 150 | 40301 | 65 | 8 | 150 |
| 60 | 77 | 40371 | 80 | 6 | 150 | 40371 | 80 | 8 | 150 |
| 75 | 96 | 40451 | 96 | 6 | 150 | 40451 | 97 | 8 | 150 |
| 100 | 124 | 40551 | 128 | 6 | 150 | 40550 | 128 | 5 | 150 |
| 125 | 156 | 40751 | 165 | 6 | 150 | 40750 | 165 | 5 | 150 |
| 150 | 180 | - | - | - | - | 40900 | 195 | 3 | 150 |
| | | 41101 | 224 | 5 | 150 | | | | |
| 200 | 240 | - | - | - | - | 41100 | 240 | 3 | 150 |
| | | - | - | - | - | 41320 | 270 | 2 | 150 |
| 250 | 302 | 41601 | 302 | 5 | 150 | 41600 | 302 | 2 | 150 |
| | | 41850 | 340 | 2 | 150 | | | | |
| 300 | 361 | 42200 | 450 | 2 | 150 | 41850 | 370 | 2 | 150 |
| 350 | 414 | | | | | 42200 | 450 | 2 | 150 |
| 400 | 477 | 43000 | 605 | 2 | 150 | 43000 | 605 | 2 | 150 |
| 500 | 590 | | | | | | | | |

Mounting Hole Data

| GPD515/G5 Mounting Hole Data | | | | |
|---|----------------------------|------|-----------------------|-------|
| Model | GPD515/G5 (Millimeters) | | GPD515/G5 (Inches) | |
| | W1 | H1 | W1 | H1 |
| 20P4 | 126 | 266 | 4.96 | 10.47 |
| 20P7 | 126 | 266 | 4.96 | 10.47 |
| 21P5 | 126 | 266 | 4.96 | 10.47 |
| 22P2 | 126 | 266 | 4.96 | 10.47 |
| 23P7 | 126 | 266 | 4.96 | 10.47 |
| 25P5 | 186 | 285 | 7.32 | 11.22 |
| 27P5 | 186 | 285 | 7.32 | 11.22 |
| 2011 | 236 | 365 | 9.29 | 14.37 |
| 2015 | 236 | 365 | 9.29 | 14.37 |
| 2018 | 275 | 435 | 10.83 | 17.13 |
| 2022 | 275 | 435 | 10.83 | 17.13 |
| 2030 | 320 | 650 | 12.60 | 25.59 |
| 2037 | 320 | 650 | 12.60 | 25.59 |
| 2045 | 370 | 775 | 14.57 | 30.51 |
| 2055 | 370 | 775 | 14.57 | 30.51 |
| 2075 | 445 | 895 | 17.52 | 35.24 |
| - | - | - | - | - |
| - | - | - | - | - |
| 40P4 | 126 | 266 | 4.96 | 10.47 |
| 40P7 | 126 | 266 | 4.96 | 10.47 |
| 41P5 | 126 | 266 | 4.96 | 10.47 |
| 42P2 | 126 | 266 | 4.96 | 10.47 |
| 43P7 | 126 | 266 | 4.96 | 10.47 |
| 45P5 | 186 | 285 | 7.32 | 11.22 |
| 47P5 | 186 | 285 | 7.32 | 11.22 |
| 4011 | 236 | 365 | 9.29 | 14.37 |
| 4015 | 236 | 365 | 9.29 | 14.37 |
| 4018 | 275 | 435 | 10.83 | 17.13 |
| 4022 | 275 | 435 | 10.83 | 17.13 |
| 4030 | 275 | 610 | 10.83 | 24.02 |
| 4037 | 275 | 610 | 10.83 | 24.02 |
| 4045 | 275 | 610 | 10.83 | 24.02 |
| 4055 | 350 | 795 | 13.78 | 31.30 |
| 4075 | 350 | 795 | 13.78 | 31.30 |
| - | - | - | - | - |
| 4110 | 445 | 895 | 17.52 | 35.24 |
| - | - | - | - | - |
| 4160 | 445 | 895 | 17.52 | 35.24 |
| 4185 | 750 | 1400 | 29.53 | 55.12 |
| 4220 | 750 | 1400 | 29.53 | 55.12 |
| 4300 | 750 | 1550 | 29.53 | 61.02 |



| G7 Mounting Hole Data | | | | |
|----------------------------------|---------------------|-----|----------------|-------|
| Model | G7 (Millimeters) | | G7 (Inches) | |
| | W1 | H1 | W1 | H1 |
| 20P4 | 126 | 266 | 4.96 | 10.47 |
| 20P7 | 126 | 266 | 4.96 | 10.47 |
| 21P5 | 126 | 266 | 4.96 | 10.47 |
| 22P2 | 126 | 266 | 4.96 | 10.47 |
| 23P7 | 126 | 266 | 4.96 | 10.47 |
| 25P5 | 186 | 285 | 7.32 | 11.22 |
| 27P5 | 186 | 285 | 7.32 | 11.22 |
| 2011 | 216 | 335 | 8.50 | 13.19 |
| 2015 | 216 | 335 | 8.50 | 13.19 |
| 2018 | 195 | 385 | 7.68 | 15.16 |
| 2022 | 220 | 435 | 8.66 | 17.13 |
| 2030 | 250 | 575 | 9.84 | 22.64 |
| 2037 | 250 | 575 | 9.84 | 22.64 |
| 2045 | 325 | 700 | 12.80 | 27.56 |
| 2055 | 325 | 700 | 12.80 | 27.56 |
| 2075 | 370 | 820 | 14.57 | 32.28 |
| 2090 | 445 | 855 | 17.52 | 33.66 |
| 2110 | 445 | 855 | 17.52 | 33.66 |
| 40P4 | 126 | 266 | 4.96 | 10.47 |
| 40P7 | 126 | 266 | 4.96 | 10.47 |
| 41P5 | 126 | 266 | 4.96 | 10.47 |
| 42P2 | 126 | 266 | 4.96 | 10.47 |
| 43P7 | 126 | 266 | 4.96 | 10.47 |
| 45P5 | 186 | 285 | 7.32 | 11.22 |
| 47P5 | 186 | 285 | 7.32 | 11.22 |
| 4011 | 216 | 335 | 8.50 | 13.19 |
| 4015 | 216 | 335 | 8.50 | 13.19 |
| 4018 | 220 | 435 | 8.66 | 17.13 |
| 4022 | 220 | 435 | 8.66 | 17.13 |
| 4030 | 260 | 535 | 10.24 | 21.06 |
| 4037 | 260 | 535 | 10.24 | 21.06 |
| 4045 | 260 | 535 | 10.24 | 21.06 |
| 4055 | 325 | 700 | 12.80 | 27.56 |
| 4075 | 325 | 700 | 12.80 | 27.56 |
| 4090 | 370 | 820 | 14.57 | 32.28 |
| 4110 | 370 | 820 | 14.57 | 32.28 |
| 4132 | 445 | 895 | 17.52 | 35.24 |
| 4160 | 445 | 895 | 17.52 | 35.24 |
| 4185 | 1270 | 540 | 21.26 | 50.00 |
| 4220 | 1270 | 540 | 21.26 | 50.00 |
| 4300 | 1440 | 730 | 28.74 | 56.69 |

Panel Cut-out Data (for external heatsink mounting)

Refer to NEC Ratings tables in Appendix 1 for the appropriate GPD515/G5 to G7 cross-reference.

Note: Ampacity ratings vary between GPD515/G5 to G7 models

| GPD515/G5 PANEL CUT OUT OPENING EXTERNAL HEATSINK MOUNTING | | | | |
|--|-------------|------|----------|----------|
| Model | Millimeters | | Inches | |
| | W | H | W | H |
| | (mm) | (mm) | (Inches) | (Inches) |
| 20P4 | 138 | 271 | 5.43 | 10.67 |
| 20P7 | 138 | 271 | 5.43 | 10.67 |
| 21P5 | 138 | 271 | 5.43 | 10.67 |
| 22P2 | 138 | 271 | 5.43 | 10.67 |
| 23P7 | 138 | 271 | 5.43 | 10.67 |
| 25P5 | 180 | 298 | 7.09 | 11.73 |
| 27P5 | 180 | 298 | 7.09 | 11.73 |
| 2011 | 200 | 377 | 7.87 | 14.84 |
| 2015 | 200 | 377 | 7.87 | 14.84 |
| 2018 | 300 | 404 | 11.81 | 15.91 |
| 2022 | 300 | 404 | 11.81 | 15.91 |
| 2030 | 380 | 627 | 14.96 | 24.68 |
| 2037 | 380 | 627 | 14.96 | 24.68 |
| 2045 | 451 | 756 | 17.76 | 29.76 |
| 2055 | 451 | 756 | 17.76 | 29.76 |
| 2075 | 555 | 894 | 21.85 | 35.20 |
| - | - | - | - | - |
| - | - | - | - | - |
| 40P4 | 138 | 271 | 5.43 | 10.67 |
| 40P7 | 138 | 271 | 5.43 | 10.67 |
| 41P5 | 138 | 271 | 5.43 | 10.67 |
| 42P2 | 138 | 271 | 5.43 | 10.67 |
| 43P7 | 138 | 271 | 5.43 | 10.67 |
| 45P5 | 180 | 298 | 7.09 | 11.73 |
| 47P5 | 180 | 298 | 7.09 | 11.73 |
| 4011 | 200 | 377 | 7.87 | 14.84 |
| 4015 | 200 | 377 | 7.87 | 14.84 |
| 4018 | 300 | 404 | 11.81 | 15.91 |
| 4022 | 300 | 404 | 11.81 | 15.91 |
| 4030 | 309 | 571 | 12.17 | 22.48 |
| 4037 | 309 | 571 | 12.17 | 22.48 |
| 4045 | 309 | 571 | 12.17 | 22.48 |
| 4055 | 440 | 761 | 17.32 | 29.96 |
| 4075 | 440 | 761 | 17.32 | 29.96 |
| - | - | - | - | - |
| 4110 | 555 | 894 | 21.85 | 35.20 |
| - | - | - | - | - |
| 4160 | 555 | 894 | 21.85 | 35.20 |
| 4185 | 875 | 1324 | 34.45 | 52.13 |
| 4220 | 875 | 1324 | 34.45 | 52.13 |
| 4300 | 873 | 1475 | 34.37 | 58.07 |



| G7 PANEL CUT OUT OPENING EXTERNAL HEATSINK MOUNTING | | | | |
|---|-------------|------|----------|----------|
| Model | Millimeters | | Inches | |
| | W | H | W | H |
| | (mm) | (mm) | (Inches) | (Inches) |
| 20P4 | 138 | 271 | 5.43 | 10.67 |
| 20P7 | 138 | 271 | 5.43 | 10.67 |
| 21P5 | 138 | 271 | 5.43 | 10.67 |
| 22P2 | 138 | 271 | 5.43 | 10.67 |
| 23P7 | 138 | 271 | 5.43 | 10.67 |
| 25P5 | 197 | 298 | 7.76 | 11.73 |
| 27P5 | 197 | 298 | 7.76 | 11.73 |
| 2011 | 233 | 353 | 9.17 | 13.90 |
| 2015 | 233 | 353 | 9.17 | 13.90 |
| 2018 | 244 | 369 | 9.61 | 14.53 |
| 2022 | 269 | 419 | 10.59 | 16.50 |
| 2030 | 359 | 545 | 14.13 | 21.46 |
| 2037 | 359 | 545 | 14.13 | 21.46 |
| 2045 | 434 | 673 | 17.09 | 26.50 |
| 2055 | 434 | 673 | 17.09 | 26.50 |
| 2075 | 484 | 782 | 19.06 | 30.79 |
| 2090 | 555 | 817 | 21.85 | 32.17 |
| 2110 | 555 | 817 | 21.85 | 32.17 |
| 40P4 | 138 | 271 | 5.43 | 10.67 |
| 40P7 | 138 | 271 | 5.43 | 10.67 |
| 41P5 | 138 | 271 | 5.43 | 10.67 |
| 42P2 | 138 | 271 | 5.43 | 10.67 |
| 43P7 | 138 | 271 | 5.43 | 10.67 |
| 44P0 | 138 | 271 | 5.43 | 10.67 |
| 45P5 | 197 | 298 | 7.76 | 11.73 |
| 47P5 | 197 | 298 | 7.76 | 11.73 |
| 4011 | 233 | 353 | 9.17 | 13.90 |
| 4015 | 233 | 353 | 9.17 | 13.90 |
| 4018 | 269 | 419 | 10.59 | 16.50 |
| 4022 | 269 | 419 | 10.59 | 16.50 |
| 4030 | 309 | 519 | 12.17 | 20.43 |
| 4037 | 309 | 519 | 12.17 | 20.43 |
| 4045 | 309 | 519 | 12.17 | 20.43 |
| 4055 | 434 | 673 | 17.09 | 26.50 |
| 4075 | 434 | 673 | 17.09 | 26.50 |
| 4090 | 484 | 782 | 19.06 | 30.79 |
| 4110 | 484 | 782 | 19.06 | 30.79 |
| 4132 | 555 | 817 | 21.85 | 32.17 |
| 4160 | 555 | 817 | 21.85 | 32.17 |
| 4185 | 693 | 1227 | 27.28 | 48.31 |
| 4220 | 693 | 1227 | 27.28 | 48.31 |
| 4300 | 875 | 1397 | 34.45 | 55.00 |

Watts Loss Data

| G5 Model | GPD515/G5 (W) | | |
|----------|---------------|----------|-------|
| | Internal | Heatsink | Total |
| 20P4 | 50 | 15 | 65 |
| 20P7 | 65 | 25 | 90 |
| 21P5 | 80 | 40 | 120 |
| 22P2 | 60 | 80 | 140 |
| 23P7 | 80 | 135 | 215 |
| 25P5 | 90 | 210 | 300 |
| 27P5 | 110 | 235 | 725 |
| 2011 | 160 | 425 | 585 |
| 2015 | 200 | 525 | 725 |
| 2018 | 230 | 655 | 885 |
| 2022 | 280 | 830 | 1110 |
| 2030 | 440 | 930 | 1370 |
| 2037 | 620 | 1110 | 1730 |
| 2045 | 660 | 1380 | 2040 |
| 2055 | 890 | 1740 | 2630 |
| 2075 | 1160 | 2050 | 3210 |
| - | - | - | - |
| - | - | - | - |
| 40P4 | 50 | 10 | 60 |
| 40P7 | 65 | 20 | 85 |
| 41P5 | 80 | 30 | 110 |
| 42P2 | 60 | 65 | 125 |
| 43P7 | 65 | 80 | 145 |
| 44P0 | 80 | 120 | 200 |
| 45P5 | 85 | 135 | 220 |
| 47P5 | 120 | 240 | 360 |
| 4011 | 150 | 305 | 455 |
| 4015 | 180 | 390 | 570 |
| 4018 | 195 | 465 | 660 |
| 4022 | 260 | 620 | 880 |
| 4030 | 315 | 705 | 1020 |
| 4037 | 370 | 875 | 1245 |
| 4045 | 415 | 970 | 1385 |
| 4055 | 710 | 1110 | 1820 |
| 4075 | 890 | 1430 | 2320 |
| - | - | - | - |
| 4110 | 1160 | 1870 | 3030 |
| - | - | - | - |
| 4160 | 1520 | 2670 | 4190 |
| 4185 | 1510 | 3400 | 4910 |
| 4220 | 2110 | 4740 | 6850 |
| 4300 | 2910 | 6820 | 9730 |



| G7 Model | G7 (W) | | |
|----------|----------|----------|-------|
| | Internal | Heatsink | Total |
| 20P4 | 36 | 21 | 57 |
| 20P7 | 42 | 43 | 85 |
| 21P5 | 47 | 58 | 105 |
| 22P2 | 53 | 83 | 136 |
| 23P7 | 64 | 122 | 186 |
| 25P5 | 87 | 187 | 274 |
| 27P5 | 112 | 263 | 375 |
| 2011 | 136 | 357 | 493 |
| 2015 | 174 | 473 | 647 |
| 2018 | 241 | 599 | 840 |
| 2022 | 257 | 679 | 936 |
| 2030 | 362 | 878 | 1240 |
| 2037 | 434 | 1080 | 1514 |
| 2045 | 510 | 1291 | 1801 |
| 2055 | 607 | 1474 | 2081 |
| 2075 | 823 | 2009 | 2832 |
| 2090 | 871 | 1660 | 2531 |
| 2110 | 1194 | 2389 | 3583 |
| 40P4 | 39 | 10 | 49 |
| 40P7 | 44 | 21 | 65 |
| 41P5 | 46 | 33 | 79 |
| 42P2 | 49 | 41 | 90 |
| 43P7 | 63 | 77 | 140 |
| 44P0 | 66 | 100 | 166 |
| 45P5 | 80 | 132 | 212 |
| 47P5 | 107 | 197 | 304 |
| 4011 | 116 | 246 | 362 |
| 4015 | 135 | 311 | 446 |
| 4018 | 174 | 354 | 528 |
| 4022 | 210 | 516 | 726 |
| 4030 | 246 | 633 | 879 |
| 4037 | 285 | 737 | 1022 |
| 4045 | 340 | 929 | 1269 |
| 4055 | 488 | 1239 | 1727 |
| 4075 | 597 | 1554 | 2151 |
| 4090 | 762 | 1928 | 2690 |
| 4110 | 928 | 2299 | 3227 |
| 4132 | 1105 | 2612 | 3717 |
| 4160 | 1501 | 3614 | 5115 |
| 4185 | 1995 | 4436 | 6431 |
| 4220 | 2205 | 5329 | 7534 |
| 4300 | 2941 | 6749 | 9690 |

Appendix 2

Parameter Differences

The following parameter list shows the differences between GPD515/G5 and G7 parameters. Parameters not listed are identical between GPD515/G5 and G7. Refer to the G7 instruction manual for details on specific parameter functions. Parameters are listed alphabetically by GPD515/G5.

Product Transition Guide
GPD515/G5 to G7

| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|-------------------------------------|---|---------------|--|---|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| A1-01 | Access Level | 0: Operation Only 1: User Level 2: Quick-Start [Q] 3: Basic Level [B] 4: Advanced Level [A] | A1-01 | Access Level Selection | Removed: 3: Basic Level [B] Modified selection: 2: Advanced Level |
| A1-02 | Control Method Selection | 0: V/F control without PG 1: V/F control with PG 2: Open Loop Vector 3: Flux Vector | A1-02 | Control Method Selection | Additional function: 4: Open Loop Vector control 2 |
| B1-01 | Reference Selection | 0: Operator 1: Terminals 2: Communication Serial Com 3: Option PCB 4: EWS Reference from CP-717 | b1-01 | Reference Selection | Changed to: 4: Pulse Input |
| B1-02 | Operation Method Selection | 0: Operator 1: Terminals 2: Communication Serial Com 3: Option PCB 4: EWSRun from CP-717 | b1-02 | Run Command Selection | Removed selection 4: 4: EWSRun from CP-717 |
| B3-01 | Speed Search Selection at Start | 0: Disabled 1: Enabled | b3-01 | Speed Search Selection | Modified selections: 0: Speed Estimation Speed Search Disable 1: Speed Estimation Speed Search Enable 2: Current Detection Speed Search Disable 3: Current Detection Speed Search Enable |
| — | — | — | b3-05 | Speed Search Delay Time | New Parameter |
| — | — | — | b5-15 | Sleep Function Start Level | New Parameter |
| — | — | — | b5-16 | Sleep Delay Time | New Parameter |
| — | — | — | b5-17 | PID Accel/Decel Time | New Parameter |
| B8-03 | Energy -saving Mode Selection | 0:Disabled 1:Enabled | b8-01 | Energy Saving Control Selection | Changed Parameter No. |
| B8-04 | Energy-saving Control Gain | — | b8-02 | Energy Saving Gain | Changed Parameter No. |
| B8-05 | Energy-saving Control Time Constant | — | b8-03 | Energy Saving Control Filter Time Constant | Changed Parameter No. |
| — | — | — | b8-04 | Energy Saving Coefficient Value | New Parameter |
| — | — | — | b8-05 | Power Detection Filter Time | — |
| — | — | — | b8-06 | Search Operation Voltage Limit | — |
| C3-06 | Output Voltage Limit | 0:Disabled | C3-05 | Output Voltage Limit Operation Selection | Changed Parameter No. |
| | Operation Selection | 1:Enabled | | | |

Product Transition Guide
Appendix 2- Parameter Differences

| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|-------------------------------------|-------------------------|---------------|--|---|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| — | — | — | C6-02 | Carrier Frequency Selection | New parameter function different than old C6-02 in GPD515/G5 0: Low noise 1: Fc = 2.0 kHz 2: Fc = 5.0 kHz 3: Fc = 8.0 kHz 4: Fc = 10.0 kHz 5: Fc = 12.5 kHz 6: Fc = 15.0 kHz F: Program Determined by the settings of C6-03 thru C6-05 |
| C6-01 | Carrier Frequency Upper Limit | — | C6-03 | Carrier Frequency Upper Limit | Changed Parameter No. |
| C6-02 | Carrier Frequency Lower Limit | — | C6-04 | Carrier Frequency Lower Limit | Changed Parameter No. |
| C6-03 | Carrier Frequency Proportional Gain | — | C6-05 | Carrier Frequency Proportional Gain | Changed Parameter No. |
| — | — | — | C6-11 | Carrier Frequency Selection Open Loop Vector Control 2 | New Parameter Select the carrier frequency when open loop vector control 2 is used. 1: 2 kHz 2: 4 kHz 3: 6 kHz 4: 8 kHz |
| C7-01 | Hunting Prevention Selection | 0:Disabled 1:Enabled | n1-01 | Hunting Prevention Selection | Changed Parameter No. |
| C7-02 | Hunting Prevention Gain | — | n1-02 | Hunting Prevention Gain Setting | Changed Parameter No. |
| C8-08 | AFR Gain | — | n2-01 | Speed Feedback Detection Control AFR Gain | Changed Parameter No. |
| C8-09 | AFR Time Constant | — | n2-02 | AFR Time | Changed Parameter No. |
| — | — | — | n2-03 | Speed Feedback Detection Control AFR Time Constant 2 | New parameter Sets the time constant to control the amount of change in the speed at low speed. |
| — | — | — | d1-09 | Frequency Reference 9 | New Parameter |
| — | — | — | d1-10 | Frequency Reference 10 | New Parameter |
| — | — | — | d1-11 | Frequency Reference 11 | New Parameter |
| — | — | — | d1-12 | Frequency Reference 12 | New Parameter |
| — | — | — | d1-13 | Frequency Reference 13 | New Parameter |
| — | — | — | d1-14 | Frequency Reference 14 | New Parameter |
| — | — | — | d1-15 | Frequency Reference 15 | New Parameter |
| — | — | — | d1-16 | Frequency Reference 16 | New Parameter |
| D1-09 | Jog Frequency Reference | — | d1-17 | Jog Frequency Reference | Changed Parameter No. |
| — | — | — | d2-03 | Master Speed Reference Lower Limit | New Parameter |
| — | — | — | d6-01 | Magnetic Field Weakening Level | New Parameter |
| — | — | — | d6-02 | Magnetic Field Frequency | New Parameter |

Product Transition Guide
GPD515/G5 to G7

| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|---|--|---------------|--|--|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| — | — | — | d6-03 | Magnetic Field Forcing Function Selection | New Parameter 0:Disabled 1:Enabled |
| E1-02 | Motor Selection | 0:Std Fan-Cooled 1:Std Blower-Cooled 2:Vector Motor | L1-01 | Motor Overload Protection Selection | Changed Parameter No. Additional selection 0: Disabled 1: Standard Fan Cooled 2: Standard Blower Cooled 3: Vector Motor |
| — | — | — | E2-11 | Motor Rated Output | New Parameter This value is automatically set during auto tuning. |
| E3-01 | Motor 2 Control Method Selection | 0: V/F control 1: V/F with PG Feedback 2: Open Loop Vector 3: Flux Vector | E3-01 | Motor 2 Control Method Selection | Additional selection 4: Open Loop Vector Control 2 |
| E4-01 | Motor 2 Max. Output Frequency | — | E3-02 | Motor 2 Maximum Output Frequency | Changed Parameter No. |
| E4-02 | Motor 2 Max. Voltage | — | E3-03 | Motor 2 Maximum Output Voltage | Changed Parameter No. |
| E4-03 | Motor 2 Max. Voltage Frequency Base Frequency | — | E3-04 | Motor 2 Base Frequency Base Frequency | Changed Parameter No. |
| E4-04 | Motor 2 Mid. Output Frequency 1 Mid Frequency | — | E3-05 | Motor 2 Mid Output Frequency Mid Frequency | Changed Parameter No. |
| E4-05 | Motor 2 Mid. Output Frequency Voltage 1 Mid Voltage | — | E3-06 | Motor 2 Mid Output Voltage VA Mid Voltage | Changed Parameter No. |
| E4-06 | Motor 2 Min. Output Frequency Min Frequency | — | E3-07 | Motor 2 Minimum Output Frequency Min Frequency | Changed Parameter No. |
| E4-07 | Motor 2 Min. Output Frequency Voltage Min Voltage | — | E3-08 | Motor 2 Minimum Output Voltage Min Voltage | Changed Parameter No. |
| E5-01 | Motor 2 Rated Current | — | E4-01 | Motor 2 Rated Current | Changed Parameter No. |
| E5-02 | Motor 2 Rated Slip | — | E4-02 | Motor 2 Rated Slip | Changed Parameter No. |
| E5-03 | Motor 2 No-load Current | — | E4-03 | Motor 2 No-Load Current | Changed Parameter No. |
| E5-04 | Motor 2 Number of poles | — | E4-04 | Motor 2 Number of Poles | Changed Parameter No. |
| E5-05 | Motor 2 Line-to-line Resistance | — | E4-05 | Motor 2 Line-to-Line Resistance | Changed Parameter No. |
| E5-06 | Motor 2 Leak Inductance | — | E4-06 | Motor 2 Leakage Inductance | Changed Parameter No. |
| — | — | — | E4-07 | Motor 2 Rated Output | New Parameter This value is automatically set during auto-tuning. |
| — | — | — | F4-07 | AO-12 Channel 1 Signal Level | New Parameter Sets the range of the voltage output. 0: 0 to 10 Vdc 1: -10 to +10 Vdc |
| — | — | — | F4-08 | AO-12 Channel 2 Signal Level | New Parameter Sets the range of the voltage output. 0: 0 to 10 Vdc 1: -10 to +10 Vdc |

Product Transition Guide
Appendix 2- Parameter Differences

| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|---|--|---------------|---|--|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| — | — | — | F5-03 | DO-08 Channel 3 Output Selection | New Parameter |
| — | — | — | F5-04 | DO-08 Channel 4 Output Selection | New Parameter |
| — | — | — | F5-05 | DO-08 Channel 5 Output Selection | New Parameter |
| — | — | — | F5-06 | DO-08 Channel 6 Output Selection | New Parameter |
| — | — | — | F5-07 | DO-08 Channel 7 Output Selection | New Parameter |
| — | — | — | F5-08 | DO-08 Channel 8 Output Selection | New Parameter |
| — | — | — | F5-09 | DO-08 Output Mode Selection | New Parameter 0:8-channel individual outputs. 1:Binary code output. 2:Output according to F5-01 to F5-08 settings. |
| F9-02 | Option External Fault Detection Selection | 0:Always Detected 1:Only During Run | F6-02 | Option External Fault Detection Selection | Changed Parameter No. |
| F9-03 | Option External Fault Detection Operation Selection | 0: Ramp to Stop 1: Coast to Stop 2: Fast - Stop 3: Alarm Only | F6-03 | Option External Fault Detection Operation Selection | Changed Parameter No. |
| F9-04 | Trace Sampling Time | — | F6-04 | Trace Sampling from Communications Option Board | Changed Parameter No. |
| F9-05 | TorqueReference/ Torque Limit Selection through DP-RAM communication | 0: Disabled 1: Enabled | F6-06 | Torque Reference/Torque Limit Selection through DP- RAM communication | Changed Parameter No. |
| F9-06 | DP-RAM Communication Error Detection Operation Selection | 0:Ramp to Stop 1:Coast to Stop 2:Fast - Stop 3:Alarm Only | F6-01 | DP-RAM Communication Error Detection Operation Selection | Changed Parameter No. |

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| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|---------------------------------|---|---------------|---|--|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| H1-01 | Terminal 3 Selection | Multi-function input terminal 3 0: 3-Wire Control 1: Local/Remote Selection 2: Option/Inverter Selection 3: Multi-Step Reference 1 4: Multi-Step Reference 2 5: Multi-Step Reference 3 6: Jog Frequency Reference 7: Multi-Accel/Decel 1 8: External Baseblock N.O. 9: External Baseblock N.C. A: Accel/Decel Ramp Hold B: OH2 Alarm Signal C: Terminal 16 Enable D: V/F Mode Select E: ASR Integral Reset F: Terminal Not Used 10: MOP Increase 11: MOP Decrease 12: Forward Jog 13: Reverse Jog 14: Fault Reset 15: Fast-Stop N.O. 16: Motor 2 Select 17: Fast Stop N.C. input 18: Timer Function 19: PID Disable 1A: Multi-Accel/Decel 2 1B: Program Lockout 1C: Trim Control Increase 1D: Trim Control Decrease 1E: Ref Sample Hold 1F: Terminal 13/14 Switch 24: External Fault 30: PID Integral Reset 31: PID Control Integral Hold 60: DC Injection Activate 61: Speed Search 1 62: Speed Search 2 63: Energy Save Mode 64: Speed Search 3 65: KEB Ridethrough N.C. 66: KEB Ridethrough N.O. 71: Speed/Torque Control Change 72: Zero Servo Command 77: ASR Gain Switch | H1-01 | Multi-Function Digital Input Terminal S3 Function Selection | Modified selection: C: Multi-function Analog Input Selection Additional selections: 32: Multi-Step Reference 4 34: PID Soft Starter Cancel 35: PID Input Error Polarity Change 67: Communications Test Mode 68: High Slip Braking 78: Polarity Reversing Command for External Torque Control |

Product Transition Guide
Appendix 2- Parameter Differences

| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|---------------------------------|----------------------|---------------|--|---------------------------------|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| H1-02 | Terminal 4 Selection | — | H1-02 | Multi-Function Digital Input Terminal S4 Function Selection | Terminal number renamed |
| H1-03 | Terminal 5 Selection | — | H1-03 | Multi-Function Digital Input Terminal S5 Function Selection | Terminal number renamed |
| H1-04 | Terminal 6 Selection | — | H1-04 | Multi-Function Digital Input Terminal S6 Function Selection | Terminal number renamed |
| H1-05 | Terminal 7 Selection | — | H1-05 | Multi-Function Digital Input Terminal S7 Function Selection | Terminal number renamed |
| H1-06 | Terminal 8 Selection | — | H1-06 | Multi-Function Digital Input Terminal S8 Function Selection | Terminal number renamed |
| — | — | — | H1-07 | Multi-Function Digital Input Terminal S9 Function Selection | New Parameter |
| — | — | — | H1-08 | Multi-Function Digital Input Terminal S10 Function Selection | New Parameter |
| — | — | — | H1-09 | Multi-Function Digital Input Terminal S11 Function Selection | New Parameter |
| — | — | — | H1-10 | Multi-Function Digital Input Terminal S12 Function Selection | New Parameter |

Product Transition Guide
GPD515/G5 to G7

| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|---|--|---------------|---|---|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| H2-01 | Multi-function Output Terminal 9-10 | — | H2-01 | Terminal M1-M2 Function Selection | Additional selections: 32: During Speed Limit 38: Drive Enable |
| H2-02 | Multi-function Output Terminal 25/27 Open Collector | — | H2-02 | Terminal M3-M4 Function Selection | Terminal number renamed |
| H2-03 | Multi-function Output Terminal 26/27 Open Collector | — | H2-03 | Terminal M5-M6 Function Selection | Terminal number renamed |
| — | — | — | H2-04 | Terminal P3 Function Selection Open Collector | New Parameter |
| — | — | — | H2-05 | Terminal P4 Function Selection Open Collector | New Parameter |
| H3-01 | Signal Level Selection Terminal 13 | — | H3-01 | Terminal A1 Signal Level Selection | Terminal number renamed |
| H3-02 | Terminal 13 Gain | Frequency reference gain of AI-14U, AI-14B 3ch addition input, DI-08, and DI-16 is common. | H3-02 | Terminal A1 Gain Setting | Terminal number renamed |
| H3-03 | Terminal 13 Bias | — | H3-03 | Terminal A1 Bias Setting | Terminal number renamed |
| H3-04 | Terminal 16 Signal Level Selection | 0:0 - 10 VDC 1:10 +10 VDC | H3-04 | Terminal A3 Signal Level Selection | Terminal number renamed |
| H3-05 | Terminal 16 Multifunction Analog Input | Multi-function analog input selection terminal 16 0: Auxiliary Reference 1: Frequency Gain 2: Frequency Bias 4: Voltage Bias 5: Accel/Decel Change 6: DC Brake Current 7: Overtorque Level 8: Stall Prevention Level 9: Reference Lower Limit A: Jump Frequency B: PID Feedback C: PID Setpoint D: Frequency Bias 2 10: Forward Torque Limit 11: Reverse Torque Limit 12: Regenerative Torque Limit 13: Torque reference 14: Torque Compensation 15: Forward/Reverse Torque Limit 1F: Not Used | | | Modified selection: 2:Aux Frequency Reference1 Used in conjunction with multi-function inputs “multi-step frequency reference 1-4”. Additional 3:Aux Frequency Reference 2 Used in conjunction with multi-function inputs “multi-step frequency reference 1-4”. E: Motor Temperature See parameters L1-03 & L1-04. |
| H3-06 | Terminal 16 Gain | — | H3-06 | Terminal A3 Gain Setting | Terminal number renamed |
| H3-07 | Terminal 16 Bias | — | H3-07 | Terminal A3 Bias Setting | Terminal number renamed |
| H3-08 | Signal Level Selection Terminal 14 | — | H3-08 | Terminal A2 Signal Level Selection | Terminal number renamed |
| H3-09 | Multi-function Analog Input Terminal 14 | — | H3-09 | Terminal A2 Function Selection | Terminal number renamed |
| H3-10 | Terminal 14 Gain | — | H3-10 | Terminal A2 Gain Setting | Terminal number renamed |
| H3-11 | Terminal 14 Bias | — | H3-11 | Terminal A2 Bias Setting | Terminal number renamed |
| H3-12 | Filter Avg Time | — | H3-12 | Filter Avg Time | Input is from the A2 terminal for the G7. |

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Appendix 2- Parameter Differences

| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|---|---|---------------|-------------------------------------|--|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| H4-01 | Monitor Selection Terminal 21 | Analog output selection terminal 21 same as F4-01 1: Frequency reference 2: Output frequency 3: Inverter output current 5: Motor speed 6: Output voltage 7: DC bus voltage 8: Output power 9: Torque reference internal 15: External terminal 13 input voltage 16: External terminal 14 input voltage 17: External terminal 16 input voltage 18: Motor secondary current Iq 19: Motor excitation current Id 20: Primary frequency after SFS 21: Speed controller ASR input 22: Speed controller ASR output 23: Speed deviation 24: PID feedback 26: Voltage reference Vq output 27: Voltage reference Vd output 31: Not Used 32: ACR q Output 33: ACR d Output 36: PID Input 37: PID Output 38: PID Reference | H4-01 | H4-01 Terminal FM Monitor Selection | Terminal number renamed 15: Terminal A1 Input Level 100% = 10Vdc 16: Terminal A2 Input Level 100% = 10Vdc or 20mA 17: Terminal A3 Input Level 100% = 10Vdc Removed: 23: Speed deviation Additional: 42: Motor flux calculation value 43: Motor flux current compensation 44: ASR Output without filter 45: Feedforward Control Output 48: Stabilizing speed during regen |
| H4-02 | Terminal 21 Output Gain | — | H4-02 | Terminal FM Gain Setting | Terminal number renamed |
| H4-03 | Terminal 21 Output Bias | — | H4-03 | Terminal FM Bias Setting | Terminal number renamed |
| H4-04 | Terminal 23 Monitor | — | H4-04 | Terminal AM Monitor Selection | Terminal number renamed |
| H4-05 | Terminal 23 Output Gain | — | H4-05 | Terminal AM Gain Setting | Terminal number renamed |
| H4-06 | Terminal 23 Output Bias | — | H4-06 | Terminal AM Bias Setting | Terminal number renamed |
| H4-07 | Analog Output Signal Selection | 0: 0 - +10 VDC 1: 10V +10 VDC | H4-07 | Terminal FM Signal Level Selection | Terminal number renamed 0: 0 - 10 Vdc 1: -10 to +10V 2: 4-20 mA* * Set the analog output jumper CN15 in the proper position. |
| — | — | — | H4-08 | Terminal AM Signal Level Selection | New Parameter 0: 0 - 10 Vdc 1: -10 to +10V 2: 4-20 mA* * Set the analog output jumper CN15 in the proper position. |
| H5-04 | Stopping Method After Communication Error | 0: Ramp to Stop 1: Coast to Stop 2: Fast - Stop 3: Alarm Only | | | Additional selection: 4: Run at D1-04 |
| — | — | — | H5-06 | Drive Transmit Wait Time | New parameter |
| — | — | — | H5-07 | RTS Control Selection | New parameter 0: Disabled RTS is always on 1: Enabled RTS turns on only when sending |

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GPD515/G5 to G7

| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|--|---|---------------|--|--|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| — | — | — | H6-01 | Pulse Train Input Function Selection | New parameter 0: Frequency reference 1: PID feedback value 2: PID setpoint value |
| — | — | — | H6-02 | Pulse Train Input Scaling | New parameter |
| — | — | — | H6-03 | Pulse Train Input Gain | New parameter |
| — | — | — | H6-04 | Pulse Train Input Bias | New parameter |
| — | — | — | H6-05 | Pulse Train Input Filter Time | New parameter |
| — | — | — | H6-06 | Pulse Train Monitor Selection | New parameter |
| — | — | — | H6-07 | Pulse Train Monitor Scaling | New parameter |
| L1-01 | Motor Protection Selection MOL Fault Select | 0:Disabled 1:Coast to Stop See: GPD515/G5 E1-02 | L1-01 | Motor Overload Protection Selection | Modified function 0: Disabled 1: Fan Cooled <10:1 motor 2:Blower Cooled 10:1 motor 3: Vector Motor 1000:1 motor |
| — | — | — | L1-03 | Motor Overheat Alarm Operation Selection | New parameter 0: Ramp to Stop 1: Coast to Stop 2: Fast-Stop 3: Alarm Only |
| — | — | — | L1-04 | Motor Overheat Fault Operation Selection | New parameter 0: Ramp to Stop 1: Coast to Stop 2: Fast-Stop |
| — | — | — | L1-05 | Motor Temperature Input Filter Time | New parameter |
| — | — | — | L2-07 | Momentary Recovery Time | New parameter |
| — | — | — | L2-08 | Frequency Reduction Gain at KEB Start | New parameter |
| L3-07 | Stall Prevention Function P Gain | — | — | — | Deleted in G7 |
| L3-08 | Stall Prevention Function Integral Time | — | — | — | Deleted in G7 |
| — | — | — | L3-11 | OV Suppression function selection | New parameter |
| — | — | — | L3-12 | OV suppression function level | New parameter |
| L4-05 | Frequency Loss Detection Selection | 0: Stop 1: Run@ 80% PrevRef | L4-05 | Frequency Reference Loss Detection Selection | Modified function 0: Normal Operation - Drive will run at the frequency reference. 1: Run at L4-06 PrevRef Drive will run at the percentage set in L4-06 |
| — | — | — | L4-06 | Frequency Reference Level at Loss Frequency | New parameter |

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Appendix 2- Parameter Differences

| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|------------------------------------|--|---------------|---|---|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| L6-01 | Overtorque Detection Selection 1 | 0: Disabled 1: @SpdAgree - Alm 2: At RUN - Alarm 3: @SpdAgree - Flt 4:At RUN - Fault | L6-01 | Torque Detection Selection 1 | Additional selections: 5: UL3 at SpeedAgree - Alarm Undertorque Detection is only active during Speed Agree and operation continues after detection. 6: UL3 at RUN - Alarm Undertorque Detection is always active and operation continues after detection. 7: UL3 at Speed Agree - Fault Undertorque Detection only active during Speed Agree and drive output will shut down on an OL3 fault. 8: UL3 at RUN - Fault Undertorque Detection is always active and drive output will shut down on an OL3 fault. |
| L6-04 | Overtorque Detection Selection 2 | 0: Disabled 1: @SpdAgree - Alm Detected during speed agree only. 2: At RUN - Alarm Overtorque detection during running. 3: @SpdAgree - Flt Detected during the speed agree only. 4: At RUN - Fault Detected during running, and the inverter trips on OL4. | L6-04 | Torque Detection Selection 2 | Additional selections: 5: UL4 at SpeedAgree - Alarm Undertorque Detection is only active during Speed Agree and operation continues after detection. 6: UL4 at RUN - Alarm Undertorque Detection is always active and operation continues after detection. 7: UL4 at Speed Agree - Fault Undertorque Detection only active during Speed Agree and drive output will shut down on an OL4 fault. 8: UL4 at RUN - Fault Undertorque Detection is always active and drive output will shut down on an OL4 fault. |
| L8-07 | Output phase loss protection | 0: Disabled 1: Enabled | L8-07 | Output phase loss protection | Additional selections 2: 2/3 phase loss protection |
| L8-10 | Short-circuit Protection Selection | 0:Disabled 1: Enabled | L8-09 | Output Ground Fault Detection Selection | Changed parameter number |
| — | — | — | L8-10 | Heatsink Cooling Fan Operation Selection | New parameter 0: Fan On-Run Mode 1: Fan Always On |
| — | — | — | L8-11 | Heatsink Cooling Fan Operation Delay Time | New parameter |
| — | — | — | L8-12 | Ambient Temperature Setting | New parameter |

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| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|--|--|---------------|--|--|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| L8-17 | IGBT Protection Selection at Low Frequency | 0: Conventional 1: Lower fc Carrier frequency is decreased when f _{out} 10Hz and the load is > 100% iac. 2: Short term OL2 OL occurs after 2 seconds during low speed [f _{out} 6Hz] current limit. 3: I-Limit=150% Current limit is set to 150% of the inverter rated current. | | | Deleted in G7 |
| L8-19 | OL2 Characteristic Selection at Low Speed | 0: Disabled-Low frequency OL disabled 1: Enabled-Low frequency OL enabled | L8-15 | OL2 Characteristic Selection at Low Speeds | Changed parameter number |
| — | — | — | L8-18 | Soft CLA Selection | New parameter 0: Disabled 1: Enabled. |
| — | — | — | n3-01 | High Slip Braking Deceleration Frequency Width | New parameter |
| | | | n3-01 | High slip braking decel frequency width | New parameter |
| — | — | — | n3-02 | High Slip Braking Current Limit | New parameter |
| — | — | — | n3-03 | High Slip Braking Dwell Time at Stop | New parameter |
| — | — | — | n3-04 | High Slip Braking Overload Time | New parameter |
| | | | n4-07 | Observer Integral Time | New parameter |
| | | | n4-08 | Observer Proportional Gain | New parameter |
| | | | n4-10 | Proportional Gain on Hi-Speed Side of Observer | New parameter |
| | | | n4-11 | Observer Switching Frequency | New parameter |
| | | | n4-15 | Lo-Speed + Regen Stability Coefficient 1 | New parameter |
| | | | n4-17 | Torque Adjustment Gain | New parameter |
| | | | n4-18 | Gain for Feeder Resistance Adjustment | New parameter |
| | | | n4-28 | Observer Switching Frequency 2 | New parameter |
| | | | n4-29 | Torque Adjustment Gain 2 | New parameter |
| | | | n4-30 | Low Speed + Regen Stability Coefficient 2 | New parameter |
| | | | n4-32 | Observer Gain Modulation Frequency | New parameter |
| | | | n4-33 | Observer Gain Modulation Frequency 2 | New parameter |
| | | | n4-34 | Observer Gain Modulation Rate | New parameter |
| — | — | — | n5-01 | Feed Forward Control Selection | New parameter 0:Disabled 1:Enabled |
| — | — | — | n5-02 | Motor Accel Time | New parameter |
| — | — | — | n5-03 | Feed Forward Proportional Gain | New parameter |
| | | | | | |

Product Transition Guide
Appendix 2- Parameter Differences

| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|---------------------------------------|--|---------------|---------------------------------|---|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| 01-01 | Monitor Selection User Monitor Sel | Monitor selection 4: Control method 5: Motor speed 6: Output voltage 7: DC bus voltage 8: Output power 9: Torque reference internal 10: Input terminal status 11: Output terminal status 12: Internal Control Status 1 13: Elapsed time 14: Flash software ID number 15: External terminal 13 input voltage 16: External terminal 14 input voltage 17: External terminal 16 input voltage 18: Motor secondary current Iq 19: Motor excitation current Id 20: Primary frequency after SFS 21: Speed controller ASR input 22: Speed controller ASR output 23: Speed deviation 24: PID feedback 25: DI-16 reference 26: Voltage reference Vq output 27: Voltage reference Vd output 28: CPU ID number 32: ACR output of q axis 33: ACR output of d axis 34: First Parameter Causing an OPE 35: Zero Servo Pulse Count 36: PID Input 37: PID Output 38: PID Setpoint | | | <p>Modified name: 15: Terminal A1 Input Voltage 16: Terminal A2 Input Voltage 17: Terminal A3 Input Voltage</p> <p>Deleted in G7 23: Speed deviation</p> <p>Added selections: 29: kWh Lo 4 Digits 30: MWh kWh Hi 5 Digits 39: Memobus Communication Error Code Transmit Err 40: Heatsink Cooling Fan Operation Time 41: Heatsink Temperature 42: Motor flux calculation value 43: Motor flux current compensation 44: ASR output without filter 45: Feed forward control output 48: Stabilizing speed during regen</p> |

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GPD515/G5 to G7

| GPD515/G5 Parameters | | | G7 Parameters | | |
|----------------------|---|---|---------------|---|--|
| Parameter No. | Name (Digital Operator Display) | Setting or Selection | Parameter No. | Name (Digital Operator Display) | Remarks on Setting or Selection |
| 01-05 | Parameter No. Display Selection Address Display | 0:Parameter Number 1:Memobus Address | o1-05 | LCD Brightness Adjustment | Modified function: Sets the contrast of the digital operator LCD. A setting of "1" is the lightest contrast and a setting of "5" is the darkest contrast. |
| — | — | — | o2-10 | Cumulative Cooling Fan Operation Time Setting | New parameter |
| — | — | — | o2-12 | Fault Trace/Fault History Clear Function | New parameter 0: Disabled no effect. 1: Enabled - resets U2 and U3 monitors, and returns o2-12 to zero. |
| — | — | — | o2-14 | kWh User Monitor Initialization | New parameter 0: Disabled no change. 1: Enabled - Resets U1-29 to zero and returns o2-14 to zero. |
| — | — | — | o3-01 | Copy Function Selection | New parameter 0: COPY SELECT no function 1: INV -> OP READ - All parameters are copied from the Drive to the digital operator. 2: OP -> INV WRITE - All parameters are copied from the digital operator to the Drive. 3: OP<->INV VERIFY - Parameter settings in the Drive are compared to those in the digital operator. NOTE: When using the copy function, the Drive model number o2-04, software number U1-14, and control method A1-02 must match or an error will occur. |
| — | — | — | o3-02 | Copy Allowed Selection Read Allowable | New parameter 0: Disabled - No digital operator copy functions are allowed. 1: Enabled - Copying allowed |

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