⊕ AIPHONE®

MULTI-TENANT ENTRY SECURITY SYSTEM
GH Open Voice
Audio & Video Series

• High Resolution Color Video Monitors for Added Security •

TENANT
STATION

SECURITY
GUARD
STATION

ENTRANCE
STATION

GH Multi-Tenant Entry Security System

Solutions for All Types of Residential & Commercial Buildings

In today's society, an increasing demand is placed on building security. An entry system must have certain criteria: it needs to match a tenant's lifestyle, must be reliable, simple to use, and economical to install. Aiphone's GH System meets all of these demands.

The GH System offers simple hands-free tenant stations, provides unparalleled reliability, and is backed by the best support in the industry. This system can accommodate up to 500 units, 16 entrance panels, and 4 security guard stations. Installation is quick and easy using no more than four wires, and the included programming software is intuitive to use.

When you use Aiphone, you're using products you can count on from a name you can trust.

AIPHONE GH-1KD

Tenant Station

Security Guard Station

Entrance Station

The GH System offers several benefits over other traditional telephone-style entry systems. It's a direct connect system that does not require an outside phone line at the tenant location and will never incur additional phone company charges. This series improves security by requiring individuals to be at the tenant station to answer calls and grant access. In addition, the GH system offers security guard stations, open voice communication, and tenant monitoring of the entry.

TENANT STATION

Select from five styles

GH-1KD
Hands-free Color
Monitor Tenant
Station *(white)*

GH-1KDS
Hands-free Color
Monitor Tenant
Station *(silver)*

GH-1MD
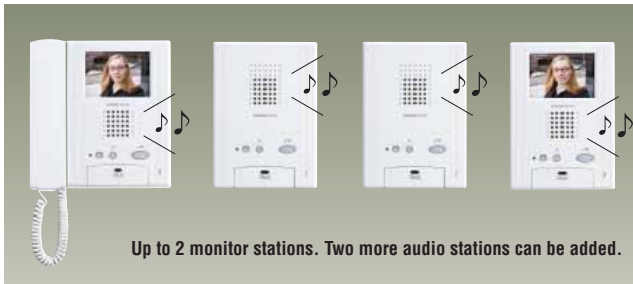Hands-free B&W
Monitor Tenant
Station *(white)*

GH-1AD
Hands-free
Audio Tenant
Station *(white)*

GH-1KD with GH-HS
Hands-free Color Monitor
Tenant Station with
Optional Handset *(white)*

Up to 4 Units per Tenant

A maximum of 4 units per tenant allows calls from an entry to be answered from almost anywhere.

Up to 2 monitor stations. Two more audio stations can be added.

Entrance Monitoring

Tenants can monitor the entry areas at any time. A call from any entry panel will have priority over tenant monitoring.

Compact, Elegant & Durable

The hands-free color video and audio stations offer compact, elegant styling, which is backed by one of the best warranties in the industry.

Handset Available

Optional handset is available for privacy (GH-1KD only)

Other Features

- **Push-to-talk Function**

  For noisy environments, communication to the entry panel from the tenant can be push-to-talk instead of hands-free.

- **External Signaling Device**

  A device*, such as a buzzer, a light, or a doorbell can be activated when the tenant station receives a call.
  ＊Requires GH-RY Relay and #238150 connector (not included).

- **Service Button**

  An open contact function* that can be used to turn on lights or call an elevator, etc.
  ＊Requires #238150 connector (not included). Not available with GH-1MD.

- **Emergency Call to Security Guard Station**

  A separate switch* can be used to trigger calls to the security guard station.
  ＊Use GFK-PS or any N/C switch.

- **Automatic Door Release**

  The option to allow a tenant to automatically release the door lock when their unit is called.
  **＊Requires #238150 connector (not included).
   Not available when service button is used.**

- **Call Tone Off LED**

  LED blinks while call tone is muted.

- **Doorbell**

  An optional doorbell can be connected at each tenant's door.

Color Video Helps Identify Visitors

- Color video monitor adds more security to individual tenants
- Available with hands-free, full color video monitors
- Tenants can clearly identify visitors using the high resolution TFT monitors

Installer-Friendly Terminal Block

- The terminal block can be removed from the station unit
- Makes installation easier and protects the station against theft during installation
- Available with GH-1KD, GH-1KDS, GH-1AD and GH-MK.

TENANT
STATION

SECURITY
GUARD
STATION

ENTRANCE
STATION

ENTRANCE STATION

◉ 2 Styles to Choose From

An entry panel can be configured in two ways: Digital Name Scrolling or Direct-Select. Digital Name Scrolling entry panels have a VFD* display for tenant names, 10-key pad for calling, and is an excellent solution for larger complexes. A Direct-Select entry panel can be configured to the exact number of tenants in a building and features a name card next to each button for identification.

*Vacuum Fluorescent Display

Direct-select call buttons   Digital Name Scrolling

◉ Always Crystal Clear Color Video

A built-in white illumination LED automatically activates in low light and night time conditions to provide clear video images to the tenant stations.

◉ Convenient Tenant Search

The digital scrolling entry panel allows visitors to easily find tenants by name or unit number (directory search by first letter is also available).

◉ Customizable Welcome Message

Tenants are able to enter their own welcome message. Up to 160 alpha-numeric characters can be used to greet visitors and give instructions on the entry's VFD panel.

◉ Card Readers, Access Codes & Postal Lock

Up to 20 access codes are available to activate an electric door strike or magnetic lock. A module with an embedded HID® card reader is also available to allow tenants to use proximity cards for access into the building. The postal lock modules allow postal workers to gain entry access as well (GF-OP2, GF-OP3).


Easy Installation

◉ Installation/Setup is Quick & Easy

• Simple wiring: 2 conductor for audio and 2 conductor for video

• Tenant data can be transferred from the first entrance panel to any additional entry panels and security guard stations

• GH-NS and GH-MK can be programmed via a PC

• All required software is included
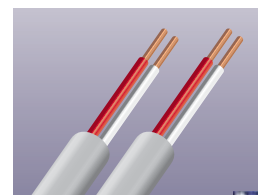
2 cond. for audio & 2 cond. for video

PC programmable

TENANT
STATION

SECURITY
GUARD
STATION

ENTRANCE
STATION
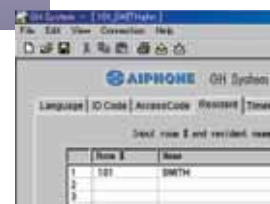
SECURITY GUARD STATION

Visitor Screening

All calls from entry panels can be routed through the security guard station(s). The security guard station can allow visitors to enter or transfer calls to the tenant(s).

Tenant Station

Entrance Station

Security Guard Station

Calls automatically
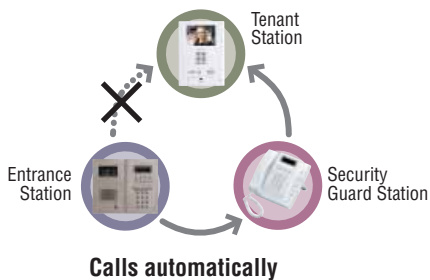
Caller ID with Call Back

All calls to the security guard station display the name of the party calling, and up to 20 missed calls can be stored. Callback from the security guard/concierge is simply a matter of pressing the call button while a tenant's name is displayed.

MISSED CALLS

Full System Connectivity

The security guard station can place and receive calls from all entry panels, tenant stations, and any other security guard stations.

Other Features

• **Receives Emergency Call from Tenant Stations**
A separate switch* at the tenant station activates calls at the security guard station.
***Use GFK-PS or any N/C switch.**

• **Doorbell**
An optional doorbell can be connected.

• **Service Button**
An open contact function* that can be used to turn on lights or call an elevator, etc.
***Requires #238150 connector (not included). Not available with GH-1MD.**

• **External Signaling Device**
A device* such as a buzzer, a light, or a doorbell can be activated when the security guard station receives a call.
***Requires GH-RY Relay and #238150 connector (not included).**

• **Wall & Desktop Installation**

GH-MK

GH-MK with GFW-S

SYSTEM COMPONENTS

Entrance Station

Direct-Select Call Button

- Color camera
- Zinc die-cast panel
- Audio module
- In-use LED
- Call buttons
- Directory card & cover

Digital Name Scrolling

- VFD Display
- Directory scroll, Cancel & Call buttons
- Keypad illumination
- Access control & tenant number dialing keypad

Audio Module

GH-DP
Audio Panel

GH-DA
Audio Module

Digital Name Scrolling Module

GF-NSP
LCD Directory Panel

GH-NS
LCD Directory

Front Frames & Back Boxes

GF-2F
2-Module Front Frame

GF-3F
3-Module Front Frame

GF-nH
Rain Hood

Video Module

GF-VP
Video Panel

GH-VA
Video Module

GF-10KP
Digital Keypad Panel

GH-10K
Digital Keypad

GF-2B
2-Module Back Box

GF-3B
3-Module Back Box

GF-nHB
Hooded Box for surface mounting

Call Switch Module

GF-1P
1-Call Panel

GF-2P
2-Call Panel

GF-3P
3-Call Panel

GF-4P
4-Call Panel

GH-SW
Call Switch Module
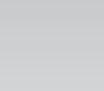
Options

GF-AP
Address Panel

GH-AD
Address Module

GF-BP
Blank Panel

GF-HID
ProxPoint Plus® Embedded HID® Card Reader

GF-HID-I
i-CLASS™ Embedded HID® Card Reader

GF-OP2
2-Frame Postal Lock Module

GF-OP3
3-Frame Postal Lock Module

GF-C
30" Internal Connector for expanded direct select panels

Entrance Station Components

Number of Call Buttons		4	8	12	16	20	24	25-48	GH-NS & GF-10K
(1)	GH-VA / GF-VP	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	For more than 24 units, Aiphone recommends using the Digtial Name Scrolling Entry Panel	1 / 1
(2)	GH-DA / GH-DP	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1		1 / 1
(3)	GH-SW / GF-4P	1 / 1	2 / 2	3 / 3	4 / 4	5 / 5	6 / 6		–
(4)	GH-2F / GF-2B	–	2 / 2	–	–	–	–		2 / 2
(5)	GH-3F / GF-3B	1 / 1	–	2 / 2	2 / 2	3 / 3	3 / 3		–
(6)	GF-BP	–	–	–	–	1	1		–
	GH-AD / GF-AP	–	–	1 / 1	–	1 / 1	–		–
(7)	GH-NS / GF-NSP	–	–	–	–	–	–		1 / 1
	GH-10K / GF-10KP	–	–	–	–	–	–		1 / 1

(1) Video   (2) Audio   (3) Call Switch   (4) 2-Module Front Frame   (5) 3-Module Front Frame   (6) Option   (7) Digital Name Scroll

SYSTEM COMPONENTS

Tenant Station

GH-1KD
Hands-free Color
Monitor Tenant
Station *(white)*

GH-1KDS
Hands-free Color
Monitor Tenant
Station *(silver)*

GH-1MD
Hands-free B&W
Monitor Tenant
Station *(white)*

GH-1AD
Hands-free
Audio Tenant
Station *(white)*

GH-1KD with GH-HS
Hands-free Color Monitor
Tenant Station with
Optional Handset *(white)*

Security Guard Station

GH-MK
Security Guard/
Concierge Station

GFW-S
Desktop Stand
for GH-MK

Entry Panel Kits

GHA-DES
Audio, VFD Directory,
and Digital Keypad Modules

GHV-DES
Video, Audio, VFD Directory,
and Digital Keypad Modules

Expanded Control Units

GH-BCX
Expanded Audio Control Unit
(mounting rail included)

GH-VBX
Expanded Video Control Unit
(mounting rail included)

Control Units

GH-BC
Audio Control Unit

GH-VBC
Video Control Unit

GH-4Z
4-Tenant Video
Control Unit

Power Supplies, Options & Accessories

PS-2410LC
Power Supply,
120V AC

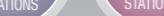**PS-2410LD**
Power Supply,
220-240V AC

GH-RY
External
Activation Relay

W-DIN11
DIN Mounting Rail
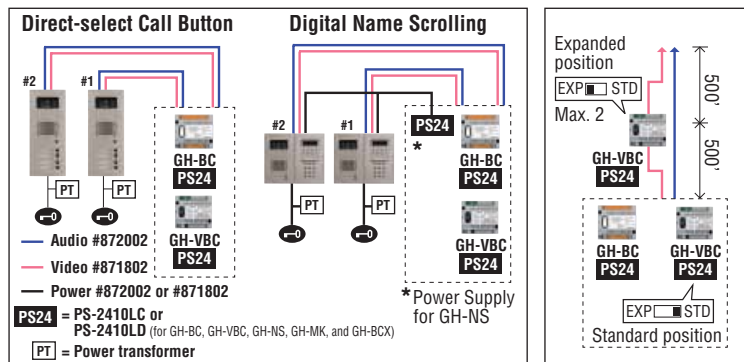for GH control units

#238150
Option
Connector

SYSTEM CONFIGURATION

Standard System

5 ENTRANCE STATIONS

2 SECURITY GUARD STATIONS

48 TENANT STATIONS

Homerun Wiring with GH-4Z
Trunk line No. 1

NOTE: Do not mix wiring methods on the same trunk line between looped and homerun.

Loop Wiring
Trunk line No. 6

VIDEO #871802 & AUDIO #872002

VIDEO #871802 & AUDIO #872002

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VIDEO #871802 & AUDIO #872002

VIDEO #871802 & AUDIO #872002

GH-1KD

GH-1MD

GH-4Z
4-Tenant Video Junction Unit Max. 6/Trunk

GH-1KD

GH-1KD

GH-1KD

AUDIO #872002

VIDEO #871802 & AUDIO #872002

VIDEO #871802 & AUDIO #872002

VIDEO #871802

VIDEO #871802

VIDEO #871802 & AUDIO #872002

GH-4Z

GH-1KD

GH-1MD

Doorbell

Doorbell

GH-1KD with **GH-HS**

GH-1KD

GH-1AD

GH-1AD

GH-1KD

Loop Wiring is not possible with GH-1MD

Max. 4 stations (up to 2 monitor stations)

No. 2~5

VIDEO #871802 & AUDIO #872002

500'/20AWG (1 Monitor/Tenant)
500'/18AWG (2 Monitor/Tenant)

VIDEO #871802 & AUDIO #872002

VIDEO #871802 & AUDIO #872002

VIDEO #871802 & AUDIO #872002

980'/20AWG

GH-BC PS24

GH-VBC PS24

AUDIO #872002

AUDIO #872002

PS24

POWER #871802

POWER #871802

POWER #871802

PS24

POWER #871802

POWER #871802

PS24 = PS-2410LC or PS-2410LD (for GH-BC, GH-VBC, GH-NS, GH-MK, and GH-BCX)

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GH-MK with **GFW-S**

GH-MK with **GFW-S**

Entrance Station: Max. 5 (3/Trunk)

Security Guard Station: Max. 2

Wiring Distance

	22 AWG	20 AWG	18 AWG
GH-BC to Distribution point	—	16'	—
Distribution point to Entrance Station	—	980'	—
Distribution point to GH-MK	—	980'	—
Distribution point to farthest GH-1AD (Audio line)	—	980'	—
GH-VBC to farthest Monitor (Video line) 1 Monitor/Tenant	330'	500'	—
GH-VBC to farthest Monitor (Video line) 2 Monitors/Tenant	165'	330'	500'
GH-VBC (STD) to GH-VBC (EXP)	330'	500'	—
GH-BC/VBC to each Power Supply	—	16'	16'
GH-NS to Power Supply	—	980'	980'
GH-MK to Power Supply	—	980'	980'
Total cumulated wiring per audio trunk line (max. 4)	—	8,200'	—

Entrance Station

Direct-select Call Button

#2   #1

GH-BC PS24

PT   PT

GH-VBC PS24

Digital Name Scrolling

#2   #1

PS24

GH-BC PS24

PT   PT

GH-VBC PS24

*Power Supply for GH-NS

— Audio #872002
— Video #871802
— Power #872002 or #871802

PS24 = PS-2410LC or PS-2410LD (for GH-BC, GH-VBC, GH-NS, GH-MK, and GH-BCX)

PT = Power transformer

Expanded position
EXP STD
Max. 2

500'

500'

GH-VBC PS24

GH-BC PS24

GH-VBC PS24

EXP STD
Standard position

SYSTEM CONFIGURATION

Expanded System

16 ENTRANCE STATIONS

4 SECURITY GUARD STATIONS

500 TENANT STATIONS

COMMON 1 - SUB 1

Trunk line   No. 1   No. 6

Max. 25 tenant stations per GH-VBC trunk line (x6 total)

VIDEO #871802 & AUDIO #872002   **GH-1KD**   VIDEO #871802 & AUDIO #872002

VIDEO #871802 & AUDIO #872002   No. 2~5   VIDEO #871802 & AUDIO #872002

GH-BC PS24   **GH-VBC** PS24

COMMON 2 - SUB 2

Trunk line   No. 1   No. 6

Max. 25 tenant stations per GH-VBC trunk line (x6 total)

VIDEO #871802 & AUDIO #872002   **GH-1KD**   VIDEO #871802 & AUDIO #872002

VIDEO #871802 & AUDIO #872002   No. 2~5   VIDEO #871802 & AUDIO #872002

GH-BC PS24   **GH-VBC** PS24

Max. 125 tenant stations per sub trunk line (x4 total)

SUB 1A   SUB 1B   SUB 2A   SUB 2B

VIDEO #871802 & AUDIO #872002

500'/18AWG

COMMON 1

VIDEO #871802 & AUDIO #872002   VIDEO #871802 & AUDIO #872002

POWER #871802   POWER #871802   **PS24**

980'/20AWG

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Entrance Station: Max. 8/COMMON line (3/Trunk)

GH-BCX PS24   **GH-VBX**

GH-BC PS24 For COMMON 1   **GH-VBC** PS24 For COMMON 2

COMMON 2

VIDEO #871802 & AUDIO #872002   VIDEO #871802 & AUDIO #872002

PS24   POWER #871802   POWER #871802

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Entrance Station: Max. 8/COMMON line (3/Trunk)

AUDIO #872002   **COMMON 1**   AUDIO #872002

POWER #871802   POWER #871802   **PS24**

GH-MK with **GFW-S**   **GH-MK** with **GFW-S**

Security Guard Station: Max. 2/COMMON line

PS24 = PS-2410LC or PS-2410LD (for GH-BC, GH-VBC, GH-NS, GH-MK, and GH-BCX)

AUDIO #872002   **COMMON 2**   AUDIO #872002

PS24   POWER #871802   POWER #871802

GH-MK with **GFW-S**   **GH-MK** with **GFW-S**

Security Guard Station: Max. 2/COMMON line

Wiring Distance

	22 AWG	20 AWG	18 AWG
GH-BCX to GH-BC	—	16'	—
GH-VBX to GH-VBC	—	16'	—
GH-BCX or GH-VBX to Entrance Station	500'	980'	—
GH-BCX to farthest GH-1AD (Audio line)	—	980'	—
GH-VBX to farthest Monitor (Video line) 1 Monitor/Tenant	330'	500'	—
GH-VBC to farthest Monitor (Video line) 2 Monitors/Tenant	165'	330'	500'
Cumulated total per COMMON trunk (max. 2)		8,200'	
Cumulated total per SUB trunk (max. 4)		8,200'	

Communication (talk and video) paths:

Communication paths on GH-BCX and GH-VBX are identified as "COMMON 1" and "COMMON 2". Each related COMMON-SUB trunk has its own communication path that can be used within itself for communication between Entrance and Tenant. Crossover to the other trunk is possible, but this will occupy both talk and video paths on both sub trunks. Security guard or concierge communication also occupies the entire system.

Two communication paths
SUB 1   SUB 2
COMMON 1   COMMON 2

One communication path
SUB 1   SUB 2
COMMON 1   COMMON 2
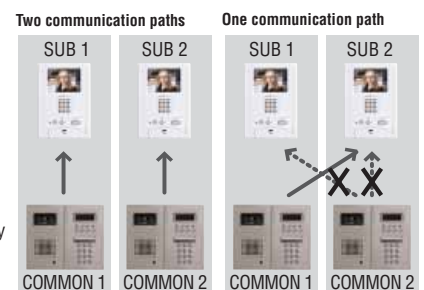
GH Series Vs. GF Series

	GH Series	GF Series
Total Tenant Stations	500 tenant stations	250 tenant stations
Number of Tenant Stations within a Residence	Up to 4 stations (up to 2 monitors)	Up to 2 stations
Total Entrance Stations	16 stations	5 stations
Total Security Guard Stations	4 stations	2 stations
Wiring Distance (Entrance Station to GH-VBC)	980 feet	330 feet
Talk & Video Path	Single channel, non-open	Single channel, handset
Video Monitor	GH-1KD & GH-1KDS: 3.5 inch color LCD GH-1MD: 4 inch B&W CRT	4 inch B&W CRT
Type of Communication	Hands-free, voice-actuated (via Optional Handset) or push-to-talk communication	Full-duplex with handset
Back Light for GH-NS & GH-MK	Vacuum Fluorescent Display	LCD with LED backlight
Visitor Screening	Available	Not available
Monitoring Entrance	Available from Tenant Station	Not available
Caller ID with Call Back	Available, stored up to 20 calls	Not available
Additional Call Signaling Device at Tenant Station	Available with GH-RY Relay	Not available
Link Programming	Program single entrance station or security guard station and transfer data to others	Program each entrance station & security guard station individually
Save Link Information to PC	Available - upload & download with Tenant information	Not available
Programmable Room No. Displayed on GH-NS & GH-MK	From 1 to 6 digits, alpha-numeric	3 or 4 digit, numeric only

Unit Dimensions

Direct-select Call Button

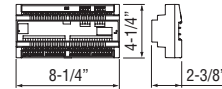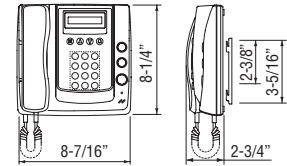**4-Call/GFA-DES**
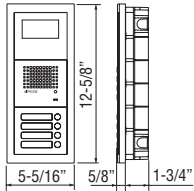
Digital Name Scrolling

GFV-DES
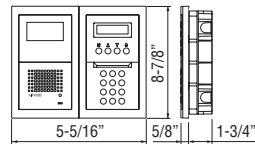
GH-BC, GH-VBC, GH-4Z
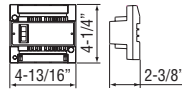
GH-BCX, GH-VBX

GH-MK

GH-1KD, GH-1KDS
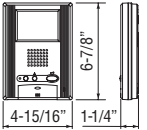
GH-1MD
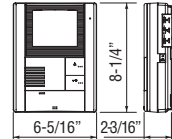
GH-1AD
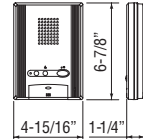
GH-HS
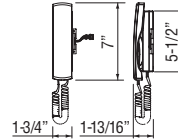
PS-2410LD, PS-2410LC
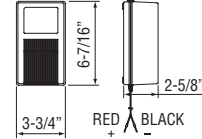
Specifications

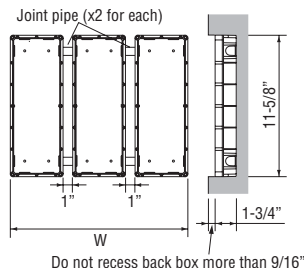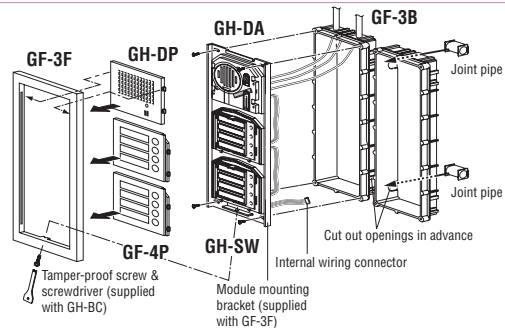|	
Power Supply	24V DC - Use PS-2410LC or PS-2410LD (for GH-BC, GH-VBC, GH-NS, GH-MK and GH-BCX)
Current Consumption	GH-BC: 0.9 A GH-VBC: 0.9 A GH-NS: 0.13 A GH-MK: 0.18 A GH-BCX: 0.35 A
Call Tone	There are three different types of call tones: from entrance station, security guard station, and doorbell
Talk & Video Path	Single channel, non-open
Communication	Hands-free, voice-actuated communication (via Optional Handset) or push-to-talk communication
Door Release	Connecting terminals: between ELM - ELC (N/O) and ELB - ELC (N/C) Specifications: less than 4A (resistance load), 24V AC/DC, dry closure contact
Wiring	Two conductor cables (Aiphone #872002 for audio and Aiphone #871802 for video)
Type of Cables	Pair cable (solid wire - not stranded), polyethylene insulated, low cap, diameter 20AWG-18AWG

Back Box Dimensions

Two 2-Module Back Boxes

Joint pipe (x2)

Do not recess back box more than 9/16"
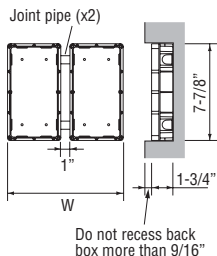
Three 3-Module Back Boxes

Joint pipe (x2 for each)

Do not recess back box more than 9/16"

Back Box Total Width

GF-2B/3B	W (inch)
x 1	4-5/16"
x 2	9-5/8"
x 3	15"
x 4	20-1/4"
x 5	25-9/16"
x 6	30-7/8"
x 7	36-1/4"
x 8	41-9/16"
x 9	46-1/8"

GF-3F

GH-DP

GH-DA

GF-3B

Joint pipe

Joint pipe

Cut out openings in advance

Internal wiring connector

GF-4P

GH-SW

Tamper-proof screw & screwdriver (supplied with GH-BC)

Module mounting bracket (supplied with GF-3F)

ISO 14001 Certified

ISO 9001:2000 Certified

Deming Prize

GSA Schedule

GS-35F-0065L

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