

FS and FD Cast Device Boxes: Malleable Iron, Aluminum

UNILETS® for use with Threaded Rigid Conduit and IMC.
All Device Boxes have Ridge Top Construction.

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.
- FS and FD blank bodies—for special conduit-entrance arrangements.

Features: All FS and FD Boxes

- Corrosion-resistant—ideal for indoor and outdoor installations.
- Weatherproof, raintight and dust-tight when used with cast gasketed covers.
- FS and 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.
- Covers have captive stainless steel screws to speed installation, prevents loss of screws.
- Internal grounding screws standard.

Features: Cast Hub Boxes

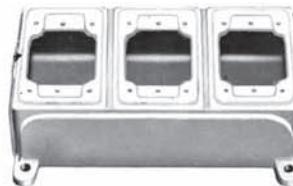
- ① Available in single, two and three gang and tandem.
- Smooth, rounded integral bushing in each hub protects conductor insulation.

Features: FDB Blank Bodies for Drilling and Tapping

- ② Available in single, two and three gang boxes.
- Drilling and tapping from 1/2" thru 1-1/2".
- Minimum engagement of 3-1/2 threads.
- With mounting lugs.
- FDB-2GL and FDB-3GL can also be drilled and tapped in back of box (wall opposite cover).



① Cast Hub Boxes.
Single Gang shown.



② Blank Bodies for Drilling
and tapping. FDB-3L shown.



③ Blank Bodies for Brazed Hubs.
FS-2G shown.

Features: FS & FD Blank

Bodies for Brazed Hubs

- ③ Available in single, two, three and four gang boxes.
- Brazed threaded hubs for threaded conduit from 1/2" thru 1-1/2" and brazed union hubs from 1/2" thru 1-1/4".
- Smooth, rounded integral bushing in each hub protects conductor insulation.

Standard Materials

- Cast Hub Device Boxes and Boxes for Drilling and Tapping: malleable iron or copper-free (4/10 of 1% max.) aluminum.
- Brazed Hubs: malleable iron.
- Covers: malleable iron, steel, or copper-free (4/10 of 1% max.) aluminum.

Standard Finishes

- Malleable Iron Device Boxes: triple-coat—(1) zinc electroplate, (2) dichromate, and (3) epoxy powder coat.
- Aluminum Device Boxes: epoxy powder coat.

- Malleable Iron Covers with Gaskets: triple-coat—(1) zinc electroplate, (2) dichromate, and (3) epoxy powder coat.
- Steel Covers: zinc electroplate.
- Aluminum Covers: epoxy powder coat.

Compliances

- UL Standard: 498 and 514A.
- U.S. Federal Specification W-C-586B.
- Appleton malleable iron products conform to ASTM A47-77, Grade 32510, which has the following properties: tensile strength, 50,000 psi; yield, 32,000 psi; and elongation, 10%.
- Appleton aluminum products are produced from a high strength copper-free (4/10 of 1% max.) alloy.

Reference Data

- When ordering drilled and tapped openings or brazed hubs for blank bodies, refer to "Ordering Information" pages.



Gasket is designed so that it wraps around ridge top of Appleton aluminum or malleable iron device box. Result is a positive seal against moisture.



Gasket construction. Cover tightens on largest perimeter of gasket and fits snugly against portion of gasket that wraps around ridge top of box.

FS and FD Cast Device Boxes: Single Gang; Malleable Iron, Aluminum

UNILETS® for use with Threaded Rigid Metal Conduit and IMC. FS Box 2.00" Deep, FD Box 2.69" Deep. Furnished with Internal Ground Screw.

Type	Depth	Hub Size (Inches)	Catalog Number		
			Malleable Iron Ridge Top	Aluminum Ridge Top	
 FS	Shallow	1/2	FS-1-50		FS-1-50-A
		3/4	FS-1-75		FS-1-75-A
		1	FS-1-100		FS-1-100-A
 FD	Deep	1/2	FD-1-50		FD-1-50-A
		3/4	FD-1-75		FD-1-75-A
 FSC	Shallow	1/2	FSC-1-50		FSC-1-50-A
		3/4	FSC-1-75		FSC-1-75-A
		1	FSC-1-100		FSC-1-100-A
 FDC	Deep	1/2	FDC-1-50		FDC-1-50-A
		3/4	FDC-1-75		FDC-1-75-A
 FSS	Shallow	1/2	FSS-1-50		FSS-1-50-A
		3/4	FSS-1-75		FSS-1-75-A
 FDS	Deep	1/2	FDS-1-50		FDS-1-50-A
		3/4	FDS-1-75		FDS-1-75-A
		1	FDS-1-100		FDS-1-100-A
 FSLA	Shallow	1/2	FSLA-1-50		

FS and FD Cast Device Boxes: Single Gang; Malleable Iron, Aluminum

UNILETS® for use with Threaded Rigid Metal Conduit and IMC.
FS Box 2.00" Deep, FD Box 2.69" Deep. Furnished with Internal
Ground Screw.

Type	Depth	Hub Size (Inches)	Catalog Number	
			Malleable Iron Ridge Top	Aluminum Ridge Top
 FSCA	Shallow	1/2 3/4	FSCA-1-50 FSCA-1-75	
 FSCC	Shallow	1/2 3/4	FSCC-1-50 FSCC-1-75	
 FDCC	Deep	1/2 3/4 1	FDCC-1-50 FDCC-1-75 FDCC-1-100	FDCC-1-75-A
 FSCT	Shallow	1/2 3/4 1	FSCT-1-50 FSCT-1-75 FSCT-1-100	
 FDCT	Deep	1/2 3/4 1	FDCT-1-50 FDCT-1-75 FDCT-1-100	
 FST	Shallow	1/2 3/4	FST-1-50 FST-1-75	
 FDT	Deep	1/2 3/4 1	FDT-1-50 FDT-1-75 FDT-1-100	
 FSX	Shallow	1/2 3/4	FSX-1-50 FSX-1-75	
 FDX	Deep	1/2 3/4 1	FDX-1-50 FDX-1-75 FDX-1-100	
FSCD	Shallow	1/2 3/4	FSCD-1-50 FSCD-1-75	

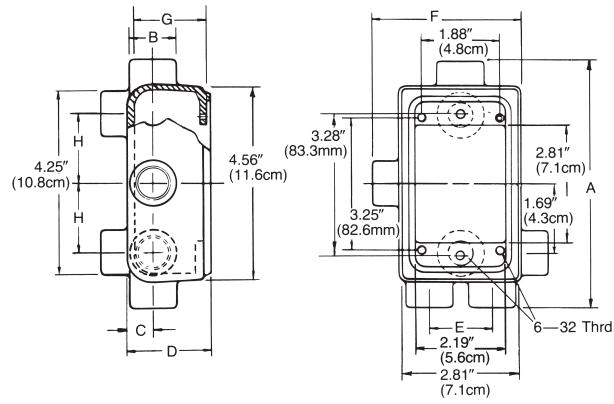
FS and FD Cast Device Boxes: Single Gang and Tandem; Malleable Iron

UNILETS® for use with Threaded Rigid Metal Conduit and IMC.
FS Box 2.00" Deep, FD Box 2.69" Deep. Furnished with
Internal Ground Screw.

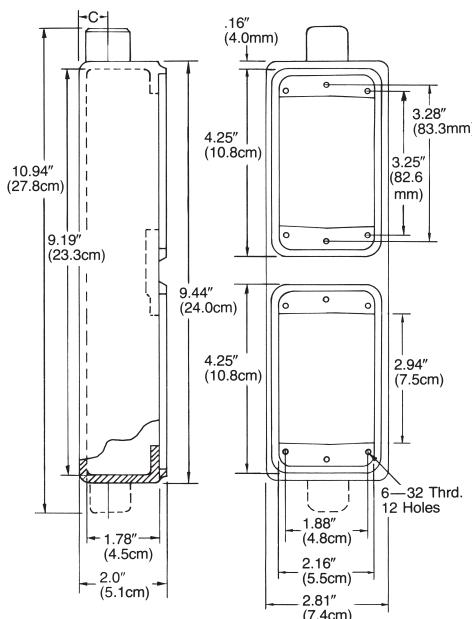
Type	Depth	Hub Size (Inches)	Catalog Number	
			Malleable Iron Ridge Top	Aluminum Ridge Top
FS and FD Single Gang Boxes with Mounting Lugs				
	FS	Shallow	1/2 3/4	FS-1-50L FS-1-75L
	FD	Deep	1/2 3/4 1	FD-1-50L FD-1-75L FD-1-100
	FSC	Shallow	1/2 3/4	FSC-1-50L FSC-1-75L
	FDC	Deep	1/2 3/4 1	FDC-1-50L FDC-1-75L FDC-1-100
FS Single Gang Boxes with Double Opening				
	FS	3.38"	1/2 3/4	FS-1D-50 FS-1D-75
	FSC	3.38"	1/2 3/4	FSC-1D-50 FSC-1D-75
FS Two-Gang Tandem Boxes				
	Take single gang covers			
	FS	Shallow	1/2 3/4	FS-2T-50 FS-2T-75
	FSC	Shallow	1/2 3/4	FSC-2T-50 FSC-2T-75
	FS	Extension	1.00"	FS-1EXT

Dimensions: FS and FD Cast Device Boxes; Malleable Iron and Aluminum Single Gang and Tandem

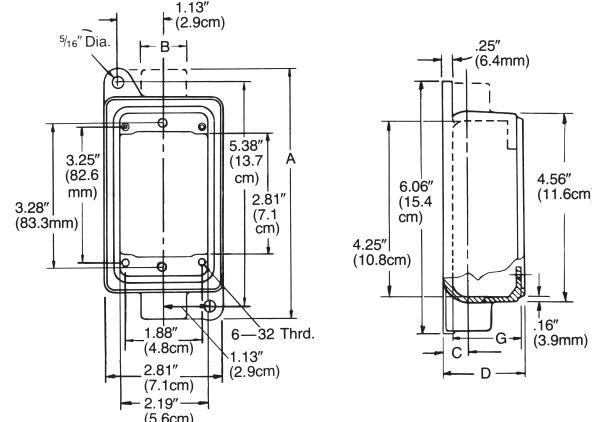
FS and FD Single Gang Boxes without lugs.
Dimensions in Inches and Centimeters



FS Tandem Boxes.
Dimensions in Inches and Centimeters



FS and FD Single Gang Boxes with lugs.
Dimensions in Inches and Centimeters



All cover and device screws 6-32 thread.

Hub Size (In.)	A	B	C	D "FS"	D "FD"	E	F	G "FS"	G "FD"	H
Dimensions in Inches										
1/2	5.88	1.13	.63	2.00	2.69	1.50	3.50	1.78	2.44	1.69
3/4	5.88	1.38	.75	2.00	2.69	2.06	3.50	1.78	2.44	1.50
1	6.31	1.69	.94	2.00	2.69	2.06	3.50	1.78	2.44	1.38

Dimensions in Centimeters										
1/2	14.9	2.9	1.6	5.1	6.8	3.8	8.5	4.5	6.2	4.3
3/4	14.9	3.5	1.9	5.1	6.8	5.2	8.5	4.5	6.2	3.8
1	16.0	4.3	2.4	5.1	6.8	5.2	8.5	4.5	6.2	3.5

*Aluminum FS Boxes have same dimensions as malleable iron FS boxes.

Fraction/Decimal Equivalents (Inches)

Fraction	Decimal	Fraction	Decimal	Fraction	Decimal	Fraction	Decimal
1/16	0.06	5/16	0.31	9/16	0.56	13/16	0.81
1/8	0.13	3/8	0.38	5/8	0.63	7/8	0.88
3/16	0.19	7/16	0.44	11/16	0.69	15/16	0.94
1/4	0.25	1/2	0.50	3/4	0.75	1	1.00

Stamped Covers for FS and FD Single Gang Device Boxes

Steel Covers and Aluminum Covers for Ridge Top Boxes. Furnished with Stainless Steel Screws, Less Gasket. For Gaskets, see Page B-8.

Description	Steel	Catalog Number Aluminum	
	For double push button switches, momentary contact and maintain switches.	FSK-1PB	
	For square handle tumblers or toggle switches.	FSK-1TS	FSK-1TS-A
	For square handle tumblers or toggle switches. Has toggle guard.	FSK-1TSG	
	For two or three interchangeable devices. Includes mounting bracket.	FSK-1WD-3	
	For round flush receptacles, without lift cover. Mounts on device. Hole Dia.—1-13/32"	FSK-1R-Q	FSK-1R-Q-A
	For round flush receptacles, with lift cover. Mounts on device. Hole Dia.—1-13/32"	FSK-1R-T	
	For round receptacles. Mounts directly on box. Hole Dia.—1-13/32"	FSK-1R-W	FSK-1R-W-A
	For round receptacles. Mounts directly on box. Hole Dia.—1-5/8". 3-9/32" C to C screw holes	FSK-1R-X	
	For round receptacles. Mounts on device. Hole Dia.—1-5/8". 2-3/8" C to C screw holes	FSK-1R-Y	FSK-1R-Y-A
	For standard 2 or 3 wire duplex receptacles	FSK-1DR	FSK-1DR-A
For pilot lamp: Red Jewel Amber Jewel Green Jewel Opal Jewel	FSK-1J FSK-1JA FSK-1JG FSK-1JO		
Blank	FSK-1B	FSK-1B-A	

**Cast Covers for FS and FD
Single Gang Device Boxes**

Malleable Iron and Aluminum Covers for Ridge Top Boxes.

	Description	Catalog Number	
		Malleable Iron	Aluminum
	Cast Covers NEMA 3R Wet Locations Furnished with gasket and stainless steel screws	FSK-1VR	FSK-1VR-A
	Receptacle cover with spring cover. Hole Dia.—1-7/16"	FSK-1VDR	FSK-1VDR-A
	For duplex flush receptacle with spring cover	FSK-1VDR	FSK-1VDR-A
	For pilot lamp flush receptacles: Red Jewel Opal Jewel Amber Jewel Green Jewel	FSK-1J-C FSK-1JOC FSK-1JAC FSK-1JGC	FSK-1JCA FSK-1JOCA FSK-1JACA FSK-1JGCA
	For double push button switches	FSK-1PBS	
	For external operation of tumbler switches with square handles	FSK-1VTS	FSK-1VTS-A
	Operating type for square handle tumbler or toggle switches	FSK-1VS	FSK-1VS-A
	Rocker type for square handle tumbler or toggle flush switches	FSK-1V	FSK-1V-A
	Blank	FSK-1B-C	FSK-1B-CA
	Gasket (Replacement) Neoprene—for use with wet location covers above and receptacle covers on pages B-10 and B-11.	FS-GKR-1N	FS-GKR-1N
	Cast Covers Dry Locations furnished with stainless steel screws less gasket	FSK-1DR-C	
	For standard 2 or 3 wire duplex receptacles	FSK-1DR-C	
	For round flush receptacles. Hole Dia.—1-7/16"	FSK-1R-Z	
	For square handle toggle switches	FSK-1TS-C	
	For square handle toggle switches. Has toggle guard.	FSK-1TSG-C	FSK-1TSG-CA

NEMA 3R Wet Location Receptacle Covers for NEMA Configuration Receptacles

Available with NEMA Configuration Receptacles or as Covers Only. Covers also accommodate Toggle Switches.

Applications

- Meet NEC 410-57(b) receptacle requirements for wet locations: "A receptacle installed outdoors where exposed to weather or in other wet locations shall be in a weatherproof enclosure, the integrity of which is not affected when the receptacle is in use (attachment plug cap inserted)."
- For industrial, commercial or residential use as a general purpose receptacle or for powering portable equipment not exceeding medium duty ratings.
- Mounts on FS or FD device boxes or equivalents, either single gang or multiple gang with single gang openings.

Features

- Provides full protection in damp or wet locations per NEC 410-57. Gasketed spring door cover closes tightly automatically to protect receptacle from moisture and dirt when not in use. With plug inserted, a heavy-duty gasket in throat of receptacle seals around it to keep out moisture and dirt.
- Receptacle interiors comply with NEMA Standards WD-1 and WD-5.
- Receptacle interiors are specification grade, back and side-wired.
- Single cover units accommodate NEMA configuration receptacles for locking or non-locking blade plugs, or toggle switches. Duplex units accommodate one receptacle and one toggle switch or any combination of the two.
- Covers open all the way, permitting easy plug insertion and withdrawal. Also permits adequate access to cover screws for easy attachment of cover to FS, FD or other device box. Large head cover screws are captivated.
- Unique design of spring door hinge provides smooth action. Duplex units have a separate hinge shaft for each spring door cover to reduce stress on the shafts.
- Spring door cover puts pressure on plug (without tilting plug) to hold plug in best position for providing optimum weatherproof seal.
- Stainless steel hinge springs are completely enclosed—inside and out—for superior resistance against corrosion.



Duplex Cover on FS Box.



Single Cover on FS Box.

- EPDM gaskets provide superior resistance to the weather, ozone and temperatures between -50°F and 260°F.
- Die-cast copper-free cover assemblies with epoxy powder coat (electrostatically applied for uniform coverage) to provide protection against corrosion.
- Positive ground path assured for all exposed metal parts.
- Receptacle interiors grounded through an extra contact in all types. Self-grounded in Duplex units.

Standard Materials

- Cover and Faceplate: die-cast copper-free (4/10 of 1%) aluminum.
- Gaskets: ethylene propylene rubber (EPDM).
- Cover screws: stainless steel.
- Hinge shaft: nylon.
- FSK-SBA Adapter: steel plate with closed cell sponged neoprene gasket.



Typical application with NEMA configuration receptacle and plug, mounted on an FS box. Gasket seals around plug, keeping out moisture and dirt. Spring door closes automatically when plug is withdrawn to protect receptacle.

Standard Finishes

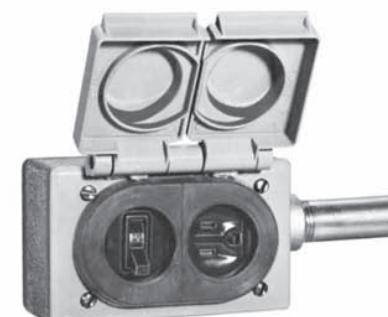
- Cover and Faceplate: epoxy powder coat.
- FSK-SBA Adapter: zinc electroplate.

Compliances

- UL Standards 498 and 514A.
- U.S. Federal Specification W-C-586B.
- NEC 410-57.
- OSHA Standards, Sub-part "S".
- NEMA Standards WD-1 (straight blade) and WD-5 (locking type).

References

- For FS/FD Boxes, see pages 3,4,5,16,20 and 21. For additional Receptacle Covers, see page 11.



Spring doors open wide for easy plug insertion and cover assembly (covers shown in open position for illustration only). This view shows gaskets that protect plugs. Gasket on bottom of cover prevents entry of moisture into device box (see gasket description on page 2).

NEMA 3R Wet Location Receptacle Covers for NEMA Configuration Receptacles

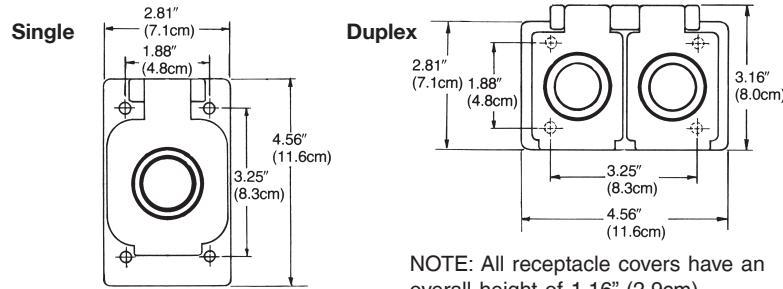
Available with NEMA Configuration Receptacles or as Covers Only. Covers also accommodate Toggle Switches. Furnished with Stainless Steel Screws and Gasket.

	Amp	Wire/ Pole	Volts	NEMA Configuration	Catalog Number With Receptacle	Catalog Number Cover Only
Duplex Cover for Non-Locking Blade Plugs, with 1-3/8" Device Opening						
	15	2P,3W	125	5-15R	FSKD5-15	FSK-WRD
	15	2P,3W	250	6-15R	FSKD6-15	FSK-WRD
	20	2P,3W	125	5-20R	FSKD5-20	FSK-WRD
	20	2P,3W	250	6-20R	FSKD6-20	FSK-WRD
Single Cover for Non-Locking and Locking Blade Plugs, with 1-3/8" Device Opening						
	15	2P,3W	125	5-15R	FSKJ5-15	FSK-WR1
	15	2P,3W	250	6-15R	FSKJ6-15	FSK-WR1
	20	2P,3W	125	5-20R	FSKJ5-20	FSK-WR1
	20	2P,3W	250	6-20R	FSKJ6-20	FSK-WR1
	15	2P,3W	125	L5-15R	FSKJL5-15	FSK-WR1
	15	2P,3W	250	L6-15R	FSKJL6-15	FSK-WR1
	15	2P,3W	277	L7-15R	FSKJL7-15	FSK-WR1
Single Cover for Locking Blade Plugs, with 1-19/32" Device Opening						
	Accommodates NEMA configuration receptacles with 1-19/32" device opening.				—	FSK-WR2
					—	FSK-WGF1
					—	FSK-WT2*
					—	FSK-SBA
Single Cover for Toggle Switches (1-19/32" opening)						
Accommodates Toggle Switch. Furnished with Toggle Switch Plate to provide protection from exposed terminal wires of Toggle Switch.				—	FSK-WT2	
Adapter/Gasket						
For mounting Receptacle Cover on Switch Boxes (not required on FS/FD Boxes)				—	FSK-SBA	



Receptacle Cover mounted on Switch Box with FSK-SBA Adapter/Gasket

*Covers shown in open position for illustration only. Spring door closes automatically when plug is withdrawn.



NOTE: All receptacle covers have an overall height of 1.16" (2.9cm).

FS and FD Receptacle Covers and Plugs for Single Gang Device Boxes

NEMA 3R Wet Locations. Malleable Iron and Aluminum Covers for Ridge Top Boxes.

Receptacle Cover has threaded aluminum cap. Plug has neoprene boot and aluminum fastening ring. Furnished with receptacle, neoprene gasket, stainless steel screws.

Receptacle	Plug	Pole/Wire	Catalog Number
		Malleable Iron	Receptacles
		Aluminum	Plug
Non-Locking, "U" Shaped Grounding Type			
Receptacle takes "U" shaped or round grounding contact plugs.			
	15 Amp, 125V NEMA 5-15R 	NEMA 5-15P 	2P,3W FSK5-15 FSK5-15-A FSWP5-15
	20 Amp, 125V NEMA 5-20R 	NEMA 5-20P 	2P,3W FSK5-20† FSK5-20-A† FSWP5-20
	15 Amp, 250V NEMA 6-15R 	NEMA 6-15P 	2P,3W FSK6-15 FSK6-15-A FSWP6-15
	20 Amp, 250V NEMA 6-20R 	NEMA 6-20P 	2P,3W FSK6-20‡ FSK6-20-A‡ FSWP6-20
Also takes FSWP5-15 Plugs	‡Also takes FSWP6-15 Plugs		

Locking Grounding Type

	15 Amp, 125V NEMA L5-15R 	NEMA L5-15P 	2P,3W FSKL5-15	FSWPL5-15
	15 Amp, 250V NEMA L6-15R 	NEMA L6-15P 	2P,3W FSKL6-15	FSWPL6-15
	15 Amp, 277V NEMA L7-15R 	NEMA L7-15P 	2P,3W FSKL7-15	FSWPL7-15

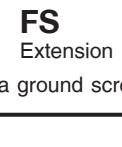
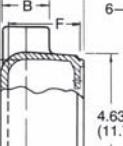
Gasket (Replacement)

Neoprene—for use with wet location covers.

FS-GKR-1N

FS and FD Cast Device Boxes: Two Gang; Malleable Iron, Aluminum

UNILETS® for use with Threaded Rigid Metal Conduit and IMC. FS Box 2.00" Deep, FD Box 2.69" Deep. Furnished with Internal Ground Screw.

	Type	Depth	Hub Size (Inches)	Catalog Number	
				Malleable Iron Ridge Top	Aluminum Ridge Top
	FS	Shallow	1/2	FS-2-50	FS-2-50-A
			3/4	FS-2-75	FS-2-75-A
			1	FS-2-100	
	FD	Deep	1/2	FD-2-50	
			3/4	FD-2-75	FD-2-75-A
			1	FD-2-100	
	FSC	Shallow	1/2	FSC-2-50	
			3/4	FSC-2-75	
			1	FSC-2-100	
	FDC	Deep	1/2	FDC-2-50	
			3/4	FDC-2-75	FDC-2-75-A
			1	FDC-2-100	
	FSS	Shallow	1/2	FSS-2-50	
			3/4	FSS-2-75	FSS-2-75-A
			1	FSS-2-100	
	FDS	Deep	3/4	FDS-2-75	
	FSD	Shallow	1/2-3/4	FSD-2-75	

† Largest hub at bottom in illustration.



FS

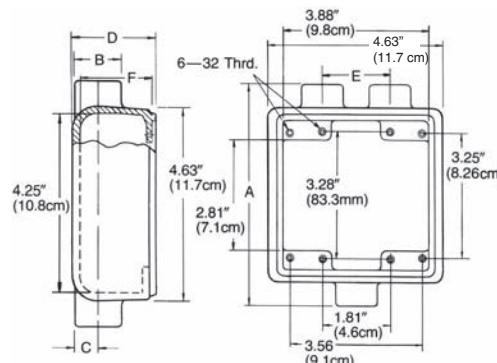
Extension

1.00"

FS-2EXT

Extension does not have a ground screw.

All cover and device screws 6-32 thread.



Hub Size (In.)	A	B	C	D "FS"	D "FD"	E	F "FS"	F "FD"
Malleable Iron and Aluminum Dimensions (Inches)								
1/2	5.88	1.13	.63	2.00	2.69	1.88	1.78	2.44
3/4	5.88	1.38	.75	2.00	2.69	1.88	1.78	2.44
1	6.31	1.69	.94	2.00	2.69	2.06	1.78	2.44
Malleable Iron and Aluminum Dimensions (Centimeters)								
1/2	14.9	2.9	1.6	5.1	6.8	4.8	4.5	6.2
3/4	14.9	3.5	1.9	5.1	6.8	4.8	4.5	6.2
1	16.0	4.3	2.4	5.1	6.8	5.2	4.5	6.2



Stamped and Cast Covers for Two Gang FS and FD Device Boxes

Steel, Aluminum and Malleable Iron Covers for Ridge Top Boxes.

Description	Catalog Number Steel Aluminum		
Stamped Steel and Aluminum Covers with stainless steel screws, less gasket.			
	For square handle tumbler or toggle flush switches	FSK-2TS	FSK-2TS-A
	For two round receptacles. Mounts on device. Hole Dia.—1-13/32"	FSK-2R-Q	
	For two round receptacles. Mounts directly on box. Hole Dia.—1-13/32"	FSK-2R-W	
	For round flush receptacles, with lift cover. Mounts on device. Hole Dia.—1-13/32"	FSK-2R-T	
	For duplex flush receptacles	FSK-2DR	FSK-2DR-A
	For tumbler flush switch and duplex flush receptacles	FSK-2RS-K	
	For round flush receptacle (Hole Dia.—1-13/32") and duplex receptacles	FSK-2R-L	
	For round receptacles. Hole Dia.—2-15/32"	FSK-2R-M	
	Blank	FSK-2B	FSK-2B-A

Cast Covers—Weatherproof with gasket and stainless steel screws.	Catalog Number Malleable Iron Aluminum	
	FSK-2VTS	FSK-2VTS-A
	FSK-2B-CM	FSK-2B-CA
Gasket (Replacement) Neoprene—for use with 2-gang cast covers above		
	FS-GKR-2N	

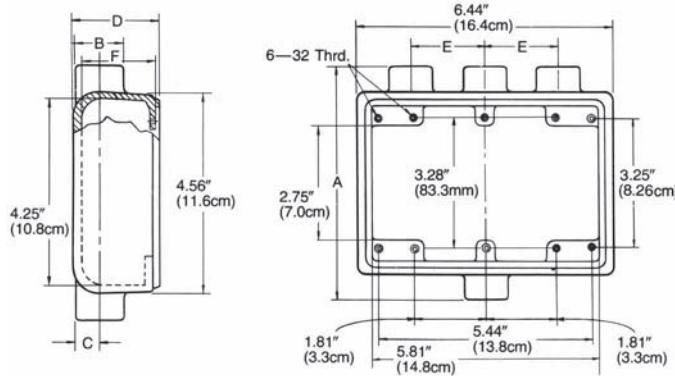
FS Cast Device Boxes: Three Gang; Malleable Iron

UNILETS® for use with Threaded Rigid Metal Conduit and IMC.
FS Box 2.00" Deep. Furnished with Internal Ground Screw.

Type	Depth	Hub Size (Inches)	Catalog Malleable Iron Ridge Top
 FS	Shallow	3/4 1	FS-3-75 FS-3-100
 FSS	Shallow	3/4	FSS-3-75

Fraction/Decimal Equivalents (Inches)

Fraction	Decimal
1/16	0.06
1/8	0.13
3/16	0.19
1/4	0.25
5/16	0.31
3/8	0.38
7/16	0.44
1/2	0.50
9/16	0.56
5/8	0.63
11/16	0.69
3/4	0.75
13/16	0.81
7/8	0.88
15/16	0.94
1	1.00



Hub Size (In.)	A	B	C	D	"FD"	E	F	"FD"
Dimensions in Inches								
1/2	5.88	1.13	.63	2.00	2.69	1.88	1.78	2.44
3/4	5.88	1.38	.75	2.00	2.69	1.88	1.78	2.44
1	6.31	1.69	.94	2.00	2.69	2.13	1.78	2.44
Dimensions in Centimeters								
1/2	14.9	2.9	1.6	5.1	6.8	4.8	4.5	6.2
3/4	14.9	3.5	1.9	5.1	6.8	4.8	4.5	6.2
1	16.0	4.3	2.4	5.1	6.8	4.8	4.5	6.2

**Stamped and Cast Covers for Three Gang
FS and FD Device Boxes**

Steel and Malleable Iron Covers for Ridge Top Boxes.

Description	Catalog Number
Stamped Steel Covers	
Furnished with stainless steel screws, less gasket	
For square handle tumbler or toggle flush switches	FSK-3TS
Blank	FSK-3B
Malleable Iron Cast Covers— Weatherproof	
Furnished with gasket and stainless steel screws	
For external operation of tumbler or toggle switches with square handles	FSK-3VTS
Blank Cast	FSK-3B-CM
Gasket (Replacement)	
Neoprene—for use with 3 gang wet location covers above	FS-GKR-3N

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

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

All boxes have lugs, and all hubs
are integral and drilled and tapped.
Note: Refer to pages 17, 18, 19 for
dimensions and ordering information.

Depth
(2.69" Deep
with Lugs)

Catalog Number
Malleable Iron
Ridge Top

Aluminum
Ridge Top



Single Gang Box

Use with all single gang covers. (Top, bottom
and sides may be drilled and tapped)

Deep

FDB-1L

FDB-1L-A



Two Gang Box, Multiple-Cover

Use with all single gang covers. (Top, bottom
and sides may be drilled and tapped)

Deep

FDB-2L

FDB-2L-A



Three Gang Box, Multiple-Cover

Use with all single gang covers. (Top, bottom
and sides may be drilled and tapped)

Deep

FDB-3L

FDB-3L-A



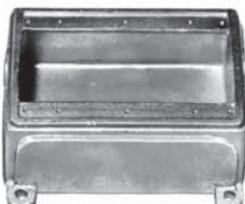
Two Gang Box, Single Cover

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

Deep

FDB-2GL



Three Gang Box, Single Cover

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

Deep

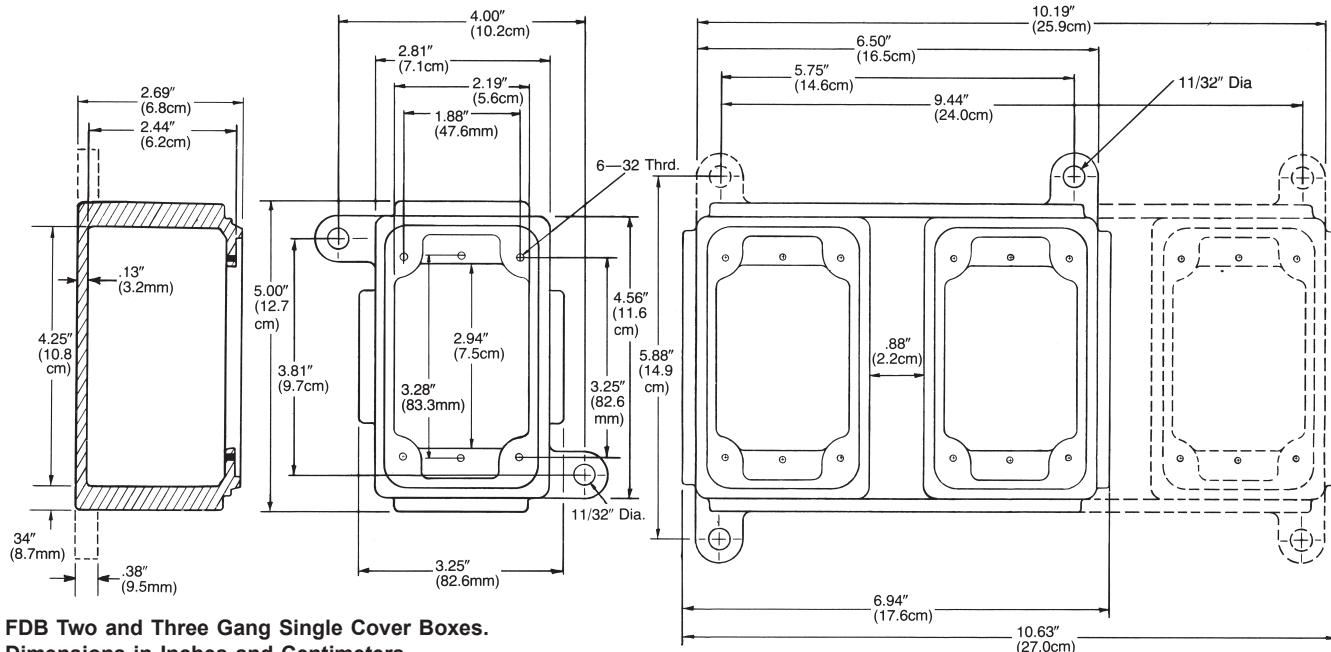
FDB-3GL

Dimensions: FDB Single and Multiple Gang Device Boxes; Blank Bodies for Drilling and Tapping

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

Dimensions in Inches and Centimeters.

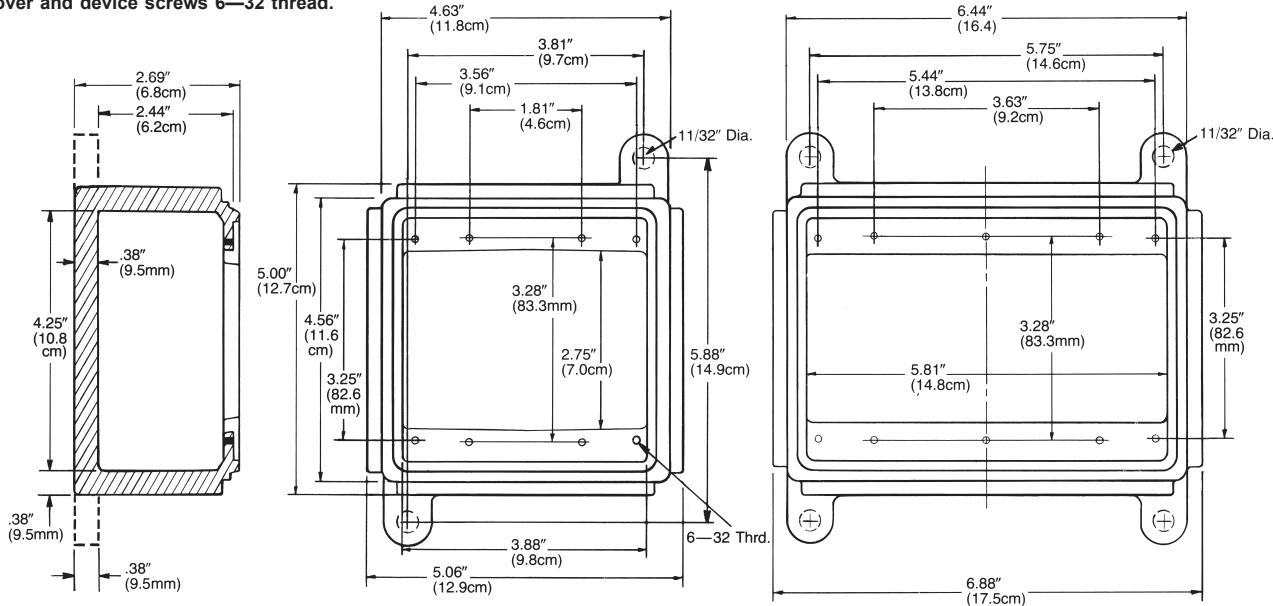
All cover and device screws 6-32 thread.



FDB Two and Three Gang Single Cover Boxes.

Dimensions in Inches and Centimeters.

All cover and device screws 6-32 thread.



FDB-2GL

FDB-3GL

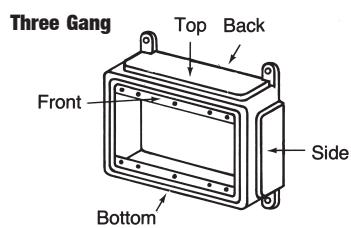
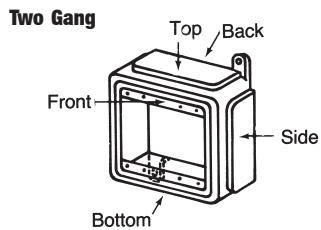
Ordering Information: FDB Cast Device Boxes; Blank Bodies for Drilling and Tapping

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-BC0E.



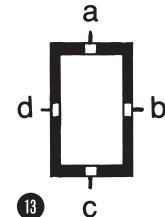
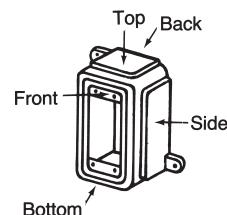
Symbol Table

Size 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

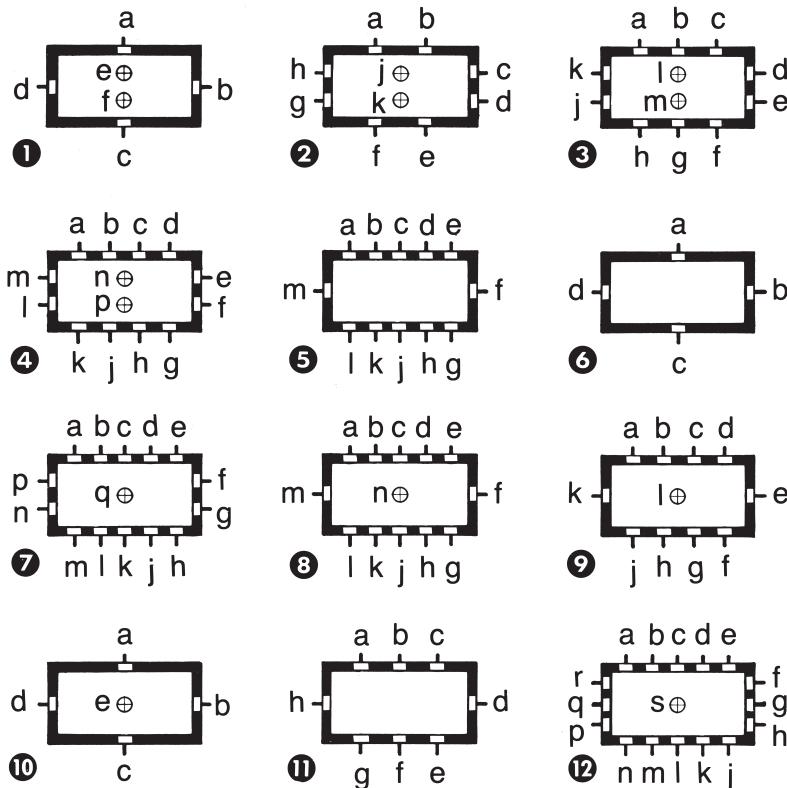
Standard Conduit Opening Arrangement Diagrams

Opening "a" is always TOP of box.

Single Gang (Front View)



Two, and Three Gang (Front View)



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 centerline of walls and evenly spaced unless otherwise specified.

Ordering Information: FDB Cast Device Boxes; Blank Bodies for Drilling and Tapping

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".

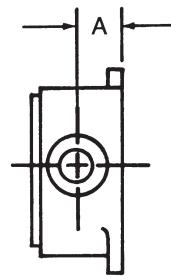
Minimum Centerline Spacing in Inches

Opening Size, Inches	1/2	3/4	1	1-1/4	1-1/2
1/2	1.19				
3/4	1.31	1.44			
1	1.44	1.56	1.69		
1-1/4	1.63	1.75	1.88	2.00	
1-1/2	1.75	1.88	2.00	2.19	2.31

BBU Bushing Dia.	1.06	1.31	1.56	1.94	2.19
UNY/UNF (R) Union Dia.	1.50	1.75	2.00	2.81	3.06
Conduit Dia.	.88	1.06	1.31	1.69	1.94

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

	FDB-1L	FDB-2L	FDB-2GL	FDB-3L	FDB-3GL
Conduit Opening (In.)	Dim. "A" (In.)				
1/2	1.06				
3/4	1.19				
1	1.31				
1-1/4	1.38				
1-1/2	1.25				
	1.06	1.19	1.31	1.38	1.44
					1.50



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

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

FDH Cast Device Boxes: Single and Multiple Gang; Blank Bodies for Brazed Hubs

UNILETS® for Use with Threaded Rigid Metal Conduit and IMC.
Available with Hub Sizes from 1/2" thru 1-1/2" (Union 1/2" thru 1-1/4").
Furnished with Internal Ground Screw.

Note: All hubs are brazed on. Refer to ordering information on pages B-24 and B-25.	Depth (2.69" Deep with Lugs)	Catalog Number
		Malleable Iron Ridge Top



Single Gang Box

Use with single gang covers

Deep

FD-1L



Two Gang Box, Multiple Cover

Use with single gang covers

Deep

FD-2L



Three Gang Box, Multiple Cover

Use with single gang covers

Deep

FD-3L



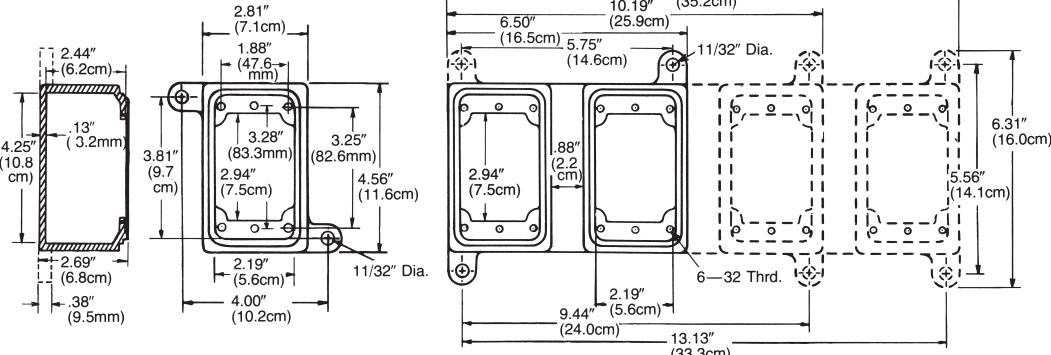
Four Gang Box, Multiple Cover

Use with single gang covers

Deep

FD-4L

**FD Single and
Multiple Gang Boxes.
Dimensions in Inches
and Centimeters.
All cover and device
screws 6-32 thread.**



**FDH Cast Device Boxes:
Single and Multiple Gang;
Blank Bodies for Brazed Hubs**

UNILETS® for use with Threaded Rigid Metal Conduit and IMC. Available with Hub Sizes from 1/2" thru 1-1/2" (Union 1/2" thru 1-1/4"). Furnished with Internal Ground Screw.

Type: Brazed Hubs	Depth	Catalog Number*
Note: refer to ordering information on pages B-24 and B-25.		Malleable Iron Ridge Top

FS Box 2.00" deep, FD Box 2.69" deep.

Accommodates single, two, three, and four gang covers.



FS and FD with Lugs

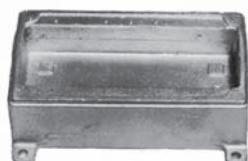
Single Gang Box	Shallow Deep	FS-1GL FD-1L
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Two Gang Box Single Cover	Shallow Deep	FS-2GL FD-2GL
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Three Gang Box Single Cover	Shallow Deep	FS-3GL FD-3GL
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Four Gang Box Single Cover	Shallow Deep	FS-4GL FD-4GL
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For four gang covers, see pg. 23

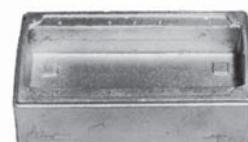


FS and FD without Lugs

Two Gang Box Single Cover	Shallow Deep	FS-2G FD-2G
--------------------------------------	-----------------	------------------------------



Three Gang Box Single Cover	Shallow Deep	FS-3G FD-3G
--	-----------------	------------------------------



Four Gang Box Single Cover	Shallow Deep	FS-4G FD-4G
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For four gang covers, see pg. B-23

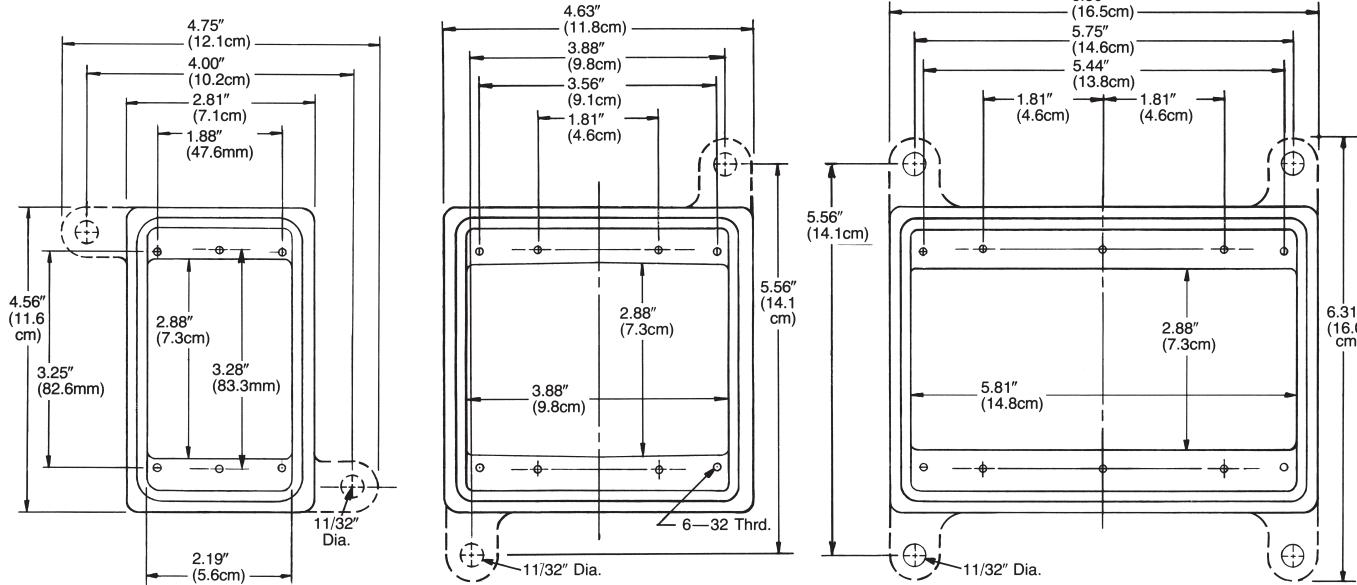
*When ordering brazed hubs for blank bodies, refer to dimension and ordering information pages.

Dimensions: FS and FD Single and Multiple Gang Device Boxes; Blank Bodies for Brazed Hubs

FS and FD Single, Two and Three Gang Single Cover Boxes. Dimensions in Inches and Centimeters.

All cover and device screws 6-32 thread.

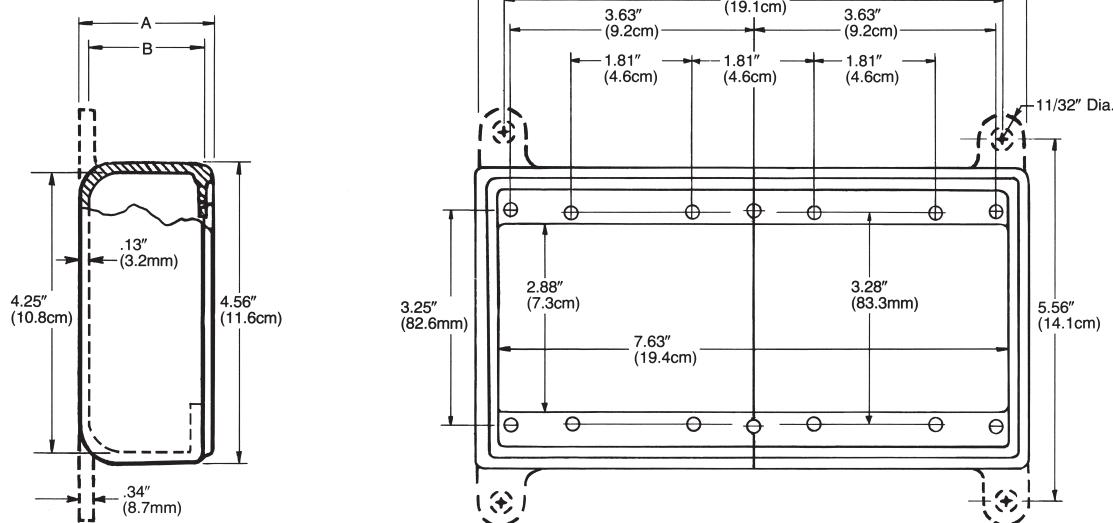
(For side view dimensions, see Four Gang Box drawings below)



FS and FD Four Gang Single Cover Boxes.

Dimensions in Inches and Centimeters.

All cover and device screws 6-32 thread.



Dimensions in Inches		Dimensions in Centimeters	
A "FS" 2.00	B "FD" 2.69	A "FS" 5.1	B "FD" 6.8
1.78	2.44	4.5	6.2

Covers for FS and FD Four Gang Single Cover Device Boxes

Cast Malleable Iron and Stamped Steel Covers for use with
Ridge Top Boxes.

Description	Catalog Number Malleable Iron Steel
Stamped Steel Covers	
	Furnished with stainless steel screws, less gasket
For square handle tumbler or toggle flush switches	FSK-4TS
Malleable Iron Cast Covers Weatherproof	
	Furnished with gasket and stainless steel screws
Blank Cast	FSK-4B-CM
Gasket (Replacement)	
	Neoprene—for use with 4-gang cast covers above
	FS-GKR-4N
	FS-GKR-4N

Ordering Information: FDH Cast Device Boxes; Blank Bodies for Brazed Threaded Hubs

Single, Two, Three, and Four Gang Boxes. Brazed Threaded Hubs for Rigid Conduit, 1/2" thru 1-1/2"; Brazed Union Hubs, 1/2" thru 1-1/4"

Determine catalog number as follows:
(1) select FDH device box catalog number;

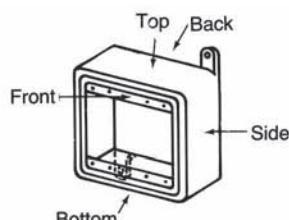
(2) select "Standard Hub Arrangement Diagram" number;

(3) Determine if your desired number and trade size of conduit entries will fit in the FDH box chosen, by reviewing the "Maximum Number and Size..." table on page B-25. Select a larger box if you experience a fit problem; and
(4) select symbols that represent hub sizes from "Symbol Table." (Use "0" where no hub is required, and separate the various divisions of the complete catalog number by dashes.)

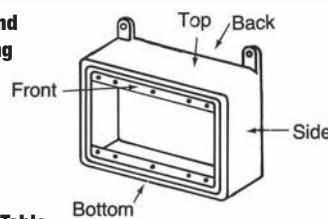
Example:

The blank body device box selected is FS-3GL and the hub arrangement is diagram #8. Hub "a" is to be 1/2" BRAZED THREADED; hub "b", 1" BRAZED THREADED; hub "c", 3/4" BRAZED THREADED; hub "d", no hub is required; and hub "e", 1-1/4" BRAZED UNION. The complete catalog number will be: FS-3GL-8—1320U

Two Gang



Three and Four Gang



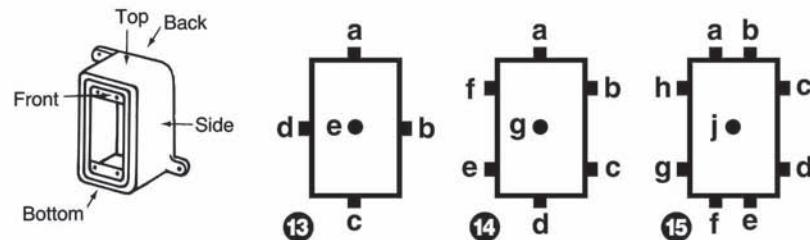
Symbol Table

Hub Size (inches)	Brazed Threaded Hub Symbol	Brazed Union Hub Symbol
Blank	0	0
1/2	1	R
3/4	2	S
1	3	T
1-1/4	4	U
1-1/2	5	—

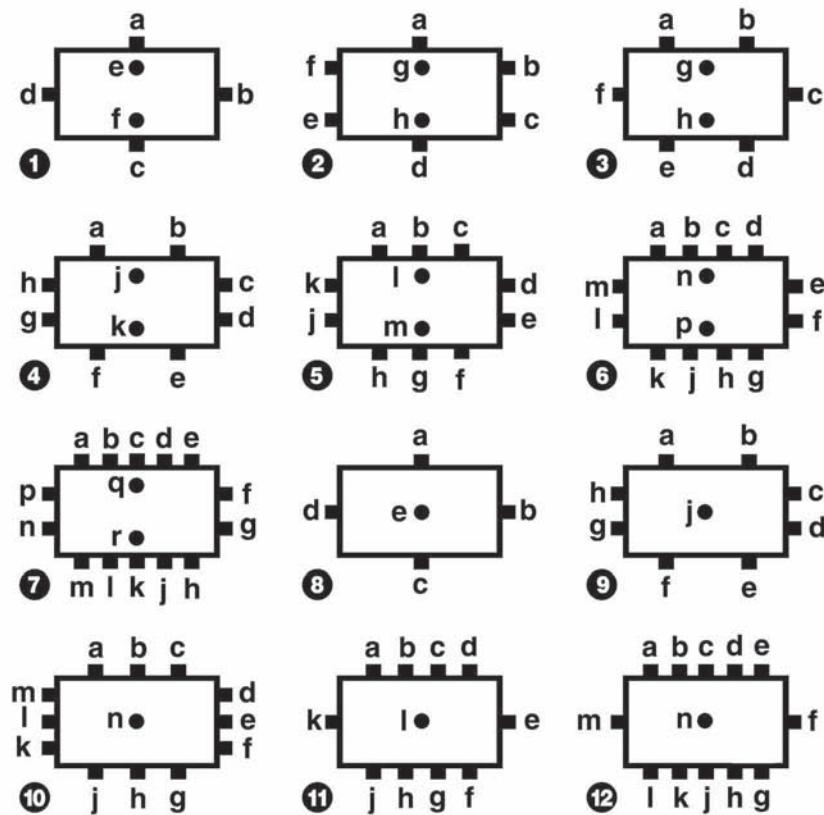
Standard Hub Arrangement Diagrams

Opening "a" is always TOP of box.

Single Gang (Front View)



Two, and Three and Four Gang (Front View)



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

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

Ordering Information: FDH Cast Device Boxes; Blank Bodies for Brazed Threaded Hubs

Single, Two, Three, and Four Gang Boxes. Brazed Threaded Hubs for Rigid Conduit, 1/2" thru 1-1/2"; Brazed Union, 1/2" thru 1-1/4".

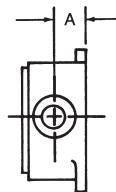
Minimum Centerline Spacing Between Brazed Threaded Hubs*

Table shows minimum distances between hub centerlines in various size combinations. For example, if 1-1/4" and 1/2" hubs are to be brazed on one side of box, the minimum spacing between centerlines would be 1.75". If union hubs are used, additional space must be allowed.

Minimum Centerline Spacing in Inches

Hub Size (In.)	1/2	3/4	1	1-1/4	1-1/2
1/2	1.25				
3/4		1.38	1.50		
1			1.56	1.69	1.81
1-1/4				1.75	1.88
1-1/2					1.94
Hub Dia.					1.13
Conduit Dia.					.88
UNY/UNF (R)	1.50		1.38	2.00	2.81
Union Dia.					—

Distance from Mounting Surface to Centerline of Brazed Threaded Hubs



Hub Size Inches	Dim. "A" (Inches)	Dim. "A" (cm)
1/2	.63	1.6
3/4	.75	1.9
1	.88	2.2
1-1/4	1.09	2.8
1-1/2	1.22	3.1

Maximum Number and Sizes of Brazed Threaded Hubs per Top, Bottom, Side and Back*

Table based on brazed threaded hubs only. Maximum union hub sizes: FS Box, 3/4"; FD Box, 1" (1-1/4" maximum on back, FS and FD)

Type Box	Hub Size (In.)	Max. Number of Openings			Type Box	Max. Number of Openings			
		Top or Bottom	Per Side	Back		Hub Size (In.)	Top or Bottom	Per Side	
FD-1L:	1/2	2	2	2	FS-3G & FS-3GL:	1/2	4	2	6
One	3/4	1	2	2	One	3/4	3	2	6
Single Gang	1	1	2	2	Three Gang	1	3	2	6
Cover	1-1/4	1	1	1	Cover	1-1/4	None	None	3
	1-1/2	1	1	1		1-1/2	None	None	3
FD-2L:	1/2	4	2	4	FS-4G & FS-4GL:	1/2	5	2	8
Two	3/4	2	2	4	One	3/4	4	2	8
Single Gang	1	2	2	4	Four Gang	1	4	2	8
Covers	1-1/4	2	1	2	Cover	1-1/4	None	None	4
	1-1/2	2	1	2		1-1/2	None	None	4
FD-3L:	1/2	6	2	6	FD-2G & FD-2GL:	1/2	3	24	
Three	3/4	3	2	6	One	3/4	2	2	4
Single Gang	1	3	2	6	Two Gang	1	2	2	4
Covers	1-1/4	3	1	3	Cover	1-1/4	1	1	2
	1-1/2	3	1	3		1-1/2	1	1	2
FD-4L:	1/2	8	2	8	FD-3G & FD-3GL:	1/2	4	26	
Four	3/4	4	2	8	One	3/4	3	2	6
Single Gang	1	4	2	8	Three Gang	1	3	2	6
Covers	1-1/4	4	1	4	Cover	1-1/4	2	1	3
	1-1/2	4	1	4		1-1/2	2	1	3
FS-1GL:	1/2	2	2	2	FD-4G & FD-4GL:	1/2	5	28	
One	3/4	1	2	2	One	3/4	4	2	8
Single Gang	1	1	2	2	Four Gang	1	4	2	8
Cover	1-1/4	None	None	1	Cover	1-1/4	3	1	4
	1-1/2	None	None	1		1-1/2	3	1	4
FS-2G & FS-2GL:	1/2	3	2	4					
One	3/4	2	2	4					
Two Gang	1	2	2	4					
Cover	1-1/4	None	None	2					
	1-1/2	None	None	2					

*Hubs will be located in center of walls and evenly spaced unless otherwise specified. Where spacings are critical, submit sketch showing exact spacing requirements.

Wiring Capacity: FS and FD Cast Device Boxes

Cast Hub Boxes and Blank Bodies.

FS and FD Boxes with Cast Hubs: All Types

Capacity in Cubic Inches



Single Gang



Two Gang Tandem



FD-4L



FDB-2L



FDB-3GL



FS-EXT

Hub Size Inches	Single Gang		Two Gang		Three Gang		Two Gang Tandem FS
	FS	FD	FS	FD	FS	FD	
1/2	18.0	25.0	32.0	45.0	46.0	62.0	40.0
3/4	18.0	25.0	32.0	45.0	46.0	62.0	40.0
1	18.0	25.0	32.0	45.0	46.0	62.0	40.0

Capacity in Cubic Centimeters

1/2	295.0	409.7	524.4	737.4	753.8	1016.0	655.5
3/4	295.0	409.7	524.4	737.4	753.8	1016.0	655.5
1	295.0	409.7	524.4	737.4	753.8	1016.0	655.5

FS and FD Blank Bodies for Brazed Hubs (FDH Series)

Capacity in Cubic Inches

Gangs	FS Cat. No.	Cu. In. Vol.	FD Cat. No.	Cu. In. Vol.
Single	FS-1GL	18.0	FD-1L	26.0
Two	FS-2G	32.0	FD-2G, FD-2GL	45.0
Two	FS-2GL	32.0	FD-2L	65.0
Three	FS-3G	46.0	FD-3G, FD-3GL	62.0
Three	FS-3GL	46.0	FD-3L	98.0
Four	FS-4G	58.0	FD-4G, FD-4GL	78.0
Four	FS-4GL	58.0	FD-4L	130.0

Capacity in Cubic Centimeters

Single	FS-1GL	295.0	FD-1L	426.1
Two	FS-2G	524.4	FD-2G, FD-2GL	737.4
Two	FS-2GL	524.4	FD-2L	1065.2
Three	FS-3G	753.8	FD-3G, FD-3GL	1016.0
Three	FS-3GL	753.8	FD-3L	1065.9
Four	FS-4G	950.4	FD-4G, FD-4GL	1278.2
Four	FS-4GL	950.4	FD-4L	2130.3

FDB Bodies for Drilling and Tapping

Gangs	Capacity in Cubic Inches		Capacity in Cubic Centimeters	
	Cat. No.	Cu. In. Vol.	Cat. No.	Cu. Cm. Vol.
Single	FDB-1L	26.0	FDB-1L	421.1
Two	FDB-2L	65.0	FDB-2L	1065.2
Three	FDB-3L	98.0	FDB-3L	1605.9
Two	FDB-2GL	45.0	FDB-2GL	737.4
Three	FDB-3GL	62.0	FDB-3GL	1016.0

FS Single Gang Extension

FS Two Gang Extension

Catalog Number	Volume Cu. In.	Volume Cu. cm.	Catalog Number	Volume Cu. In.	Volume Cu. cm.
FS-1EXT	10.8	177.0	FS-2EXT	18.0	295.0

Class I, Div. 2, Groups B,C,D
Class II, Div. 2, Groups F,G
Class III
NEMA 3, 3R, 4, 4X*,12

FD Factory Sealed Toggle Switches/Covers

For use FD Cast Device Boxes.

Applications

- For use in wash down or other wet locations to switch lighting and light power loads.
- For use in Class I, Division 2, Groups B, C, D Hazardous locations where ignitable vapors, gases or combustible dusts may be present.
- For use in NEMA 4X applications.

Features

- Corrosion-resistant captive stainless steel cover-screws.
- 20 amp Single pole, 2 pole and 3 way models for use with 120-277 Volt A.C.
- Lockout hole for 1/4" hasp.
- Factory sealed - No external seals required.
- For use with Appleton FD Cast Device Boxes in various hub configurations for varying applications.
- NEMA 4X rated.

Standard Materials

- Covers: Malleable iron or Copper free (4/10 of 1% max) Aluminum.
- Gasket: EPDM.
- Cover Screws: Stainless Steel.

Standard Finishes

- Malleable iron covers: Triple coat -1) zinc electroplate 2) dichromate and 3) epoxy powder coat.
- Aluminum Covers: epoxy powder finish.

Compliances

- UL Standard 698, 1604

*NEMA 4X rated when using an Aluminum FD back box and cover assembly.



Gasket is designed so that it wraps around ridge top of Appleton aluminum or malleable iron device box. Result is a positive seal against moisture.



Gasket construction. Cover tightens on largest perimeter of gasket and fits snugly against portion of gasket that wraps around ridge top of box.

Cover Assemblies with Switch and Gasket (Factory Sealed)

20 ampere – 120-277 Volt A.C.

(Furnished with 4 captive stainless steel mounting screws.
 Furnished with Type TW leads No. 12 AWG, 10" Long.)



	Catalog Number	
	Malleable Iron	Aluminum*
1 Pole	FDK2-F1	FDK2-F1A
2 Pole	FDK2-F2	FDK2-F2A
3 Way	FDK2-F3W	FDK2-F3WA

Replacement Switch Only (Factory Sealed)

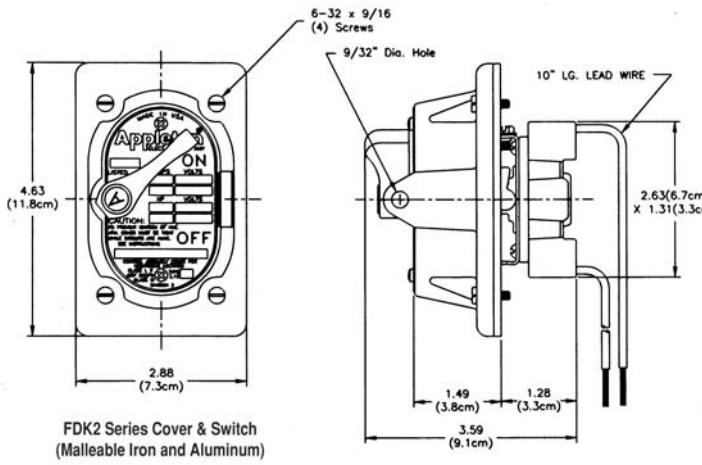
20 ampere – 120-277 Volt A.C.

(Furnished with 4 captive stainless steel mounting screws.
 Furnished with Type TW leads No. 12 AWG, 10" Long.)



Catalog Number
LAB21L
LAB22L
LAB23WL

Dimensions: FD Factory Sealed Toggle Switches



FDK2 Series Cover & Switch
 (Malleable Iron and Aluminum)