

I/A Series® Hardware

Global Enclosure G06



The G06 I/A Series® system metal industrial wall-mounted enclosure provides mild or severe environmental protection and houses DIN rail mounted modules, power modules, terminals and connectors for field wiring.

FEATURES

Features of the G06 enclosure include:

- ▶ Environmental protection for location in mild to severe environments
- ▶ NEMA® 4 rated, Class G3 (harsh) environment ready or NEMA 4X rated, Class GX (severe) environment ready
- ▶ Accommodation for up to 16 modules - Fieldbus Modules (FBMs)/Field Communication Modules (FCMs)
- ▶ Option for 2-position Modular Baseplate to support Fieldbus Communication Modules

(FCMs)/Field Control Processors (FCP270s)

- ▶ Wall mounted
- ▶ DIN rails, wire ways, and an optional earthing bar for field shield terminations
- ▶ Optional single or redundant power supplies
- ▶ Sealed metal structure
- ▶ Top or bottom cable entry for field and power wiring.

INTRODUCTION

The G06 enclosure is specially designed for DIN rail mounted equipment. Each enclosure can be configured with vertically mounted Modular

Baseplates, for mounting up to 16 Fieldbus Modules (FBMs)/Field Communication Modules (FCMS). An optional 2-position Modular Baseplate accommodates Fieldbus Communication Modules or Field Control Processors (FCMs/FCPs). DIN rails provide ample space for mounting the associated Termination Assemblies (TAs).

This rugged, metal, wall-mounted enclosure can be mounted in severe, harsh, or mild environmental areas. Wall-mounting of the enclosure allows secure, space-saving mounting of the FBMs/FCMs/FCPs close to the process.

ENVIRONMENTAL PROTECTION

The enclosure is available with several levels of environmental protection, allowing it to be used in a variety of locations: indoors, outdoors, sheltered, and harsh.

- ▶ NEMA 4 Version – Painted steel enclosure with NEMA ratings of 1, 3R, 4, 12, 13, and IP55 (G3, harsh)
- ▶ NEMA 4X Version – Stainless steel enclosure with NEMA ratings of 1, 4, 4X, 12, and IP66 (GX, severe).

In both versions of enclosure (NEMA 4 or 4X) sealed doors prevent the intrusion of moisture and contaminants from the outside. Heat from the equipment mounted within the enclosure is convected naturally within the enclosure and is dissipated by the exterior surfaces of the enclosure.

MODULAR BASEPLATE MOUNTING

The enclosure can contain various types of vertically mounted Modular Baseplates, which accommodate different quantities and types of modules: FBMs/FCMs/FCPs. The Modular Baseplate is DIN rail mounted (see Figure 1 on page 4 and Figure 2 on page 5). The Modular Baseplate includes signal connectors for the FBMs/FCMs/FCPs, redundant independent dc power connections, I/O cable

connections, Module Fieldbus connections and time synchronization connections.

The control area of the enclosure is isolated from the field connection area by a poly carbon cover.

The G06 enclosure has two vertical DIN rails for mounting 4- or 8-position vertically mounted Modular Baseplates and an optional 2-position vertically mounted Modular Baseplate for FCMs/FCPs. When an optional 2-position vertically mounted Modular Baseplate for FCMs/FCPs is not ordered, a combination of FBM/FCM/FCP 4 - or 8-position vertically mounted Modular Baseplates can be selected. When an optional 2-position vertically mounted Modular Baseplate for FCMs/FCPs is ordered, two 8-position vertically mounted Modular Baseplates for mounting FBMs can be selected. The Modular Baseplate positions are shown in Figure 1 on page 4, Figure 2 on page 5.

For more information on the various types of Modular Baseplates in an I/A Series system, refer to *DIN Rail Mounted Modular Baseplates* (PSS 21H-2W6 B4).

FIELD TERMINATION ASSEMBLIES

The enclosures can be ordered for bottom cable entry (see Figure 1 on page 4) or top cable entry (see Figure 2 on page 5).

For the NEMA 4 top cable entry version, the wires enter through a cable entry panel located at the top of the enclosure. For the NEMA4 bottom entry version, the wires enter through a cable entry panel located at the bottom of the enclosure.

For the NEMA 4X version, users must provide their own cable access ports (for top or bottom cable entry), in keeping with maintenance of the enclosure's protection classification.

The enclosure's DIN rails have the capacity (length) to mount a reasonable mixture of TAs to meet the requirements of the 16 FBMs (maximum) that the enclosure can accommodate. Up to 235 cm (92.3 in) is available to mount TAs.

An optional bus bar provides for earthing (grounding) of field cable shields. A poly carbon cover separates the installation (wiring) area from the maintenance (control) area.

NOTE:

The G06 enclosure does not support the use of baseplate-mounted termination assemblies.

POWER DISTRIBUTION ARCHITECTURE

The G06 enclosure supports an optional redundant power system, in which a dual power distribution network (two power supplies fed by independent entry sources) provide redundancy protection against power failures.

Power wiring to the enclosure is routed through the bottom or top of the enclosure. The input power connects to the primary and secondary entry terminal blocks for main and backup power.

The G06 enclosure uses a DIN rail mounted power supply that provides 24 V dc to DIN rail mounted baseplates. The power supply is agency certified for use in Class 1, Division II and Zone 2 applications. For more information, refer to *DIN Rail Mounted Power Supply* (PSS 21H-2W3 B4).

- ▶ A painted or stainless steel enclosure
- ▶ Single, redundant, or no power supplies and power distribution
- ▶ Bus bars for field cable shields with or without rail isolation
- ▶ A general purpose or hazardous (Class 1, Division II and Zone 2) area certification.
- ▶ A general purpose or Class 1, Division II area designation
- ▶ NEMA 4 or NEMA 4X rating
- ▶ Print pocket inside front door
- ▶ Ergo form S handle with push button lock.

ENCLOSURE OPTIONS

The G06 enclosure can be configured with the following options:

- ▶ A combination of 4 or 8-position Modular Baseplates for FCMs/FBMs/FCPs, mounted vertically
- ▶ A 2-position Modular Baseplate for FCMs/FCPs with two 8-position Modular Baseplates for FBMs, mounted vertically
- ▶ Bottom cable entry
- ▶ Top cable entry
- ▶ No enclosure - customer supplies enclosure (DIN rails, wire ways, and mounting hardware are not supplied)

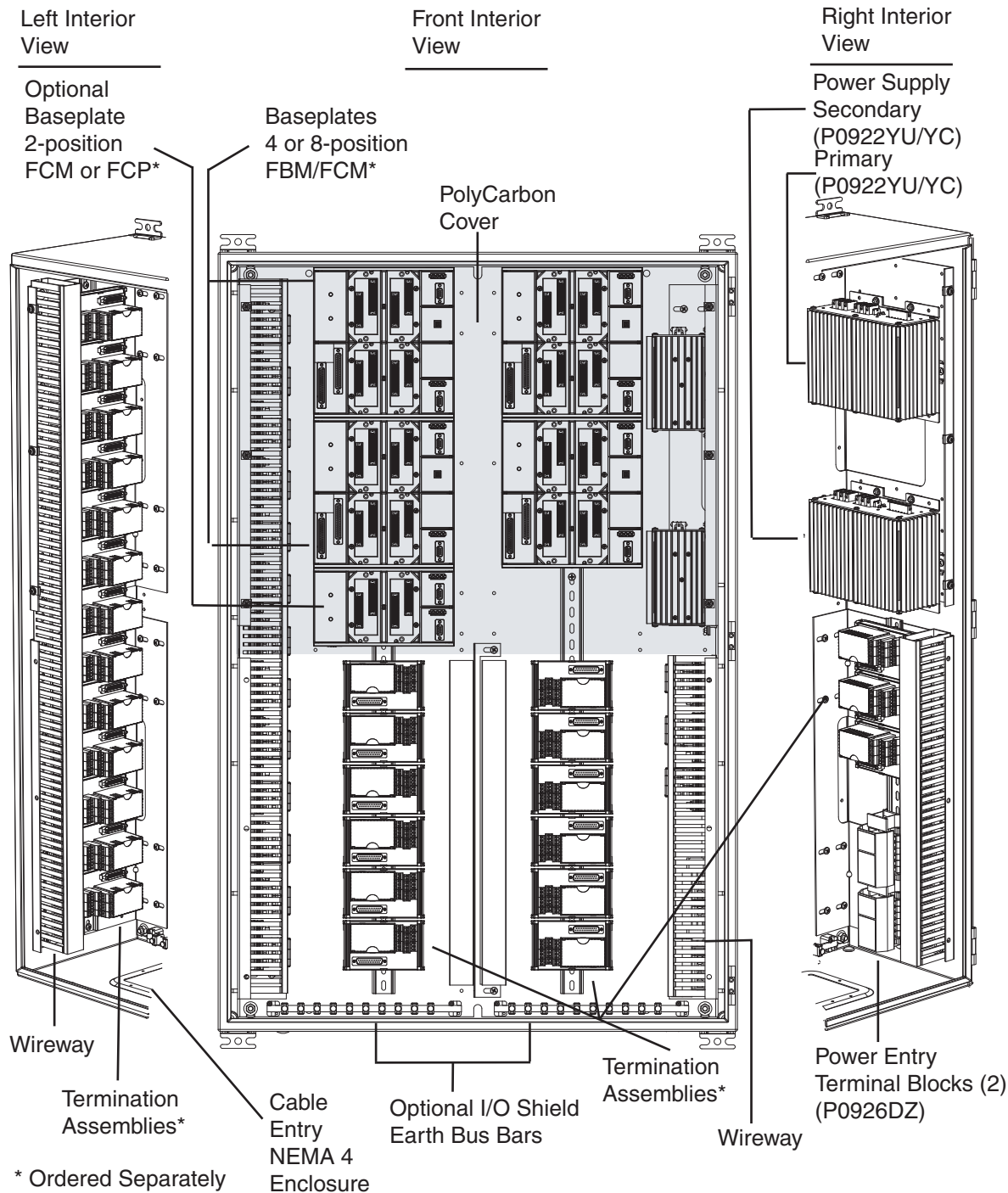


Figure 1. G06 Enclosure, Bottom Cable Entry, Front View

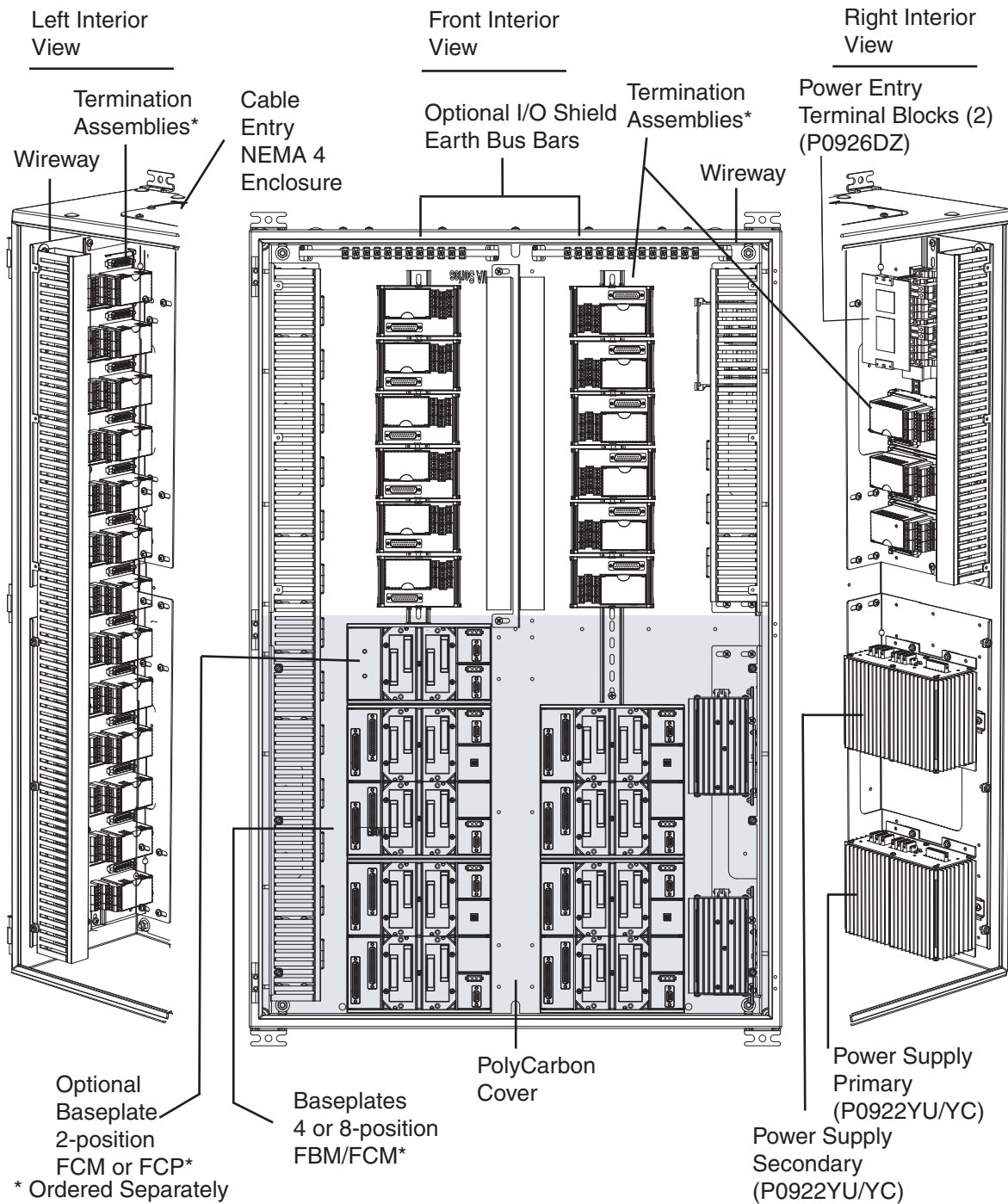


Figure 2. G06 Enclosure, Top Cable Entry, Front View

FUNCTIONAL SPECIFICATIONS

Enclosure

Wall-mounted, metal field enclosure, mounting up to 16 DIN rail mounted FBMs/FCMs and associated termination assemblies. Optional 2-position baseplate accommodates FCMs or FCPs.

Input Power (Optionally Redundant)

Refer to PSS 21H-2W3 B4

ENVIRONMENTAL SPECIFICATIONS

Ingress Protection

NEMA 1, 3R, 4, 12, 13/ IP55
(Per EN 60 529/IEC 529) or,
NEMA 1, 4, 4X, 12/ IP66
(Per EN 60 529/IEC 529)

Operating Temperature (external ambient) and Thermal Loading

See Table 1

Table 1. Temperature and Thermal Loading

Temperature	Thermal Loading (Watts) (Includes Power Supplies)
-20 to +60°C (-4 to +140°F)	Average Loading, 166 Watts
-20 to +50°C (-4 to +122°F)	Maximum Loading, 227 Watts

Storage Temperature

-40 to 70°C (-40 to 158°F)

Altitude

OPERATING

-300 to +3,000 m (-1,000 to +10,000 ft)

STORAGE

-300 to +12,000 m (-1,000 to +40,000 ft)

Contamination Class

NEMA 4 ENCLOSURE

Class G3 (Harsh) as defined in
ISA® Standard, S71.04.

NEMA 4X ENCLOSURE

Class GX (Severe) as defined in
ISA Standard, S71.04.

Relative Humidity

5 to 95% (condensing)

Agency Certification

UL/UL-C listed and CENELEC certified.
Enclosure meets all applicable European Union directives and bears the CE mark.

Area Designation

Per customer order, designed for General Purpose or Hazardous area (Class 1, Division II, Zone 2).

PHYSICAL SPECIFICATIONS

Construction

NEMA 4 RATED ENCLOSURE

Sheet steel with light gray, powder-coated finish (RAL 7035).

NEMA 4X RATED ENCLOSURE

Stainless steel

Panel Thickness

DOORS - 14 GAUGE (2 MM)
HousinG - 16 Gauge (1.5 mm)

Mounting

Wall-mounting

Cable Entry

NEMA 4 RATED ENCLOSURE

Bottom or top cable entry (as shipped) plate.

NEMA 4X RATED ENCLOSURE

User must provide access ports (for top or bottom cable entry) in keeping with maintenance of the enclosure's protection classification.

PHYSICAL SPECIFICATIONS (CONTINUED)

Field Termination Connections

Refer to *DIN Rail Subsystem User's Guide* (B0400FA).

Field-Wire Termination

DIN RAILS

Four DIN rails for mounting TAs. One 110 cm (43.3 in) long, two 52.5 cm (20.5 in) long, one 20 cm (8 in) long

WIRE WAY

Two wire ways 38 mm x 75 mm (1.5 x 3.0 in) for routing of cables.

EARTH BUS BAR

Two optional bus bars for earthing (grounding) of field device wiring.

Mass

The mass of the enclosure is dependent upon the particular configuration. Consult with an Invensys representative if precise mass figures are required.

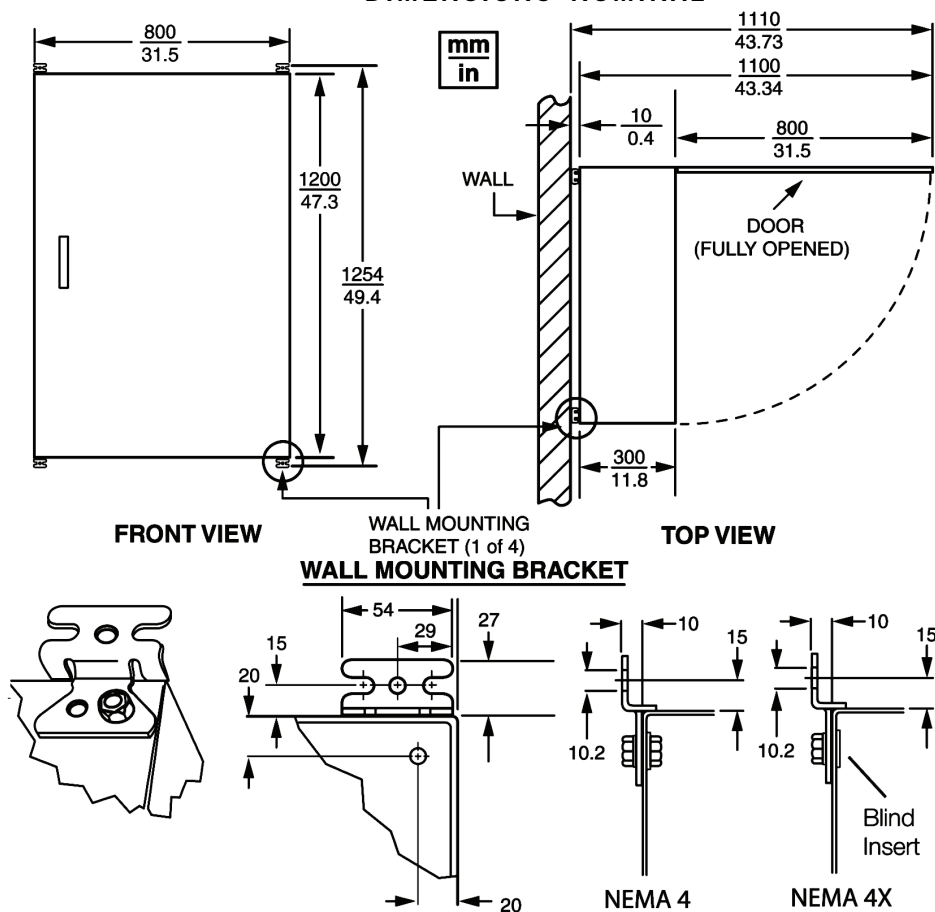
MASS (EMPTY)

70 kg (154 lb)

MASS (FULLY LOADED)

Up to 91 kg (up to 200 lb) without termination assemblies and field wiring.

DIMENSIONS—NOMINAL



FOR MORE INFORMATION

For more information refer to the following Product Specification Sheets (PSS):

PSS Number	Description
PSS 21H-2X8 B3	G-Series Enclosures Overview
PSS 21H-2W1 B3	DIN Rail Mounted Subsystem Overview
PSS 21H-2W6 B4	DIN Rail Mounted Modular Baseplates
PSS 21H-2W3 B4	DIN Rail Mounted Power Supply
PSS 21H-2W2 B3	DIN Rail Mounted Equipment, Agency Certifications