EcoStruxure™

Foxboro™ DCS

G-Series Enclosure Overview

PSS 41H-2GOV

Product Specification

January 2020

G-SERIES ENCLOSURES FOR
ECOSTRUXURE™ FOXBORO™ DCS SYSTEMS

G-SERIES ENCLOSURES FOR
ECOSTRUXURE™ TRICONEX™ TRICON SYSTEMS

Schneider Electric™

https://www.se.com

Legal Information

Overview

Control system electronics and signal cabling require protection against physical intrusion and environmental effects. Standard enclosures providing this protection, the G-Series enclosures, are available for the majority of situations encountered in modern plants. These enclosures are factory designed and constructed to provide the reliability and quality that you have come to expect from EcoStruxure™ Foxboro™ DCS and Triconex™ products.

Features

G-Series enclosures provide factory assembled packaging solutions for the Foxboro DCS and Triconex equipment. A broad set of standard enclosures allows selection of sealed or vented enclosures to meet plant installation location requirements. Depending upon the enclosure type, these enclosures may include the following:

- Top or bottom cable entry, depending on enclosure
- Front-only or front-and-rear enclosure access
- Support for system equipment, including:
  - Compact 200 Series Fieldbus Modules (FBMs)
  - Standard 200 Series FBMs
  - Field Control Processors (FCPs) and Fieldbus Communications Modules (FCMs)
  - Triconex equipment, such as the Tricon™ chassis or Trident™ I/O baseplates
- Support for termination equipment, such as Foxboro termination assemblies (TAs) or Triconex termination devices and/or additional customer-supplied terminal blocks for marshalling
- Support for both system and termination equipment
- Doors supporting universal mounting for left- or right-hand door swing
- Door intrusion monitoring switch which provides alerts when the enclosure doors are opened or closed
- Universal front and back enclosure lights which comply with the performance criteria of EN 61326 annex A
- Dual temperature thermostat which allows independent monitoring of high and low temperature alarms, or for controlling the heating and cooling of third-party supplied equipment
- Comfort door handle with push button/keylock
- Ground studs and/or rails
- Lifting eyebolts on enclosure top

G-Series Enclosure Selection

These tables can assist you in selecting a G-Series enclosure appropriate to your requirements.

Table 1 - G-Series Enclosure Selection - Equipment and Dimensions

Equipment to be Installed	G-Series Enclosures Available																					
	G-06	G-10	G-11	G-12	G-13	G-14	G-15	G-16	G-17	G-20	G-21	G-22	G-40	G-45	G-50	G-60	G-61	G-62	G-66	G-72	G-80	G-85
Standard 200 Series Fieldbus Modules	x	x		x			x		x	x		x										
Compact 200 Series Fieldbus Modules					x	x																
Termination and/or marshalling for 200 Series System	x		x	x		x		x	x		x	x										
Tricon System																x		x		x		
Termination and/or marshalling for Tricon System																	x	x	x	x		
Trident Controllers																					x	x
Foxboro 19" Rack Mounted Equipment												x	x									
Foxboro 19" Rack Mounted Workstations/ Servers and Switches														x								
Enclosure Dimensions																						
800 mmW x 800 mmD x 2000 mmH		x	x	x	x	x	x	x	x				x	x		x	x	x	x		x	x
800 mmW x 600 mmD x 2000 mmH										x	x	x										
800 mmW x 800 mmD x 2200 mmH																				x		
600 mmW x 1000 mmD x 2000 mmH															x							
800 mmW x 300 mmD x 1200 mmH	x																					

Table 2 - G-series Enclosure Selection - Enclosure Door Configuration

Enclosure Door Configuration	G-Series Enclosures Available																					
	G-06	G-10	G-11	G-12	G-13	G-14	G-15	G-16	G-17	G-20	G-21	G-22	G-40	G-45	G-50	G-60	G-61	G-62	G-66	G-72	G-80	G-85
Front and Rear Access		x	x	x	x	x				x	x	x	x		x	x	x	x		x	x	
Front Access only	x						x	x	x					x		x			x			x

Table 3 - G-Series Enclosure Selection - Equipment Environmental Ratings

Environmental Rating	G-Series Enclosures Available																				
	G-06	G-10	G-11	G-12	G-13	G-14	G-15	G-16	G-17	G-20	G-21	G-22	G-40	G-45	G-50	G-60	G-61	G-62	G-66	G-72	G-80	G-85
Not IP Rated (NEMA 1)															x							
IP 43					x	x																
IP 43 to EN 60 529/10.9191 (NEMA 12)		x	x	x			x	x	x	x	x	x	x	x		x	x	x	x	x	x	x
IP 55 to EN 60 529 (NEMA 12)	x	x	x	x			x	x	x	x	x	x	x	x			x		x		x	x
IP 66 to EN 60 529 (NEMA 4)	x	x	x	x			x	x	x	x	x	x	x	x			x		x		x	x

Table 4 - G-Series Enclosure Selection - Features

Features (Included with Enclosure)	G-Series Enclosures Available																					
	G-06	G-10	G-11	G-12	G-13	G-14	G-15	G-16	G-17	G-20	G-21	G-22	G-40	G-45	G-50	G-60	G-61	G-62	G-66	G-72	G-80	G-85
UL and UL-C Approved (Empty Enclosure) [a]	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Cable Base on Enclosure Plinth		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Lifting Eyebolts		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Ground Studs		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Ground Rail(s)	x	x		x		x	x		x	x	x	x	x	x		x	x	x	x	x	x	x
Enclosure Finish																						
Frame - Dipcoat-primed, RAL 7044 Smooth		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x [b]	x [b]	x [b]	x [b]	x [b]	x	x
Roof/Sidewalls/ Doors - Dipcoat-primed, Powder-coated, RAL 7035 (Light Gray) Textured	x [c]	x [c]	x [c]	x [c]	x	x	x [c]	x [c]	x [c]	x [c]	x [c]	x [c]	x [c]	x [c]	x	x [b]	x [b] [c]	x [b]	x [b] [c]	x [b]	x [c]	x [c]
Base/Plinth - RAL 7022 (Umbra Gray) Smooth, Plastic Cover Caps RAL 9005 (jet black)		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
316 Stainless Steel	x [d]																					

[a] Enclosures meet all applicable European Union directives and are CE compliant. Final installed enclosures populated with your equipment should be inspected by your local UL/CSA committee, or other local safety governing organization if required. A complete listing of certifications is available from enclosure vendor.

[b] With EMC Compliance option, interior finish is aluminum zinc coating.

[c] IP 55 (NEMA 4) version only. Powder-coating finish on all external surfaces is applied to entire enclosure - frame, roof, sidewalls, and door.

[d] IP 66 (NEMA 4X) version only. Entire enclosure is stainless steel.

Table 5 - G-Series Enclosure Selection - Options

Enclosure Options	G-Series Enclosures Available																					
	G-06	G-10	G-11	G-12	G-13	G-14	G-15	G-16	G-17	G-20	G-21	G-22	G-40	G-45	G-50	G-60	G-61	G-62	G-66	G-72	G-80	G-85
Vented Enclosure		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Sealed Enclosure (a)	x	x	x	x			x	x	x	x	x	x	x	x			x		x		x	x
Top Cable Entry (b)	x	x	x	x			x	x	x	x	x	x	x	x	x		(c)		(c)		x	x
Bottom Cable Entry (b)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Door-Mounted Fans		x	x	x			x	x	x	x	x	x	x	x			x		x		x	x
Roof-Mounted Fans (d)		x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x		x
Metal (Sheet Steel) Doors	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x (e)	x	x	x	x	x	x	x
Glass Front Door																x		x				
Universal Mounting for Left and Right-hand Door Swing		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Comfort Door Handle with Push Button/Keylock		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Door Intrusion Monitoring Switch																x	x	x	x	x		
Sidewalls		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
EMC Compliance																x	x (f)	x	x (f)	x		
Universal Enclosure Light		x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x
Dual Temperature Thermostat		x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x
Fan Failure Monitoring (g)																						x

(a) No fans with sealed enclosures.

(b) With both top and bottom cable entry allowed, can be customer configured for simultaneous top and bottom cable entry.

(c) Due to the placement of field power supplies, top entry is not recommended for this enclosure.

(d) Top cable entry not recommended for roof-mounted fans.

(e) Front and rear doors are perforated to allow free air flow.

(f) With vented option only.

(g) For roof-mounted fans only.

G-Series Enclosures for Foxboro DCS Equipment

G06 Enclosure

Table 6 - G06 Enclosure Features

Feature	Availability
Enclosure Type	Field enclosure
Equipment Supported	• Up to four vertically mounted baseplates for mounting up to 16 200 Series FBMs, FCMs, or FCPs • Optional baseplate for mounting up to two 200 Series FCMs, or FCPs • Up to 18 modules total supported, as listed above - 16 FBMs/FCMs + two FCMs
Enclosure Access	Front access only
Available Environmental Protection	• IP 55 (NEMA 4) Version – a painted steel enclosure with NEMA ratings of 1, 3R, 4, 12, 13, and IP 55 (G3, harsh) or • IP 66 (NEMA 4X) Version – a stainless steel enclosure with NEMA ratings of 1, 4, 4X, 12, and IP 66 (GX, severe)
Product Specification Sheet	*Global Enclosure G06* (PSS 41H-2G06)

G-Series 800 x 800 Front and Rear Access Enclosures for Compact 200 Series I/O Subsystem

Table 7 - G13 System Enclosure Features

Feature	Availability
Enclosure Type	System only
Equipment Supported	• Vented (IP 43) - Up to 12 Compact 200 Series 16-slot horizontal baseplates, for mounting up to 192 Compact 200 Series FBMs • Up to two 2-position vertically-mounted FCP280 baseplates
Enclosure Access	Front and rear access
Documentation	*G13 System Enclosure* (PSS 41H-2G13)

Table 8 - G14 System and Termination Enclosure Features

Feature	Availability
Enclosure Type	System and Termination
Equipment Supported	• Vented (IP 43) - Up to six Compact 200 Series 16-slot horizontal baseplates, for mounting up to 96 Compact 200 Series FBMs • One 2-position vertically-mounted FCP280 baseplate • Up to four 1,900 mm vertical DIN rails for mounting of termination assemblies and terminal blocks for marshalling
Enclosure Access	Front and rear access
Documentation	*G14 System and Termination Enclosure* (PSS 41H-2G14)

G-Series 800 x 800 Front and Rear Access Enclosures

Table 9 - G10 System Enclosure Features

Feature	Availability
Enclosure Type	System Only
Equipment Supported	• Vented (IP 43/55) - Up to 96 200 Series FBMs, up to six FCMs • Sealed (IP 55/66) - Up to 32 200 Series FBMs and up to two FCMs
Enclosure Access	Front and rear access
Documentation	*G10 System Enclosure* (PSS 41H-2G10)

Table 10 - G11 Termination Enclosure Features

Feature	Availability
Enclosure Type	Termination only
Equipment Supported	Vented (IP 43/55) or Sealed (IP 55/66) - Up to eight vertical DIN rails for mounting of TAs and terminal blocks for marshalling
Enclosure Access	Front and rear access
Documentation	*G11 Termination Enclosure* (PSS 41H-2G11)

Table 11 - G12 System and Termination Enclosure Features

Feature	Availability
Enclosure Type	System and Termination
Equipment Supported	• Vented (IP 43/55) or Sealed (IP 55/66) - Up to 32 200 Series FBMs and up to two FCMs • Up to four vertical DIN rails for mounting of TAs and terminal blocks for marshalling
Enclosure Access	Front and rear access
Documentation	*G12 System and Termination Enclosure* (PSS 41H-2G12)

G-Series 800 x 600 Front and Rear Access Enclosures

Table 12 - G20 System Enclosure Features

Feature	Availability
Enclosure Type	System Only
Equipment Supported	• Vented (IP 43/55) - Up to 96 200 Series FBMs and up to six FCMs • Sealed (IP 55/66) - Up to 32 200 Series FBMs and up to two FCMs
Enclosure Access	Front and rear access
Documentation	*G20 System Enclosure* (PSS 41H-2G20)

Table 13 - G21 Termination Enclosure Features

Feature	Availability
Enclosure Type	Termination Only
Equipment Supported	Vented (IP 43/55) or Sealed (IP 55/66) - Up to four vertical DIN rails for mounting of TAs and terminal blocks for marshalling
Enclosure Access	Front and rear access
Documentation	*G21 Termination Enclosure* (PSS 41H-2G21)

Table 14 - G22 System and Termination Enclosure Features

Feature	Availability
Enclosure Type	System and Termination
Equipment Supported	• Vented (IP 43/55) or Sealed (IP 55/66) - Up to 32 200 Series FBMs and up to two FCMs • Up to two vertical DIN rails for mounting of termination assemblies and terminal blocks for marshalling
Enclosure Access	Front and rear access
Documentation	*G22 System and Termination Enclosure* (PSS 41H-2G22)

G-Series 800 x 800 Front-Only Access Enclosures

Table 15 - G15 System Enclosure Features

Feature	Availability
Enclosure Type	System Only
Equipment Supported	• Vented (IP 43/55) - Up to 96 200 Series FBMs and up to six FCMs • Sealed (IP 55/66) - Up to 32 200 Series FBMs and up to two FCMs
Enclosure Access	Front access only
Documentation	*G15 System Enclosure* (PSS 41H-2G15)

Table 16 - G16 Termination Enclosure Features

Feature	Availability
Enclosure Type	Termination Only
Equipment Supported	Vented (IP 43/55) or Sealed (IP 55/66) - Up to six vertical DIN rails for mounting of TAs and terminal blocks for marshalling
Enclosure Access	Front access only
Documentation	*G16 Termination Enclosure* (PSS 41H-2G16)

Table 17 - G17 System and Termination Enclosure Features

Feature	Availability
Enclosure Type	System and Termination
Equipment Supported	• Vented (IP 43/55) or Sealed (IP 55/66) - Up to 32 200 Series FBMs and up to two FCMs • Up to four vertical DIN rails for mounting of TAs and terminal blocks for marshalling
Enclosure Access	Front access only
Documentation	*G17 System and Termination Enclosure* (PSS 41H-2G17)

G-Series 800 x 800 19-Inch Rack Enclosures

Table 18 - G40 19-Inch Rack Enclosure Features

Feature	Availability
Enclosure Type	System
Equipment Supported	Vented (IP 43/55) or Sealed (IP 55/66) - Upper and lower enclosure halves accommodate each one of the following: • Up to three shelves to support equipment such as the Windows® or Solaris™-based workstations or • Up to two 1x8 Mounting Structures or • Equipment mounted directly to the EIA 19-inch rails, such as the Foxboro DCS Control Network switches
Enclosure Access	Front and rear access
Documentation	*G40 19-Inch Rack Enclosure* (PSS 41H-2G40)

Table 19 - G45 19-Inch Rack Enclosure Features

Feature	Availability
Enclosure Type	System
Equipment Supported	Vented (IP 43/55) or Sealed (IP 55/66) - Upper and lower enclosure halves accommodate each one of the following: • Up to three shelves to support equipment such as the Window® or Solaris™-based workstations or • Up to two 1x8 Mounting Structures (Maximum of three in enclosure) or • Equipment mounted directly to the EIA 19-inch rails, such as the control network switches
Enclosure Access	Front access only
Documentation	*G45 19-Inch Rack Enclosure* (PSS 41H-2G45)

G-Series 600 x 1000 19-Inch Server Enclosure

Table 20 - G50 Server Enclosure Features

Feature	Availability
Enclosure Type	System
Equipment Supported	Vented, indoor (Not IP rated/NEMA 1) - Enclosure can accommodate: • Up to two sliding shelves; shelves can support the Windows® or Solaris™-based tower workstations and servers, such as the Model H90 Foxboro DCS Standard Server and P90 servers, Model H91 and P91 servers, or the Model H92 Foxboro DCS Standard Workstation and P92 workstations, depending on the size and ventilation requirements of the equipment • Rack-mounted equipment mounted directly to the 19-inch rails (42 U of available vertical mounting space), such as the control network switches, depending on sizing, power, cabling, and ventilation requirements of the equipment
Enclosure Access	Front and rear access
Documentation	*G50 Server Enclosure* (PSS 41H-2G50)

G-series Enclosures for Triconex System Equipment

G-Series 800 x 800 EcoStruxure Triconex Tricon System Enclosures

Table 21 - G60 Tricon System Enclosure Features

Feature	Availability
Enclosure Type	System
Equipment Supported	Vented (IP 43/55) - Up to three Triconex Tricon chassis
Enclosure Access	Front and rear access or front access only (optional front glass door)
Documentation	*G60 Tricon System Enclosure* (PSS 41H-2G60)

Table 22 - G62 and G72 System and Termination Enclosures Features

Feature	Availability
Enclosure Type	System and Termination
Enclosure Size	• G62 Enclosure - 800 mm x 800 mm x 2,000 mm • G72 Enclosure - 800 mm x 800 mm x 2,200 mm
Equipment Supported	• Vented (IP 43/55) - Up to two Triconex Tricon chassis • Two vertical DIN rails for mounting of Triconex termination devices and terminal blocks for marshalling
Enclosure Access	Front and rear access (optional front glass door)
Documentation	*G62 and G72 Tricon System and Termination Enclosures* (PSS 41H-2G62)

G-Series 800 x 800 Tricon Termination Enclosures

The G-series 800 x 800 Tricon termination enclosures may accommodate the termination of Tricon modules, which are housed in a G60 Tricon system enclosure or G62/G72 Tricon system and termination enclosure.

Table 23 - G61 Tricon Termination Enclosure Features

Feature	Availability
Enclosure Type	Termination Only
Equipment Supported	Vented (IP 43/55) or Sealed (IP 55/66) - Up to eight vertical DIN rails for mounting of Triconex termination devices and additional customer-supplied terminal blocks for marshalling
Enclosure Access	Front and rear access
Documentation	*G61 Tricon Termination Enclosure* (PSS 41H-2G61)

Table 24 - G66 Tricon Termination Enclosure Features

Feature	Availability
Enclosure Type	Termination only
Equipment Supported	Vented (IP 43/55) or Sealed (IP 55/66) - Up to six vertical DIN rails for mounting of Triconex termination devices and additional customer-supplied terminal blocks for marshalling
Enclosure Access	Front access only
Documentation	*G66 Tricon Termination Enclosure* (PSS 41H-2G66)

G-Series 800 x 800 EcoStruxure Triconex Trident System Enclosures

Table 25 - G80 Trident System Enclosure Features

Feature	Availability
Enclosure Type	System Only (No terminations required for Trident controllers)
Equipment Supported	• Vented (IP 43/55) - Up to 20 Triconex Trident I/O baseplates • Sealed (IP 55/66) - Up to 10 Triconex Trident I/O baseplates • Both enclosure types accommodate one Main Processor (MP) baseplate, and one Communication Module (CM) baseplate
Enclosure Access	Front and rear access
Documentation	*G80 Trident System Enclosure* (PSS 41H-2G80)

Table 26 - G85 Trident System Enclosures Features

Feature	Availability
Enclosure Type	System Only (No terminations required for Trident controllers)
Equipment Supported	Vented (IP 43/55) or Sealed (IP 55/66) - Up to 10 Triconex Trident I/O baseplates, plus one MP baseplate, and one CM baseplate
Enclosure Access	Front access only
Documentation	*G85 Trident System Enclosure* (PSS 41H-2G85)

Related Product Documents

Document Number	Description
PSS 41H-2G06	*Global Enclosure G06*
PSS 41H-2G13	*G13 System Enclosure*
PSS 41H-2G14	*G14 System and Termination Enclosure*
PSS 41H-2G10	*G10 System Enclosure*
PSS 41H-2G11	*G11 Termination Enclosure*
PSS 41H-2G12	*G12 System and Termination Enclosure*
PSS 41H-2G15	*G15 System Enclosure*
PSS 41H-2G16	*G16 Termination Enclosure*
PSS 41H-2G17	*G17 System and Termination Enclosure*
PSS 41H-2G20	*G20 System Enclosure*
PSS 41H-2G21	*G21 Termination Enclosure*
PSS 41H-2G22	*G22 System and Termination Enclosure*
PSS 41H-2G40	*G40 19-Inch Rack Enclosure*
PSS 41H-2G45	*G45 19-Inch Rack Enclosure*
PSS 41H-2G50	*G50 Server Enclosure*
PSS 41H-2G60	*G60 Tricon System Enclosure*
PSS 41H-2G62	*G62 and G72 Tricon System and Termination Enclosures*
PSS 41H-2G61	*G61 Tricon Termination Enclosure*
PSS 41H-2G66	*G66 Tricon Termination Enclosure*
PSS 41H-2G80	*G80 Trident Enclosure*
PSS 41H-2G85	*G85 Trident Enclosure*
PSS 41H-2COV	*Compact 200 Series I/O Subsystem Overview*
PSS 31H-2S200	*Standard 200 Series Subsystem Overview*
PSS 41H-2W100	*100 Series Fieldbus Module Migration Subsystem Overview*

⚠ **WARNING**: This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.p65warnings.ca.gov/.

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As standards, specifications, and design change from time to time, please ask for confirmation of the information given in this publication.

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