

# GS1 Series Introduction



## GS1 Series Drives

| Motor Rating                                      | hp | 0.25 | 0.5 | 1    | 2   |
|---|----|------|-----|------|-----|
|   | kW | 0.2  | 0.4 | 0.75 | 1.5 |
| 115V Single-Phase Input / 230V Three-Phase Output |    | ✓    | ✓   |      |     |
| 230V Single-Phase Input / 230V Three-Phase Output |    | ✓    | ✓   | ✓    |     |
| 230V Three-Phase Input / Output                   |    | ✓    | ✓   | ✓    | ✓   |

## Overview

The GS1 series of AC drives is our most affordable and compact inverter, offering V/Hz control with general purpose application features. These drives can be configured using the built-in digital keypad (which also allows you to set the drive speed, start and stop, and monitor specific parameters) or with the standard RS-485 serial communications port. Standard GS1 features include one analog input, four programmable digital inputs and one programmable normally open relay output.

## Features

- Simple Volts/Hertz control
- Pulse Width Modulation (PWM)
- 3–10 kHz carrier frequency
- IGBT technology
- 130% starting torque at 5Hz
- 150% rated current for one minute
- Electronic overload protection
- Stall prevention
- Adjustable accel and decel ramps
- S-curve settings for acceleration and deceleration
- Manual torque boost
- Automatic slip compensation
- DC braking
- Three skip frequencies
- Trip history
- Integral keypad and speed potentiometer
- Programmable jog speed
- Three programmable preset speeds
- Four programmable digital inputs
- One programmable analog input
- One programmable relay output
- RS-485 Modbus communications up to 19.2K
- Optional Ethernet communications
- DIN rail or panel mountable
- Two-year warranty
- UL/cUL/CE listed

## Accessories

- AC line reactors
- RF filter
- Fuse kits and replacement fuses
- Ethernet interface
- Four and eight-port RS-485 multi-drop termination board
- Serial communication cables available for creating plug and play RS-232/RS-485 networks with AutomationDirect PLCs. See the comm cable matrix ([pg.tGSX-171](#)).
- GSoft drive configuration software
- USB-485M – USB to RS-485 PC adapter (see “Communications Products” chapter for detailed information)
- Detailed descriptions and specifications for GS accessories are available in the “GS/DURApulse Accessories” section.

## Typical Applications

- Conveyors
- Fans
- Pumps
- Shop tools

# GS1 Series Specifications

| 115V/230V CLASS GS1 Series  |                |  |                                 |                                 |   |                                 |   |
|---|----------------|--|---------------------------------|---------------------------------|---|---------------------------------|---|
| Model   |                | GS1-10P2   | GS1-10P5                        | GS1-20P2                        | GS1-20P5  | GS1-21P0                        | GS1-22P0  |
| Price   |                | <--->  | <--->                           | <--->                           | <--->   | <--->                           | <--->   |
| Motor Rating  | HP             | 1/4 hp   | 1/2 hp                          | 1/4 hp                          | 1/2 hp  | 1hp                             | 2hp   |
|   | kW             | 0.2 kW   | 0.4 kW                          | 0.2 kW                          | 0.4 kW  | 0.7 kW                          | 1.5 kW  |
| Rated Output Capacity (200V) kVA  |                | 0.6  | 1.0                             | 0.6                             | 1.0   | 1.6                             | 2.7   |
| Rated Input Voltage   |                | Single-phase: 100–120 VAC<br>±10%;<br>50/60 Hz ±5%   |                                 |                                 | Single/three-phase: 200–240 VAC ±10%; 50/60 Hz<br>±5% |                                 | Three-phase:<br>200–240<br>VAC±10%;<br>50/60 Hz ±5% |
| Rated Output Voltage  |                | Three-phase corresponds to<br>double the input voltage   |                                 |                                 | Three-phase corresponds to the input voltage          |                                 |   |
| Rated Input Current (A)   |                | 6  | 9                               | 4.9/1.9                         | 6.5/2.7   | 9.7/5.1                         | 9   |
| Rated Output Current (A)  |                | 1.6  | 2.5                             | 1.6                             | 2.5   | 4.2                             | 7.0   |
| Watt Loss @ 100% I (W)  |                | 19.2   | 19.2                            | 18.4                            | 26.8  | 44.6                            | 73  |
| Cooling Fan   |                | no   | yes                             | no                              | yes   |                                 |   |
| Weight: kg (lb)   |                | 2.10   | 2.20                            | 2.20                            | 2.20  | 2.20                            | 2.20  |
| Dimensions (HxWxD) (mm [in])  |                | 132.0 x 68.0 x128.1 [5.20 x 2.68 x 5.04]   |                                 |                                 |   |                                 |   |
| Accessories   |                |  |                                 |                                 |   |                                 |   |
| Line Reactor *  |                | LR-1xxPx-xxx (refer to "GS/DURApulse Drives Accessories – Line Reactors" section for exact part #) |                                 |                                 |   |                                 |   |
| RF Filter   |                | RF220X00A  |                                 |                                 |   |                                 |   |
| Fuse Kit **   | Single-Phase** | <a href="#">GS-10P2-FKIT-1P</a>  | <a href="#">GS-10P5-FKIT-1P</a> | <a href="#">GS-20P2-FKIT-1P</a> | <a href="#">GS-20P5-FKIT-1P</a>                       | <a href="#">GS-21P0-FKIT-1P</a> | –   |
|   | Three-Phase    | –  | –                               | <a href="#">GS-20P2-FKIT-3P</a> | <a href="#">GS-20P5-FKIT-3P</a>                       | <a href="#">GS-21P0-FKIT-3P</a> | <a href="#">GS-22P0-FKIT-3P</a>                     |
| Replacement Fuses   | Single-Phase   | <a href="#">GS-10P2-FKIT-1P</a>  | <a href="#">GS-10P5-FKIT-1P</a> | <a href="#">GS-20P2-FUSE-1P</a> | <a href="#">GS-20P5-FKIT-1P</a>                       | <a href="#">GS-21P0-FUSE-1P</a> | –   |
|   | Three-Phase    | –  | –                               | <a href="#">GS-20P2-FUSE-3P</a> | <a href="#">GS-20P5-FKIT-3P</a>                       | <a href="#">GS-21P0-FUSE-3P</a> | <a href="#">GS-22P0-FUSE-3P</a>                     |
| Ethernet Communications module for GS Series Drives (DIN rail mounted)                        |                | <a href="#">GS-EDRV100</a>   |                                 |                                 |   |                                 |   |
| USB to RS-485 PC Communication Adapter  |                | <a href="#">USB-485M</a>   |                                 |                                 |   |                                 |   |
| RS-485 Communication Distribution Module (for creating plug and play RS-485 networks)         |                | <a href="#">ZL-CDM-RJ12X4</a> / <a href="#">ZL-CDM-RJ12X10</a>                                     |                                 |                                 |   |                                 |   |
| RS-485 Serial Cable, GS Drive to DL06/D2-260  |                | <a href="#">GS-485HD15-CBL-2</a>   |                                 |                                 |   |                                 |   |
| RS-485 Serial Cable, GS Drive to ZIPLink CDM Module   |                | <a href="#">GS-485RJ12-CBL-2</a>   |                                 |                                 |   |                                 |   |
| Software  |                | <a href="#">GSOFT</a>  |                                 |                                 |   |                                 |   |
| * GS1-1xxx drives require 115V class input line reactors and 230V class output line reactors. |                |  |                                 |                                 |   |                                 |   |
| ** Single-phase fuse kits and fuses are used only with GS1-1xxx drives.                       |                |  |                                 |                                 |   |                                 |   |

# GS1 General Specifications

| General Specifications         |                               |                 |  |
|--------------------------------|-------------------------------|-----------------|--|
| Control Characteristics        |                               |                 |  |
| Control System                 |                               |                 | Sinusoidal Pulse Width Modulation, carrier frequency 3kHz–10kHz  |
| Rated Output Frequency         |                               |                 | 1.0 to 400.0 Hz limited to 9999 motor rpm  |
| Output Frequency Resolution    |                               |                 | 0.1 Hz   |
| Overload Capacity              |                               |                 | 150% of rated current for 1 minute   |
| Torque Characteristics         |                               |                 | Includes manual torque boost, auto-slip compensation, starting torque 130% @ 5.0Hz   |
| DC Braking                     |                               |                 | Operation frequency 60–0Hz, 0–30% rated voltage. Start time 0.0–5.0 seconds. Stop time 0.0–25.0 seconds  |
| Acceleration/Deceleration Time |                               |                 | 0.1 to 600 seconds (can be set individually)   |
| Voltage/Frequency Pattern      |                               |                 | V/F pattern adjustable. Settings available for Constant Torque – low and high starting torque, Variable Torque – low and high starting torque, and user configured   |
| Stall Prevention Level         |                               |                 | 20 to 200% of rated current  |
| Operation Specification        |                               |                 |  |
| Inputs                         | Frequency Setting             | Keypad          | Setting by <UP> or <DOWN> buttons or potentiometer   |
|                                |                               | External Signal | Potentiometer - 5kΩ 0.5W, 0 to 10 VDC (input impedance 47kΩ), 0 to 20 mA / 4 to 20 mA (input impedance 250Ω), Multi-function inputs 1 to 3 (3 steps, JOG, UP/DOWN command), RS485 communication setting  |
|                                | Operation Setting             | Keypad          | Setting by <RUN>, <STOP> buttons   |
|                                |                               | External Signal | DI1, DI2, DI3, DI4 can be combined to offer various modes of operation, RS485 communication port   |
| Outputs                        | Multi-Function Input Signal   |                 | Multi-step selection 0 to 3, Jog, Accel/decel inhibit, First/second accel/decel switch, Counter, PLC operation, External base block (N.C., N.O.) selection   |
|                                | Multi-Function Output Signal  |                 | AC drive operating, Frequency attained, Non zero speed, Base Block, Fault indication, Local/remote indication, PLC operation indication  |
|                                | Operating Functions           |                 | Automatic voltage regulation, S-curve, Over-voltage stall prevention, DC braking, Fault records, Adjustable carried frequency, Starting frequency setting of DC braking, Over-current stall prevention, Momentary power loss restart, Reverse inhibition, Frequency limits, Parameter lock/reset |
| Protective Functions           |                               |                 | Overcurrent, overvoltage, undervoltage, electronic thermal motor overload, Overheating, Overload, Self testing   |
| Operator Interface             | Operator Devices              |                 | 5-key, 4-digit, 7-segment LED, 3 status LEDs, potentiometer  |
|                                | Programming                   |                 | Parameter values for setup and review, fault codes   |
|                                | Parameter Monitor             |                 | Master Frequency, Output Frequency, Scaled Output Frequency, Output Voltage, DC Bus Voltage, Output Direction, Trip Event Monitor, Trip History Monitor  |
|                                | Key Functions                 |                 | RUN/STOP, DISPLAY/RESET, PROGRAM/ENTER, <UP>, <DOWN>   |
| Environment                    | Enclosure Rating              |                 | Protected chassis, IP20  |
|                                | Ambient Operating Temperature |                 | -10° to 40°C (14°F to 104°F) w/o derating  |
|                                | Storage Temperature           |                 | -20° to 60 °C (-4°F to 140°F) during short-term transportation period)   |
|                                | Ambient Humidity              |                 | 0 to 90% RH (non-condensing)   |
|                                | Vibration                     |                 | 9.8 m/s <sup>2</sup> (1G), less than 10Hz; 5.88 m/s <sup>2</sup> (0.6G) 20 to 50 Hz  |
|                                | Installation Location         |                 | Altitude 1000m or lower above sea level, keep from corrosive gas, liquid and dust  |
| Options                        |                               |                 | Programming Software (GSOFT)   |

# GS1 Specifications - Installation

Understanding the installation requirements for your GS1 drive will help to ensure that it will operate within its environmental and electrical limits.

## NOTE:

Never use only this catalog for installation instructions or operation of equipment; refer to the user manual, GS1-M.

## Environmental Specifications

|   |  |
|---|--|
| <b>Protective Structure</b> <sup>1</sup>          | IP20   |
| <b>Ambient Operating Temperature</b> <sup>2</sup> | -10 to 40 °C<br>(14 to 104 °F)                                       |
| <b>Storage Temperature</b> <sup>3</sup>           | -20 to 60°C<br>(-4 to 140 °F)  |
| <b>Humidity</b>                                   | up to 90%<br>(no condensation)                                       |
| <b>Vibration</b> <sup>4</sup>                     | 5.9 m/s <sup>2</sup> (0.6g),<br>10 to 55 Hz                          |
| <b>Location</b>                                   | Altitude 1,000 m or less,<br>indoors (no corrosive<br>gases or dust) |

1: Protective structure is based upon EN60529

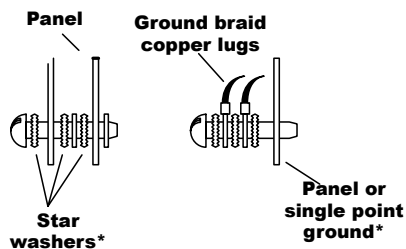
2: The ambient temperature must be in the range of -10 to 40 °C (14 to 104 °F). If the range will be up to 50 °C (122 °F), you will need to set the carrier frequency to 3.0 kHz and derate the output current to 80% or less. See our web site for derating curves.

3: The storage temperature refers to the short-term temperature during transport.

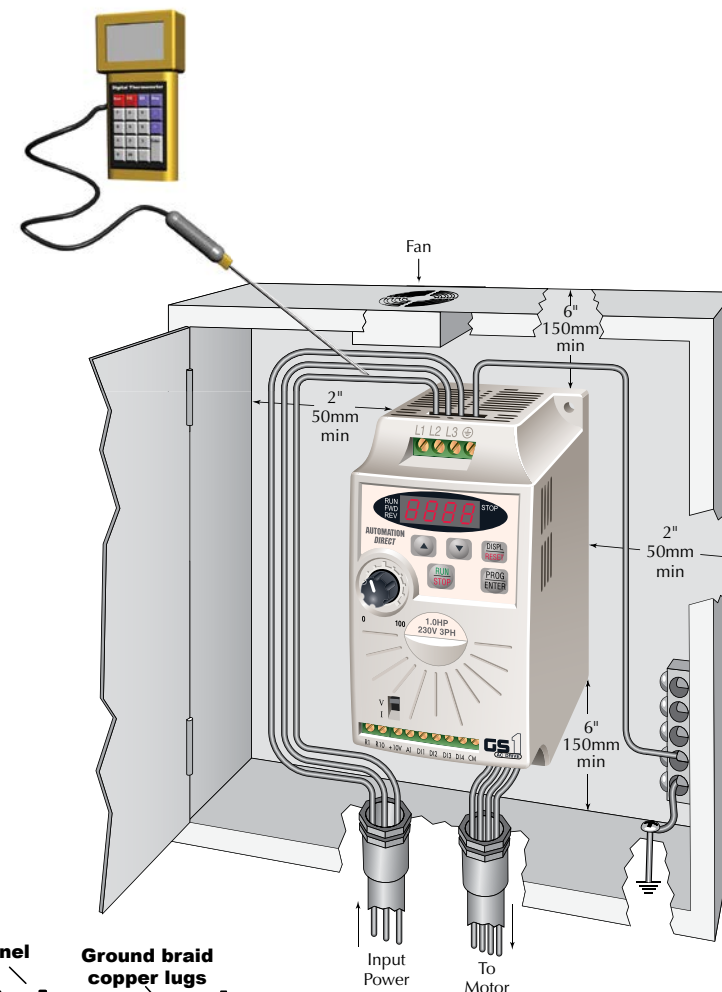
4: Conforms to the test method specified in JIS C0911 (1984)

## Watt Loss Chart

| GS1 Drive Model | At full load |
|-----------------|--------------|
| GS1-10P2        | 19.2         |
| GS1-10P5        | 19.2         |
| GS1-20P2        | 18.4         |
| GS1-20P5        | 26.8         |
| GS1-21P0        | 44.6         |
| GS1-22P0        | 73           |

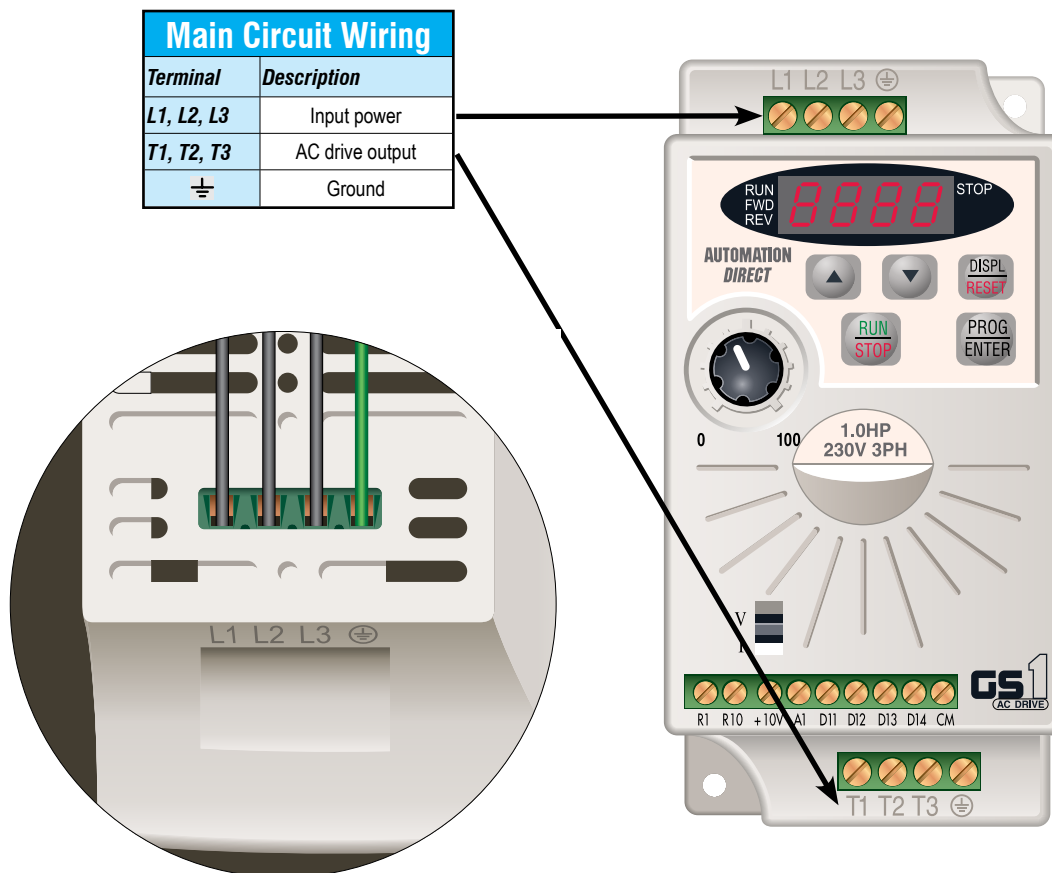


\* For painted sub-panels, scrape the paint from underneath the star washers before tightening them.



**WARNING: AC DRIVES GENERATE A LARGE AMOUNT OF HEAT, WHICH MAY DAMAGE THE AC DRIVE. AUXILIARY COOLING METHODS ARE TYPICALLY REQUIRED IN ORDER TO NOT EXCEED MAXIMUM AMBIENT TEMPERATURES.**

# GS1 Specifications - Terminals



| Control Circuit Terminals |  |
|---------------------------|--|
| Terminal Symbol           | Description                            |
| R10                       | Relay output 1 normally open           |
| R1                        | Relay output 1 common                  |
| DI1                       | Digital input 1                        |
| DI2                       | Digital input 2                        |
| DI3                       | Digital input 3                        |
| DI4                       | Digital input 4                        |
| AI <sup>1</sup>           | Analog input                           |
| +10V                      | Internal power supply (10 mA @ 10 VDC) |
| CM                        | Common                                 |

<sup>1</sup> 0 to +10 VDC, 0 to 20 mA, or 4 to 20 mA input represents zero to maximum output frequency.

**Note:** Use twisted-shielded, twisted-pair or shielded-lead wires for the control signal wiring. It is recommended all signal wiring be run in a separate steel conduit. The shield wire should only be connected at the drive. Do not connect shield wire on both ends.

# GS1 Specifications - Basic Wiring Diagram

**Note:** Users **MUST** connect wiring according to the circuit diagram shown below. (Refer to user manual GS1-M for additional specific wiring information.)

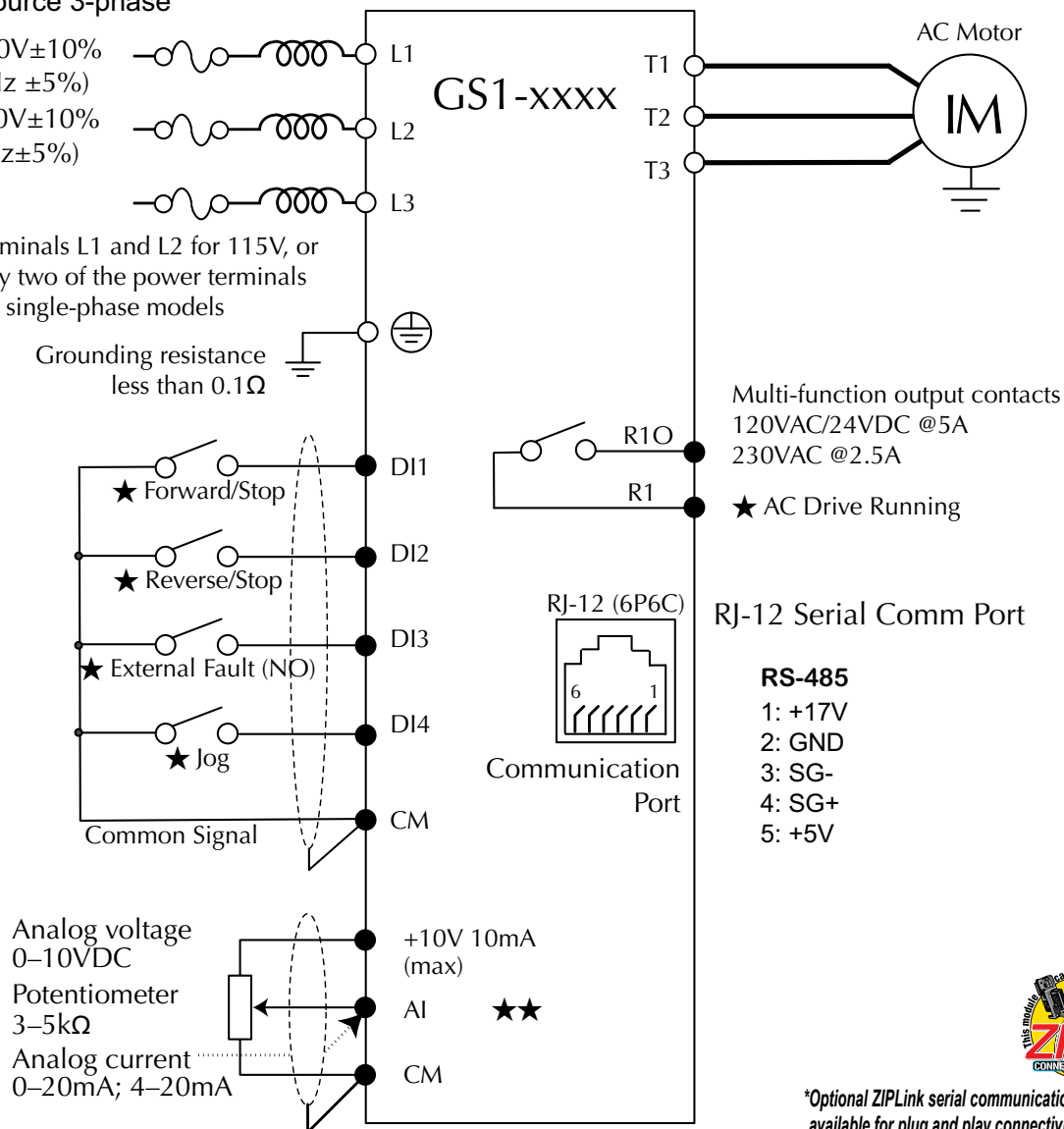
**Note:** Please refer to the following pages for explanations and information regarding line reactors (pg.tGSX-118) and RF filters (pg.tGSX-159).

## Power Source 3-phase\*

100–120V±10%  
(50/60Hz ±5%)  
200–240V±10%  
(50/60Hz±5%)

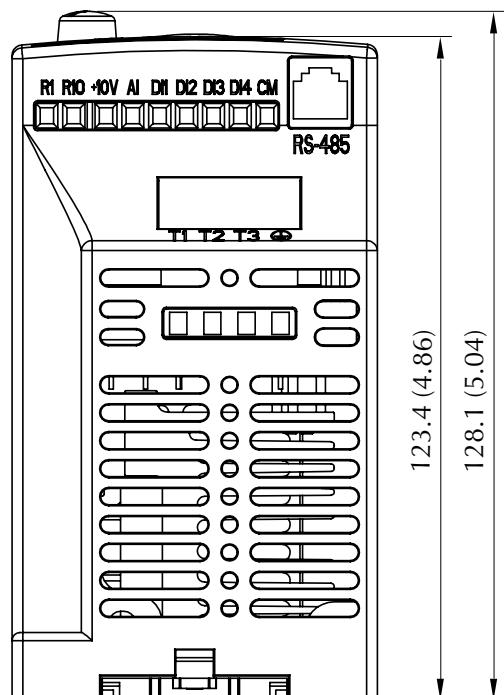
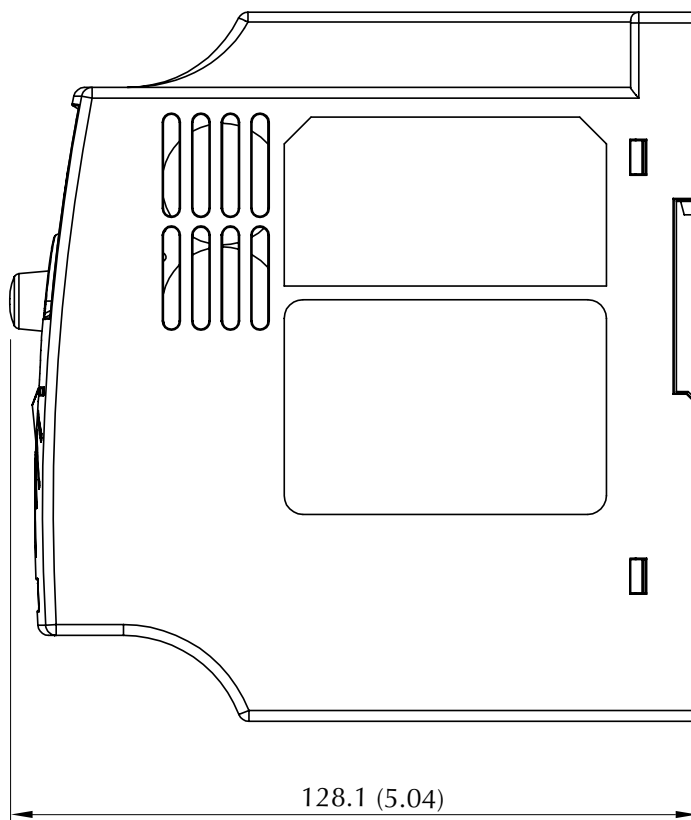
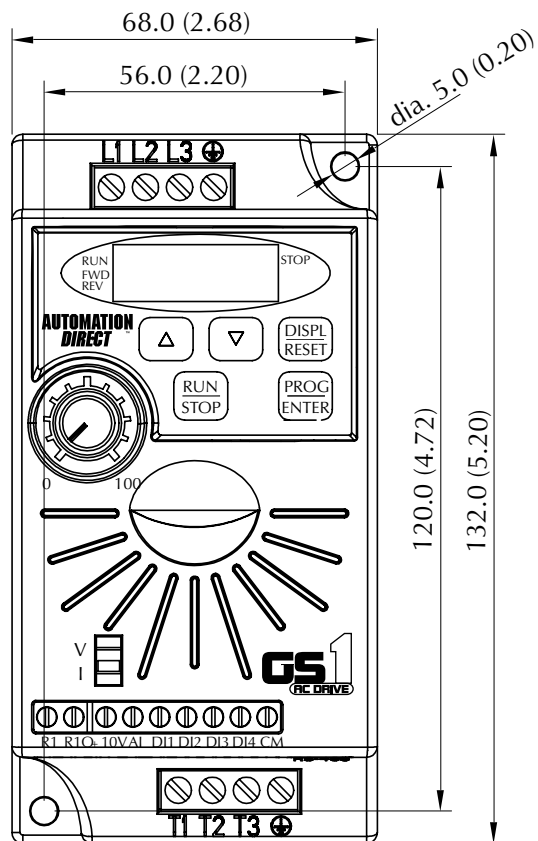
\* Use terminals L1 and L2 for 115V, or select any two of the power terminals for 230V single-phase models

Grounding resistance  
less than 0.1Ω



\*Optional ZIPLink serial communication cables available for plug and play connectivity to AutomationDirect PLCs. See the comm cable selection matrix on page pg.tGSX-17.

# GS1 Specifications - Dimensions



Unit: mm (in)





# Wiring Solutions

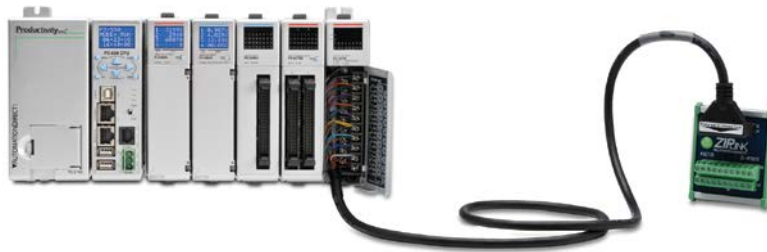
## Wiring Solutions using the ZIPLink Wiring System

**ZIPLink**s eliminate the normally tedious process of wiring between devices by utilizing prewired cables and DIN rail mount connector modules. It's as simple as plugging in a cable connector at either end or terminating wires at only one end. Prewired cables keep installation clean and efficient, using half the space at a fraction of the cost of standard terminal blocks. There are several wiring solutions available when using the **ZIPLink** System ranging from PLC I/O-to-**ZIPLink** Connector Modules that are ready for field

termination, options for connecting to third party devices, GS, DuraPulse and SureServo Drives, and specialty relay, transorb and communications modules. Pre-printed I/O-specific adhesive label strips for quick marking of **ZIPLink** modules are provided with **ZIPLink** cables. See the following solutions to help determine the best **ZIPLink** system for your application.

### **Solution 1: DirectLOGIC, CLICK and Productivity I/O Modules to ZIPLink Connector Modules**

When looking for quick and easy I/O-to-field termination, a **ZIPLink** connector module used in conjunction with a prewired **ZIPLink** cable, consisting of an I/O terminal block at one end and a multi-pin connector at the other end, is the best solution.



Using the PLC I/O Modules to **ZIPLink** Connector Modules selector tables located in this section,

- 1. Locate your I/O module/PLC.
- 2. Select a **ZIPLink** Module.
- 3. Select a corresponding **ZIPLink** Cable.

### **Solution 2: DirectLOGIC, CLICK and Productivity I/O Modules to 3rd Party Devices**

When wanting to connect I/O to another device within close proximity of the I/O modules, no extra terminal blocks are necessary when using the **ZIPLink** Pigtail Cables. **ZIPLink** Pigtail Cables are prewired to an I/O terminal block with color-coded pigtail with soldered-tip wires on the other end.



Using the I/O Modules to 3rd Party Devices selector tables located in this section,

- 1. Locate your PLC I/O module.
- 2. Select a **ZIPLink** Pigtail Cable that is compatible with your 3rd party device.

### **Solution 3: GS Series and DURAPULSE Drives Communication Cables**

Need to communicate via Modbus RTU to a drive or a network of drives?

**ZIPLink** cables are available in a wide range of configurations for connecting to PLCs and *SureServo*, *SureStep*, *Stellar Soft Starter* and AC drives. Add a **ZIPLink** communications module to quickly and easily set up a multi-device network.

Using the Drives Communication selector tables located in this section,

- 1. Locate your Drive and type of communications.
- 2. Select a **ZIPLink** cable and other associated hardware.







# Wiring Solutions

## **Solution 4: Serial Communications Cables**

ZIPLink offers communications cables for use with *Direct*LOGIC, CLICK, and Productivity CPUs, that can also be used with other communications devices. Connections include a 6-pin RJ12 or 9-pin, 15-pin and 25-pin D-sub connectors which can be used in conjunction with the RJ12 or D-Sub Feedthrough modules.

Using the **Serial Communications Cables** selector table located in this section,

- 1. Locate your connector type
- 2. Select a cable.



## **Solution 5: Specialty ZIPLink Modules**

For additional application solutions, ZIPLink modules are available in a variety of configurations including stand-alone relays, 24VDC and 120VAC transorb modules, D-sub and RJ12 feedthrough modules, communication port adapter and distribution modules, and SureServo 50-pin I/O interface connection.

Using the **ZIPLink Specialty Modules** selector table located in this section,

- 1. Locate the type of application.
- 2. Select a ZIPLink module.



## **Solution 6: ZIPLink Connector Modules to 3rd Party Devices**

If you need a way to connect your device to terminal blocks without all that wiring time, then our pigtail cables with color-coded soldered-tip wires are a good solution. Used in conjunction with any compatible ZIPLink Connector Modules, a pigtail cable keeps wiring clean and easy and reduces troubleshooting time.

Using the **Universal Connector Modules and Pigtail Cables** table located in this section,

- 1. Select module type.
- 2. Select the number of pins.
- 3. Select cable.





# Motor Controller Communication

| AC Drive / Motor Controller (GS/DuraPulse) ZIPLink Selector |                 |                    |   |                   |                           |                     |                              |         |  |  |  |
|---|-----------------|--------------------|---|-------------------|---------------------------|---------------------|------------------------------|---------|--|--|--|
| AC Drive / Controller                                       |                 | Communications     |   |                   | ZIPLink Cable             |                     |                              |         |  |  |  |
| Controller  | Comm Port Type  | Network/Protocol   | Connects to   | Comm Port Type    | Cable<br>(2 meter length) | Cable<br>Connectors | Other Hard-<br>ware Required |         |  |  |  |
| GS1   | RJ12            | RS-485 Modbus RTU  | BRX MPUs  | RS-485, 3-Pin     | ZL-RJ12-CBL-2P            | RJ12 to pigtail     | N/A                          |         |  |  |  |
|   |                 |                    | P1 CPUs   | RS-485            |                           |                     |                              |         |  |  |  |
|   |                 |                    | P2 CPUs   |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | P3 CPUs   |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | P2-SCM  | RS-485, 4-Pin     |                           |                     |                              |         |  |  |  |
|   |                 |                    | P3-SCM  |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | DL06 PLCs   | Port 2 (HD15)     | GS-485HD15-CBL-2          | RJ12 to HD15        |                              |         |  |  |  |
|   |                 |                    | D2-260, D2-262 CPU  | RJ12              | GS-EDRV-CBL-2             | RJ12 to RJ12        |                              |         |  |  |  |
|   |                 |                    | GS-EDRV100  |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | ZL-CDM-RJ12Xxx *  | RJ12              | GS-485RJ12-CBL-2          | RJ12 to 5-pin plug  |                              |         |  |  |  |
| FA-ISOCOCON   | 5-pin connector | GS-ISOCOCON-CBL-2  |   |                   |                           |                     |                              |         |  |  |  |
| GS2   | RJ12            | RS-232 Modbus RTU  | BRX MPUs  | RS-232/485, 3-Pin | ZL-RJ12-CBL-2P            | RJ12 to pigtail     | N/A                          |         |  |  |  |
|   |                 |                    | P1 CPUs   | RS-485            |                           |                     |                              |         |  |  |  |
|   |                 |                    | P2 CPUs   |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | P3 CPUs   |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | P2-SCM  | Ports 1, 2 & 3    |                           |                     |                              |         |  |  |  |
|   |                 |                    | P3-SCM  | Ports 1 to 4      |                           |                     |                              |         |  |  |  |
|   |                 |                    | CLICK PLCs  | Port 2 (RJ12)     | GS-RJ12-CBL-2             | RJ12 to RJ12        |                              |         |  |  |  |
|   |                 |                    | DL05 PLCs   |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | DL06 PLCs   | Port 2 (HD15)     |                           |                     |                              |         |  |  |  |
|   |                 |                    | D2-250-1 CPU  |                   |                           |                     |                              |         |  |  |  |
|   |                 | D2-260, D2-262 CPU |   |                   |                           |                     |                              |         |  |  |  |
|   |                 | D4-450, D4-454 CPU | Port 3 (25-pin)   |                   |                           |                     |                              | FA-15HD |  |  |  |
|   |                 |                    |   |                   |                           | FA-CABKIT           |                              |         |  |  |  |
|   |                 | RS-485 Modbus RTU  | BRX MPUs  | RS-232/485, 3-Pin | ZL-RJ12-CBL-2P            | RJ12 to pigtail     | N/A                          |         |  |  |  |
|   |                 |                    | P1 CPUs   | RS-485            |                           |                     |                              |         |  |  |  |
|   |                 |                    | P2 CPUs   |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | P3 CPUs   |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | P2-SCM  | RS-485, 4-Pin     |                           |                     |                              |         |  |  |  |
|   |                 |                    | P3-SCM  |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | DL06 PLCs   | Port 2 (HD15)     | GS-485HD15-CBL-2          | RJ12 to HD15        |                              |         |  |  |  |
|   |                 |                    | D2-260, D2-262 CPU  | RJ12              | GS-EDRV-CBL-2             | RJ12 to RJ12        |                              |         |  |  |  |
|   |                 |                    | GS-EDRV100  |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | ZL-CDM-RJ12Xxx *  | RJ12              | GS-485RJ12-CBL-2          | RJ12 to 5-pin plug  |                              |         |  |  |  |
| FA-ISOCOCON   | 5-pin connector | GS-ISOCOCON-CBL-2  |   |                   |                           |                     |                              |         |  |  |  |
| DuraPulse<br>(GS3)  | RJ12            | RS-485 Modbus RTU  | BRX MPUs  | RS-485, 3-Pin     | ZL-RJ12-CBL-2P            | RJ12 to pigtail     | N/A                          |         |  |  |  |
|   |                 |                    | P1 CPUs   | RS-485            |                           |                     |                              |         |  |  |  |
|   |                 |                    | P2 CPUs   |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | P3 CPUs   |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | P2-SCM  | RS-485, 4-Pin     |                           |                     |                              |         |  |  |  |
|   |                 |                    | P3-SCM  |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | DL06 PLCs   | Port 2 (HD15)     | GS-485HD15-CBL-2          | RJ12 to HD15        |                              |         |  |  |  |
|   |                 |                    | D2-260, D2-262 CPU  | RJ12              | GS-EDRV-CBL-2             | RJ12 to RJ12        |                              |         |  |  |  |
|   |                 |                    | GS-EDRV100  |                   |                           |                     |                              |         |  |  |  |
|   |                 |                    | ZL-CDM-RJ12Xxx *  | RJ12              | GS-485RJ12-CBL-2          | RJ12 to 5-pin plug  |                              |         |  |  |  |
|   |                 |                    | FA-ISOCOCON   | 5-pin Connector   | GS-ISOCOCON-CBL-2         |                     |                              |         |  |  |  |
|   |                 |                    | * When using the ZL-CDM-RJ12Xxx ZIPLink Communication Distribution Module, replace the lowercase xx with the number of RJ12 ports, i.e. 4 for four ports or 10 for ten ports. (ex: ZL-CDM-RJ12X4 or ZL-CDM-RJ12X10) |                   |                           |                     |                              |         |  |  |  |

\* When using the ZL-CDM-RJ12Xxx ZIPLink Communication Distribution Module, replace the lowercase xx with the number of RJ12 ports, i.e. 4 for four ports or 10 for ten ports. (ex: ZL-CDM-RJ12X4 or ZL-CDM-RJ12X10)