

FDB Single and Multiple Gang Cast Device Blank Bodies for Drilling and Tapping

UNILETS® for use with Threaded Rigid Metal Conduit and IMC. Furnished with Internal Ground Screw.

Threaded Drilled and Tapped Openings from 1/2" thru 1-1/2".

Applications

- Accommodate wiring devices such as switches and receptacles.
- Provide excellent service in areas where boxes are subject to rough usage.
- Serve as pull boxes for conductors.
- Permit access to conductors for maintenance.
- Provide openings for making splices.
- Allow connections for branch conduit runs.
- Blank bodies for special conduit entrance arrangements.



Blank Bodies for Drilling and tapping. FDB-3L shown.

Features

- Corrosion-resistant — ideal for indoor and outdoor installations.
- Weatherproof, raintight and dust-tight when used with cast gasketed covers.
- FD boxes take standard flush wiring devices.
- FD boxes take devices exceeding 1-5/8" in depth under fastening ears.
- Malleable iron for high tensile strength and ductility — provides greater resistance to impact and shock.
- Both malleable iron and aluminum boxes have ridge top construction for positive cover/gasket/box fit.
- Accurately tapped, tapered threads for tight, rigid joints, ground continuity.
- Complete selection of covers, receptacles, plugs, gaskets and accessories.
- Internal grounding screws standard.
- Available in single, two and three gang boxes.
- All boxes have mounting lugs.



Blank Bodies for Brazed Hubs. FS-2G shown.

Standard Materials

- Cast device boxes and boxes for drilling and tapping: malleable iron or copperfree (4/10 of 1% max.) aluminum

Standard Finishes

- Malleable iron boxes: triple-coat — (1) zinc electroplate, (2) chromate, and (3) epoxy powder coat
- Aluminum boxes: epoxy powder coat

Certifications and Compliances






- UL Standard: 514A
- UL Listed: E2527
- NEMA Standard: FB-1

Reference Data

- When ordering drilled and tapped openings or brazed hubs for blank bodies, refer to *FDB Blank Cast Device Boxes, Drilling and Tapping Information* page.

FDB Single and Multiple Gang Cast Device Blank Bodies for Drilling and Tapping

UNILETS® for use with Threaded Rigid Metal Conduit and IMC. Furnished with Internal Ground Screw.
Threaded Drilled and Tapped Openings for Sizes 1/2" thru 1-1/2".

Description	Depth (2.69" Deep with Lugs)	Catalog Number	
		Malleable Iron Ridge Top	Aluminum Ridge Top
Single Gang Box			
 <p>Use with all single gang covers. (Top, bottom and sides may be drilled and tapped)</p>	Deep	FDB-1L	FDB-1L-A
Two-Gang Box, Multiple Cover			
 <p>Use with all single gang covers. (Top, bottom and sides may be drilled and tapped)</p>	Deep	FDB-2L	FDB-2L-A
Three-Gang Box, Multiple Cover			
 <p>Use with all single gang covers. (Top, bottom and sides may be drilled and tapped)</p>	Deep	FDB-3L	FDB-3L-A
Two-Gang Box, Single Cover			
 <p>Use with all two-gang covers. May be drilled and tapped in back of box (wall opposite cover) as well as top, bottom and sides</p>	Deep	FDB-2GL	—
Three-Gang Box, Single Cover			
 <p>Use with all three-gang covers. May be drilled and tapped in back of box (wall opposite cover) as well as top, bottom and sides</p>	Deep	FDB-3GL	—

Fittings

FITTINGS: CAST DEVICE BOXES

FDB Blank Cast Device Boxes Drilling and Tapping Information

Single, Two, and Three Gang Boxes. Drilled and Tapped Openings from 1/2" thru 1-1/2".

Determine catalog number as follows:

- (1) Select FDB device box catalog number;
- (2) Select "Standard Conduit Opening Arrangement Diagram" number;
- (3) Determine if your desired number and trade size of conduit entries will fit in the FDB box chosen by reviewing the "Maximum Number and Size..." table on page B-19. Select a larger box if you experience a fit problem, and
- (4) Select symbols that represent conduit opening sizes from "Symbol Table." (Use "0" where no opening is required and separate the various divisions of the complete catalog number by dashes.)

Example

The blank body device box selected is FDB-3GL and the conduit-opening arrangement is diagram #6. Conduit opening "a" is to be 3/4"; "b", 1"; "c", no opening required; and "d", 1-1/2".

The complete catalog number will be:
FDB-3GL-6-BCOE

If a "Standard Conduit Opening Arrangement" is not suitable for the application, or when openings are to be more accurately spaced, submit sketch locating openings (1) from centerlines of box and (2) from outside back of box (or from mounting lug surface if lugs are supplied).

All conduit openings will be located in centerlines of walls and evenly spaced unless otherwise specified.

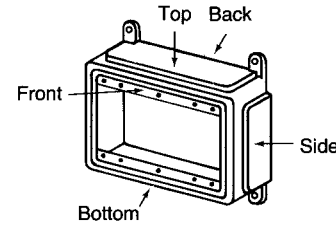
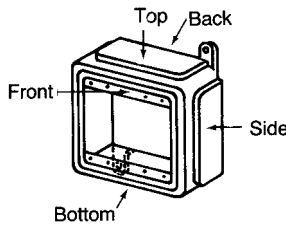
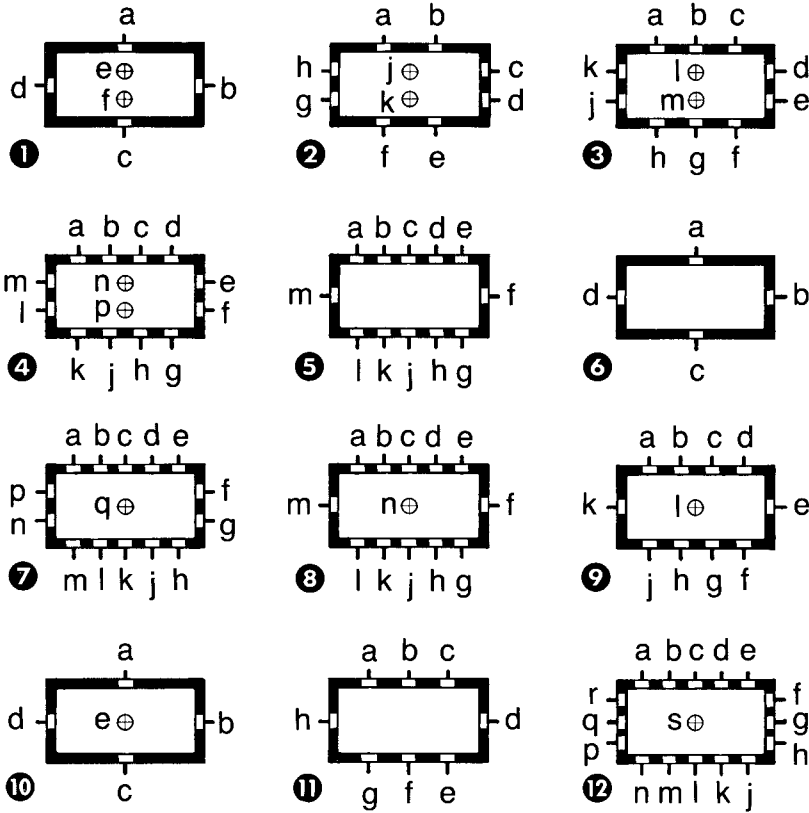
Symbol Table

Size of Opening (Inches)	Drilled and Tapped Hole Symbol
Blank	0
1/2	A
3/4	B
1	C
1-1/4	D
1-1/2	E

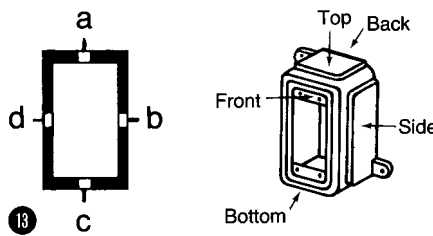
Standard Conduit Opening Arrangement Diagrams

Hub "a" is always TOP of box

Two and Three Gang (Front View)



One Gang (Front View)



FITTINGS: CAST DEVICE BOXES

Fittings

FDB Blank Cast Device Boxes Drilling and Tapping Information

Single, Two, and Three Gang Boxes. Drilled and Tapped Openings from 1/2" thru 1-1/2".

Minimum Centerline Spacing Between Drilled and Tapped Conduit Openings *

Allowance made for clearance over Appleton BBU Series bushings.
If unions are used, additional space must be allowed.

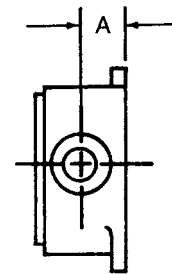
Table shows minimum distances between conduit-opening centerlines in various size combinations. For example, if 3/4" and 1/2" openings are to be drilled and tapped into one side of box, the minimum spacing between centerlines would be 1.31".

Minimum Centerline Spacing in Inches/Millimeters

Opening Size (Inches)	Minimum Centerline Spacing in Inches/Millimeters				
	1/2	3/4	1	1-1/4	1-1/2
1/2	1.19/30.2				
3/4	1.31/33.3	1.44/36.6			
1	1.44/36.6	1.56/39.6	1.69/42.9		
1-1/4	1.63/41.4	1.75/44.5	1.88/47.8	2.00/50.8	
1-1/2	1.75/44.5	1.88/47.8	2.00/50.8	2.19/55.6	2.31/58.7
BBU Bushing Dia.	1.06/26.9	1.31/33.3	1.56/39.6	1.94/49.3	2.19/55.6
UNY/UNF® Union Dia.	1.50/38.1	1.75/44.5	2.00/50.8	2.81/71.4	3.06/77.7
Conduit Dia.	0.88/22.4	1.06/26.9	1.31/33.3	1.69/42.9	1.94/49.3

Distance from Mounting Surface to Centerline of Drilled and Tapped Conduit Opening

Conduit Opening (Inches)	Dim. "A" Inches/Millimeters	
	FDB-1L FDB-2L FDB-3L	FDB-2GL FDB-3GL
1/2	1.06/26.9	1.06/26.9
3/4	1.19/30.2	1.19/30.2
1	1.31/33.3	1.31/33.3
1-1/4	1.38/35.1	1.44/36.6
1-1/2	1.25/37.75	1.50/38.1



Maximum Number and Sizes of Drilled and Tapped Conduit Openings Per Top, Bottom, Side and Back *

Allowance made for clearance over Appleton BBU Series bushings.

Type Box	Size (Inches)	Max. No. Of Openings			Type Box	Size (Inches)	Max. No. Of Openings		
		Top or Bottom	Per Side	Back			Top or Bottom	Per Side	Back
FDB-1L One Single-Gang Cover	1/2	1	1		FDB-2GL One Two-Gang Cover	1/2	3	3	2
	3/4	1	1			3/4	2	2	2
	1	1	1	none		1	2	2	2
	1-1/4	1	1			1-1/4	2	2	1
	1-1/2	1	1		1-1/2	1	1	1	
FDB-2L Two Single-Gang Covers	1/2	4	3		FDB-3GL One Three-Gang Cover	1/2	5	3	2
	3/4	4	2			3/4	4	2	2
	1	3	2	none		1	3	2	2
	1-1/4	3	2			1-1/4	3	2	1
	1-1/2	2	1		1-1/2	2	1	1	
FDB-3L Three Single-Gang Covers	1/2	7	3						
	3/4	6	2						
	1	5	2	none					
	1-1/4	4	2						
	1-1/2	3	1						

* Conduit openings will be located in centerline of walls and evenly spaced unless otherwise specified.

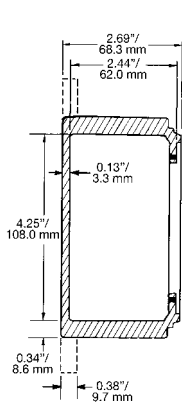
FDB Single and Multiple Gang Cast Device Box Wiring Capacity

Wiring Capacity

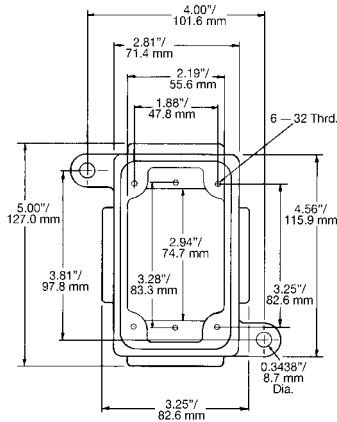
Gangs	Catalog Number	Capacity (in ³ /dm ³)	Volume
Single	FDB-1L		26.00/0.43
Two	FDB-2L		65.00/1.07
Three	FDB-3L		98.00/1.61
Two	FDB-2GL		45.00/0.74
Three	FDB-3GL		62.00/1.02

Dimensions in Inches/Millimeters — All cover and device screws 6—32 thread.

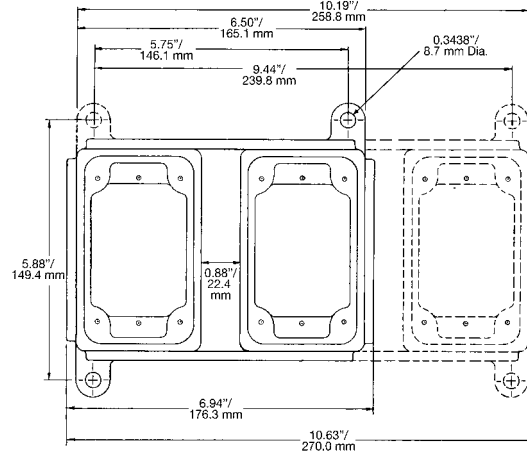
FDB Single, Two, and Three Gang Multiple Cover Boxes.



Side

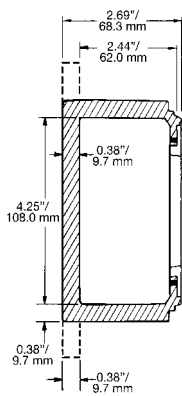


FDB-1L

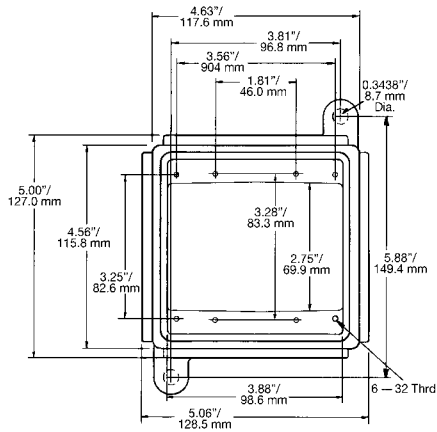


FDB-2L/FDB-3L

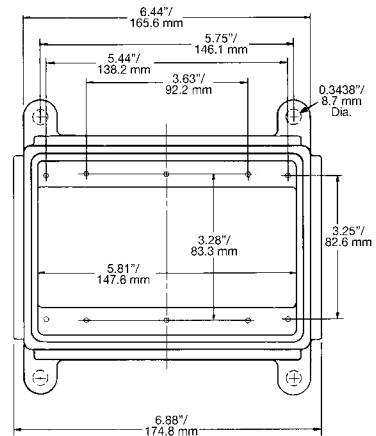
FDB Two and Three Gang Single Cover Boxes.



Side



FDB-2GL



FDB-3GL

Fittings

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Blank Bodies for Drilling and tapping. FDB-3L shown.

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Standard Finishes

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- UL Standard: 514A
- UL Listed: E2527
- NEMA Standard: FB-1

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Two-Gang Box, Multiple Cover			
 <p>Use with all single gang covers. (Top, bottom and sides may be drilled and tapped)</p>	Deep	FDB-2L	FDB-2L-A
Three-Gang Box, Multiple Cover			
 <p>Use with all single gang covers. (Top, bottom and sides may be drilled and tapped)</p>	Deep	FDB-3L	FDB-3L-A
Two-Gang Box, Single Cover			
 <p>Use with all two-gang covers. May be drilled and tapped in back of box (wall opposite cover) as well as top, bottom and sides</p>	Deep	FDB-2GL	—
Three-Gang Box, Single Cover			
 <p>Use with all three-gang covers. May be drilled and tapped in back of box (wall opposite cover) as well as top, bottom and sides</p>	Deep	FDB-3GL	—

Fittings

FITTINGS: CAST DEVICE BOXES

FDB Blank Cast Device Boxes Drilling and Tapping Information

Single, Two, and Three Gang Boxes. Drilled and Tapped Openings from 1/2" thru 1-1/2".

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Example

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All conduit openings will be located in centerlines of walls and evenly spaced unless otherwise specified.

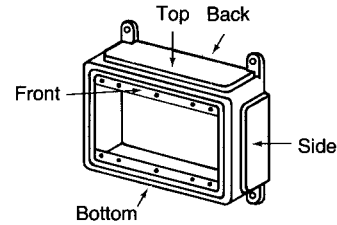
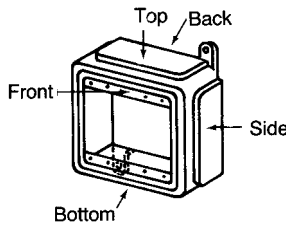
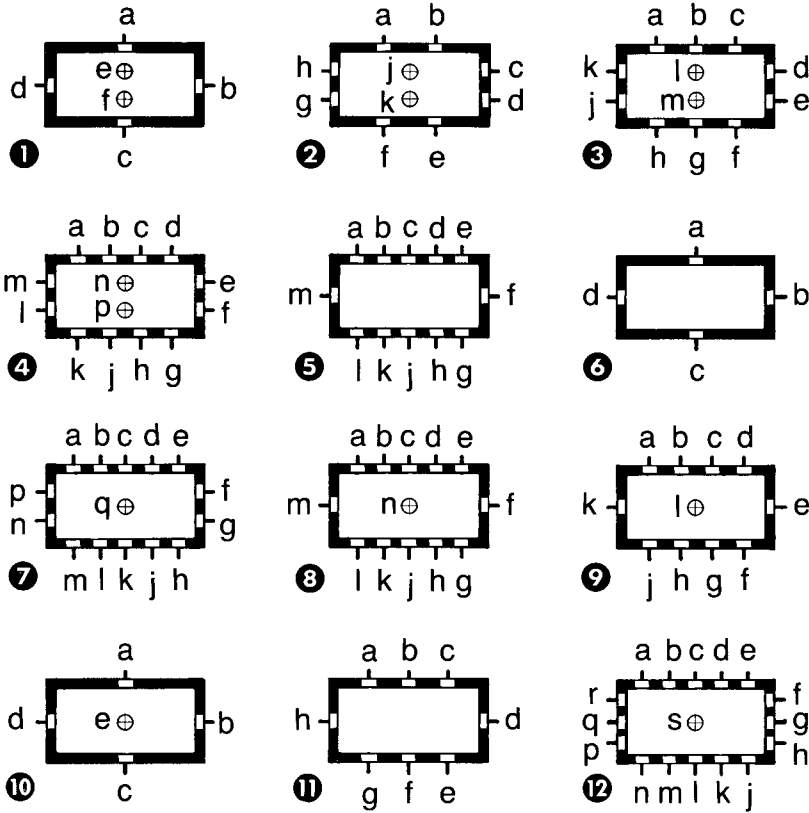
Symbol Table

Size of Opening (Inches)	Drilled and Tapped Hole Symbol
Blank	0
1/2	A
3/4	B
1	C
1-1/4	D
1-1/2	E

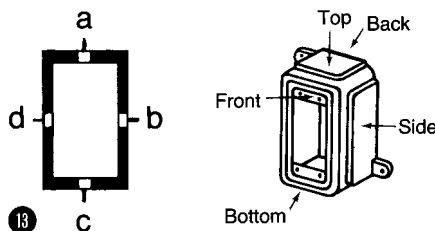
Standard Conduit Opening Arrangement Diagrams

Hub "a" is always TOP of box

Two and Three Gang (Front View)



One Gang (Front View)



FDB Blank Cast Device Boxes Drilling and Tapping Information

Single, Two, and Three Gang Boxes. Drilled and Tapped Openings from 1/2" thru 1-1/2".

Minimum Centerline Spacing Between Drilled and Tapped Conduit Openings *

Allowance made for clearance over Appleton BBU Series bushings.
If unions are used, additional space must be allowed.

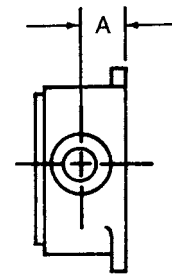
Table shows minimum distances between conduit-opening centerlines in various size combinations. For example, if 3/4" and 1/2" openings are to be drilled and tapped into one side of box, the minimum spacing between centerlines would be 1.31".

Minimum Centerline Spacing in Inches/Millimeters

Opening Size (Inches)	Minimum Centerline Spacing in Inches/Millimeters				
	1/2	3/4	1	1-1/4	1-1/2
1/2	1.19/30.2				
3/4	1.31/33.3	1.44/36.6			
1	1.44/36.6	1.56/39.6	1.69/42.9		
1-1/4	1.63/41.4	1.75/44.5	1.88/47.8	2.00/50.8	
1-1/2	1.75/44.5	1.88/47.8	2.00/50.8	2.19/55.6	2.31/58.7
BBU Bushing Dia.	1.06/26.9	1.31/33.3	1.56/39.6	1.94/49.3	2.19/55.6
UNY/UNF® Union Dia.	1.50/38.1	1.75/44.5	2.00/50.8	2.81/71.4	3.06/77.7
Conduit Dia.	0.88/22.4	1.06/26.9	1.31/33.3	1.69/42.9	1.94/49.3

Distance from Mounting Surface to Centerline of Drilled and Tapped Conduit Opening

Conduit Opening (Inches)	Dim. "A" Inches/Millimeters	
	FDB-1L FDB-2L FDB-3L	FDB-2GL FDB-3GL
1/2	1.06/26.9	1.06/26.9
3/4	1.19/30.2	1.19/30.2
1	1.31/33.3	1.31/33.3
1-1/4	1.38/35.1	1.44/36.6
1-1/2	1.25/37.75	1.50/38.1



Maximum Number and Sizes of Drilled and Tapped Conduit Openings Per Top, Bottom, Side and Back *

Allowance made for clearance over Appleton BBU Series bushings.

Type Box	Size (Inches)	Max. No. Of Openings			Type Box	Size (Inches)	Max. No. Of Openings		
		Top or Bottom	Per Side	Back			Top or Bottom	Per Side	Back
FDB-1L One Single-Gang Cover	1/2	1	1	none	FDB-2GL One Two-Gang Cover	1/2	3	3	2
	3/4	1	1			3/4	2	2	2
	1	1	1			1	2	2	2
	1-1/4	1	1			1-1/4	2	2	1
	1-1/2	1	1	1-1/2	1	1	1		
FDB-2L Two Single-Gang Covers	1/2	4	3	none	FDB-3GL One Three-Gang Cover	1/2	5	3	2
	3/4	4	2			3/4	4	2	2
	1	3	2			1	3	2	2
	1-1/4	3	2			1-1/4	3	2	1
	1-1/2	2	1	1-1/2	2	1	1		
FDB-3L Three Single-Gang Covers	1/2	7	3	none					
	3/4	6	2						
	1	5	2						
	1-1/4	4	2						
	1-1/2	3	1						

* Conduit openings will be located in centerline of walls and evenly spaced unless otherwise specified.

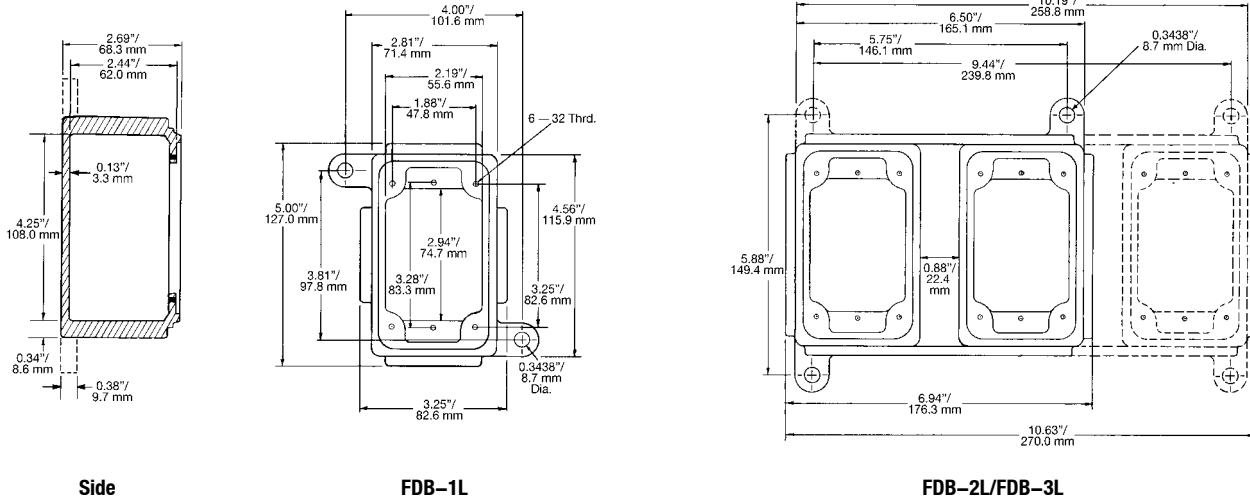
FDB Single and Multiple Gang Cast Device Box Wiring Capacity

Wiring Capacity

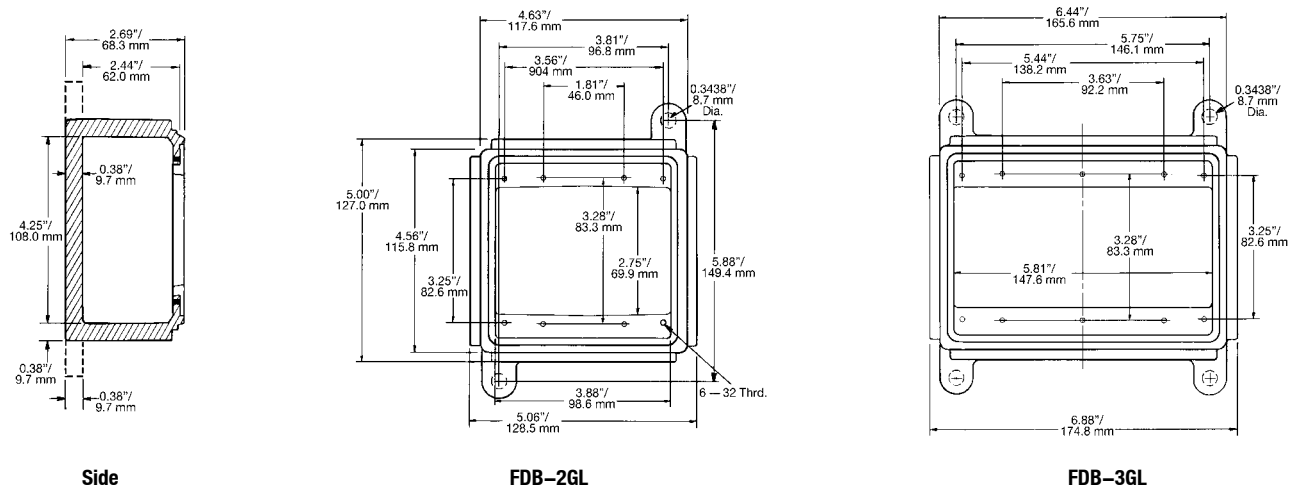
Gangs	Catalog Number	Capacity (in ³ /dm ³)	Volume
Single	FDB-1L		26.00/0.43
Two	FDB-2L		65.00/1.07
Three	FDB-3L		98.00/1.61
Two	FDB-2GL		45.00/0.74
Three	FDB-3GL		62.00/1.02

Dimensions in Inches/Millimeters — All cover and device screws 6—32 thread.

FDB Single, Two, and Three Gang Multiple Cover Boxes.



FDB Two and Three Gang Single Cover Boxes.



Fittings

FITTINGS: CAST DEVICE BOXES