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NEMA STANDARDS PUBLICATION

NEMA OS 1

SHEET-STEEL OUTLET BOXES, DEVICE BOXES, COVERS, AND BOX SUPPORTS

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NEMA Standards Publication OS 1-1996

SHEET-STEEL OUTLET BOXES, DEVICE BOXES, COVERS, AND BOX SUPPORTS

Published by

National Electrical Manufacturers Association
1300 North 17th Street, Suite 1847
Rosslyn, VA 22209

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Table of Contents

Foreword ii
Section 1 GENERAL 1
1.1 Scope 1
1.2 References 1
1.3 Definitions 1
Section 2 SPECIFICATIONS 3
2.1 Material 3
2.2 Corrosion Protection 3
2.2.1 Outside Surfaces 3
2.2.2 Inside Surfaces 3
2.2.3 Screws 3
2.3 Openings 4
2.3.1 Conduit Knockouts 4
2.3.2 Cable-Size Knockouts 4
2.3.3 Diameters of Knockouts 4
2.3.4 Open Holes 4
2.4 Supports 5
2.4.1 Supporting Ears 5
2.4.2 Stud Face Brackets 5
2.4.3 Stud Side Brackets 5
2.4.4 Bar Hangers (Adjustable or Fixed) 5
2.5 Cover Screws 5
2.6 Markings 5
2.6.1 Boxes and Covers 5
2.6.2 Clamps 6
2.7 Grounding 6
2.8 Dimensional Tolerances 6
2.9 Figures (see 2.3) 6

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Foreword

The purpose of this standards publication is to provide a guide to the types and sizes of metal outlet boxes, and supports which are in general use or suggested for future design or both. The standards present dimensional data needed for the safety and convenience of interchangeability with associated equipment. All items when properly installed and properly used contribute to safety.

Properly manufactured boxes and covers are, however, only one factor in minimizing the hazards which may be associated with the use of electricity. The reduction of hazard involves the joint efforts of the various equipment manufacturers, the system designer, the installer, and user. Information is provided herein to assist users and others in the proper selection of boxes and covers.

The manufacturer has limited or no control over the following factors which are vital to a safe installation:

a. Environmental conditions
b. System design
c. Equipment selection and application
d. Installation
e. Operating practices
f. Maintenance

This publication is not intended to instruct the user of the boxes and covers with regard to these factors except insofar as suitable equipment to meet needs can be recognized in this publication.

These standards are necessarily limited to defining the construction requirements for the products covered herein. The publication has been promulgated with a view towards reducing the hazard to persons and property when boxes and covers conforming with these standards are properly selected and installed in accordance with the *National Electrical Code*.

This Standards Publication has been reviewed with input obtained from independent testing laboratories and major consumer representatives.

The publication will be reviewed periodically by the Outlet and Switch Box Section of NEMA so that it will be kept up to date with advancing technology. Comments will be welcomed and should be sent to:

Vice President, Engineering
National Electrical Manufacturers Association
1300 North 17th Street, Suite 1847
Rosslyn, VA 22209

OS 1-1996 revises and supersedes OS 1-1989.

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This Standards Publication was developed by the Outlet and Switchbox Section. Section approval of the standard does not necessarily imply that all section members voted for its approval or participated in its development. At the time it was approved, the Outlet and Switchbox Section was composed of the following members:

Allied Moulded Products, Inc.—Bryan, OH
Appleton Electric Company—Chicago, IL
Arlington Industries, Inc.—Scranton, PA
Bridgeport Fittings, Inc.—Bridgeport, CT
CANTEX, Inc.—Mineral Wells, TX
Hubbell, Incorporated—Bridgeport, CT
Lamson & Sessions—Cleveland, OH
O-Z Gedney, A Unit of General Signal Corp.—Farmington, CT
Pass & Seymour/Legrand—Syracuse, NY
Raco, Inc.—South Bend, IN
Steel City—Memphis, TN
Thepitt Manufacturing Company, Inc.—Meadow Lands, PA
Thomas & Betts Corporation—Memphis, TN
Valen Manufacturing Company—Cleveland, OH

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Section 1
GENERAL

1.1 SCOPE

This Standards Publication covers those general-purpose metal outlet boxes, device boxes, covers, and supports that are widely used by the consumer. These items (covered by UL 514A) are designed to facilitate the pulling of wires, to protect and facilitate wiring splices and taps, to provide a means of mounting and protecting wiring devices, and to provide a connection for rigid conduit, electrical metallic tubing, armored cable, metal clad cable, nonmetallic sheathed cable, flexible metallic conduit and knob-and-tube wiring systems.

Excluded from this Standards Publication are the following: "conduit bodies" and similar types of boxes; cabinets or cutout boxes; pull boxes; floor boxes; flush device plates; boxes, plates and covers designed for use with surface metal raceway systems only; and boxes larger than 100 cubic inches (1638.706 cubic cm) in volume except multiple gang device boxes.

1.2 References

The following publications are adopted in part, by reference in this publication, and are available from the organizations below.

National Fire Protection Association
Batterymarch Park
Quicy, MA 00269

NFPA 70-1996 *National Electrical Code*

Underwriters Laboratories, Inc.
Publications Stock
333 Pfingsten Road
Northbrook, IL 60062

UL 514A *Metallic Outlet Boxes*

1.3 Definitions

A box support is a means of securing an outlet or device box to the building structure. Supports shall be permitted to be an integral part of the box, attached to the box, or entirely separate.

A device box is designed to receive and support switches, receptacles, and similar devices. The term device box includes the following specific types:

a. A gangable device box is designed to permit the removal of one or both sides of the box to join (or gang) as many sections as required, while maintaining a high degree of strength and rigidity.
b. A nongangable device box has permanently affixed sides.
c. A through-wall box is open at both front and back to permit the mounting of a flush device on each side of a partition.
d. A tile-wall box has square corners and internal ears for use in tile, masonry, or marble walls.

An extension ring (which need not be round) is intended to extend the sides of an outlet box or flush device box to increase the box depth.

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An outlet box is used in an electrical wiring system for containing wire, taps, splices, or devices. It has provisions for the entry of conduit or cable assemblies and for the attachment of a separate cover which is used to close the box or provide support for devices or fixtures. With the cover in place, the enclosure guards live parts against accidental contract and protects the environment from faults occurring within the enclosure.

The function of an outlet box when completely closed by a cover is to guard live parts against outside accidental contact, to protect the surrounding environment from faults occurring within the enclosure, to permit inspection of the wiring system, and to provide a safe means for replacement of wiring devices. Normally, outlet boxes have provisions in the side, ends and bottom for the entrance of conductors through conduit, cable, or tubing. Outlet boxes also have provision for fastening covers which are separate or a part of a wiring device. The fastening means is not a hinge and provides for future removal. An outlet box also provides one or more of the following.

a. Support for fixture assemblies and lamp holders
b. Extension of existing raceway or wiring system
c. Ground continuity through the raceway or wiring system for which it is designed
d. Utilization of accessories like fixture studs, clamps, bar hangers, extension rings, and so forth

The term outlet box includes the following specific types:

a. A cable box is provided with clamps for use with metallic or nonmetallic cables or flexible nonmetallic tubing, or any combination of said cables and tubing.
b. A concrete box is especially intended for support in concrete. It shall be permitted to be constructed to allow end-to-end extension and the application of covers on two sides. This box is not intended for floor installation.
c. A conduit box is designed with circular knockouts for conduits or fittings.
d. A floor box is specifically designed for flush installation in a floor.
e. A gang box is designed to accept one or more devices and has provisions for the installation of one or more removable partitions.
f. A hung-ceiling box consists of a ring and a back plate with supporting bars (see 2.4.4) for use with rigid metal or nonmetallic conduit, electrical metallic or nonmetallic tubing, flexible metallic conduit, armored cable, flexible nonmetallic tubing, or nonmetallic sheathed cable above suspended ceilings.
g. Outlet box covers.
    1. blank cover—has no openings or knockouts, and is mounted to the box to complete the enclosure.
    2. blank/knockout—contains a knockout which can be removed to accommodate a fitting for a pendant cord, etc. When left in place it may serve as a blank cover.
    3. device mounting covers (may be raised, also called mud rings)—these covers are mounted to the box to provide a mounting platform for devices. The devices are mounted on top of the cover and use a wallplate to complete the enclosure.
    4. exposed work covers (are usually raised)—are mounted to the box and have cutouts in the face of cover to accept and support devices. The devices are mounted to the underside of the cover. These covers also complete the enclosure.
h. A wallplate or face plate is attached to electrical devices to complete the enclosure. Because they do not support devices they are not covers and may be thinner than the boxes.

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Section 2
SPECIFICATIONS

2.1 MATERIAL

The thickness of boxes and covers of flat rolled sheet steel shall be not less than 0.0625 inch (1.588 mm) except that:

a. The minimum thickness at or within 1/4 inch (6.350 mm) of any right-angle bend in a drawn sheet-steel box shall not be less than 0.041 inch (1.041 mm).

b. The average thickness of the sides and ends (see 2.9) of a drawn box shall be permitted to be 0.058 inch (1.473 mm) based on three measurements made on the side and end of the box not less than 3/4 inch (19.050 mm) from a right-angle bend. The three measurements are to be made in a line perpendicular to the front of the box at a point 1/4 inch (6.350 mm) from the front, at a point 1/4 inch (6.350 mm) from the right-angle bend at the back, and at a point equidistant between the two.

c. Listed boxes and covers shown to have equivalent strength and characteristics shall be permitted to be made of thinner or other metals.

2.2 CORROSION PROTECTION

The surfaces of sheet-steel boxes, covers, and supports (except tapped holes, the area under the heads of screws securing the sides of a gangable device box, pieced holes and cut edges formed from zinc-coated stock, and hangers made of steel bar stock) shall be protected against corrosion.

2.2.1 Outside Surfaces

The average thickness of a zinc coating shall be not less than 0.0005 inch(0.013 mm) nor a minimum of 0.0004 inch(0.0102 mm) on box supports, external clamps, and the outside surface of boxes and covers. Alternate coatings may be approved.

NOTE—See UL 514A for method of determining compliance.

2.2.2 Inside Surfaces

The average thickness of a zinc coating shall be not less than 0.00015 inch (0.0038 mm) nor a minimum of less than 0.0001 inch (0.0025 mm) on internal clamps and the inside surface of boxes and covers.

Note—See UL 514A for method of determining compliance.

2.2.3 Screws

Screws of ferrous material shall be protected against corrosion by a zinc or a cadmium coating.

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2.3 OPENINGS

2.3.1 Conduit Knockouts

Conduit knockout openings which are provided in boxes or covers for the entrance of conduit shall be effectively closed to afford protection practically equivalent to that of the box walls; however, the knockouts shall be so cut that they can be removed without deforming the box or cover in which they are located. Such knockout openings shall be located in flat surfaces of the boxes so that locknuts, bushings, or connectors, when in position, shall be permitted to be seated against these surfaces.

The drawings in this publication illustrated the minimum number of conduit knockouts considered adequate in a side, end, bottom, or cover of a box. These drawings show typical knockout locations but are not intended to be required locations.

2.3.2 Cable-Size Knockouts

Cable-size knockouts openings which are provided in boxes for the entrance of tubing or cable shall be effectively closed to afford protection practically equivalent to that of the box walls; however, the knockouts shall be so cut that they can be removed without deforming the box in which they are located. Clamps shall be installed in all cable boxes to firmly secure the cable or tubing. Cable-size knockouts shall have priout openings not more than 0.040 square inch (1.016 sq. mm) in area.

The drawings shown in this publication illustrate the minimum number of cable-size knockouts considered adequate. Additional knockouts may be provided.

2.3.3 Diameters of Knockouts

The actual diameters for five nominal sizes of knockouts shall be as shown in Table 2-1.

Table 2-1
DIAMETER OF KNOCKOUTS

Trade Size of Knockout	Diameter, Inches (Millimeters)		
	Normal	Minimum	Maximum
Cable Priout*	0.656 (16.662)	0.651 (16.535)	0.661 (16.789)
1/2" (16)	0.875 (22.225)	0.859 (21.819)	0.906 (23.012)
3/4" (21)	1.109 (28.169)	1.094 (27.788)	1.141 (28.981)
1" (27)	1.375 (34.925)	1.359 (34.519)	1.406 (35.712)
1 1/4" (35)	1.734 (44.044)	1.719 (43.663)	1.766 (44.856)

* The maximum dimension of horseshoe-shaped cable-size knockout(priout), perpendicular to a flat side, shall be considered its diameter.

2.3.4 Open Holes

No dimension of an open hole in a box shall exceed 17/64 inch (6.747 mm). The total area of open holes shall not exceed the values shown in Table 2-2.

In computing the area of openings, the oblique portion of a bevel-corned box shall be considered as a part of the integral end.

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Table 2-2
AREA OF OPEN HOLES

Type of Box	Maximum Area of Openings, Sq. Inches (Sq. Millimeters)		
	Total for Box	In Bottom (see 2.9)	In Any End or Side (see 2.9)
Single unit or 2 to 4 multiple gang units	0.452 (291.63)	0.332 (214.21)	0.200 (129.04)
5 to 7 multiple-gang units	0.784 (505.84)	0.664 (428.41)	0.200 (129.04)
8 or more multiple-gang units	1.116 (720.04)	0.996 (642.62)	0.200 (129.04)

2.4 SUPPORTS

Boxes shall be so designed that they can be securely fastened in place without depending on the support furnished by any system of wiring. A box support which is provided as a part of a box shall be so designed and constructed as to provide ample strength and rigidity.

Provision for supporting a device within the box shall be independent of the means used to support the box.

2.4.1 Supporting Ears

Supporting ears shall be of flat-rolled sheet steel not less than 0.036 inch (0.914 mm) in thickness (or equivalent in strength) and suitably attached to the box.

2.4.2 Stud Face Brackets

Brackets, shall be capable of supporting a 50-pound (22.68 kg) weight for 5 minutes without breaking or pulling loose from the box.

2.4.3 Stud Side Brackets

Brackets shall be capable of supporting a 50-pound (22.68 kg) weight for 5 minutes without breaking or pulling loose from the box.

2.4.4 Bar Hangers (Adjustable or Fixed)

Bar hangers shall be made of steel 3/16 x 1/2 inch (4.763 x 12.700 mm) in cross section or be so constructed as to be capable of supporting a 200-pound (90.72 kg) weight for 5 minutes without breaking or pulling loose from its box.

2.5 COVER SCREWS

Cover screws shall be long enough to engage at least two full threads in the metal of the ears or box.

2.6 MARKINGS

2.6.1 Boxes and Covers

Boxes and covers shall be plainly marked with the name or trademark of the manufacturer and cubic capacity as required by the *National Electrical Code*.

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2.6.2 Clamps

A clamp which is furnished as part of a box shall be marked to indicate the type of material with which it is intended to be used—"A" for armored cable, "F" for flex metal conduit, "N" for nonmetallic sheathed cable, "T" for flexible nonmetallic tubing, "MCC" for metal corrugated cable, "MCS" for metal clad smooth cable, and "MCI" for metal clad interlocking cable. Clamps which are suitable for use with all types of materials require no marking.

2.7 GROUNDING

A means shall be provided in each metal box for the connection of an equipment grounding conductor. The means shall be permitted to be a tapped hole (such as a #10-32) or equivalent. If an #8-32 tapped hole is used it must be identified and marked.

2.8 DIMENSIONAL TOLERANCES

Fractional dimensions shall be held to ±1/32 inch (±0.794 mm) and decimal dimensions shall be held to ± 0.010 inch (±0.254 mm) unless otherwise indicated on the drawings.

2.9 FIGURES (see Table 2-3)

Figures 70 through 400 (see Table 2-3) give the sizes, dimensions, locations and arrangement of knockouts, as well as other details pertaining to boxes, covers, extensions and supports. Overall dimensions of drawn boxes are the dimensions at the point of tangency of the radius from the bottom of the box to the sides or ends, or both, of the box and not at the open face of the box.

Certain noncritical construction and functional details are purposely avoided; for example, construction differences between assembled and drawn boxes, of the functional differences between screw holes, notches, keyhole slots, or straight slots in box covers are not covered by the drawings. Dimensions applicable to screw holes in box covers represent the final installed positions of cover screws.

Figures 2-1 and 2-2 illustrate the nomenclature used when referring to the sides, bottoms, and ends of boxes.

Figure 2-3 illustrates minimum box cover face opening.

Figure 2-4 illustrates clearances between device box plaster ear mounting screws.

Figure 2-5 illustrates alternate knockout designs.

Figure 2-6 illustrates alternate cover mounting holes or slots.

Figure 2-7 illustrates alternate device mounting holes (or knockouts).

Figure 2-8 illustrates alternate pryout configurations.

Figure 2-9 illustrates alternate exposed work cover configurations.

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Table 2-3
INDEX OF FIGURES

DESCRIPTION	FIGURE NO.
OUTLET BOXES AND OUTLET BOX EXTENSIONS	
3 1/2" ROUND BOXES	
1/2" and 3/4" Deep Cable	70
3 1/2" OCTAGON BOXES	
1 1/2" and 1" Deep, 1/2" and 3/4" Knockouts	80
Cable 1 1/2" Deep	81
4" ROUND BOX	
1/2" Deep, 1/2" Knockouts	90
Cable 1/2" Deep	91
4" OCTAGON BOXES	
1 1/2" and 2 1/8" Deep, 1/2", 3/4", and 1" Knockouts	100
Cable, 1 1/2" and 2 1/8" Deep	101
4" SQUARE BOXES	
1 1/4", 1 1/2", and 2 1/8" Deep, 1/2" Knockouts	110
1 1/2", and 2 1/8" Deep, 3/4" and 1" Knockouts	111
1 1/2", and 2 1/8" Deep, Combination 1/2" and 3/4" Knockouts	112
Cable, 1 1/2" and 21/8" Deep	113
4 11/16" SQUARE BOXES	
1 1/2", and 2 1/8" Deep, 1/2" Knockouts	120
1 1/2", and 2 1/8" Deep, 3/4" and 1" Knockouts	121
1 1/2", and 2 1/8" Deep, Combination 1/2" and 3/4" Knockouts	122
3 1/2" OCTAGON BOX EXTENSION	
1 1/2" Deep, 1/2" Knockouts	125
4" OCTAGON BOX EXTENSION	
1 1/2", and 2 1/8" Deep, 1/2", 3/4" and 1" Knockouts	130
4" SQUARE THRU-WALL BOXES AND BOX EXTENSIONS	
Box Extension, 1 1/2" and 2 1/8" Deep, 1/2" Knockouts	140
Thru-Wall box, 1 1/4" and 1 1/2" Deep, 1/2" Knockouts	141
Box Extension, 1 1/2" and 2 1/8" Deep, 3/4" and 1" Knockouts	142
Thru-Wall box, 1 1/2" Deep, 3/4" Knockouts	143
Box Extension, 1 1/2", and 2 1/8" Deep, Combination 1/2" and 3/4" Knockouts	144
Thru-Wall box, 1 1/2" Deep, Combination 1/2" and 3/4" Knockouts	145
4 11/16" SQUARE BOX EXTENSIONS	
1 1/2", and 2 1/8" Deep, 1/2" Knockouts	150
1 1/2", and 2 1/8" Deep, 3/4" and 1" Knockouts	151
1 1/2", and 2 1/8" Deep, Combination 1/2" and 3/4" Knockouts	152
CONCRETE RING	
Concrete Ring, 1/2", 3/4", and 1" Knockouts	160

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Table 2-3 (continued)
INDEX OF FIGURES

DESCRIPTION	FIGURE NO.
HUNG CEILING BOX	
Hung Ceiling Box, 1/2" and 3/4" Knockouts	161
GANG BOXES	
Gang boxes, 1 5/8" and 2 1/2" Deep, 1/2", 3/4", and 1" Knockouts	170
DEVICE BOXES AND DEVICE BOX EXTENSIONS	
NON-GANGABLE DEVICE BOXES (SINGLE DEVICE SURFACE MOUNT)	
1 1/2", 1 7/8", and 2 1/8" Deep, 1/2" Knockouts	200
1 7/8", and 2 1/8" Deep, 3/4" Knockouts	201
FLUSH DEVICE BOX EXTENSION RING (GOOF RING)	202
4" SQUARE BOXES FOR TWO DEVICES	
2 1/8" Deep, 1/2" Knockouts	210
2 1/8" Deep, 3/4" Knockouts	211
SINGLE DEVICE BOXES	
1 1/2" TO 3 1/2" Deep, 1/2" or 3/4" Knockouts	220
Gangable for Cable, 2 1/4" Deep, with Bevel Corner	221
1 1/2" TO 3 1/2" Deep Cable	222
NON-GANGABLE TILE (MASONRY) WALL DEVICE BOXES	
Tile Wall Boxes, 1/2" Knockouts Single and Multigang 2 1/2" and 3 1/2" Deep	240
Masonry Thru-Wall Boxes, 1/2" and 3/4" Knockouts Single Gang 3 1/2" to 7 1/2" Deep	241
OUTLET BOX COVERS	
3 1/2" Octagon Box Covers	
Flat Cover, with or without 1/2" Knockouts	280
Flat Cover for Single Convenience Outlet	281
Flat Cover for Duplex Convenience Outlet	282
4" OCTAGON BOX COVERS	
Flat Cover, with or without 1/2" Knockouts	300
Flat Cover for Single Convenience Outlet	301
Flat Cover for Duplex Convenience Outlet	302
Raised Cover with 1/2" Knockout	303
Raised Cover with Center Blanked Out	304
Raised Cover for Drop Cord	305
4" SQUARE BOX COVERS	
Flat Cover, with or without 1/2" Knockouts	310
Raised Cover with 1/2" Knockout	311
Raised Cover with Center Blanked Out	312
One-Device Cover	313

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Table 2-3 (continued)
INDEX OF FIGURES

DESCRIPTION	FIGURE NO.
Two-Device Cover	314
One-Device Tile Cover	315
Two-Device Tile Cover	316
4" SQUARE BOX SURFACE COVERS	
One GFCI Receptacle	317
Two GFCI Receptacles	318
One Duplex and One GFCI Receptacle	319
Single Receptacle	320
One Toggle Switch and One Single Receptacle	321
One Toggle Switch	322
Two Toggle Switches	323
One Duplex Receptacle	324
One Toggle Switch and One Duplex Receptacle	325
4" SQUARE BOX SURFACE COVERS	
Two Duplex Receptacles	326
30-50-60 Ampere and 3-Wire Receptacles	327
Two Single Receptacle	328
One Toggle Switch and One GFCI Receptacle	329
4 11/16" SQUARE BOX COVERS	
Flat Cover, with or without 1/2" Knockouts	310
Raised Cover with 1/2" Knockout	311
Raised Cover with Center Blanked Out	312
One-Device Cover	313
Two-Device Cover	330
One-Device TileCover	332
Two-Device Tile Cover	333
4 11/16" SQUARE BOX SURFACE COVERS	
Single Receptacle	340
One Toggle Switch and One Single Receptacle	341
One Toggle Switch	342
Two Toggle Switches	343
One Duplex Receptacle	344
One Toggle Switch and One Duplex Receptacle	345
Two Duplex Receptacles	346
30-50-60 Ampere and 3-Wire Receptacles	347
Two Single Receptacle	348
GANG BOX COVERS	
Flat Blank Covers	350
Flat Toggle Switch Covers	351
Raised Covers	352

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Table 2-3 (continued)
INDEX OF FIGURES

DESCRIPTION	FIGURE NO.
CONCRETE AND HUNG CEILING BOX BACKPLATES	
Concrete Backplate, Combination 1/2" and 3/4" Knockouts (Optional)	360
Concrete Backplate with Stud, Combination 1/2" and 3/4" Knockouts (Optional)	361
BOX AND CONDIUT SUPPORT	
Box and Conduit Support	400

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Table 2-3.1
INDEX OF DESIGN CONFIGURATIONS

DESCRIPTION	FIGURE NO.
BOX NOMENCLATURE	2-1 2-2
BOX/ COVER FACE OPENING	2-3
PLASTER EAR SCREW CLEARANCE	2-4
ALTERNATE KNOCKOUTS	2-5
ALTERNATE COVER MOUNTING HOLES / SLOTS	2-6
ALTERNATE DEVICE MOUNTING HOLES	2-7
ALTERNATE PRIOUTS	2-8
ALTERNATE EXPOSED WORK COVERS	2-9

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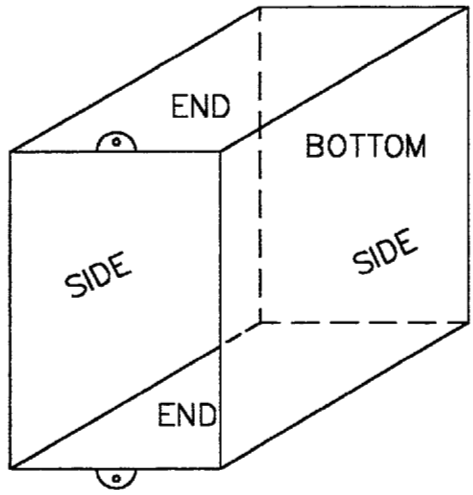


Figure 2–1
DEVICE BOX

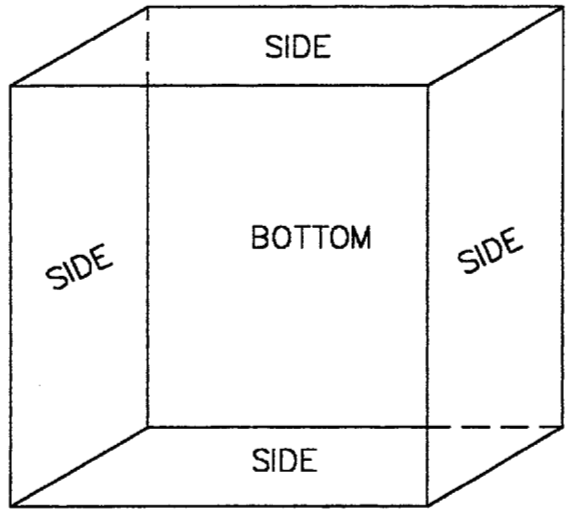
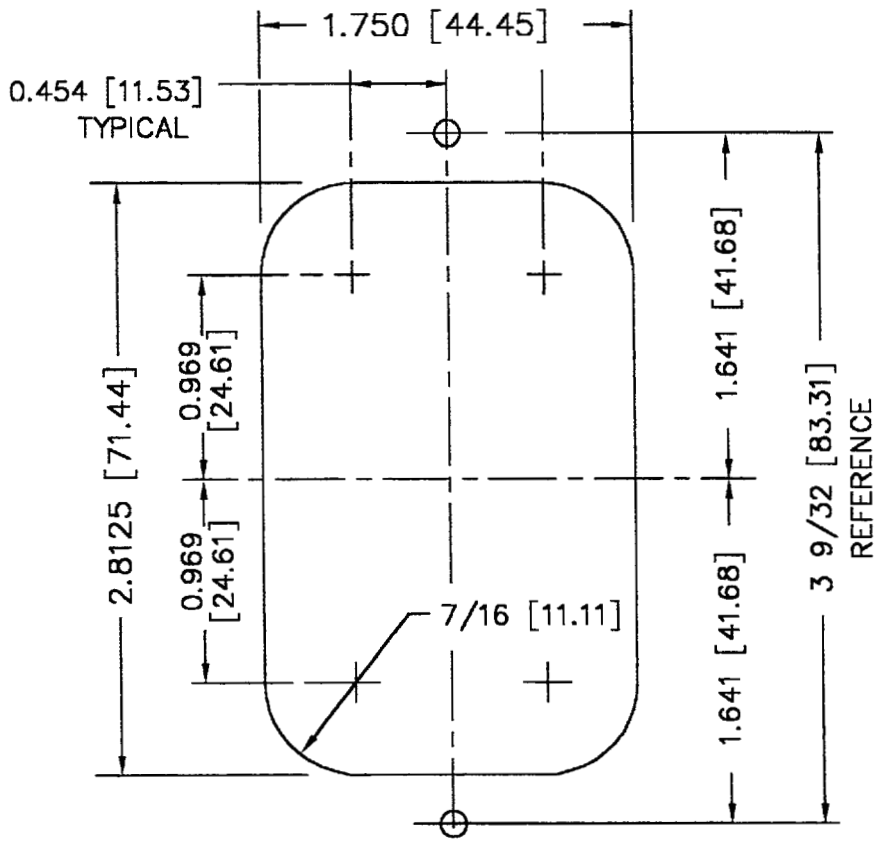


Figure 2–2
OUTLET BOX

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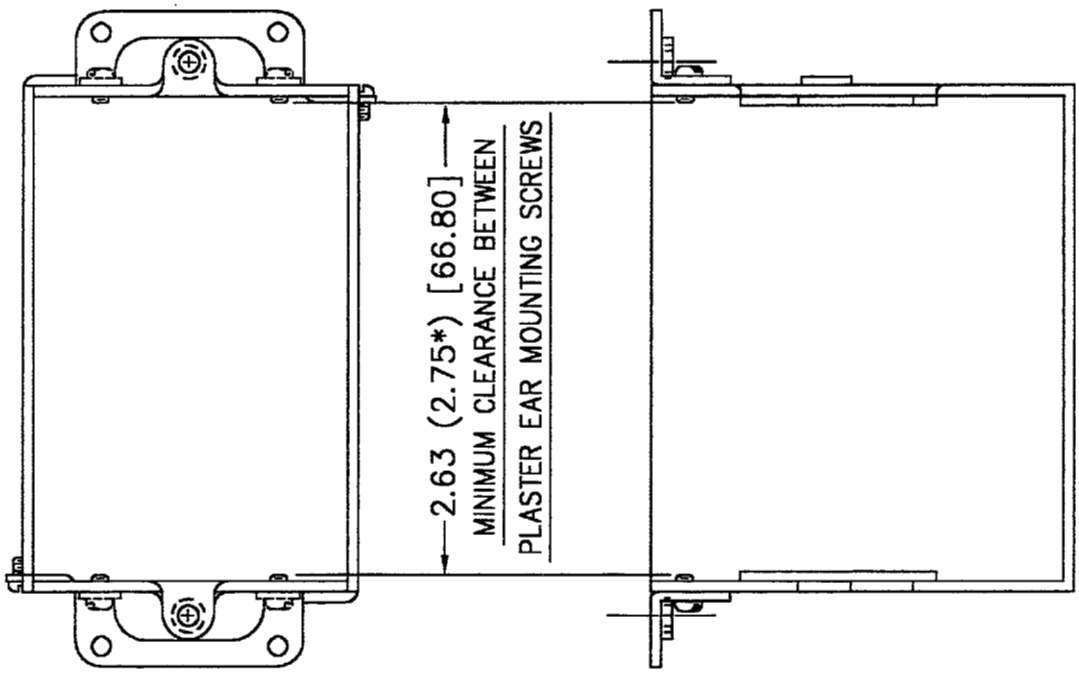


NOTE:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].

Figure 2–3
MINIMUM BOX/COVER FACE OPENING

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NOTE:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].

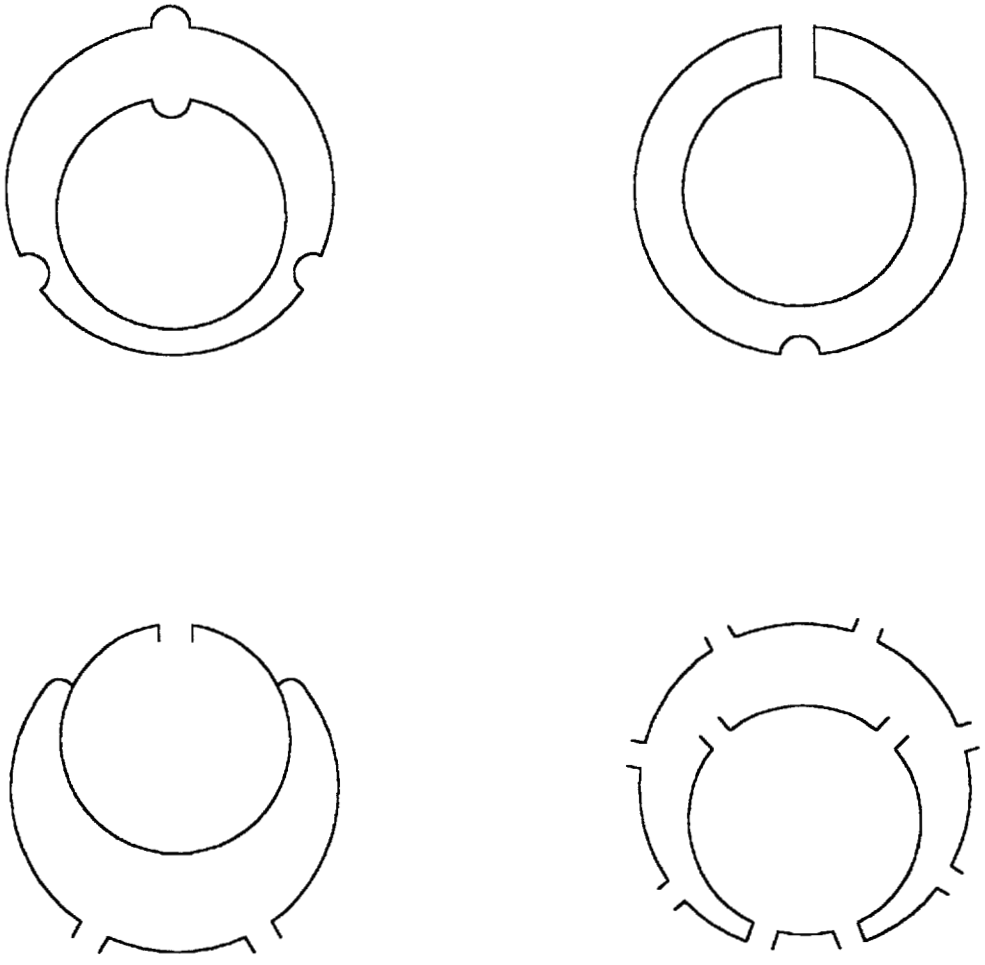
Figure 2–4
CLEARANCE BETWEEN DEVICE BOX PLASTER EAR MOUNTING SCREWS

* DIMENSION IN PARENTHESES IS APPROVED AS A SUGGESTED STANDARD FOR FUTURE DESIGN

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ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 2–5



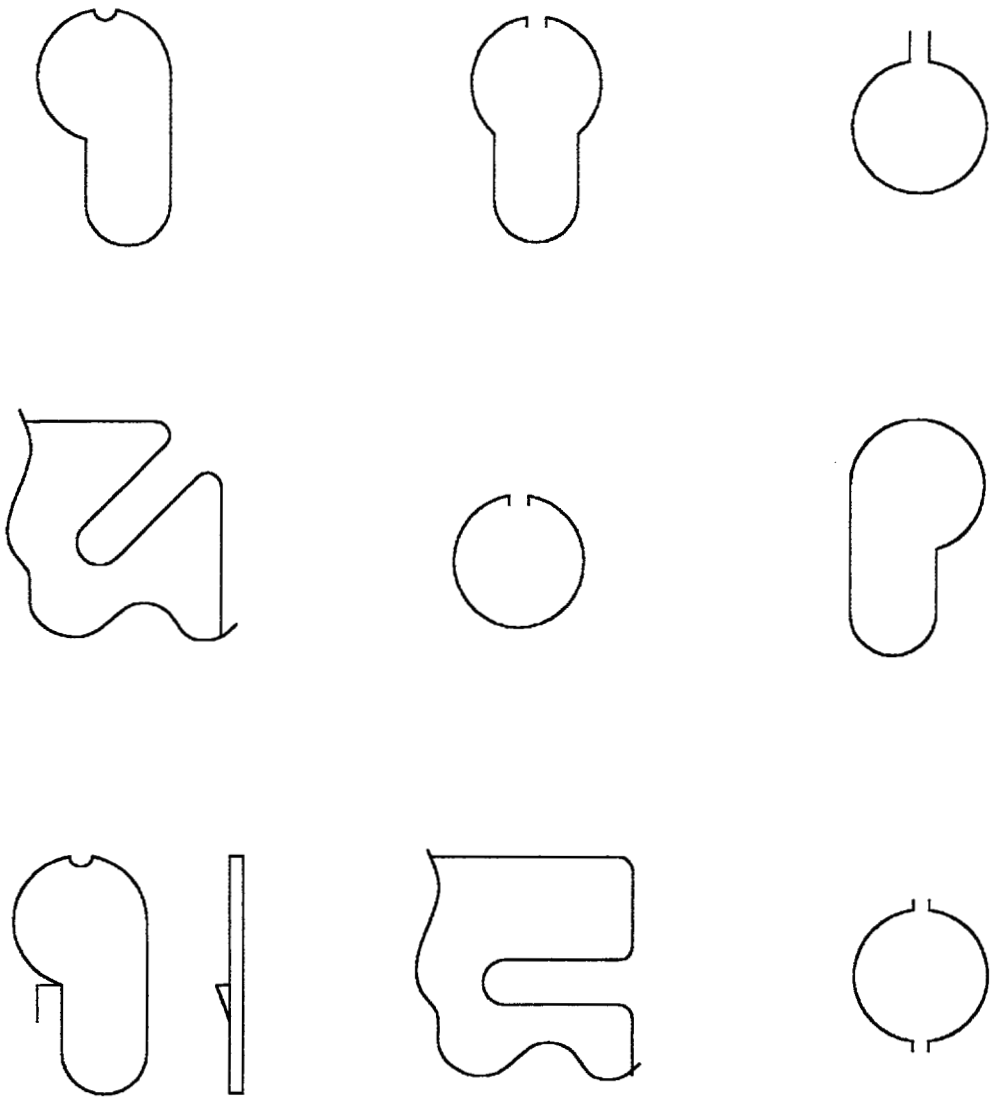
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Figure 2–5

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ALTERNATE COVER MOUNTING HOLE(S)/SLOTS(S) CONFIGURATIONS



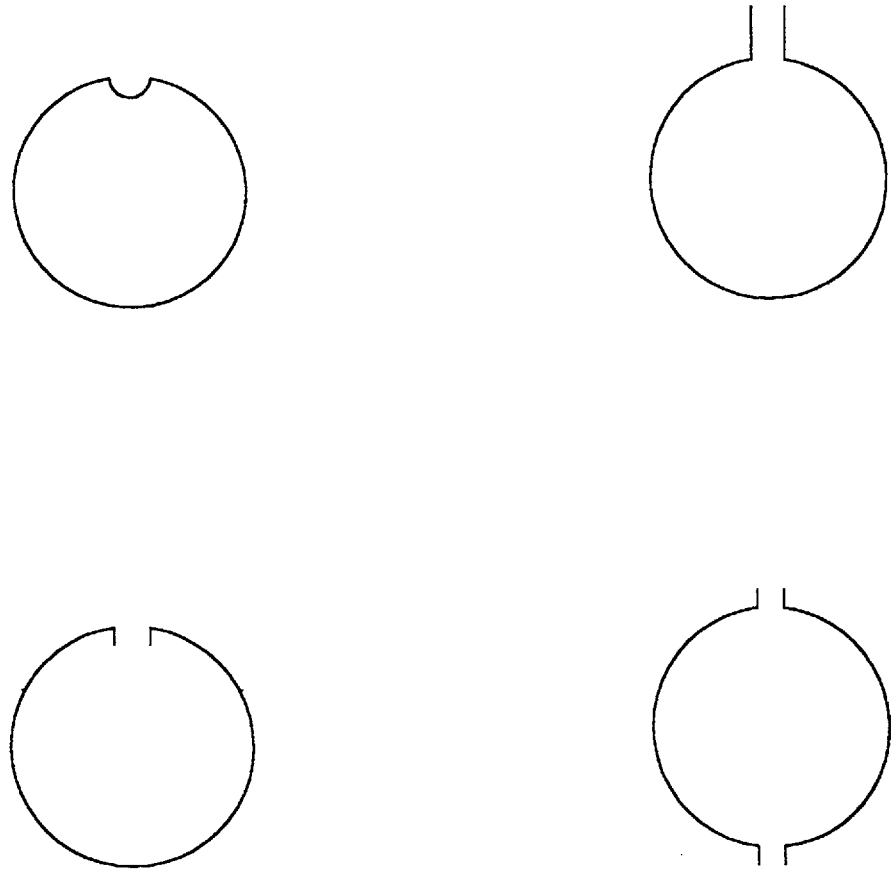
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Figure 2–6

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ALTERNATE DEVICE MOUNTING CONFIGURATIONS FOR COVERS



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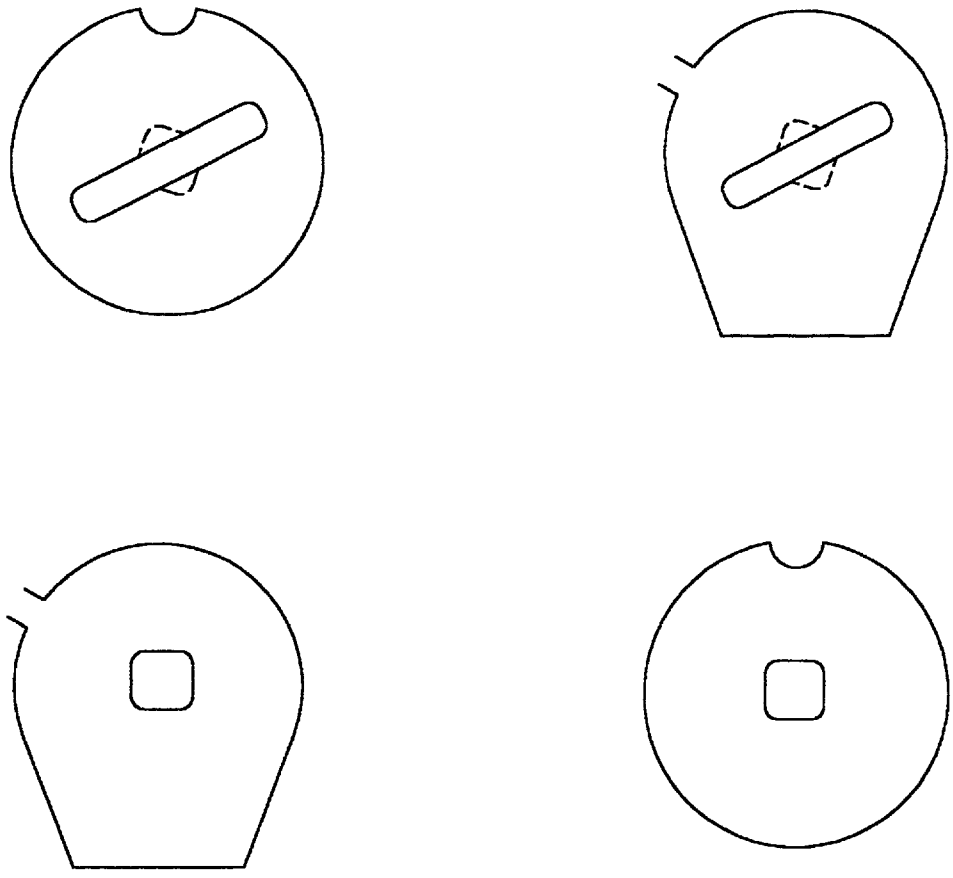
MOUNTING CONFIGURATIONS MAY BE OPEN HOLES OR KNOCKOUTS AND MAY BE COUNTERSUNK 82 DEGREES FOR #6 OVAL HEAD MACHINE SCREW.

Figure 2–7

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ALTERNATE PRIOUT CONFIGURATIONS



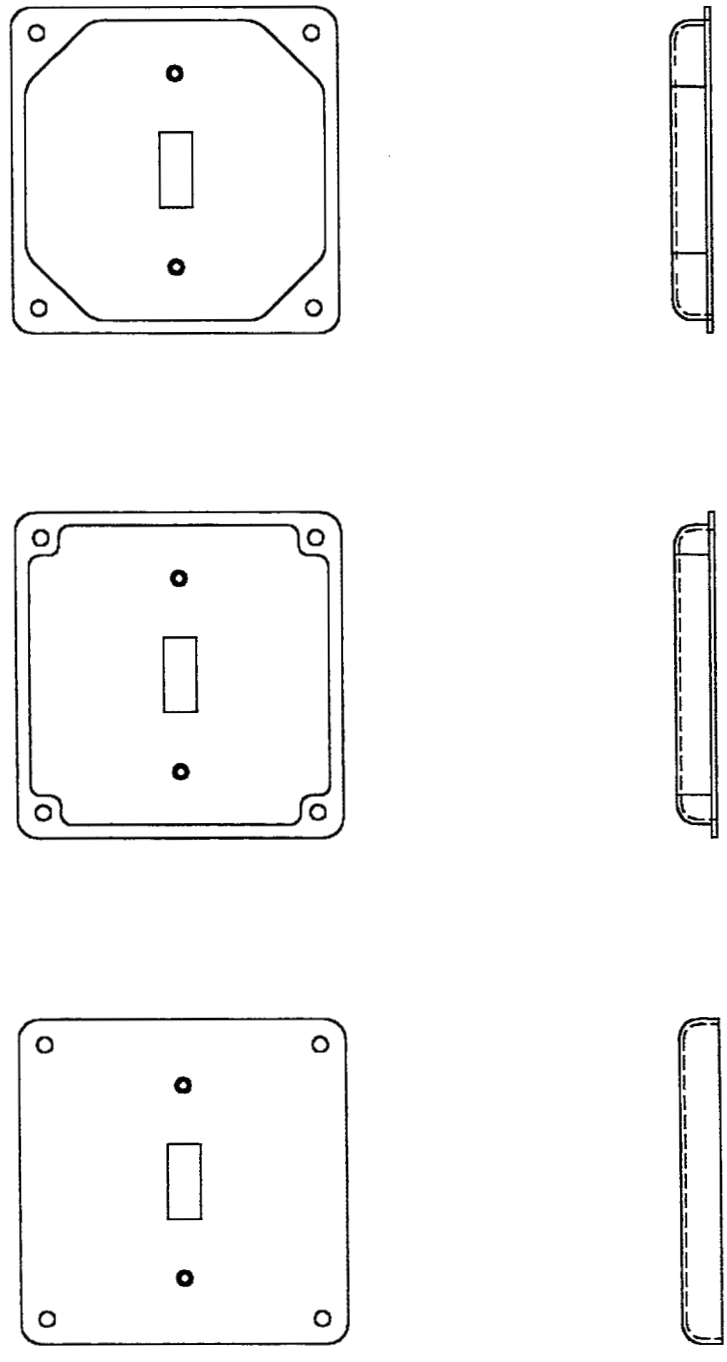
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Figure 2–8

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ALTERNATE EXPOSED WORK COVER CONFIGURATIONS

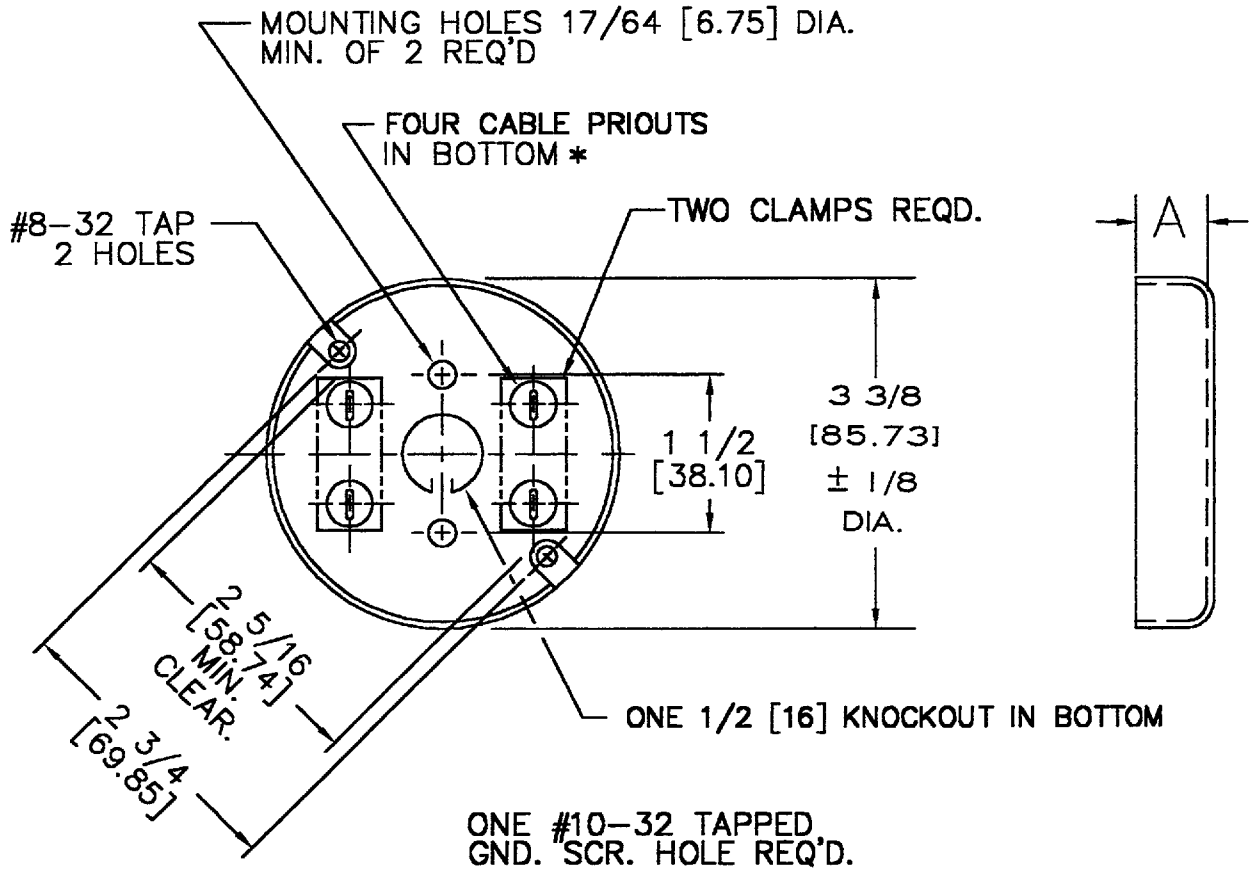


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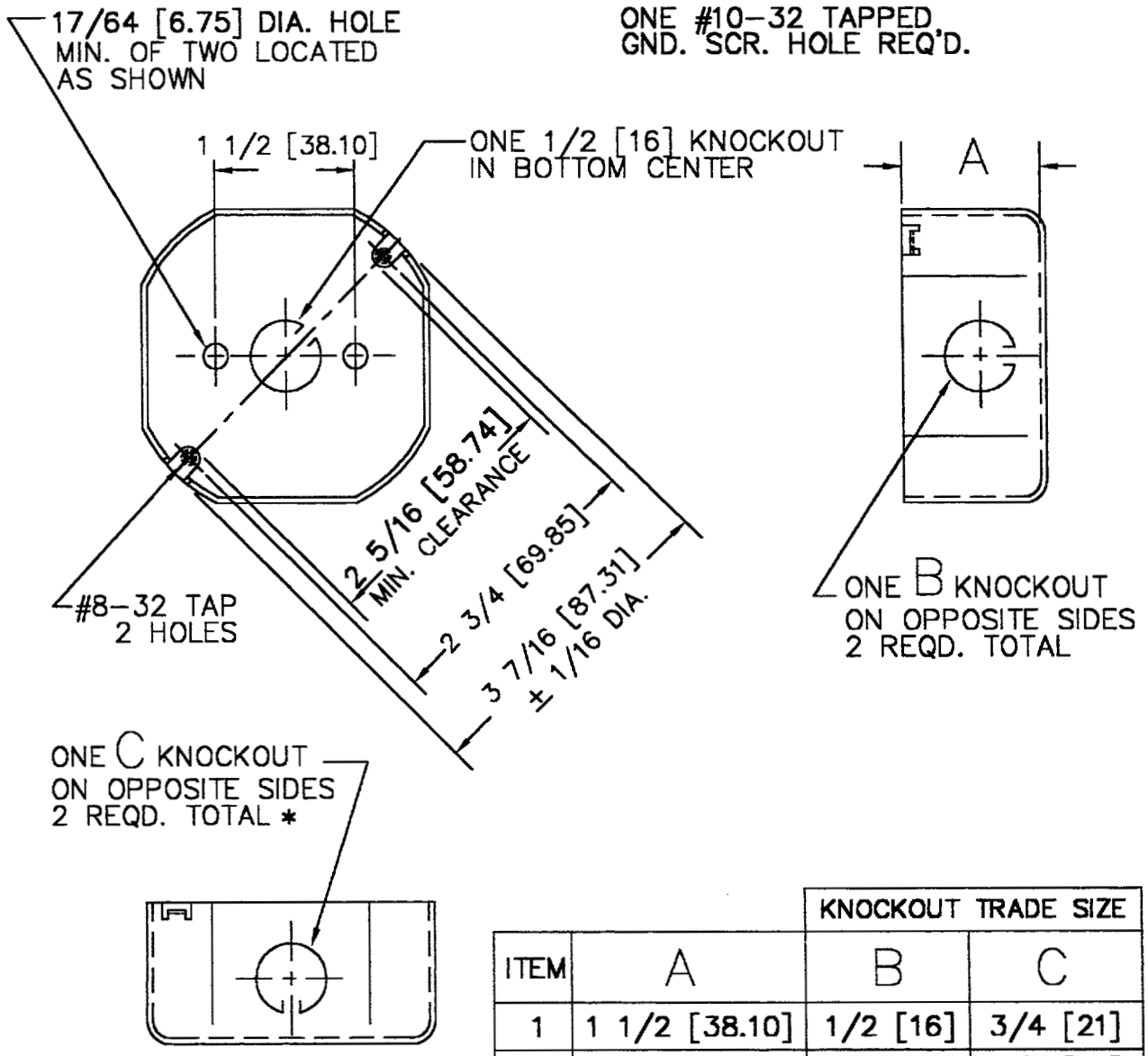


ITEM	A
1	1/2 [12.70]
2	3/4 [19.05]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS]
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-8 FOR ALTERNATE PRIOUT CONFIGURATIONS

Figure 70
3 1/2" ROUND CABLE BOX

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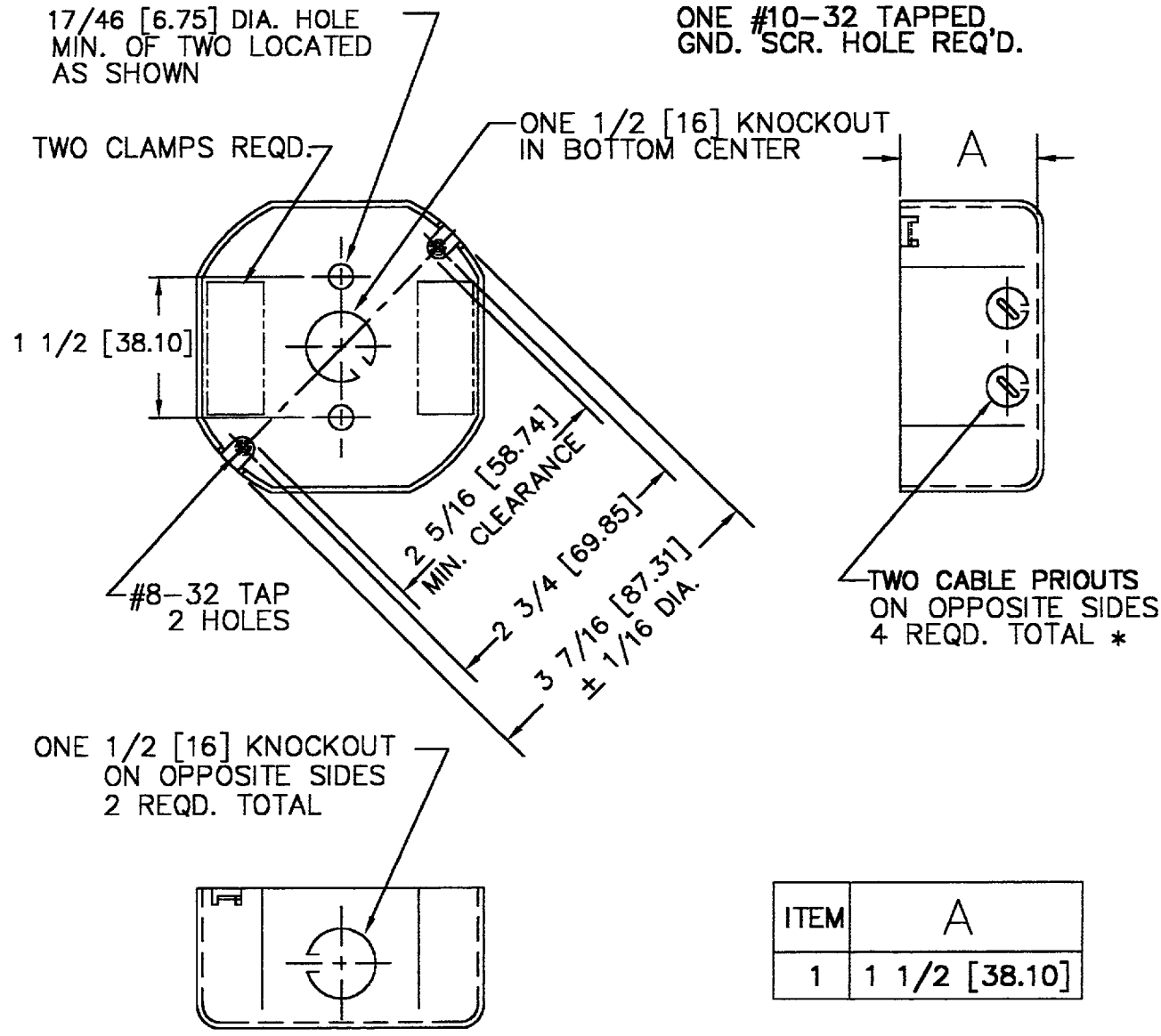
	KNOCKOUT TRADE SIZE		
ITEM	A	B	C
1	1 1/2 [38.10]	1/2 [16]	3/4 [21]
2	2 1/8 [53.98]	1/2 [16]	3/4 [21]

NOTES:
ALL DIMENSIONS IN INCHES[MILLIMETERS]
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 80

3 1/2" OCTAGON BOX, 1 1/2" AND 2 1/8" DEEP

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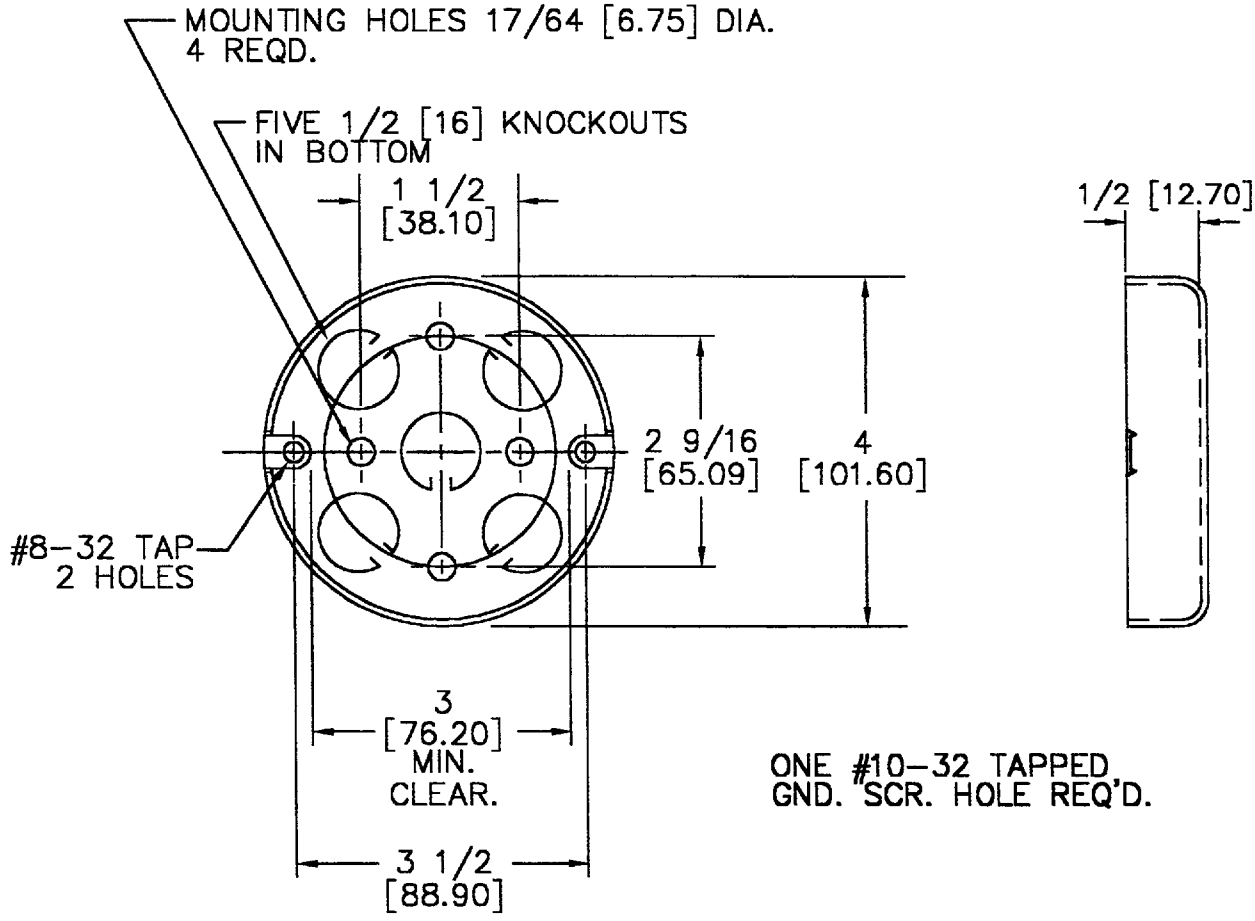


ITEM	A
1	1 1/2 [38.10]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS]
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-8 FOR ALTERNATE PRIOUT CONFIGURATIONS

Figure 81
3 1/2" OCTAGON CABLE BOX, 1 1/2" DEEP

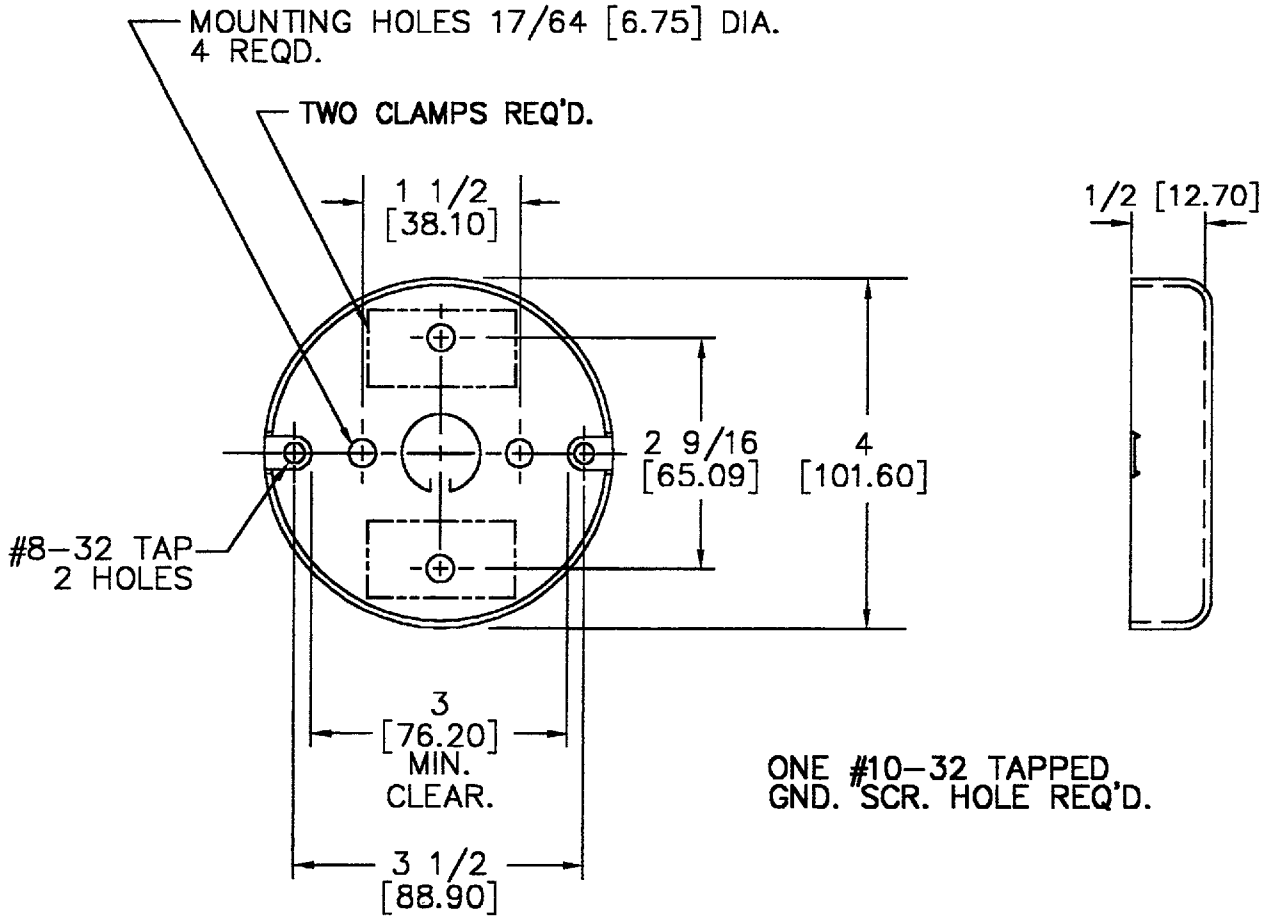
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NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS

Figure 90
4" ROUND BOX, 1/2 [16] KNOCKOUTS

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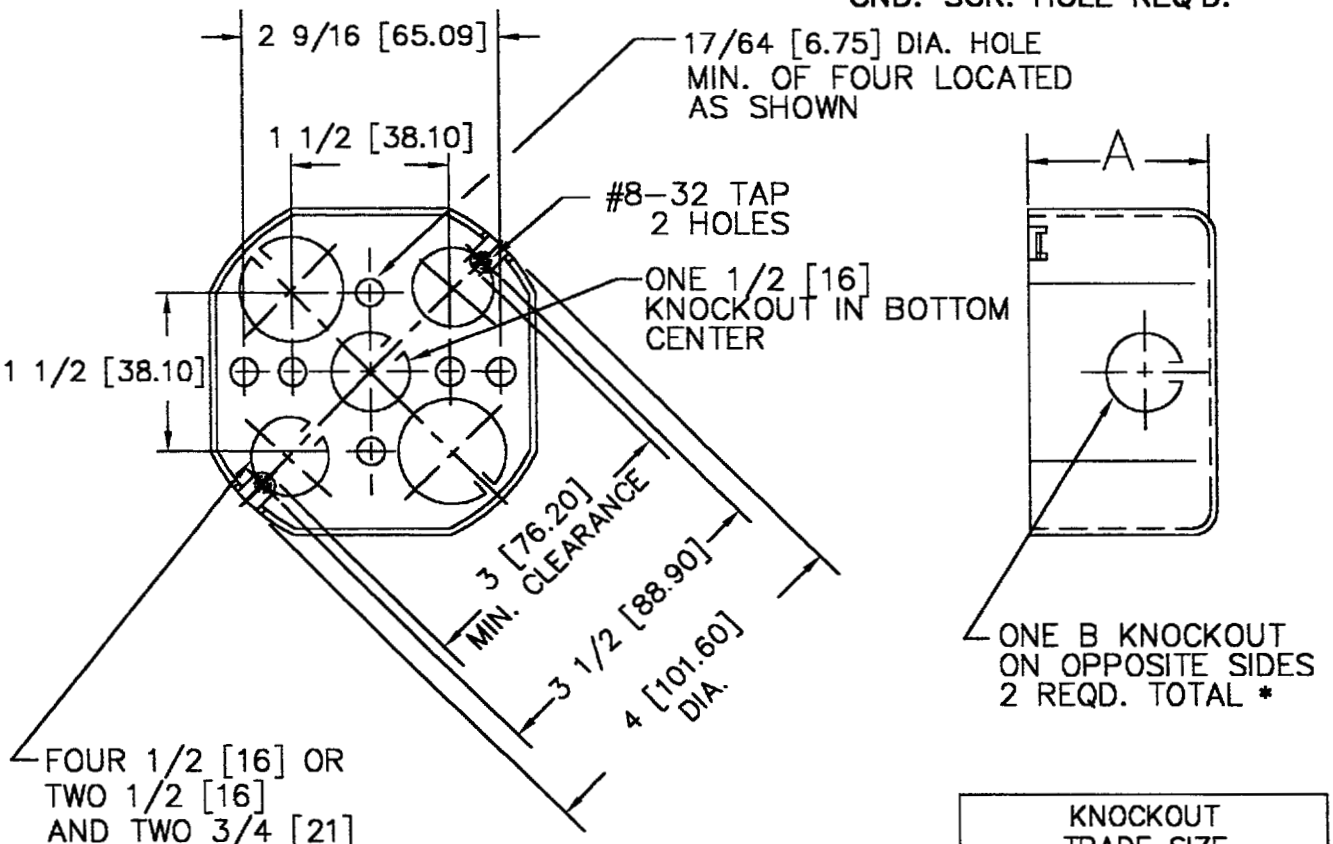


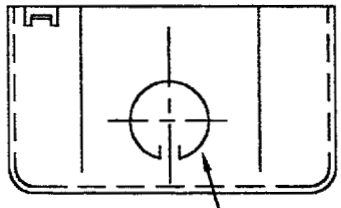
NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS

Figure 91

4" ROUND BOX (PAN) WITH CABLE CLAMPS

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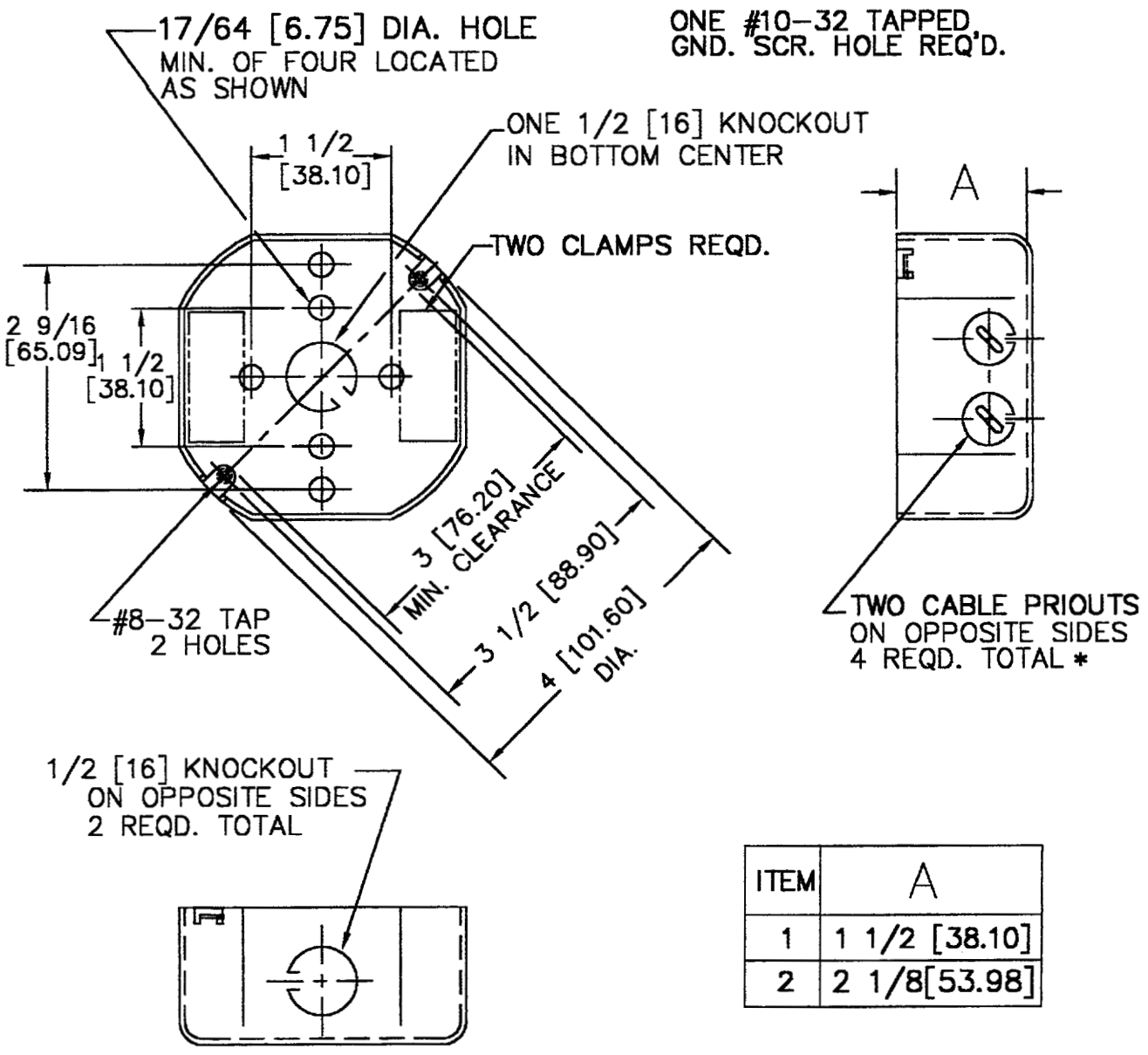
ITEM	A	KNOCKOUT TRADE SIZE B	C
1	1 1/2 [38.10]	1/2 [16]	1/2 [16]
2	1 1/2 [38.10]	3/4 [21]	3/4 [21]
3	1 1/2 [38.10]	1/2 [16]	3/4 [21]
4	2 1/8 [53.98]	1/2 [16]	1/2 [16]
5	2 1/8 [53.98]	3/4 [21]	3/4 [21]
6	2 1/8 [53.98]	1 [27]	1 [27]
7	2 1/8 [53.98]	1/2 [16]	3/4 [21]
8	2 1/8 [53.98]	3/4 [21]	1 [27]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 100

4" OCTAGON BOX, 1 1/2" AND 2 1/8" DEEP, 1/2 [16], 3/4 [21], OR 1 [27] KNOCKOUTS

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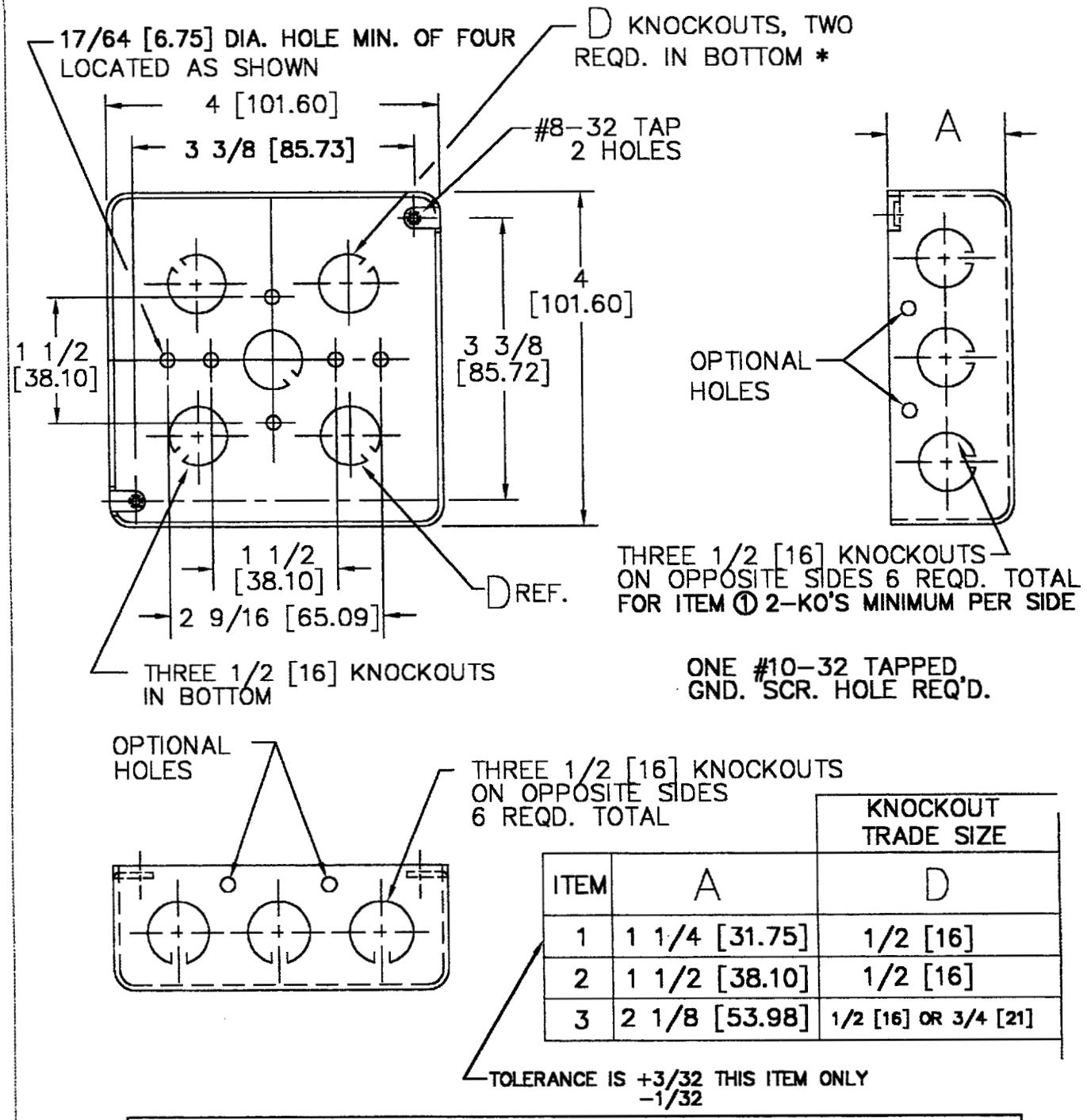


ITEM	A
1	1 1/2 [38.10]
2	2 1/8[53.98]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–8 FOR ALTERNATE PRIOUT CONFIGURATIONS

Figure 101
4" OCTAGON CABLE BOX, 1 1/2" AND 2 1/8" DEEP

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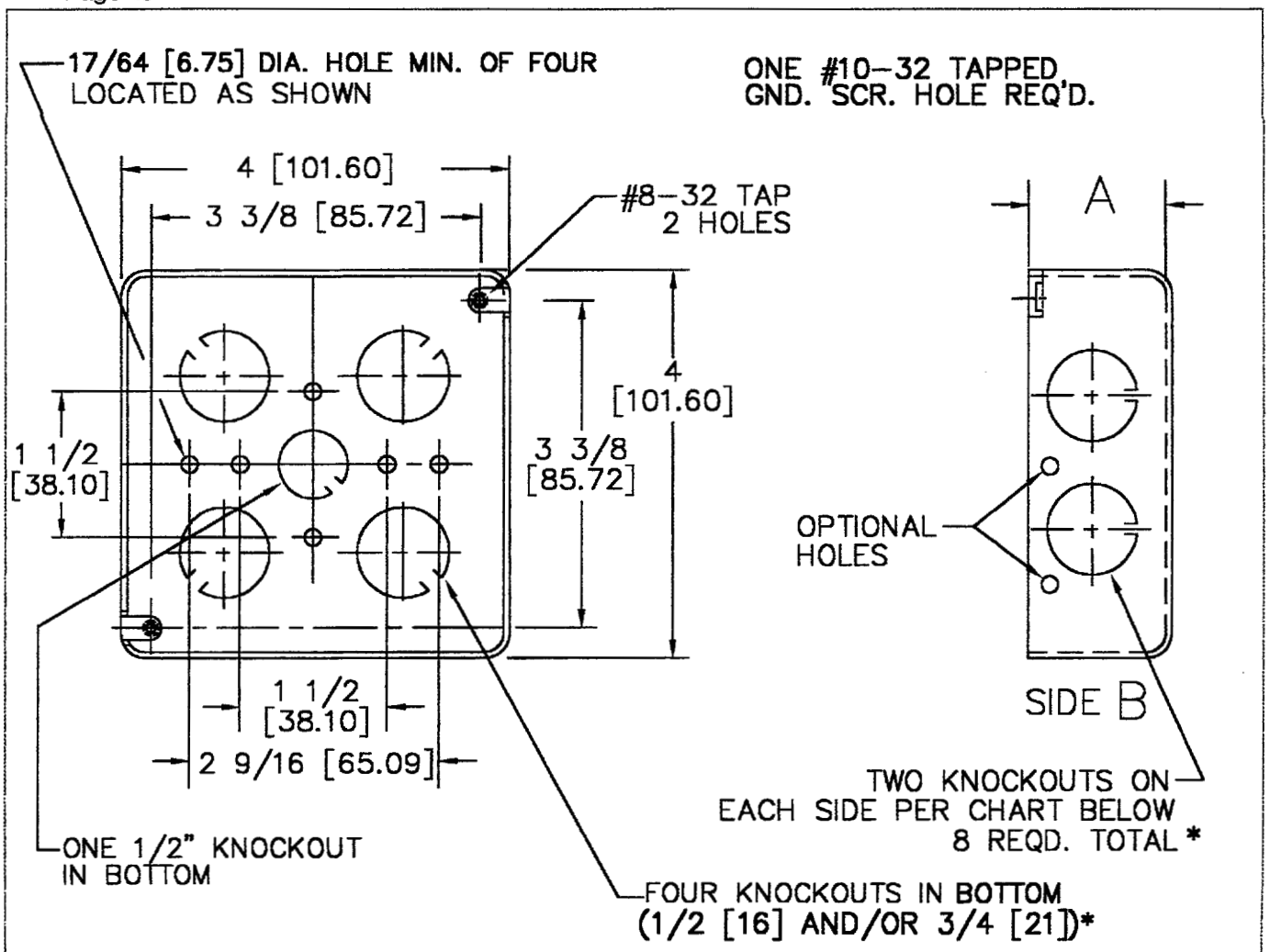
ITEM	A	KNOCKOUT TRADE SIZE D
1	1 1/4 [31.75]	1/2 [16]
2	1 1/2 [38.10]	1/2 [16]
3	2 1/8 [53.98]	1/2 [16] OR 3/4 [21]

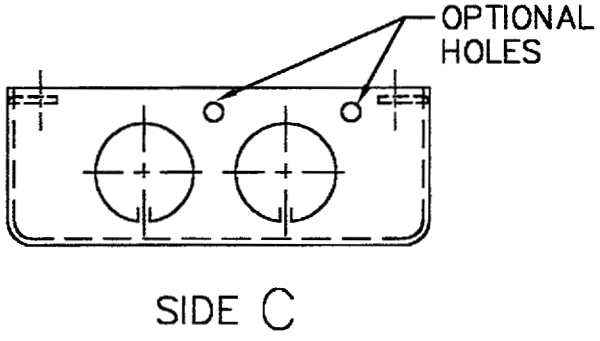
NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 110

4" SQUARE BOX, 1 1/4", 1 1/2", AND 2 1/8" DEEP, 1/2 [16] KNOCKOUTS

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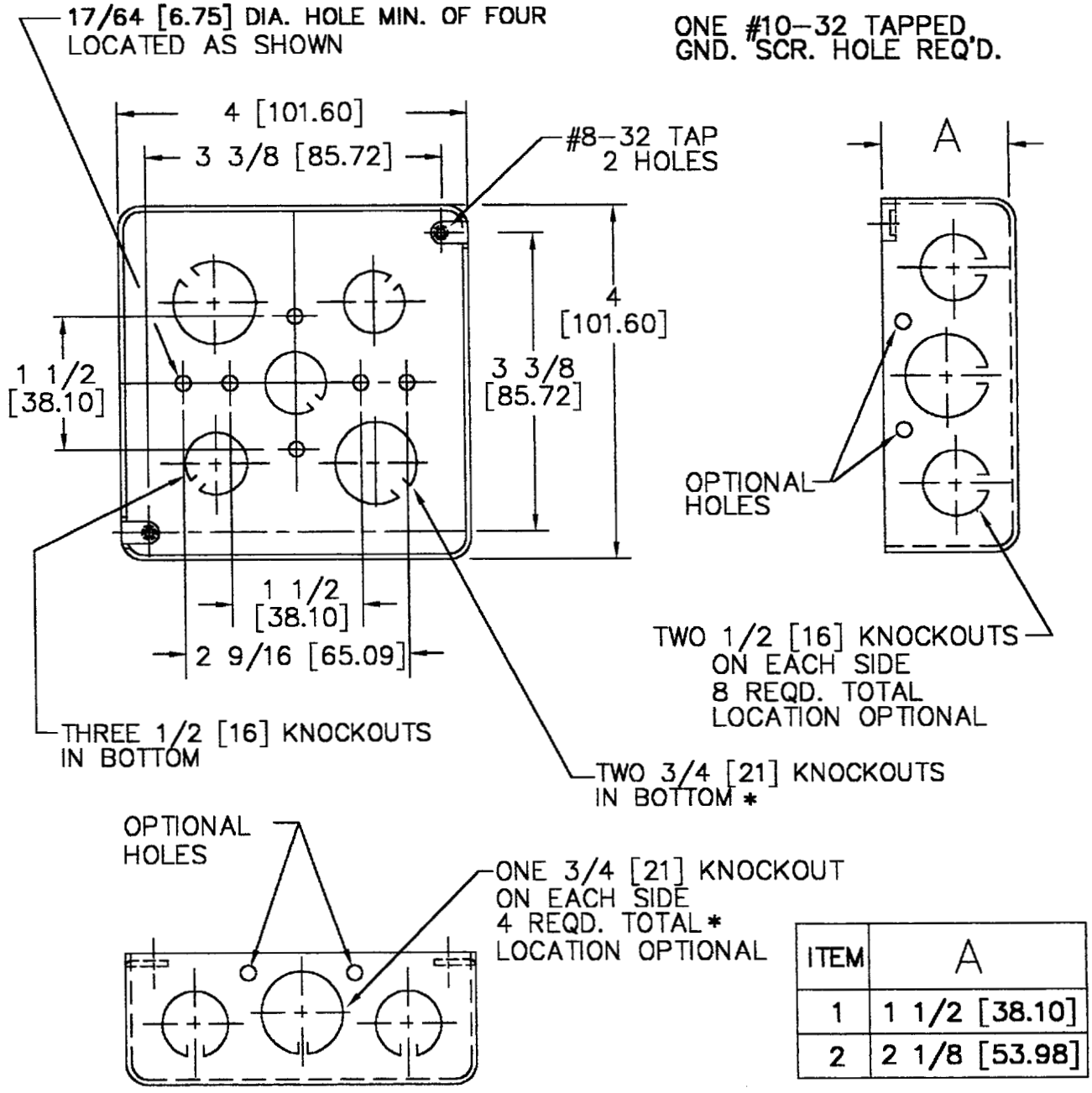
		KNOCKOUT TRADE SIZE	
ITEM	A	SIDE B	SIDE C
1	1 1/2 [38.10]	3/4 [21]	3/4 [21]
2	2 1/8 [53.98]	3/4 [21]	3/4 [21]
3	2 1/8 [53.98]	1 [27]	1 [27]
4	2 1/8 [53.98]	3/4 [21]	1 [27]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 111

4" SQUARE BOX, 1 1/2" AND 2 1/8" DEEP, 3/4" AND 1" KNOCKOUTS

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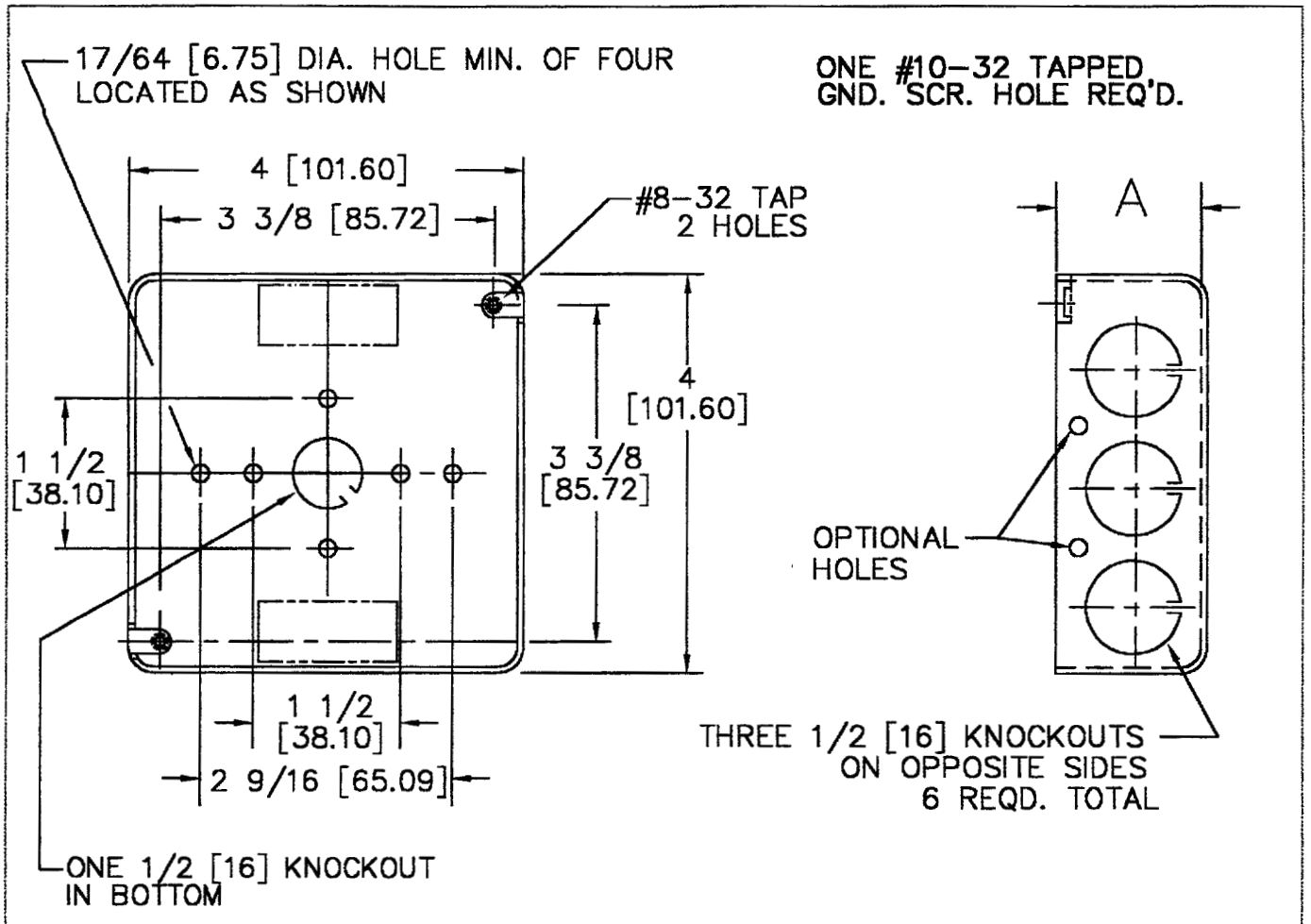
ITEM	A
1	1 1/2 [38.10]
2	2 1/8 [53.98]

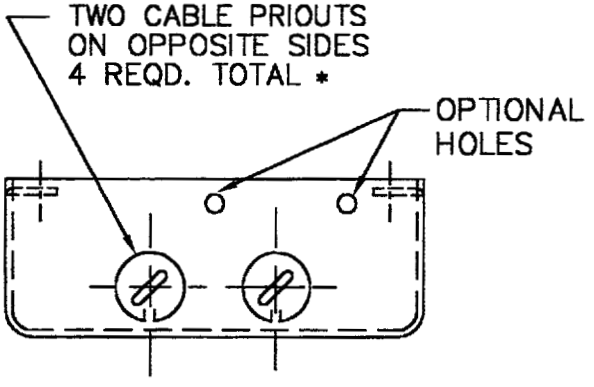
NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 112

4" SQUARE BOX , 1 1/2" AND 2 1/8" DEEP, COMBINATION 1/2 [16] AND 3/4 [21] KNOCKOUTS

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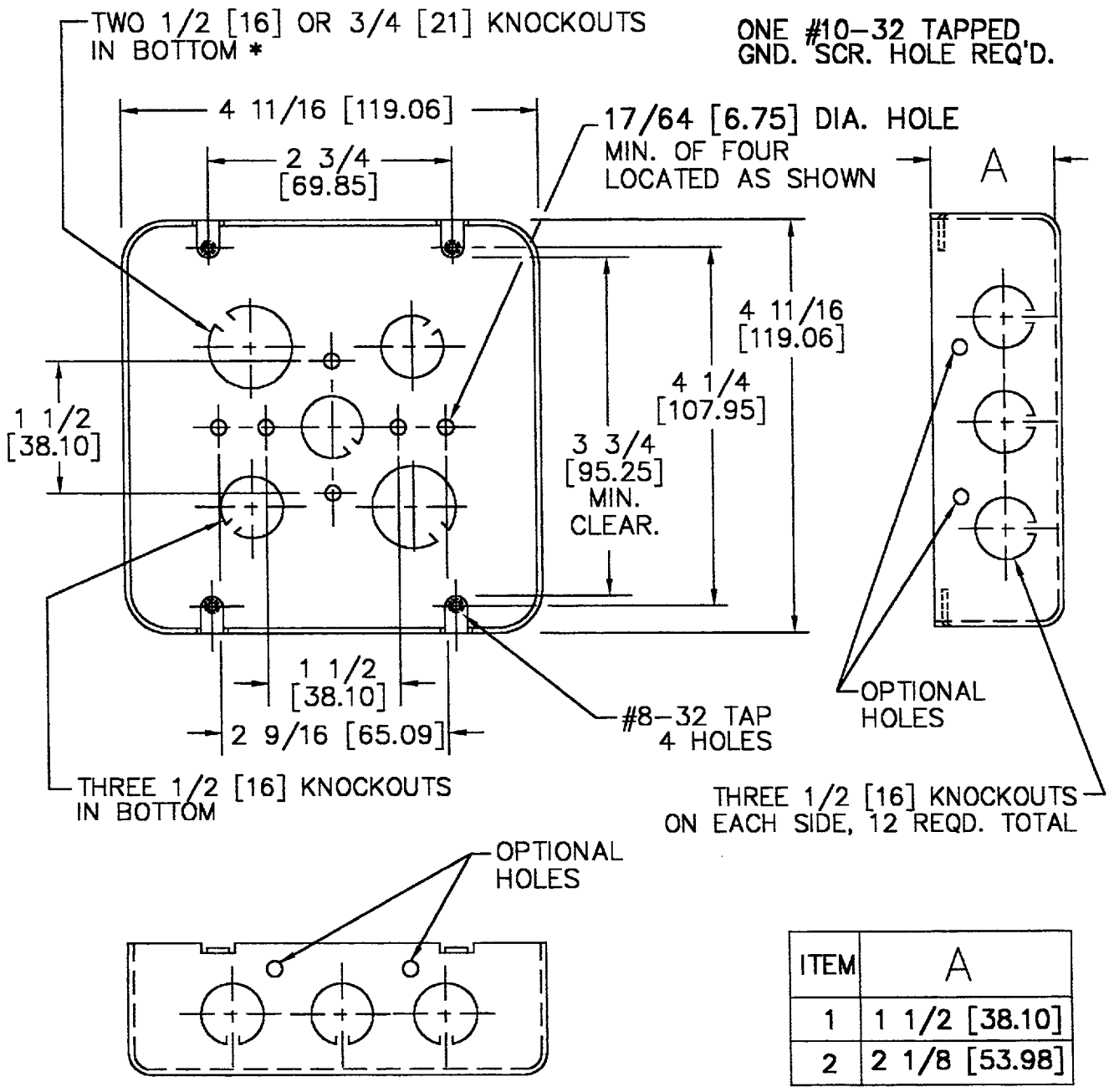


ITEM	A
1	1 1/2 [38.10]
2	2 1/8 [53.97]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–8 FOR ALTERNATE PRIOUT CONFIGURATIONS

Figure 113
4" SQUARE CABLE BOX, 1 1/2" AND 2 1/8" DEEP

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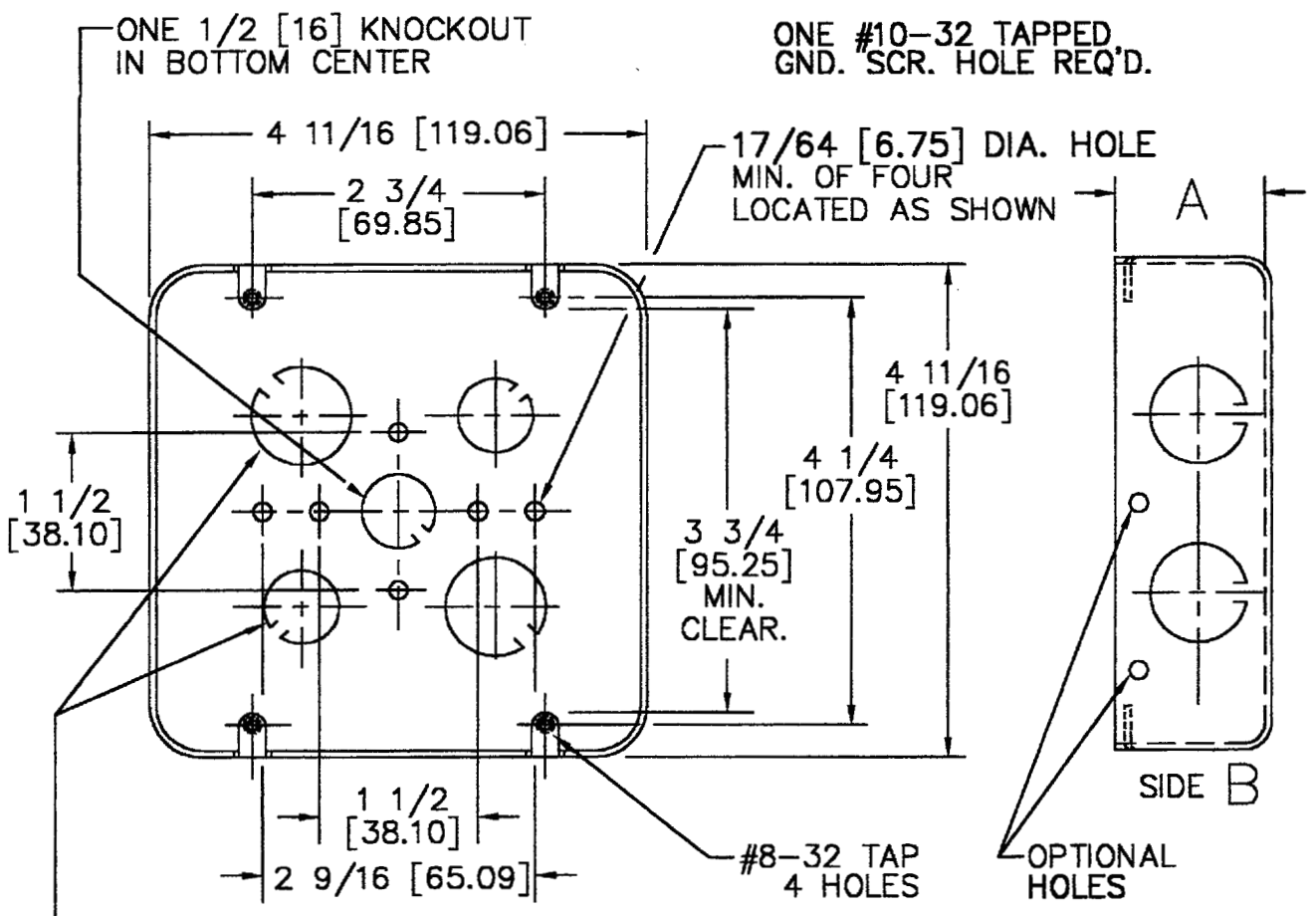


ITEM	A
1	1 1/2 [38.10]
2	2 1/8 [53.98]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 120
4 11/16" SQUARE BOX, 1 1/2" AND 2 1/8" DEEP, 1/2 [16] KNOCKOUTS

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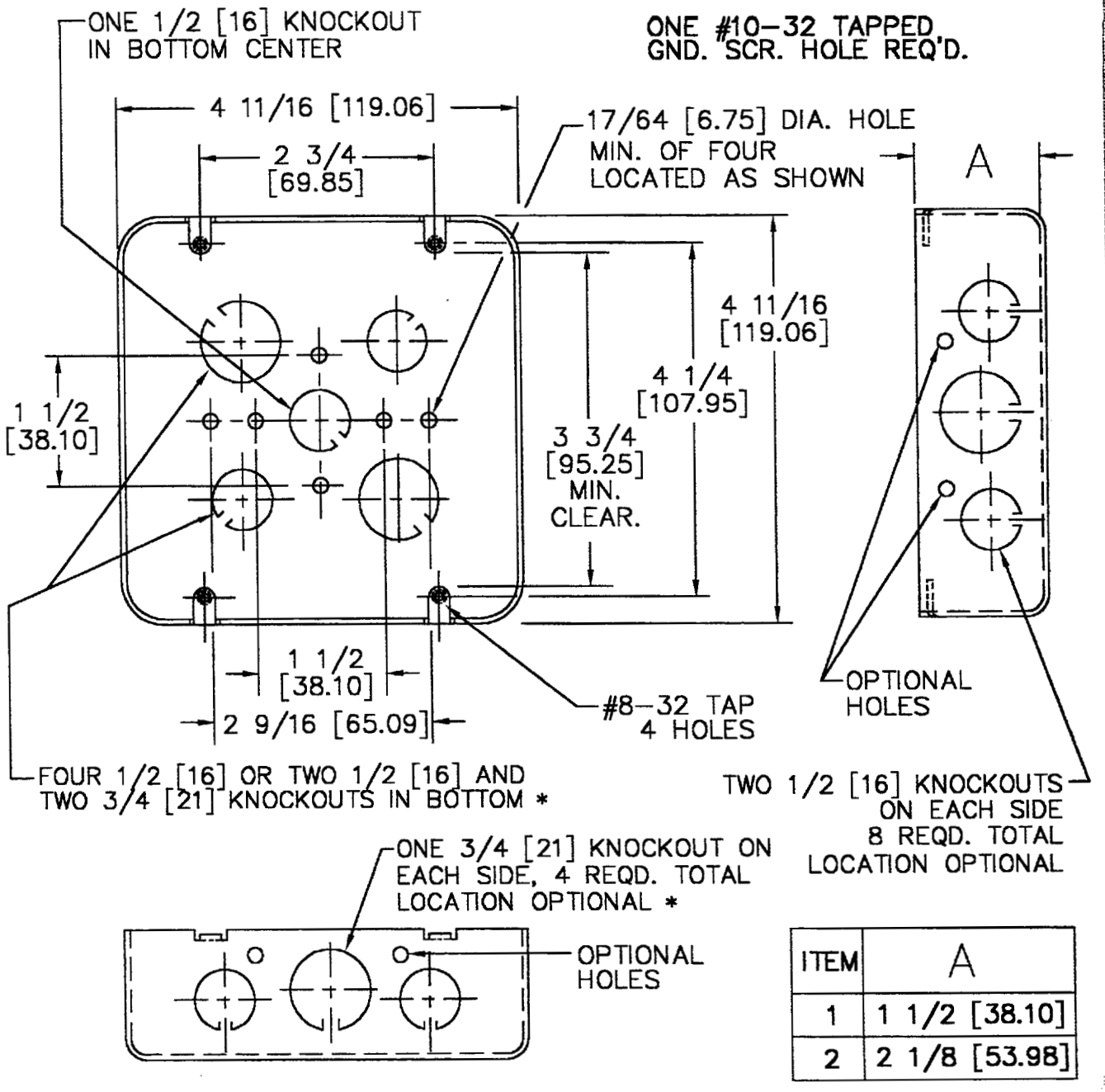


ITEM	A	KNOCKOUT TRADE SIZE B	C
1	1 1/2 [38.10]	3/4 [21]	3/4 [21]
2	2 1/8 [53.98]	3/4 [21]	3/4 [21]
3	2 1/8 [53.98]	1 [27]	1 [27]
4	2 1/8 [53.98]	3/4 [21]	1 [27]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 121
4 11/16" SQUARE BOX , 1 1/2" AND 2 1/8" DEEP,
3/4 [21] AND 1 [27] KNOCKOUTS

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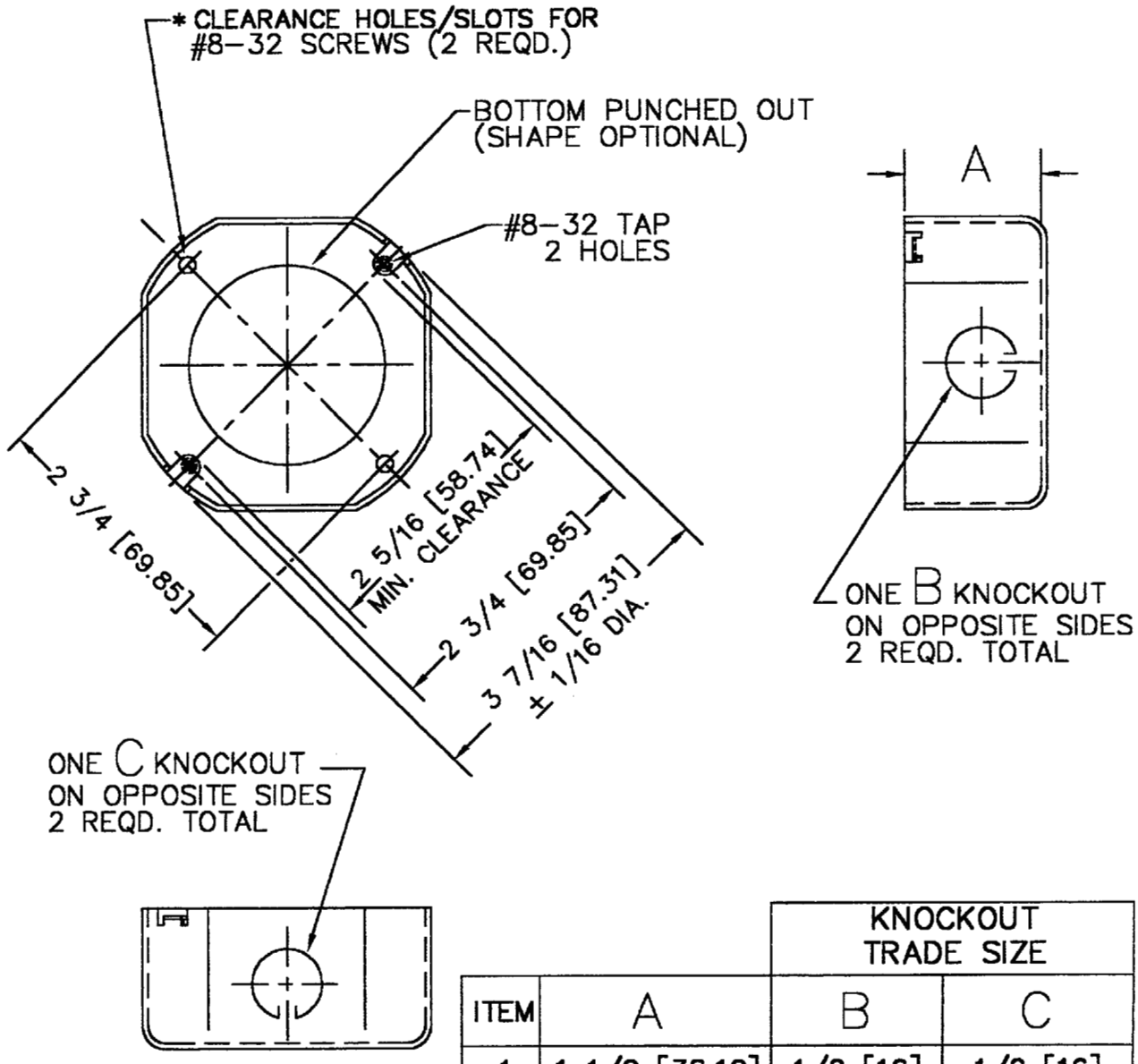
ITEM	A
1	1 1/2 [38.10]
2	2 1/8 [53.98]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 122

4 11/16" SQUARE BOX , 1 1/2" AND 2 1/8" DEEP, COMBINATION 1/2 [16] AND 3/4 [21] KNOCKOUTS

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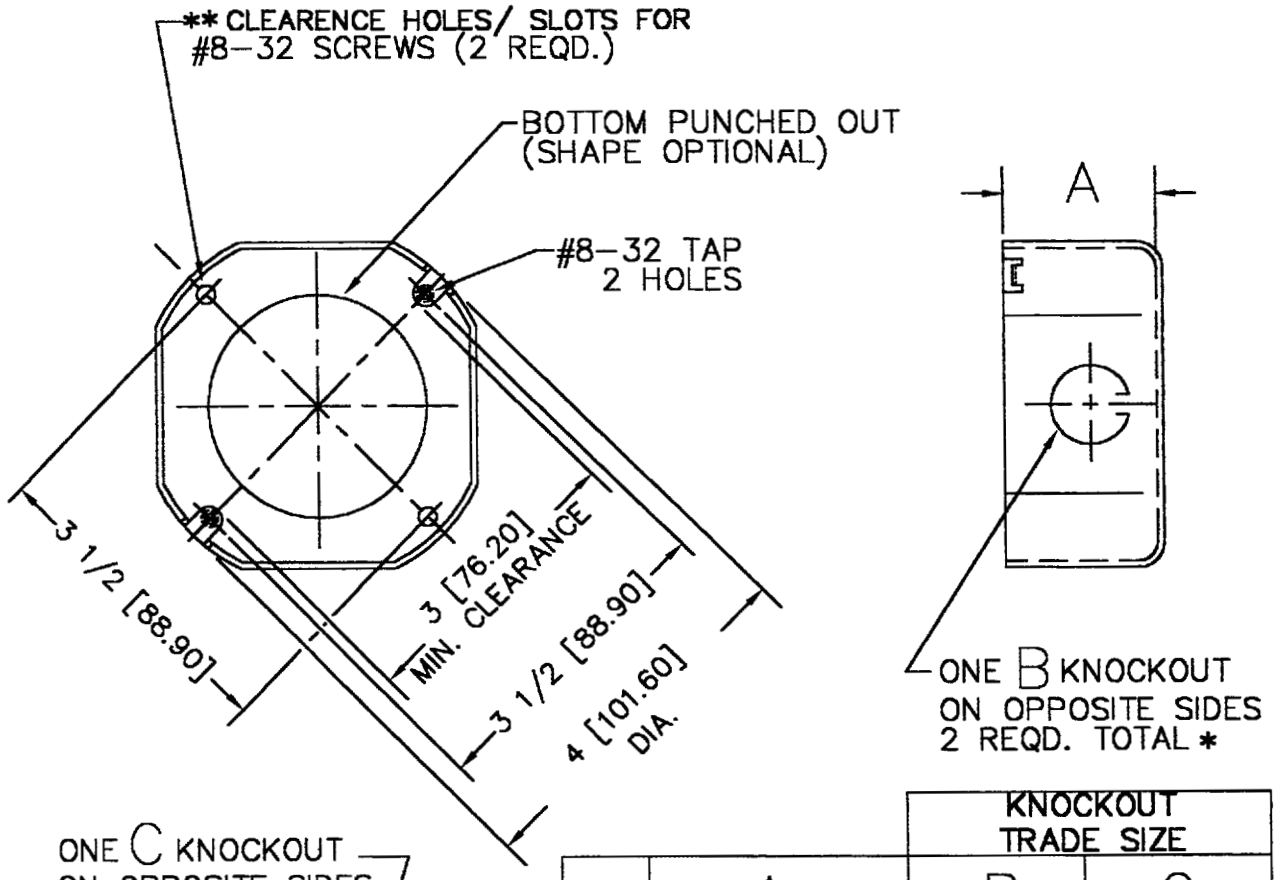


		KNOCKOUT TRADE SIZE	
ITEM	A	B	C
1	1 1/2 [38.10]	1/2 [16]	1/2 [16]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE/ SLOT DESIGNS

Figure 125
3 1/2" OCTAGON BOX EXTENSION, 1 1/2" DEEP, 1/2 [16] KNOCKOUTS

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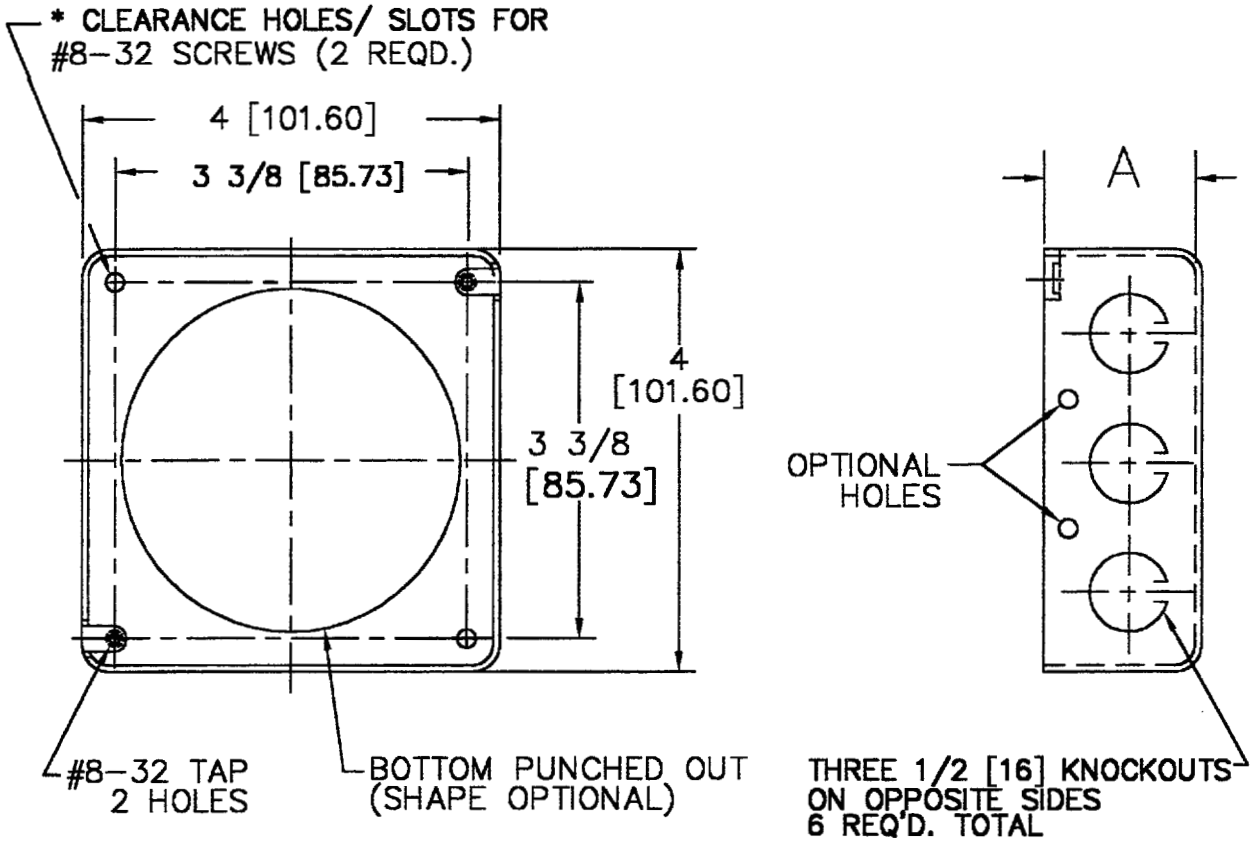


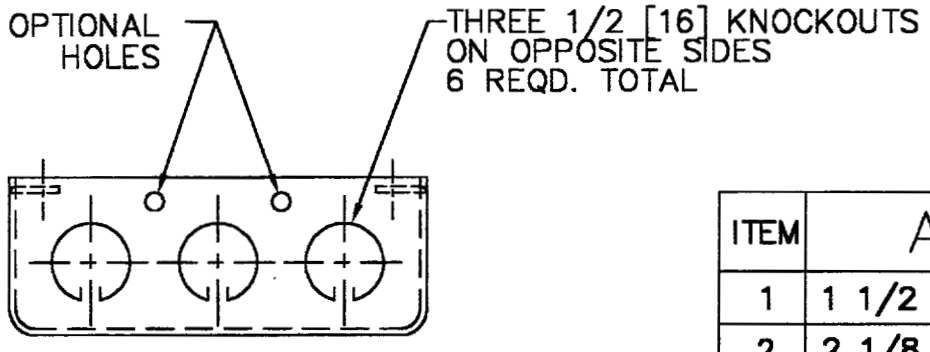
ITEM	A	KNOCKOUT TRADE SIZE B	C
1	1 1/2 [38.10]	1/2 [16]	1/2 [16]
2	1 1/2 [38.10]	3/4 [21]	3/4 [21]
3	1 1/2 [38.10]	1/2 [16]	3/4 [21]
4	2 1/8 [53.98]	1/2 [16]	1/2 [16]
5	2 1/8 [53.98]	3/4 [21]	3/4 [21]
6	2 1/8 [53.98]	1 [27]	1 [27]
7	2 1/8 [53.98]	1/2 [16]	3/4 [21]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS
** SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE/ SLOT DESIGNS

Figure 130
4" OCTAGON BOX EXTENSION, 1 1/2" AND 2 1/8" DEEP,
1/2 [16], 3/4 [21], AND 1 [27] KNOCKOUTS

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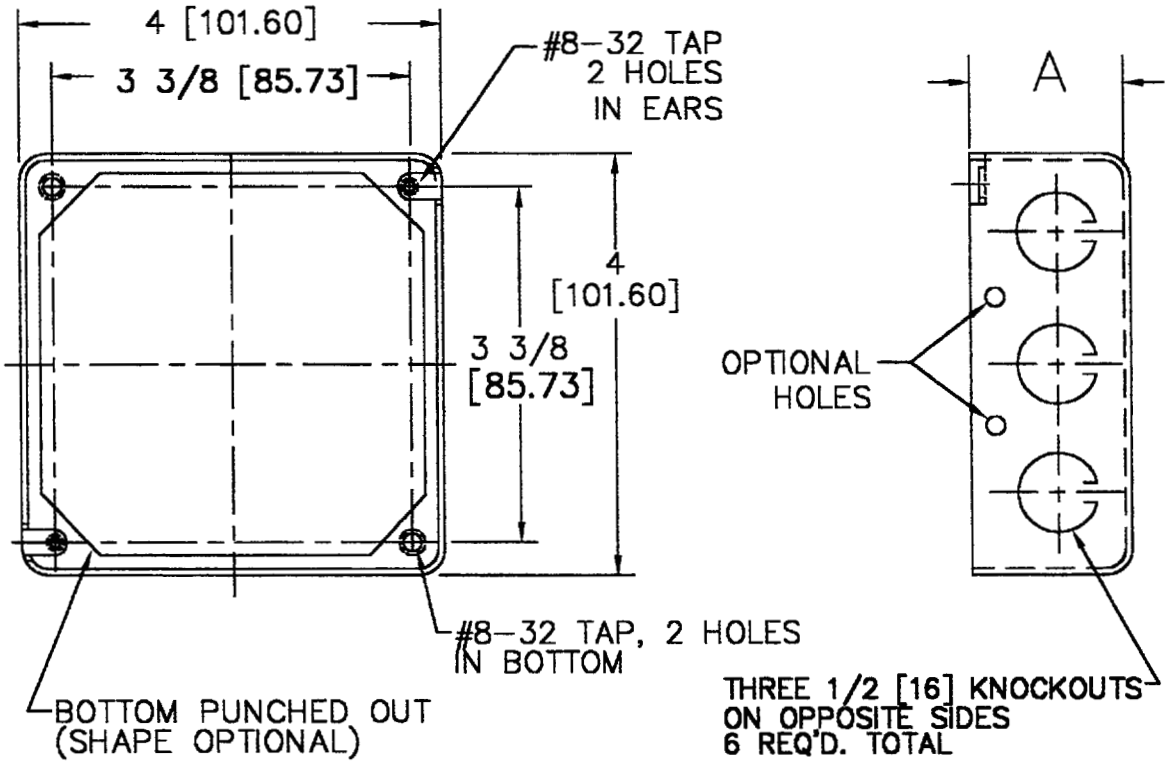


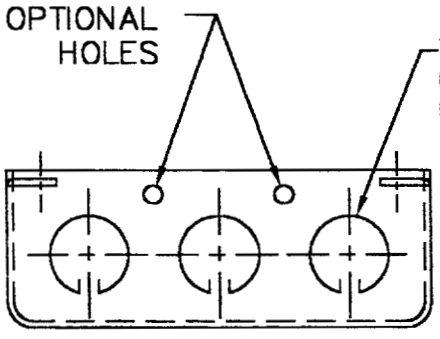
ITEM	A
1	1 1/2 [38.10]
2	2 1/8 [53.98]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE/ SLOT DESIGNS

Figure 140
4" SQUARE BOX EXTENSION, 1 1/2 AND 2 1/8" DEEP, 1/2 [16] KNOCKOUTS

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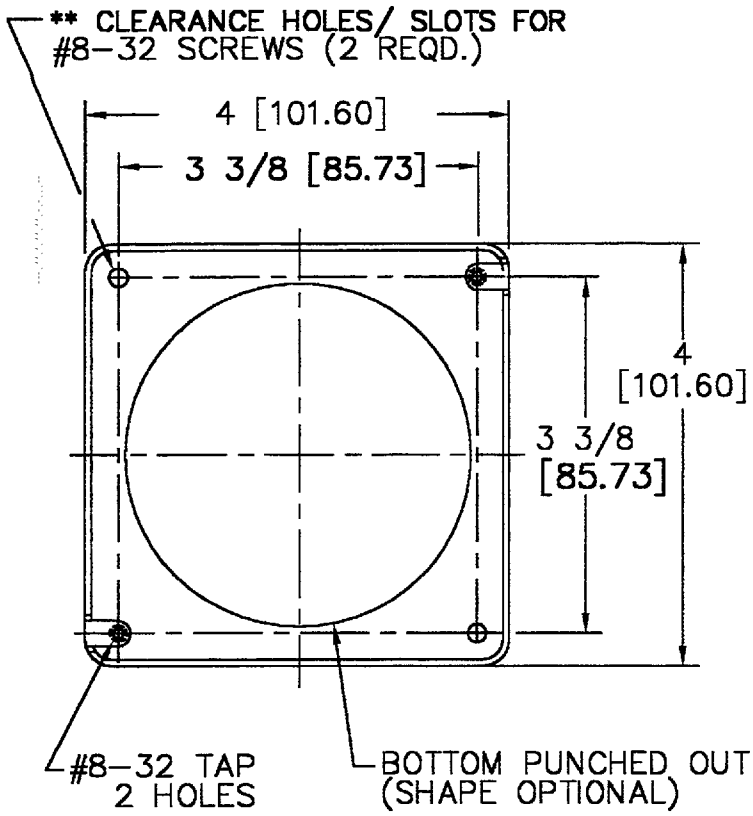


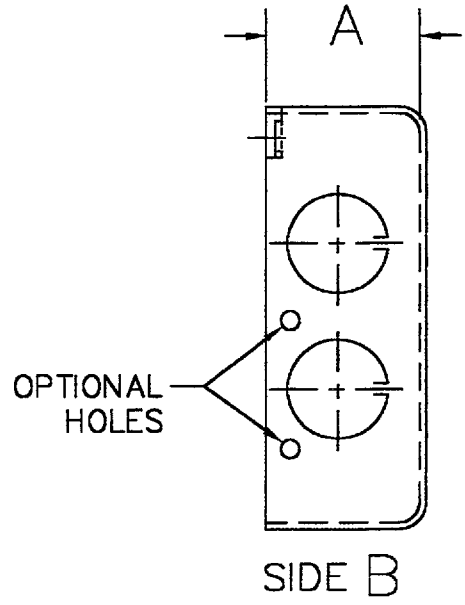
ITEM	A
1	1 1/2 [38.10]
2	2 1/8 [53.98]

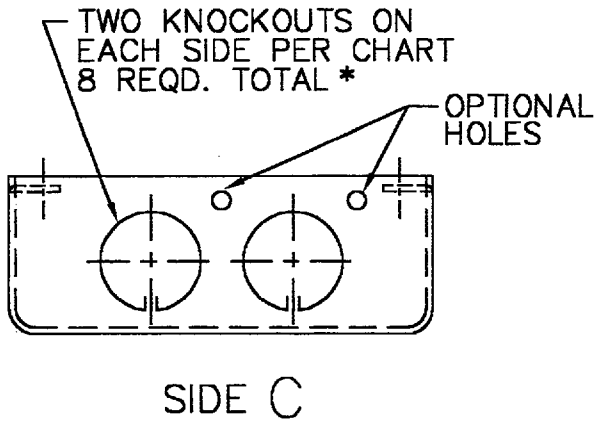
NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS

Figure 141
4" SQUARE THRU–WALL BOX, 1 1/4" AND 1 1/2" DEEP, 1/2 [16] KNOCKOUTS

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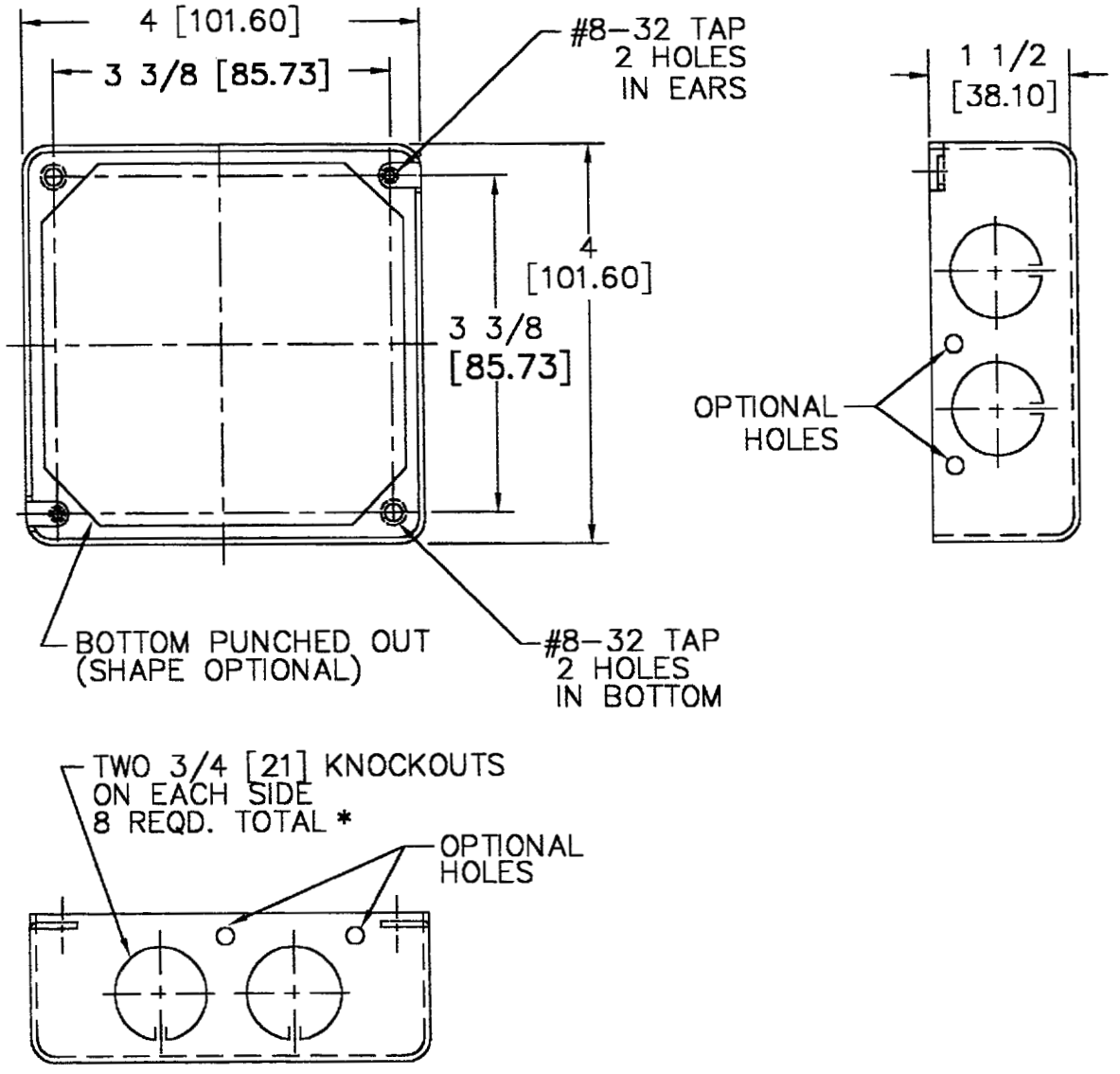
		KNOCKOUT TRADE SIZE	
ITEM	A	SIDE B	SIDE C
1	1 1/2 [38.10]	3/4 [21]	3/4 [21]
2	2 1/8 [53.97]	3/4 [21]	3/4 [21]
3	2 1/8 [53.97]	1 [27]	1 [27]
4	2 1/8 [53.97]	3/4 [21]	1 [27]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS
** SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE/ SLOT DESIGNS

Figure 142

4" SQUARE BOX EXTENSION, 1 1/2" AND 2 1/8" DEEP, 3/4 [21] AND 1 [27] KNOCKOUTS

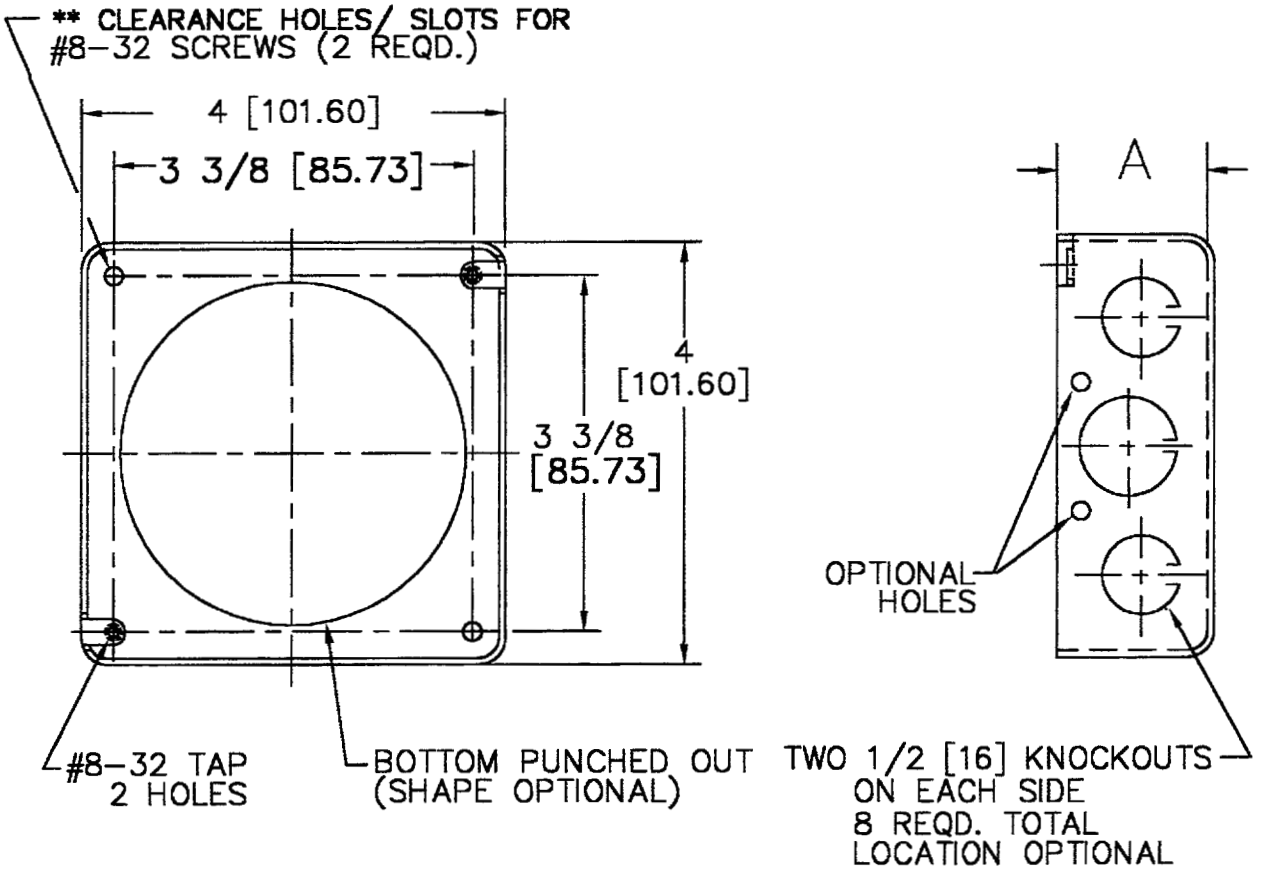
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NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 143
4" SQUARE THRU–WALL BOX, 1 1/2" DEEP, 3/4 [21] KNOCKOUTS

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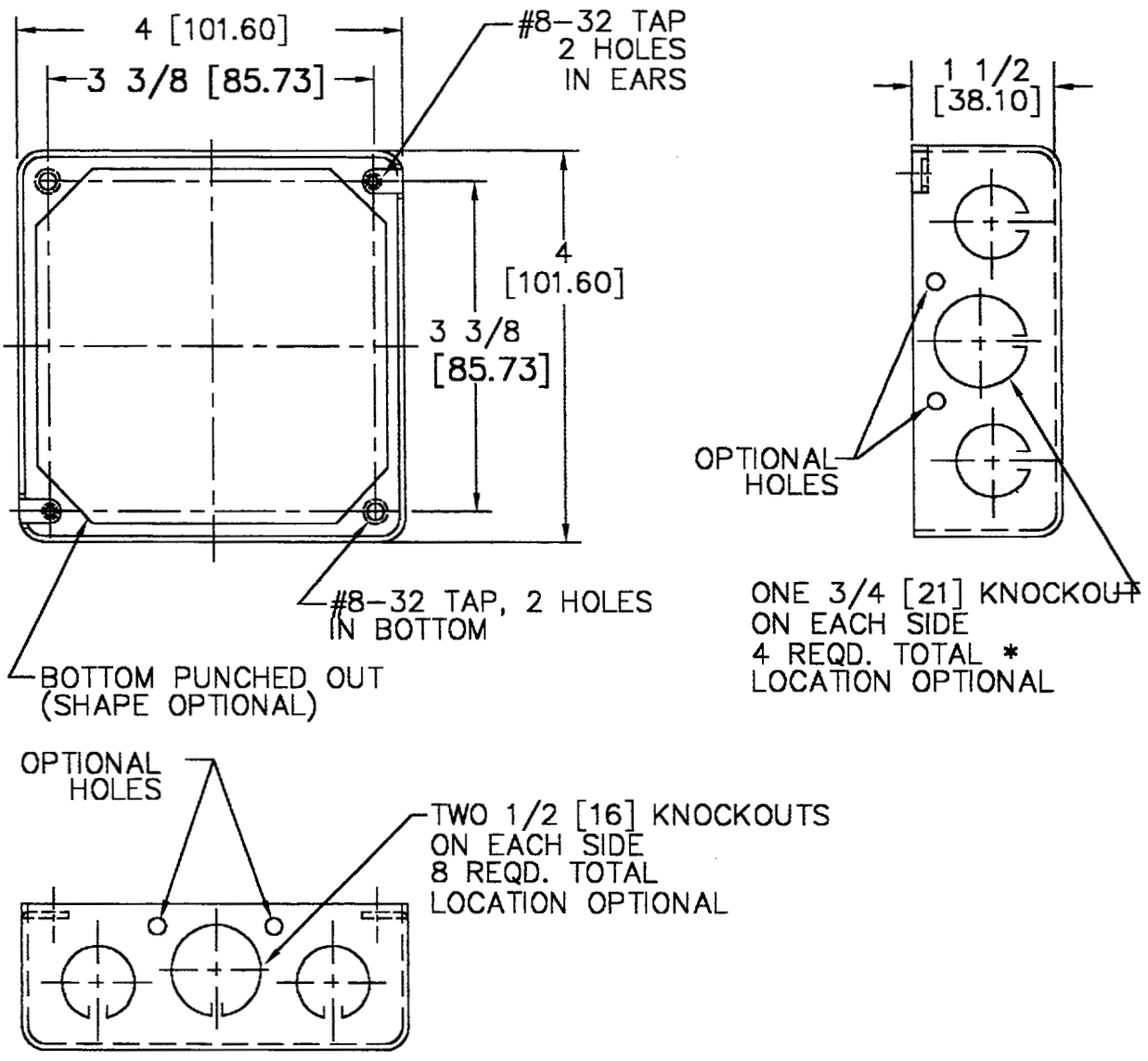
ITEM	A
1	1 1/2 [38.10]
2	2 1/8 [53.98]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS
** SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE/ SLOT DESIGNS

Figure 144

4" SQUARE BOX EXTENSION, 1 1/2" AND 2 1/8" DEEP, COMBINATION 1/2 [16] AND 3/4 [21] KNOCKOUTS

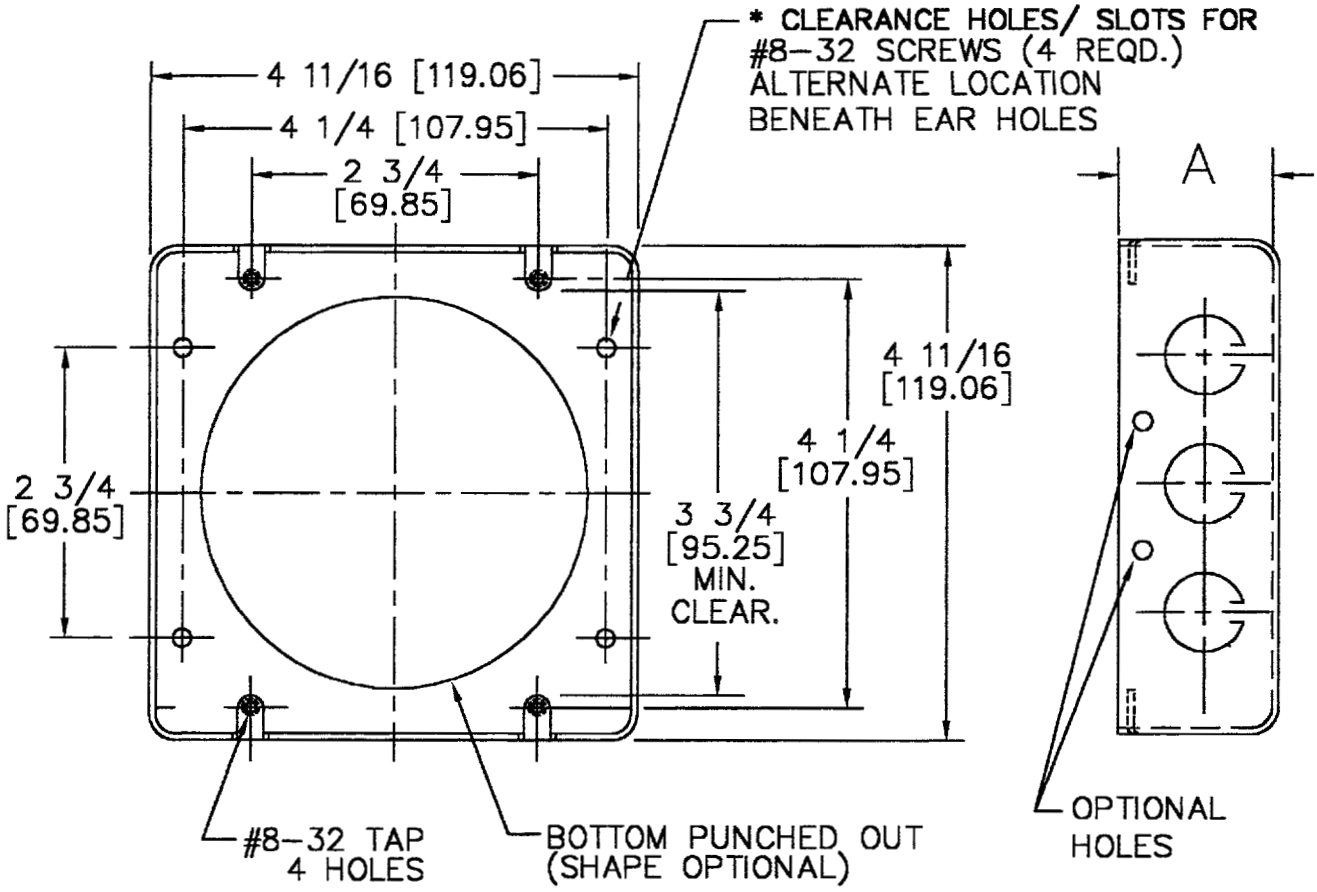
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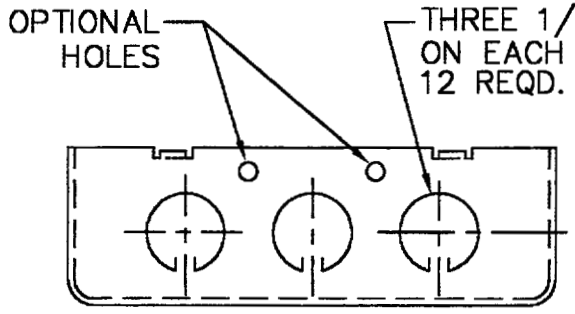


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 145
4" SQUARE THRU-WALL BOX, 1 1/2" DEEP, COMBINATION
1/2 [16] AND 3/4 [21] KNOCKOUTS

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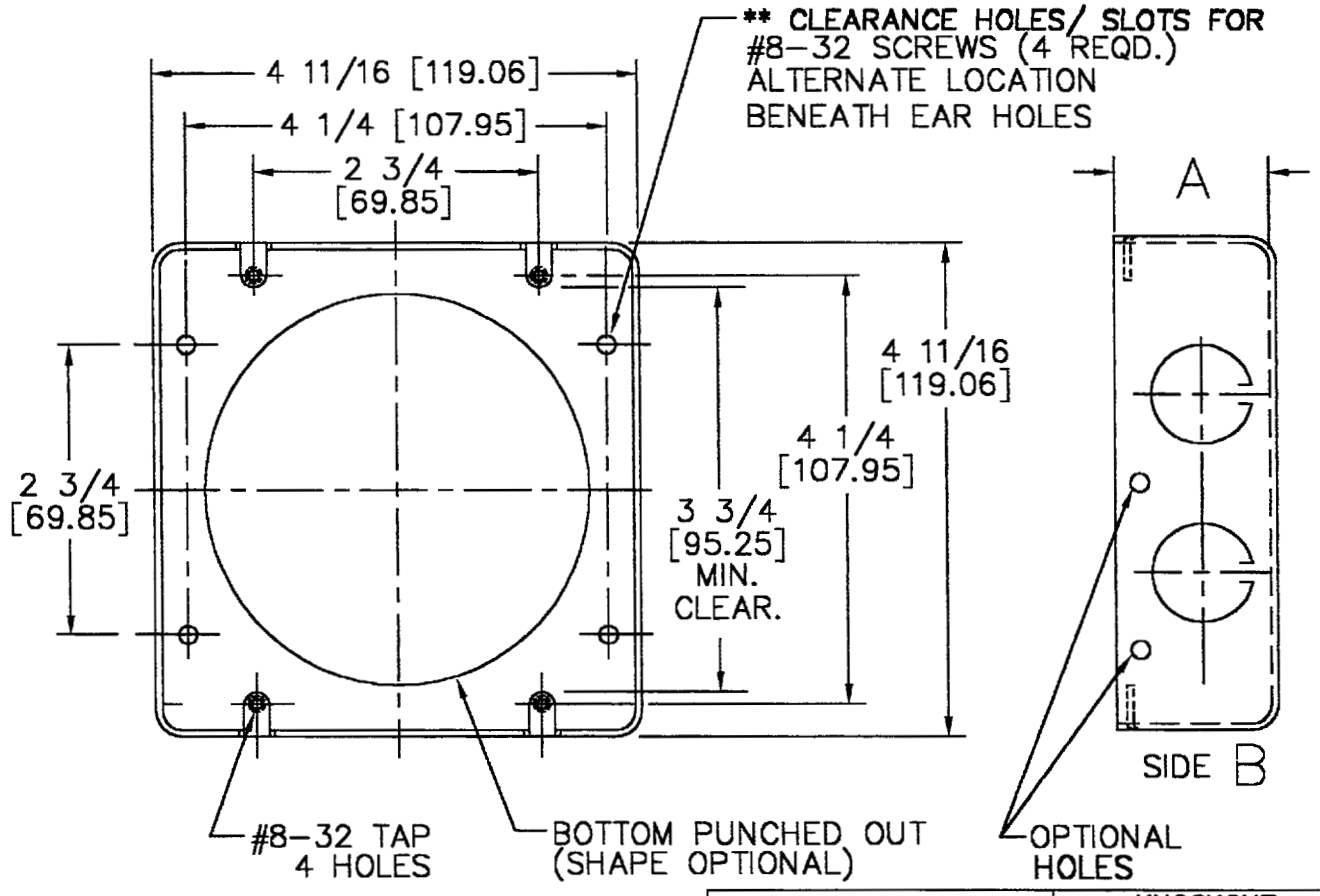


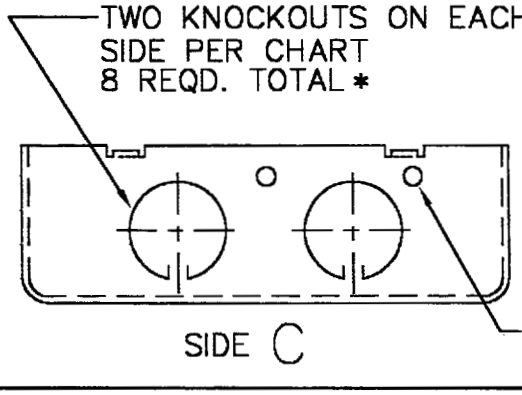
ITEM	A
1	1 1/2 [38.10]
2	2 1/8 [53.98]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE/ SLOT DESIGNS

Figure 150
4 11/16" SQUARE BOX EXTENSION, 1–1/2" AND 2–1/8" DEEP, 1/2 [16] KNOCKOUTS

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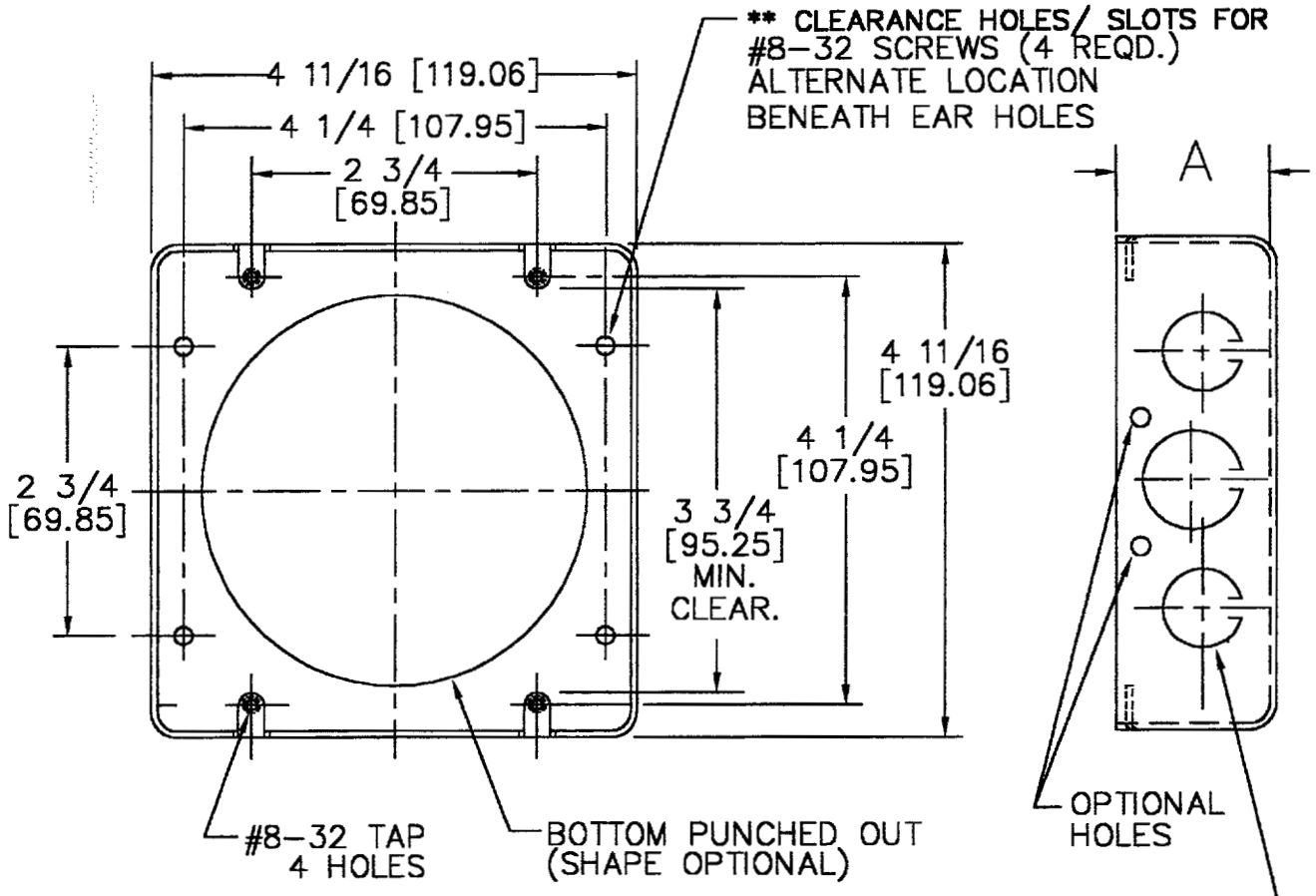
		KNOCKOUT TRADE SIZE	
ITEM	A	B	C
1	1 1/2 [38.10]	3/4 [21]	3/4 [21]
2	2 1/8 [53.98]	3/4 [21]	3/4 [21]
3	2 1/8 [53.98]	1 [27]	1 [27]
4	2 1/8 [53.98]	3/4 [21]	1 [27]
5	2 1/8 [53.98]	3/4 [21] 1 [27]	3/4 [21] 1 [27]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS
** SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE/ SLOT DESIGNS

Figure 151

4 11/16" SQUARE BOX EXTENSION, 1 1/2" AND 2 1/8" DEEP, 3/4 [21] AND 1 [27] KNOCKOUTS

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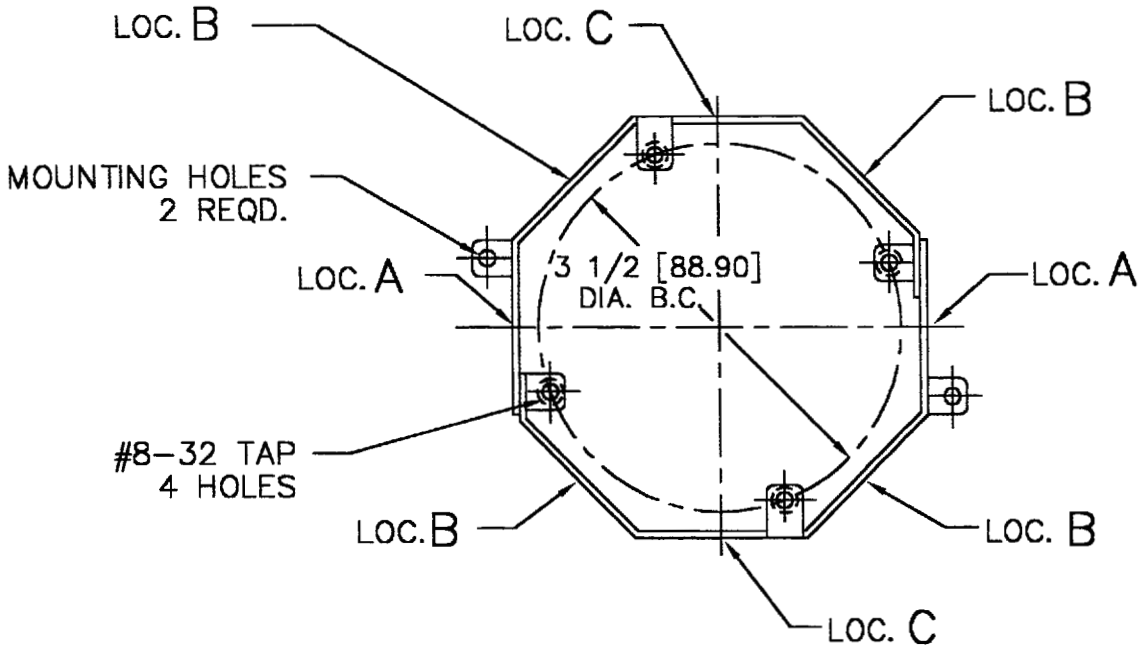
ITEM	A
1	1 1/2 [38.10]
2	2 1/8 [53.98]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS
** SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE/ SLOT DESIGNS

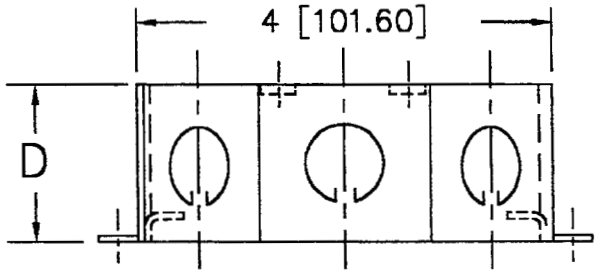
Figure 152

4 11/16" SQUARE BOX EXTENSION, 1 1/2" AND 2 1/8" DEEP, COMBINATION 1/2 [16] AND 3/4 [21] KNOCKOUTS

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ITEM	D
1	2 [50.80]
2	2 1/2 [63.50]
3	3 [76.20]
4	3 1/2 [88.90]
5	4 [101.60]
6	5 [127.00]
7	6 [152.40]

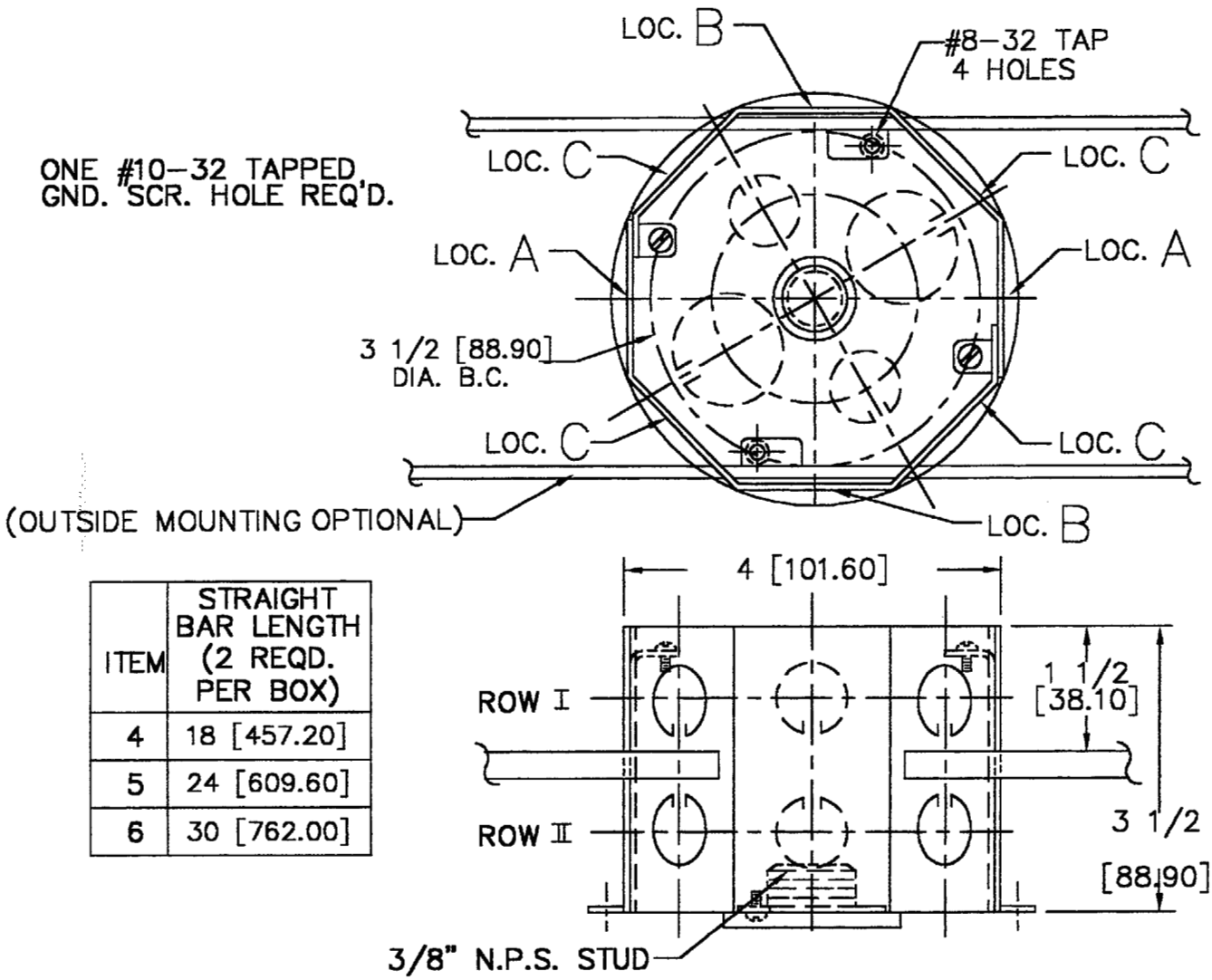


	KNOCKOUT INFORMATION			
STYLE	MIN. REQD.& TRADE SIZE	A	B	C
A	EIGHT 1/2 [16]	1/2	1/2	1/2
* B	SIX 3/4 [21]	NONE	3/4	3/4
* C	FOUR 1/2 [16], FOUR 3/4 [21]	1/2 [16]	3/4 [21]	1/2 [16]
* D	FOUR 3/4 [21] TWO 1 [27]	NONE	3/4 [21]	1 [27]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 160
CONCRETE RING, 1/2 [16], 3/4 [21], AND 1 [27] KNOCKOUTS

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ITEM	STRAIGHT BAR LENGTH (2 REQD. PER BOX)
4	18 [457.20]
5	24 [609.60]
6	30 [762.00]

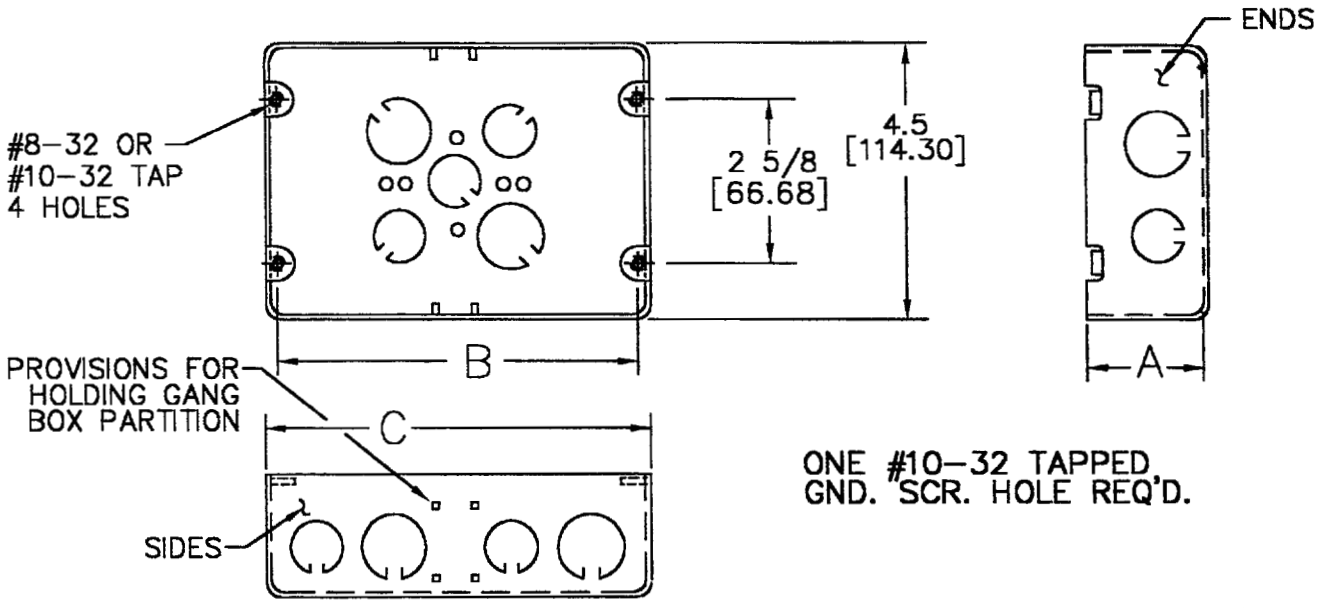
		KNOCKOUT INFORMATION				
	ITEM	MIN. REQD. & SIZE	ROW	A	B	C
*	1	EIGHT 1/2 [16]	I	1/2 [16]	1/2 [16]	3/4 [21]
		EIGHT 3/4 [21]	II	1/2 [16]	1/2 [16]	3/4 [21]
*	2	SIX 3/4 [21]	I	NONE	NONE	NONE
			II	NONE	3/4 [21]	3/4 [21]
*	3	EIGHT 1/2 [16]	I	NONE	NONE	NONE
			II	1/2 [16]	1/2 [16]	1/2 [16]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 161

HUNG CEILING BOX, 1/2 [16] AND 3/4 [21] KNOCKOUTS

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ITEM	NO. OF GANGS	A	B	C	KNOCKOUT TRADE SIZE & QUANTITY							
					SIDES			ENDS			BOTTOM	
					1/2 [16]	3/4 [21]	1 [27]	1/2 [16]	3/4 [21]	1 [27]	1/2 [16]	3/4 [21]
1	2	1 5/8 [41.28]	6 3/8 [161.93]	6 13/16 [173.04]	4	4	–	2	2	–	3	2
2	2	2 1/2 [63.50]	6 3/8 [161.93]	6 13/16 [173.04]	–	4	2	–	2	2	3	2
3	3	1 5/8 [41.28]	8 3/16 [207.96]	8 5/8 [219.08]	6	4	–	2	2	–	6	4
4	3	2 1/2 [63.50]	8 3/16 [207.96]	8 5/8 [219.08]	–	8	2	–	2	2	6	4
5	4	1 5/8 [41.28]	10 [254.00]	10 7/16 [265.11]	6	6	–	2	2	–	6	4
6	4	2 1/2 [63.50]	10 [254.00]	10 7/16 [265.11]	–	4	4	–	2	2	6	4
7	5	1 5/8 [41.28]	11 13/16 [300.04]	12 1/4 [311.15]	8	6	–	2	2	–	6	4
8	5	2 1/2 [63.50]	11 13/16 [300.04]	12 1/4 [311.15]	–	6	4	–	2	2	6	4
9	6	1 5/8 [41.28]	13 5/8 [346.08]	14 1/16 [357.19]	8	8	–	2	2	–	6	4
10	6	2 1/2 [63.50]	13 5/8 [346.08]	14 1/16 [357.19]	–	6	6	–	2	2	6	4
11	7	1 5/8 [41.28]	15 7/16 [392.11]	15 7/8 [403.23]	10	8	–	2	2	–	6	4
12	7	2 1/2 [63.50]	15 7/16 [392.11]	15 7/8 [403.23]	–	8	6	–	2	2	6	4
13	8	1 5/8 [41.28]	17 1/4 [438.15]	17 11/16 [449.26]	10	10	–	2	2	–	6	4
14	8	2 1/2 [63.50]	17 1/4 [438.15]	17 11/16 [449.26]	–	8	8	–	2	2	6	4
15	9	1 5/8 [41.28]	19 1/16 [484.19]	19 1/2 [495.30]	12	10	–	2	2	–	6	4
16	9	2 1/2 [63.50]	19 1/16 [484.19]	19 1/2 [495.30]	–	10	8	–	2	2	6	4
17	10	1 5/8 [41.28]	20 7/8 [530.23]	21 5/16 [541.34]	12	12	–	2	2	–	6	4
18	10	2 1/2 [63.50]	20 7/8 [530.23]	21 5/16 [541.34]	–	10	10	–	2	2	6	4

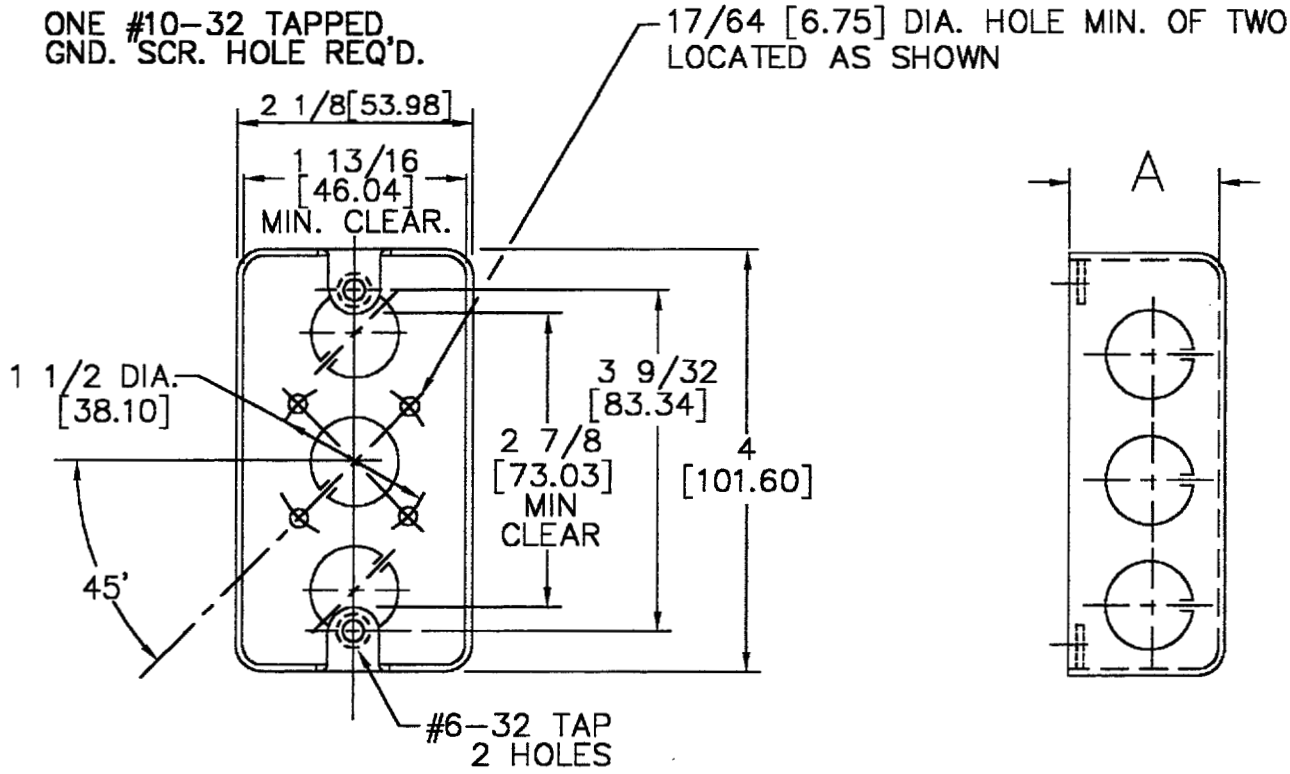
NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

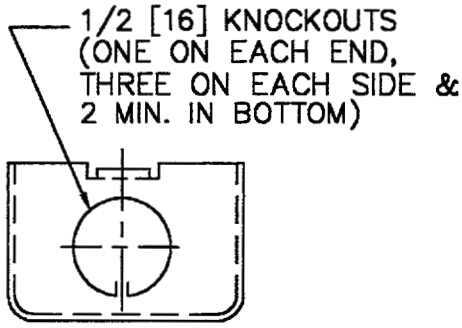
Figure 170

GANG BOXES, 1 5/8" AND 2 1/2" DEEP, 1/2 [16], 3/4 [21] & 1 [27] KNOCKOUTS

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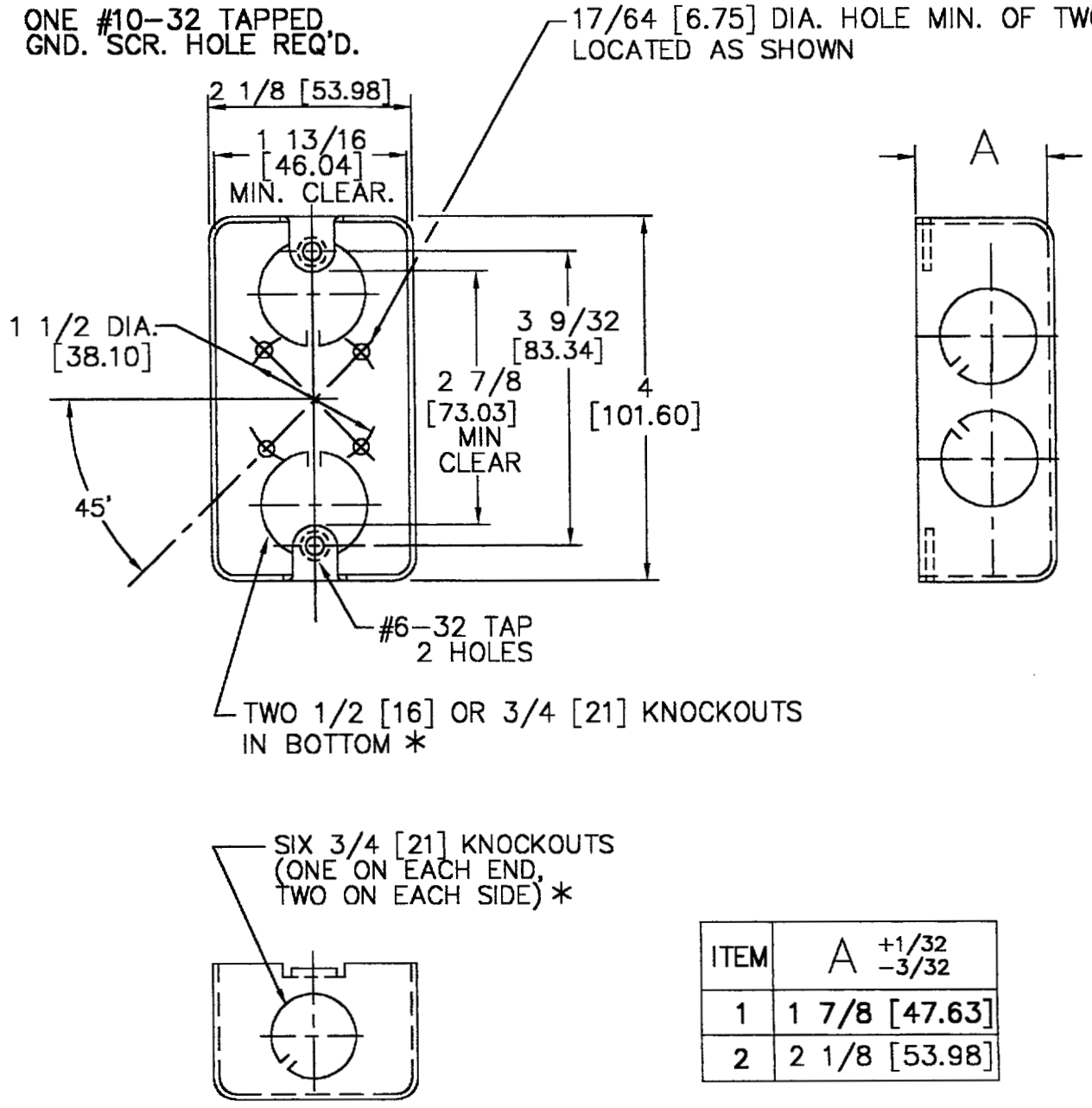


ITEM	A +1/32 −3/32
1	1 1/2 [38.10]
2	1 7/8 [47.63]
3	2 1/8 [53.98]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS

Figure 200
NONGANGABLE DEVICE BOXES, 1/2 [16] KNOCKOUTS

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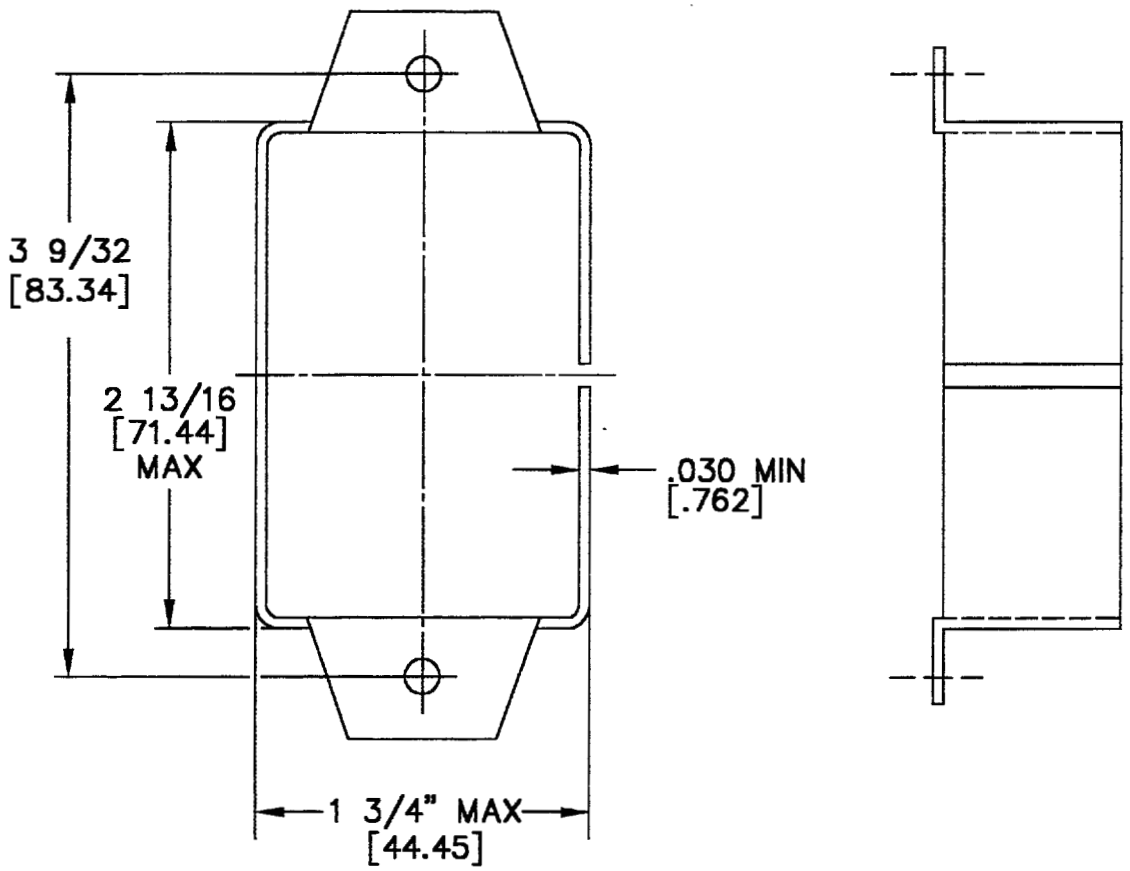


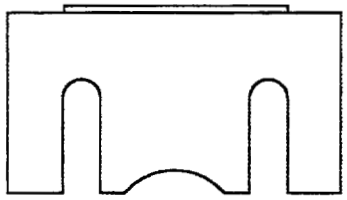
ITEM	A +1/32 −3/32
1	1 7/8 [47.63]
2	2 1/8 [53.98]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 201
NONGANGABLE DEVICE BOXES, 3/4 [21] KNOCKOUTS

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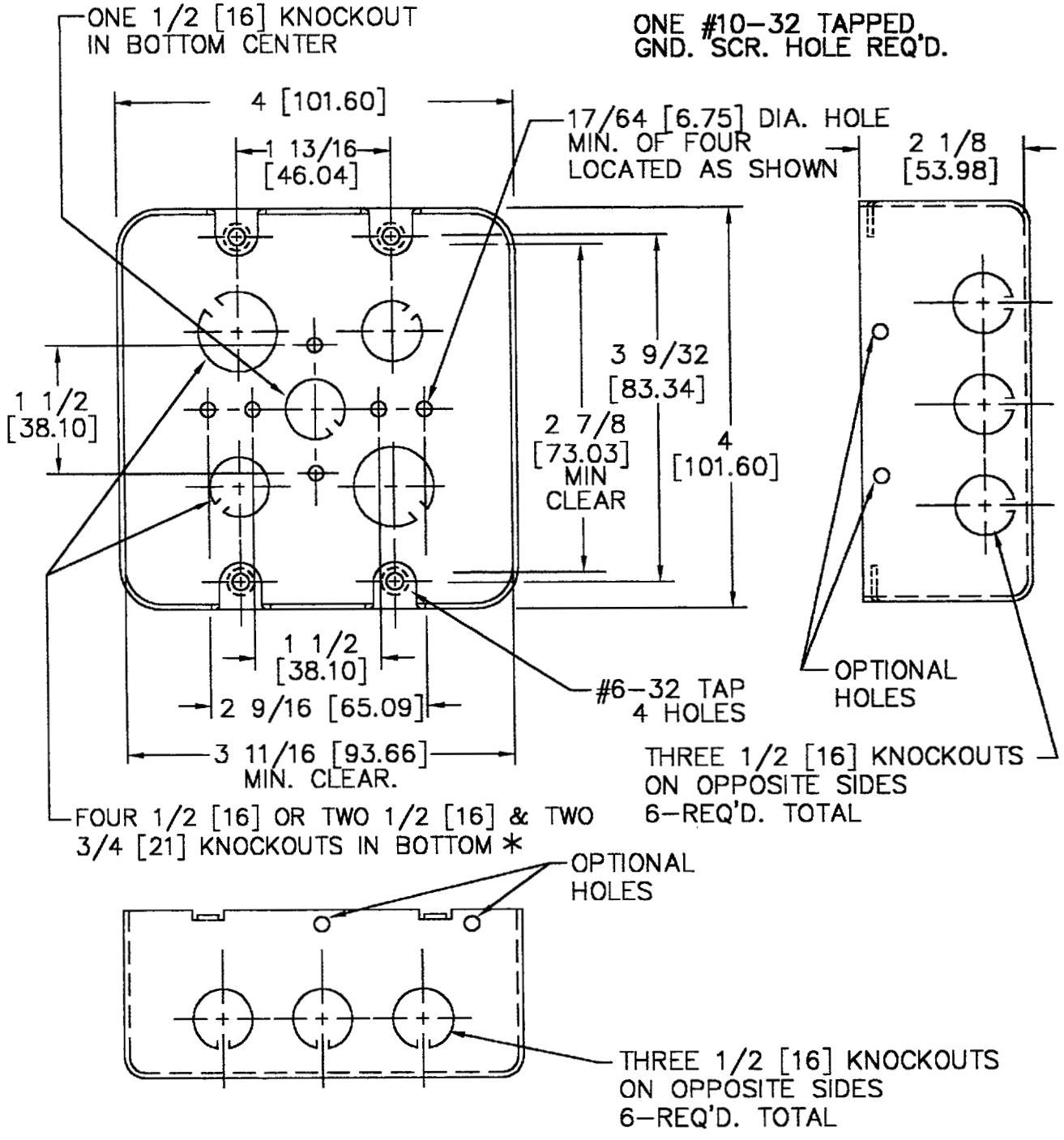
NOTES
ALL DIMENSIONS IN INCHES AND [MILLIMETERS]
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS

Figure 202

A FLUSH DEVICE BOX EXTENSION RING

(GOOF RING)

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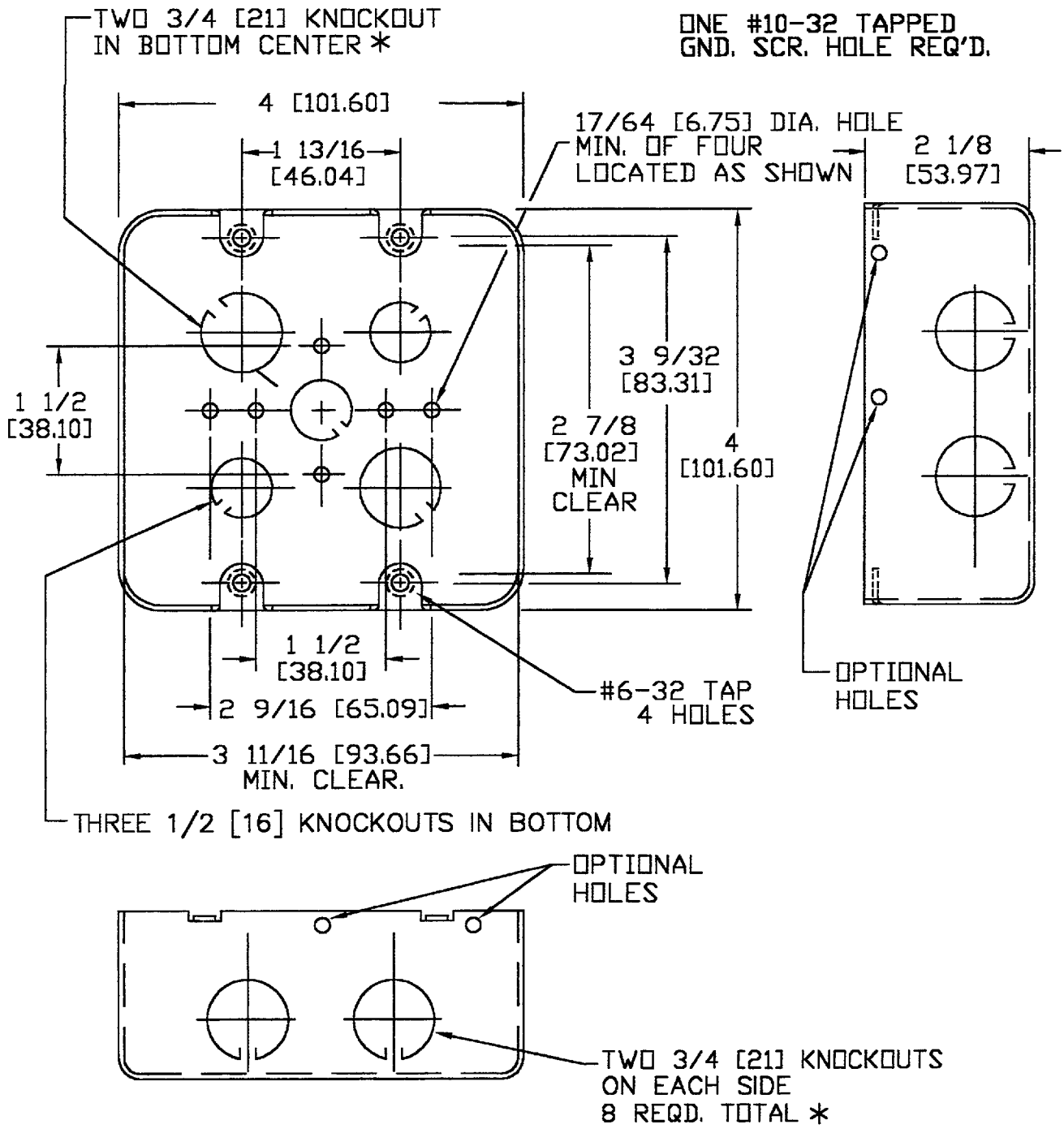


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 210

4" SQUARE BOX FOR TWO DEVICES, 1/2 [16] KNOCKOUTS

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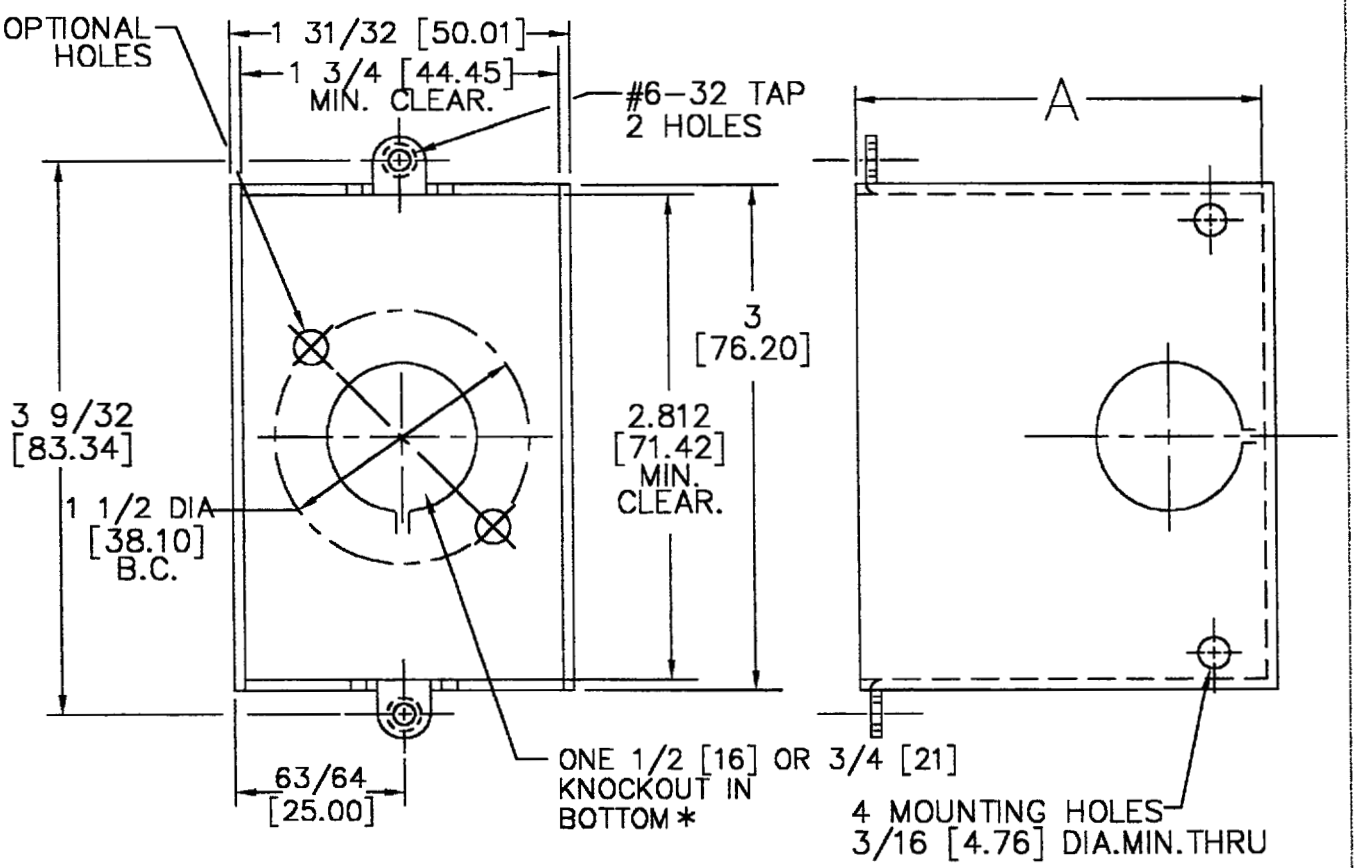


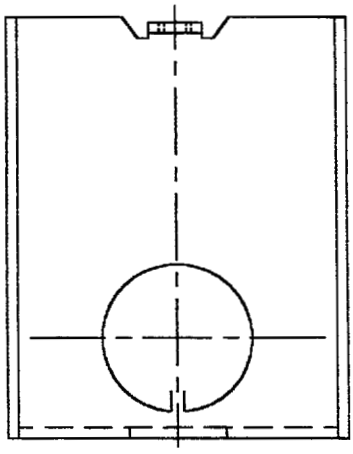
NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 211

4" SQUARE BOX FOR TWO DEVICES, 3/4 [21] KNOCKOUTS

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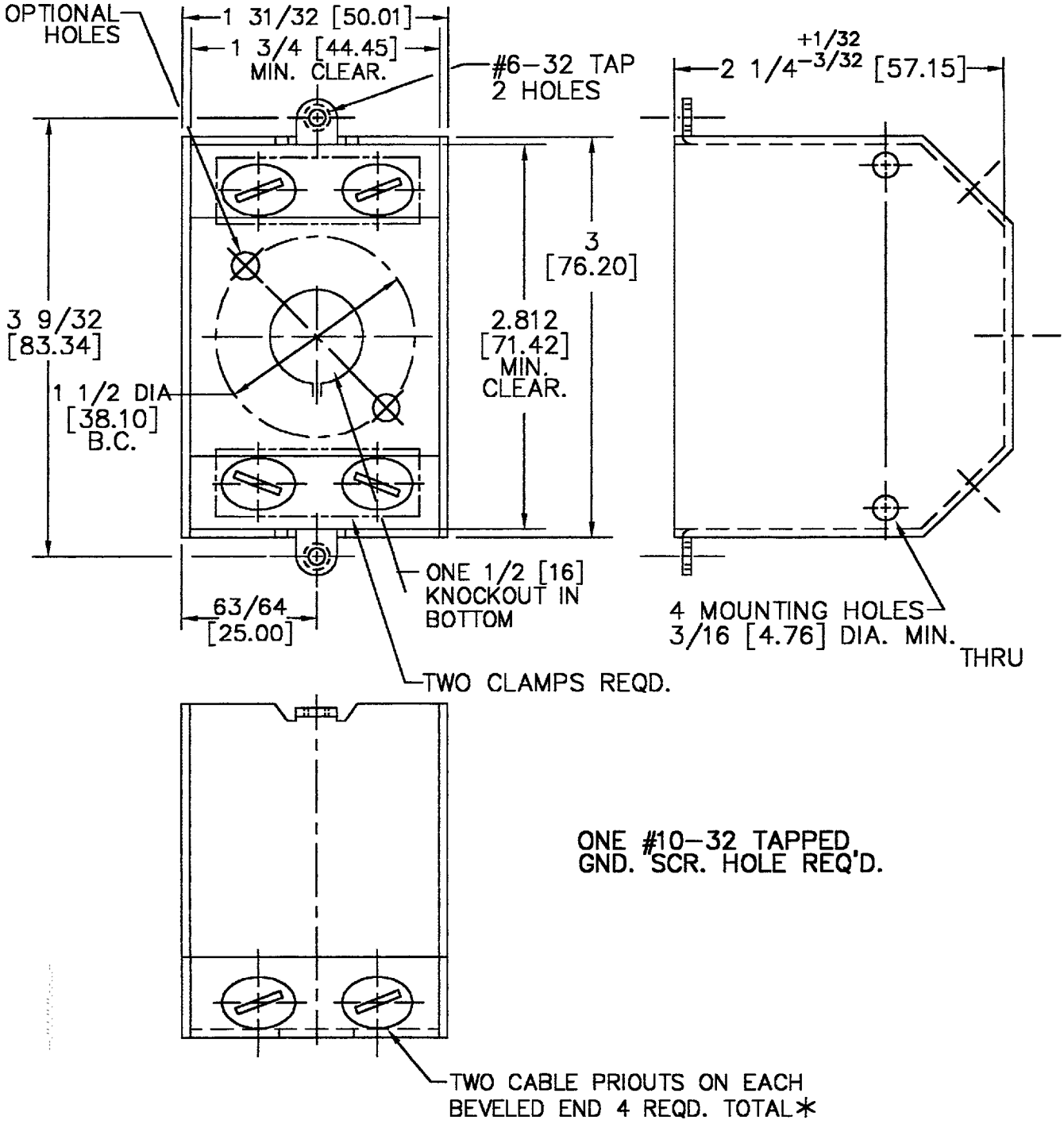
ONE #10-32 TAPPED GND. SCR. HOLE REQ'D.

ITEM	A +1/32 −3/32	KNOCKOUT TRADE SIZE & QUANTITY			
		1/2 [16] K.O.'S		3/4 [21] K.O.'S	
		SIDES	ENDS	SIDES	ENDS
1	1 1/2 [38.10]	–	2	–	–
2	2 [50.80]	–	2	–	–
3	2 1/2 [63.50]	2	2	–	–
4	2 1/2 [63.50]	–	–	2	2
5	2 3/4 [69.85]	2	2	–	–
6	2 3/4 [69.85]	–	–	2	2
7	3 1/2 [88.90]	4	4	–	–
8	3 1/2 [88.90]	–	–	4	4

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 220
SINGLE DEVICE BOX FOR 1/2 [16] OR 3/4 [21] KNOCKOUTS

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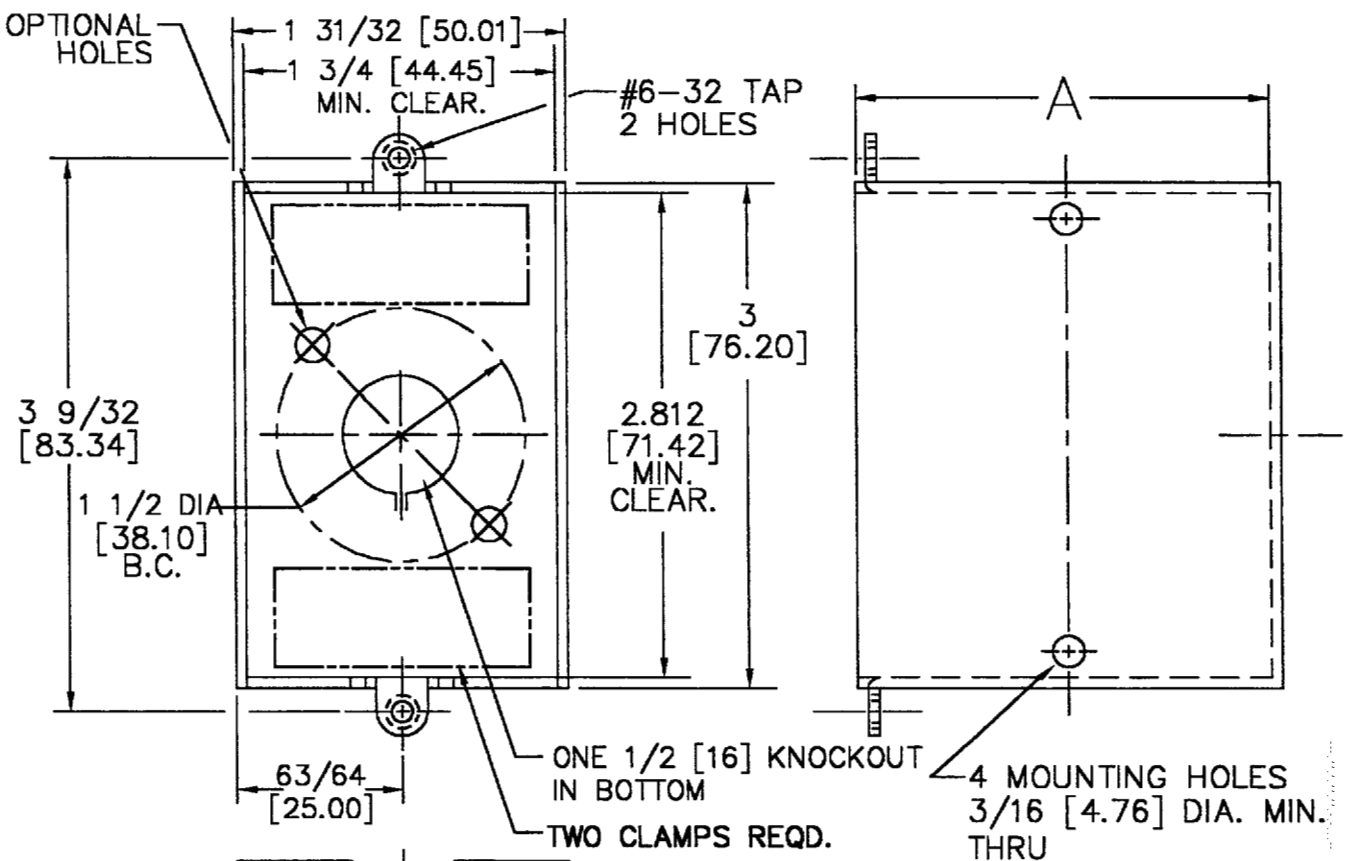


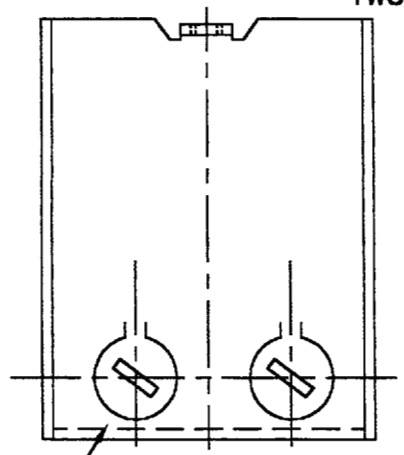
NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
*SEE FIGURE 2-8 FOR ADDITIONAL PRIOUT CONFIGURATIONS

Figure 221

GANGABLE DEVICE BOX FOR CABLE, 2 1/4" DEEP, WITH BEVEL CORNER

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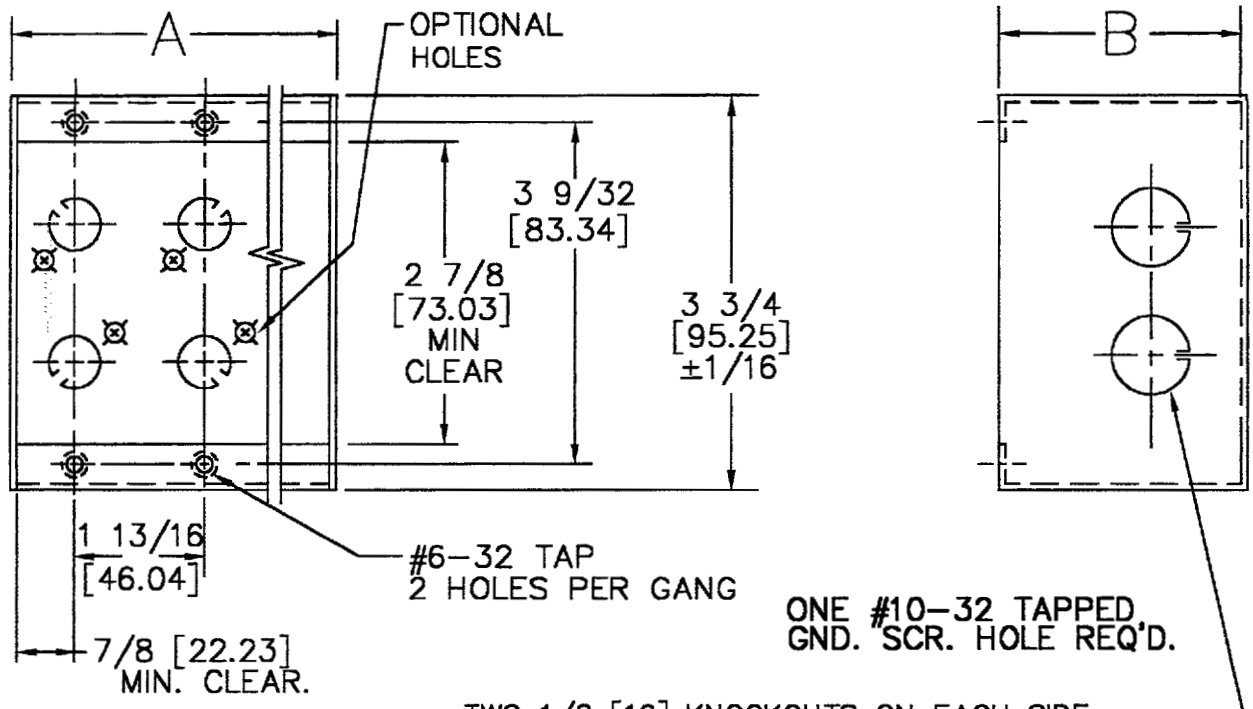


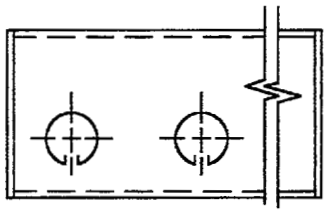
ITEM	A $^{+1/32}_{-3/32}$
1	1 1/2 [38.10]
2	2 [50.80]
3	2 1/2 [63.50]
4	2 3/4 [69.85]
5	3 1/2 [88.90]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-8 FOR ADDITIONAL PRIOUT CONFIGURATIONS

Figure 222
SINGLE DEVICE BOX FOR CABLE

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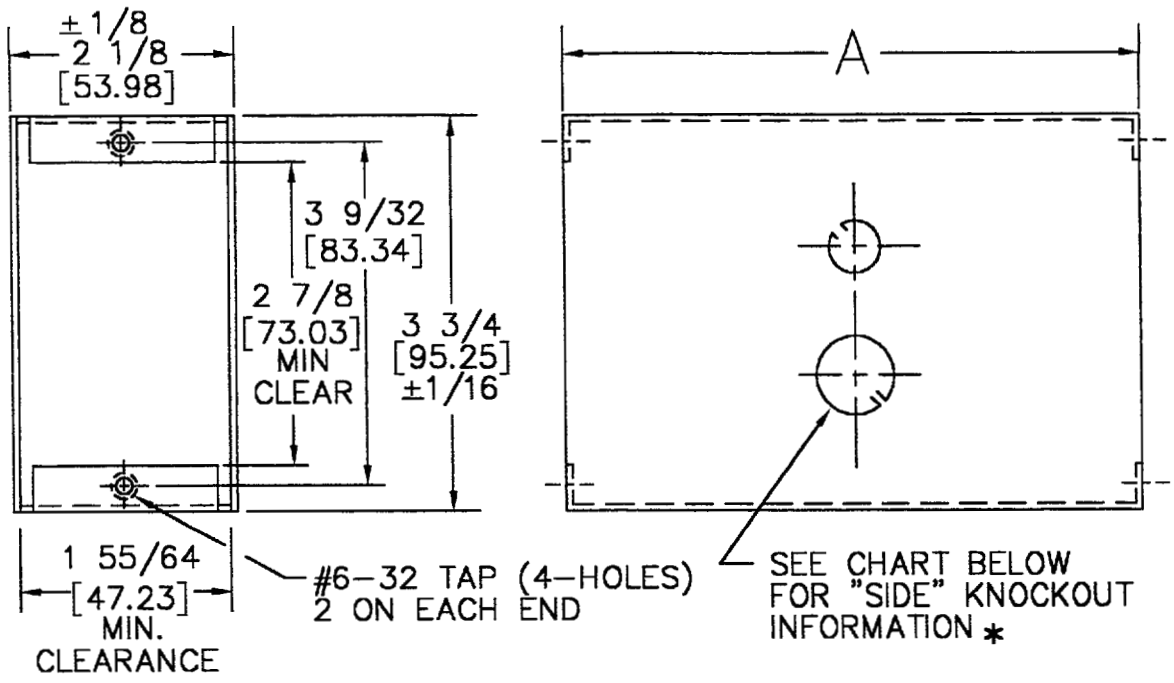


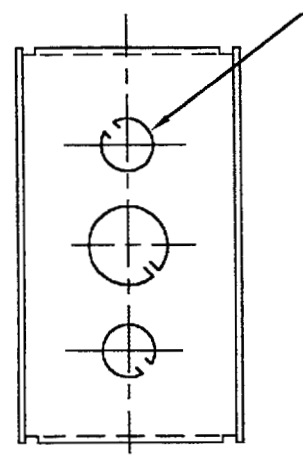
TYPE OF BOX	A ± 1/16	B				MIN. K.O.'S REQD.
		ITEM	SHALLOW	ITEM	DEEP	
1 GANG	2 [50.8]	1	2 1/2[63.5]	2	3 1/2[88.9]	7
2 GANG	3 13/16[96.84]	3	2 1/2[63.5]	4	3 1/2[88.9]	10
3 GANG	5 5/8 [142.87]	5	2 1/2[63.5]	6	3 1/2[88.9]	13
4 GANG	7 7/16 [188.91]	7	2 1/2[63.5]	8	3 1/2[88.9]	16
5 GANG	9 1/4 [234.95]	9	2 1/2[63.5]	10	3 1/2[88.9]	19
6 GANG	11 1/16[280.99]	11	2 1/2[63.5]	12	3 1/2[88.9]	22
7 GANG	12 3/4 [323.85]	13	2 1/2[63.5]	14	3 1/2[88.9]	25
8 GANG	14 9/16[369.89]	15	2 1/2[63.5]	16	3 1/2[88.9]	28
9 GANG	16 3/8[415.93]	17	2 1/2[63.5]	18	3 1/2[88.9]	31
10 GANG	18 3/16[461.96]	19	2 1/2[63.5]	20	3 1/2[88.9]	34

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
SEE FIGURE 2-5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 240
TILE WALL BOXES, 1/2 [16] KNOCKOUTS, SINGLE AND MULTIGANG

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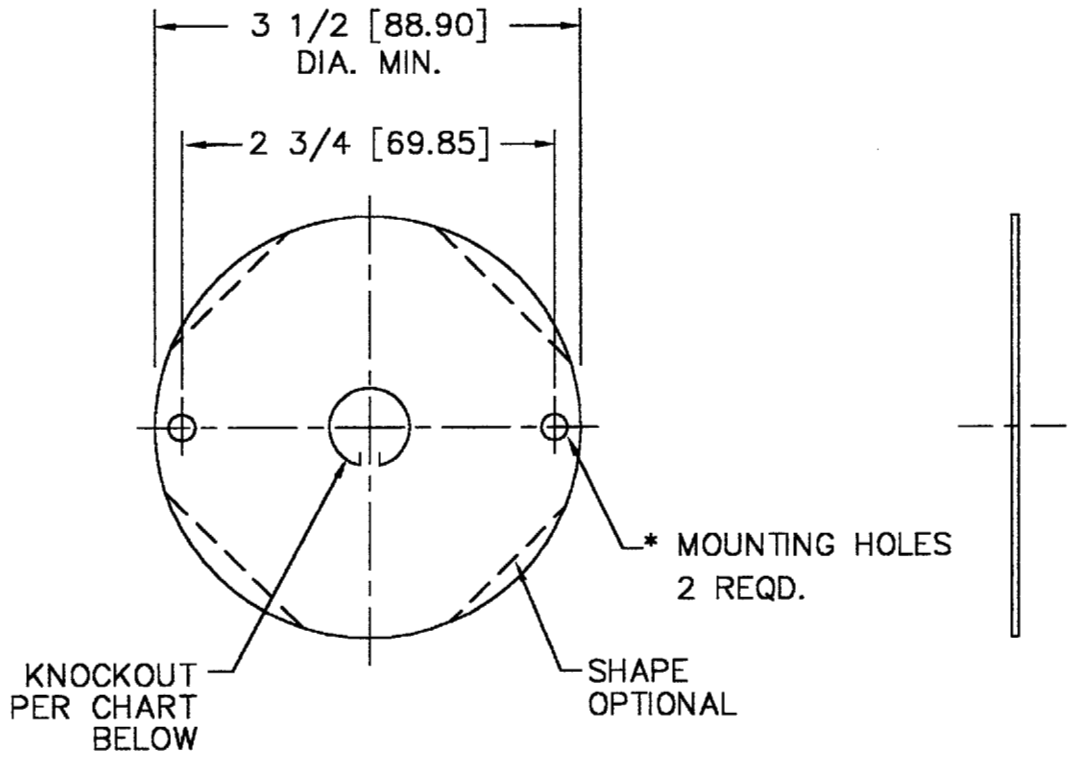


ITEM	A	KNOCKOUT TRADE SIZE AND QUANTITY			
		SIDES		TOP & BOTTOM	
		REQD	SIZE	REQD	SIZE
1	3 1/2 [88.90]	1 EA.	1/2 [16]	1 EA.	3/4 [21]
		1 EA.	3/4 [21]	—	—
2	5 1/2 [139.70]	1 EA.	1/2 [16]	2 EA.	1/2 [16]
		1 EA.	3/4 [21]	1 EA.	3/4 [21]
3	7 1/2 [190.50]	1 EA.	1/2 [16]	2 EA.	1/2 [16]
		1 EA.	3/4 [21]	1 EA.	3/4 [21]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS

Figure 241
MASONRY THRU-WALL BOXES, 1/2 [16] AND 3/4 [21] KNOCKOUTS, SINGLE GANG

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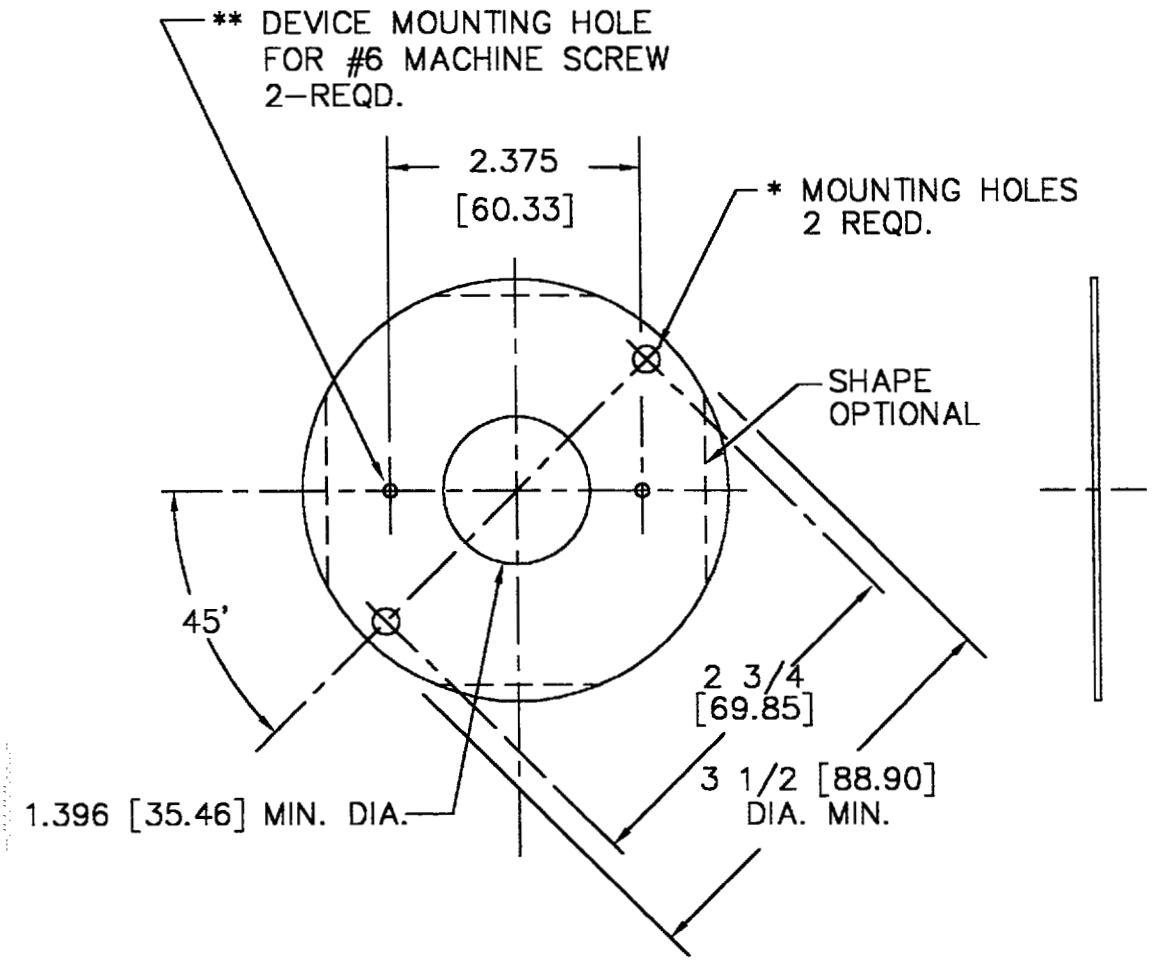


ITEM	KNOCKOUT
1	NONE
2	1/2 [16]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 280
FLAT COVER FOR 3 1/2" OCTAGON BOX, WITH OR WITHOUT 1/2 [16] KNOCKOUT

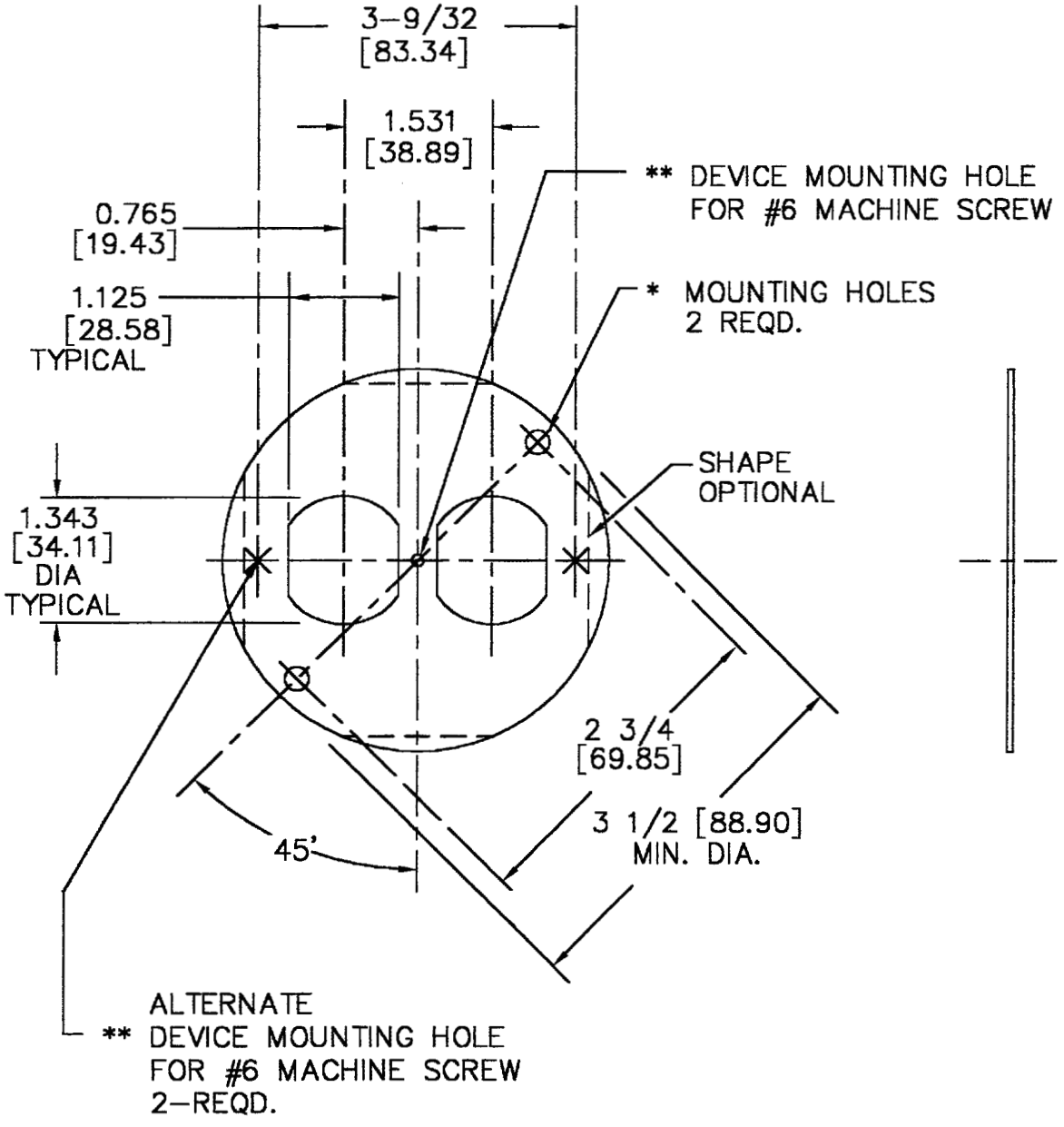
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NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS

Figure 281
FLAT COVER FOR SINGLE CONVENIENCE OUTLET FOR 3 1/2" OCTAGON BOX

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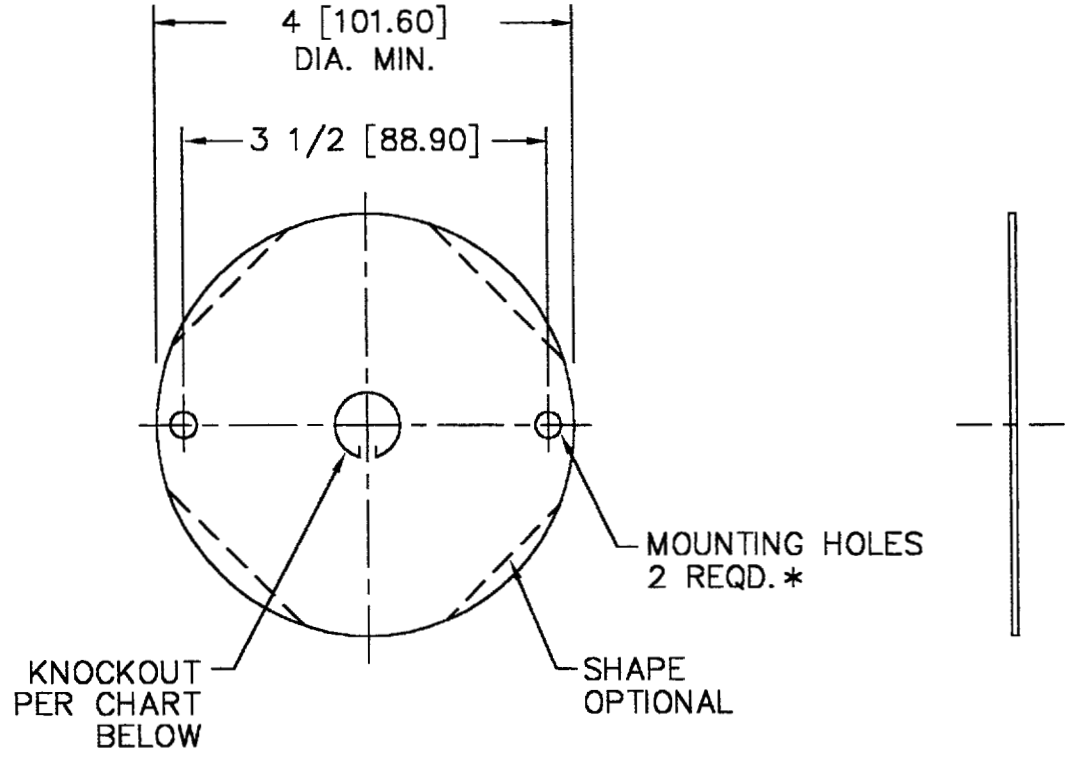


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS

Figure 282

FLAT COVER FOR DUPLEX CONVENIENCE OUTLET FOR 3 1/2" OCTAGON BOX

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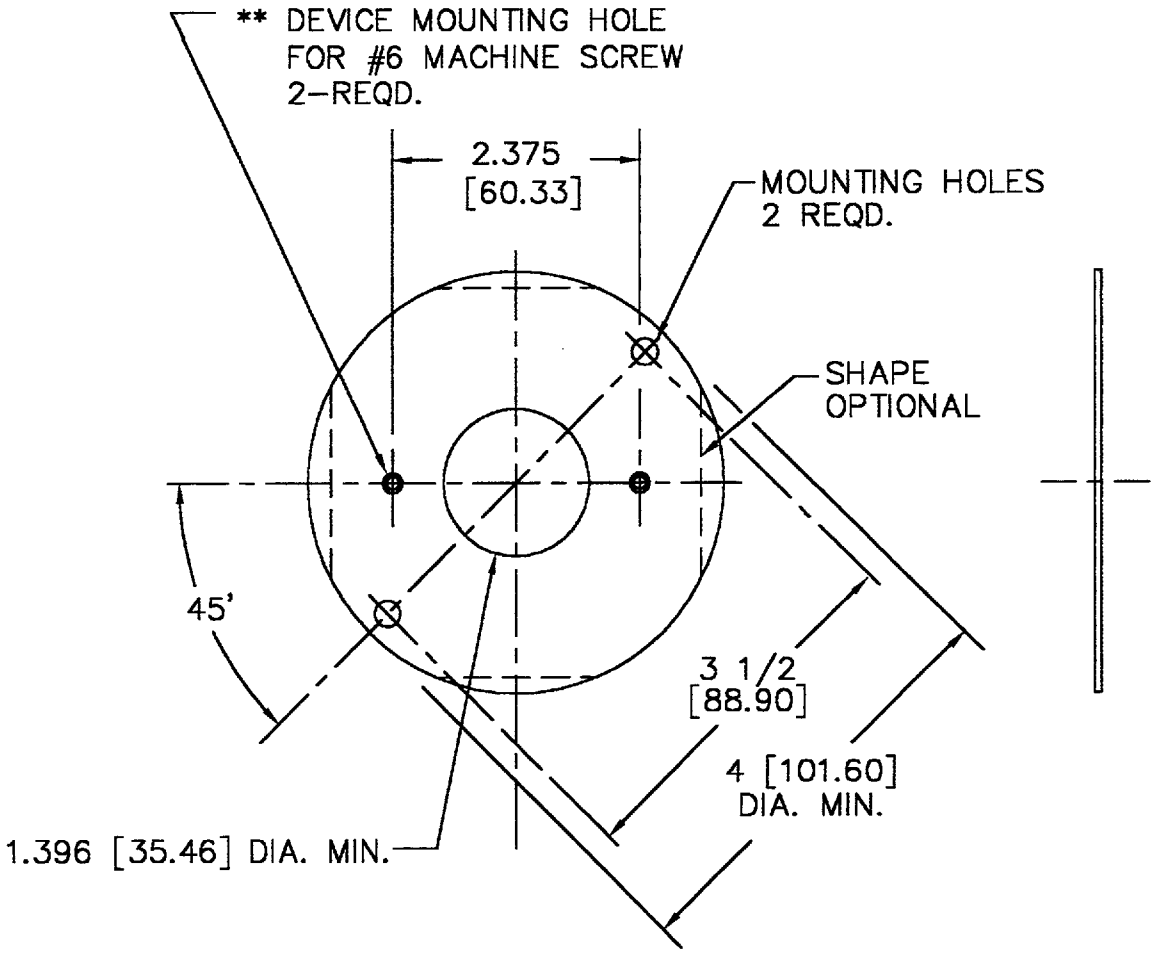


ITEM	KNOCKOUT
1	NONE
2	1/2 [16]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 300
FLAT COVER FOR 4" OCTAGON BOX, WITH OR WITHOUT 1/2 [16] KNOCKOUTS

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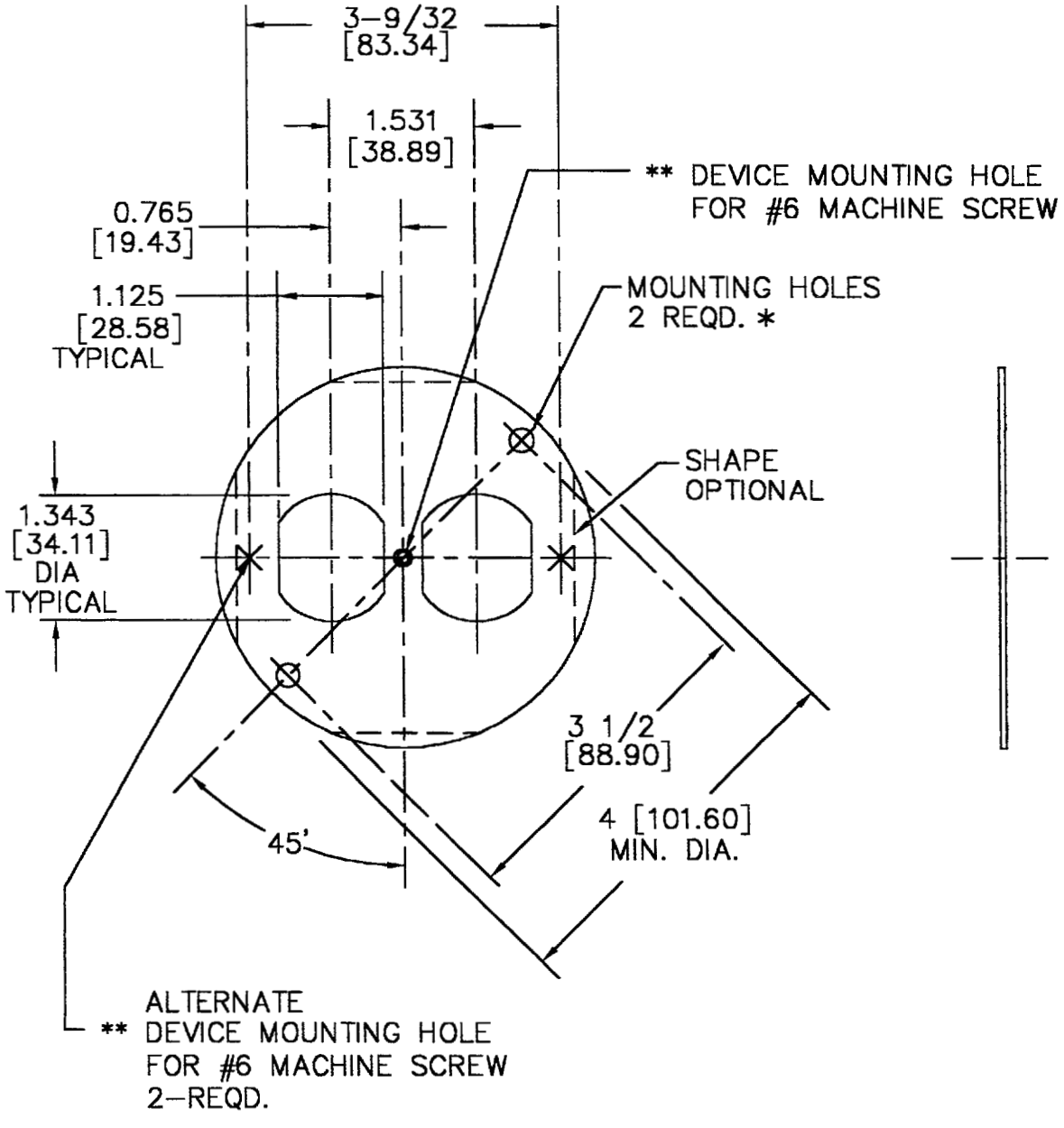


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 301

FLAT COVER FOR SINGLE CONVENIENCE OUTLET FOR 4" OCTAGON BOX

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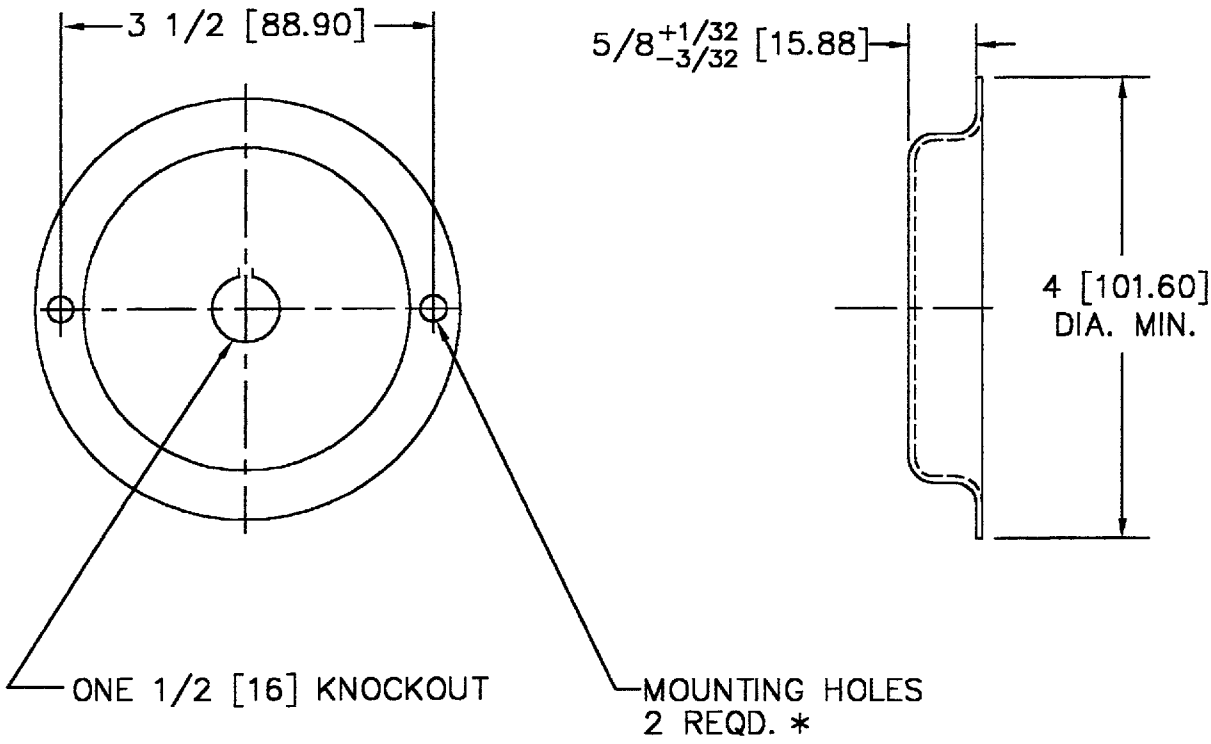
NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 302

FLAT COVER FOR DUPLEX CONVENIENCE OUTLET FOR 4" OCTAGON BOX

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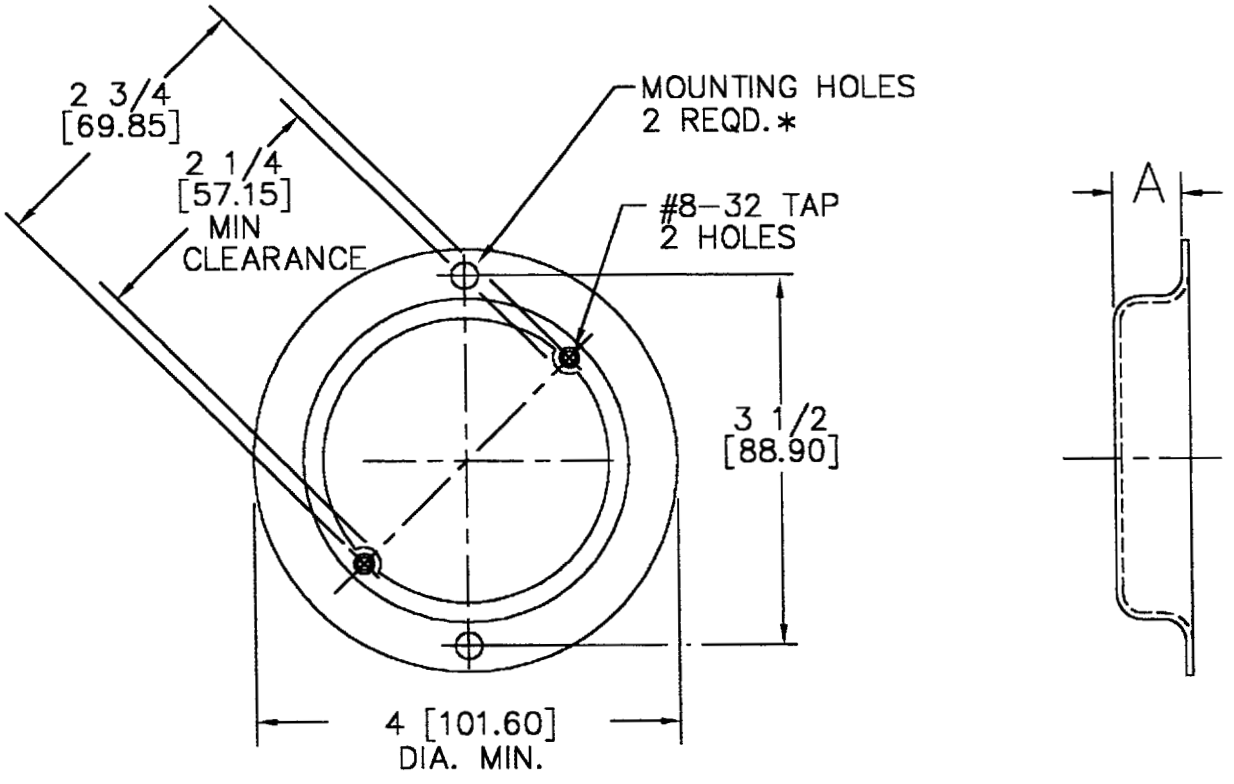
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NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE/SLOT DESIGNS
SEE FIGURE 2-9FOR ALTERNATE EXPOSED WORK COVER CONFIGURATIONS

Figure 303
RAISED COVER WITH ONE 1/2 [16] KNOCKOUT FOR 4" OCTAGON BOX

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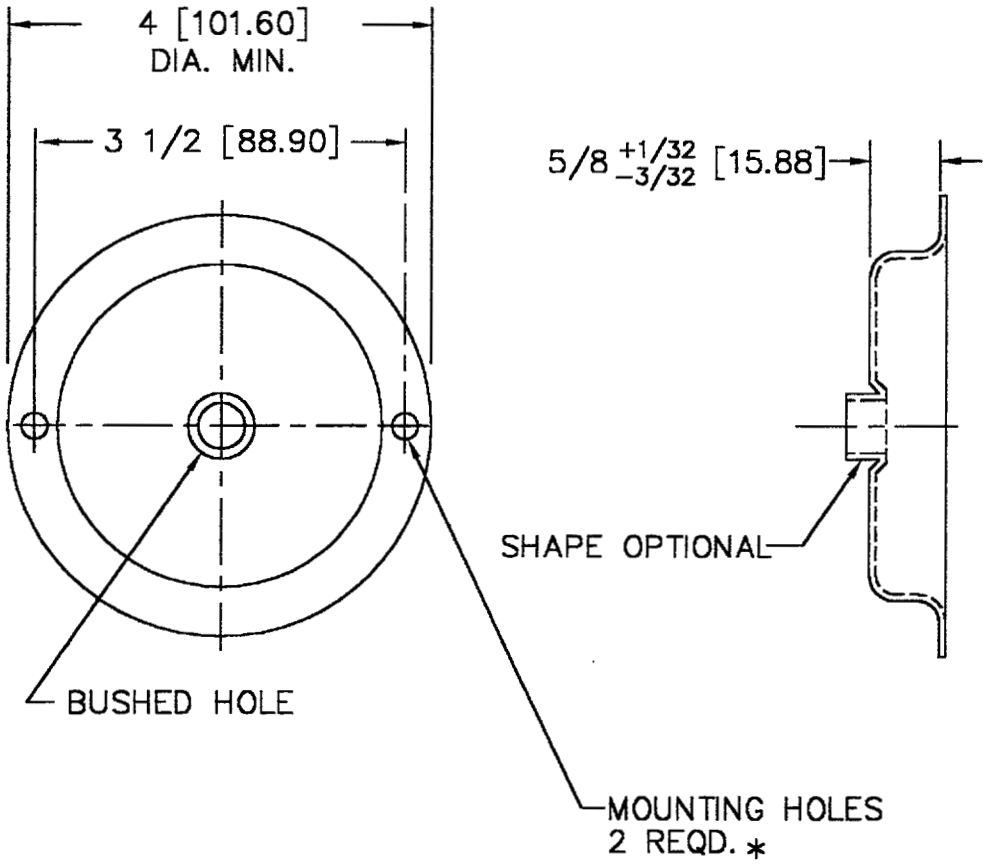
ITEM	A +1/32 −3/32
1	1/2 [12.70]
2	5/8 [15.88]
3	3/4 [19.05]
4	1 [25.40]
5	1 1/4 [31.75]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 304

RAISED COVER WITH CENTER BLANKED OUT FOR 4" OCTAGON BOX

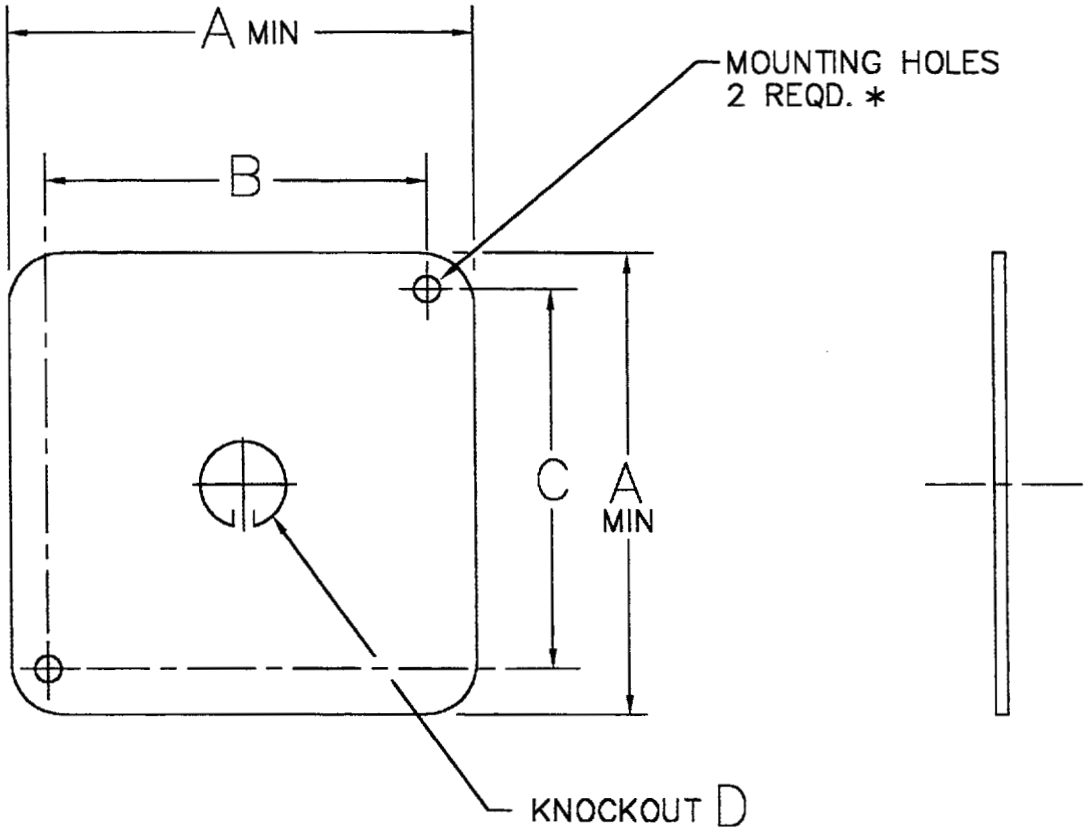
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NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 305
RAISED COVER FOR DROP CORD FOR 4" OCTAGON BOX

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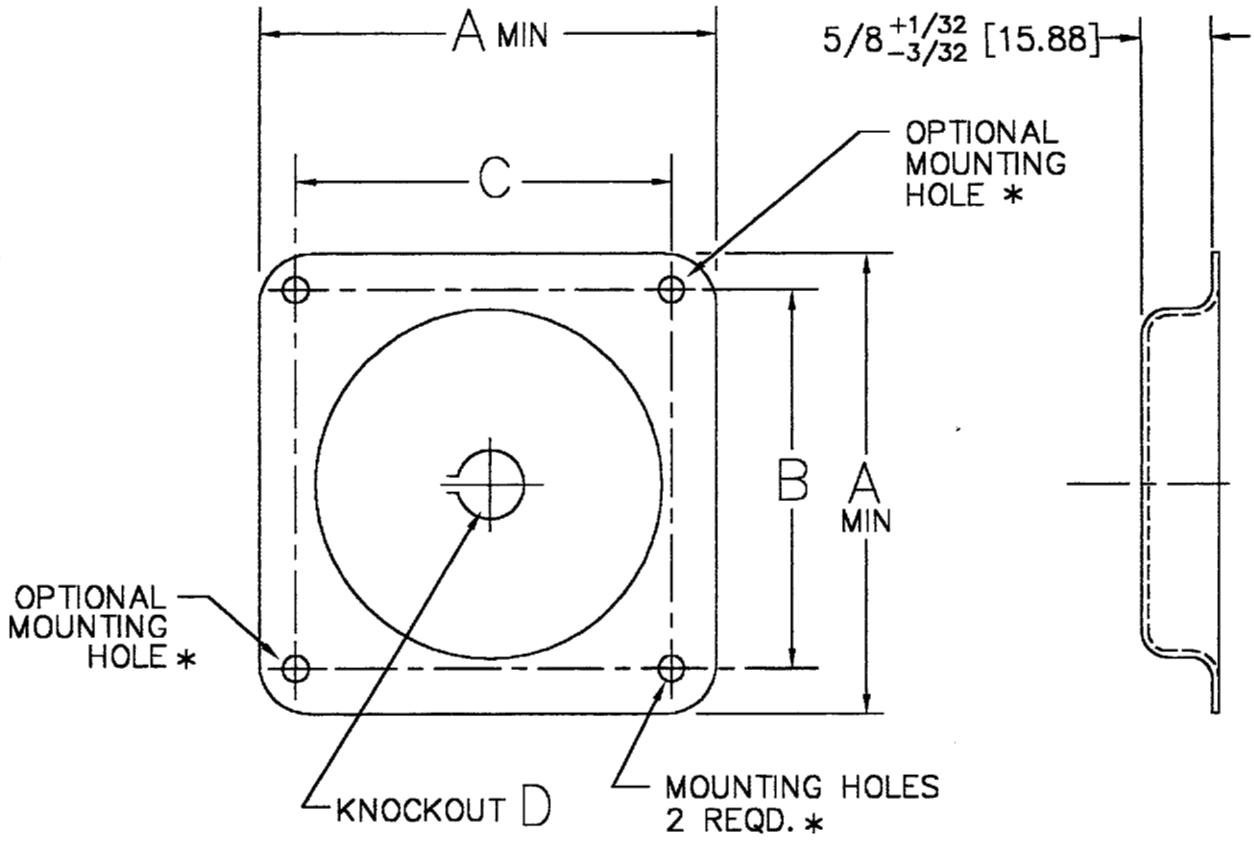
ITEM	A MIN.	B	C	KNOCKOUT TRADE SIZE D
1	4 [101.60]	3 3/8 [85.73]	3 3/8 [85.73]	NONE
2	4 11/16 [119.06]	4 1/4 [107.95]	2 3/4 [69.85]	NONE
3	4 [101.60]	3 3/8 [85.73]	3 3/8 [85.73]	1/2 [16]
4	4 11/16 [119.06]	4 1/4 [107.95]	2 3/4 [69.85]	1/2 [16]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 310

FLAT COVER FOR 4" AND 4 11/16" SQUARE BOX, WITH OR WITHOUT 1/2 [16] KNOCKOUTS

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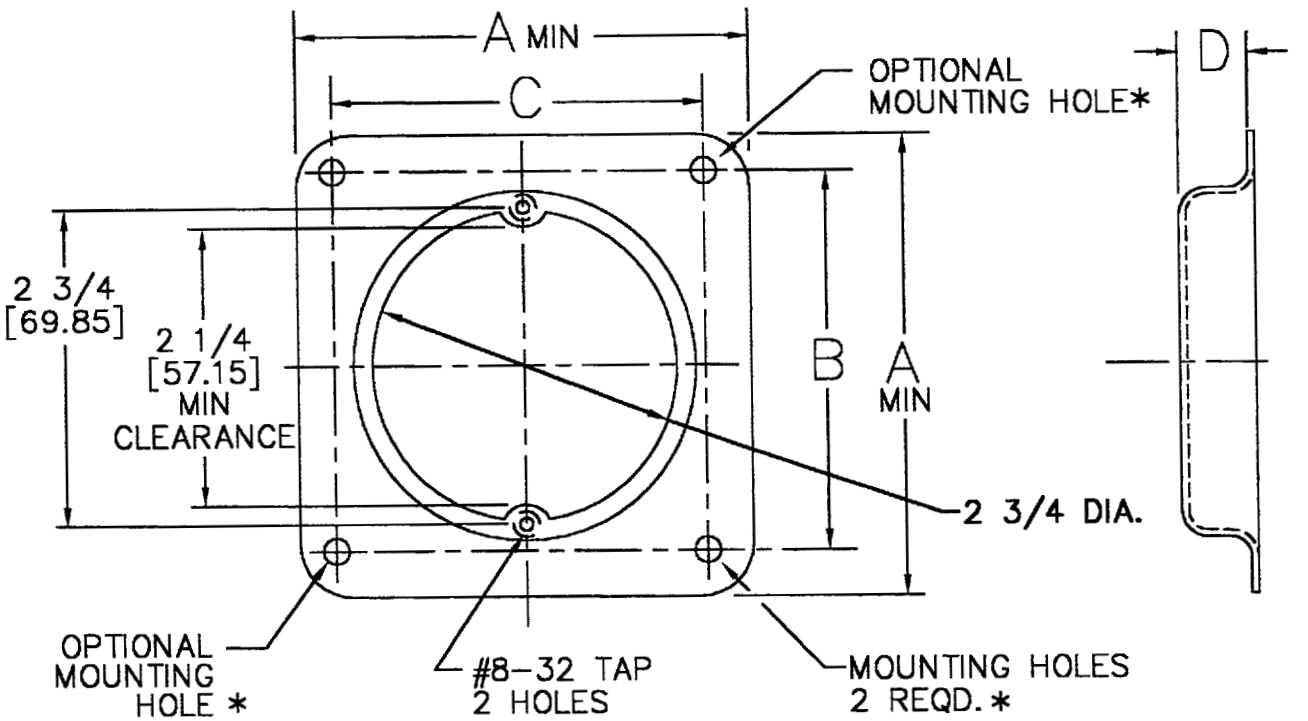
ITEM	A MIN.	B	C	KNOCKOUT TRADE SIZE D
1	4 [101.60]	3 3/8 [85.73]	3 3/8 [85.73]	NONE
2	4 11/16 [119.06]	4 1/4 [107.95]	2 3/4 [69.85]	NONE
3	4 [101.60]	3 3/8 [85.73]	3 3/8 [85.73]	1/2 [16]
4	4 11/16 [119.06]	4 1/4 [107.95]	2 3/4 [69.85]	1/2 [16]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 311

RAISED COVER FOR 4" & 4 11/16" SQUARE BOX WITH OR WITHOUT 1/2 [16] KNOCKOUT

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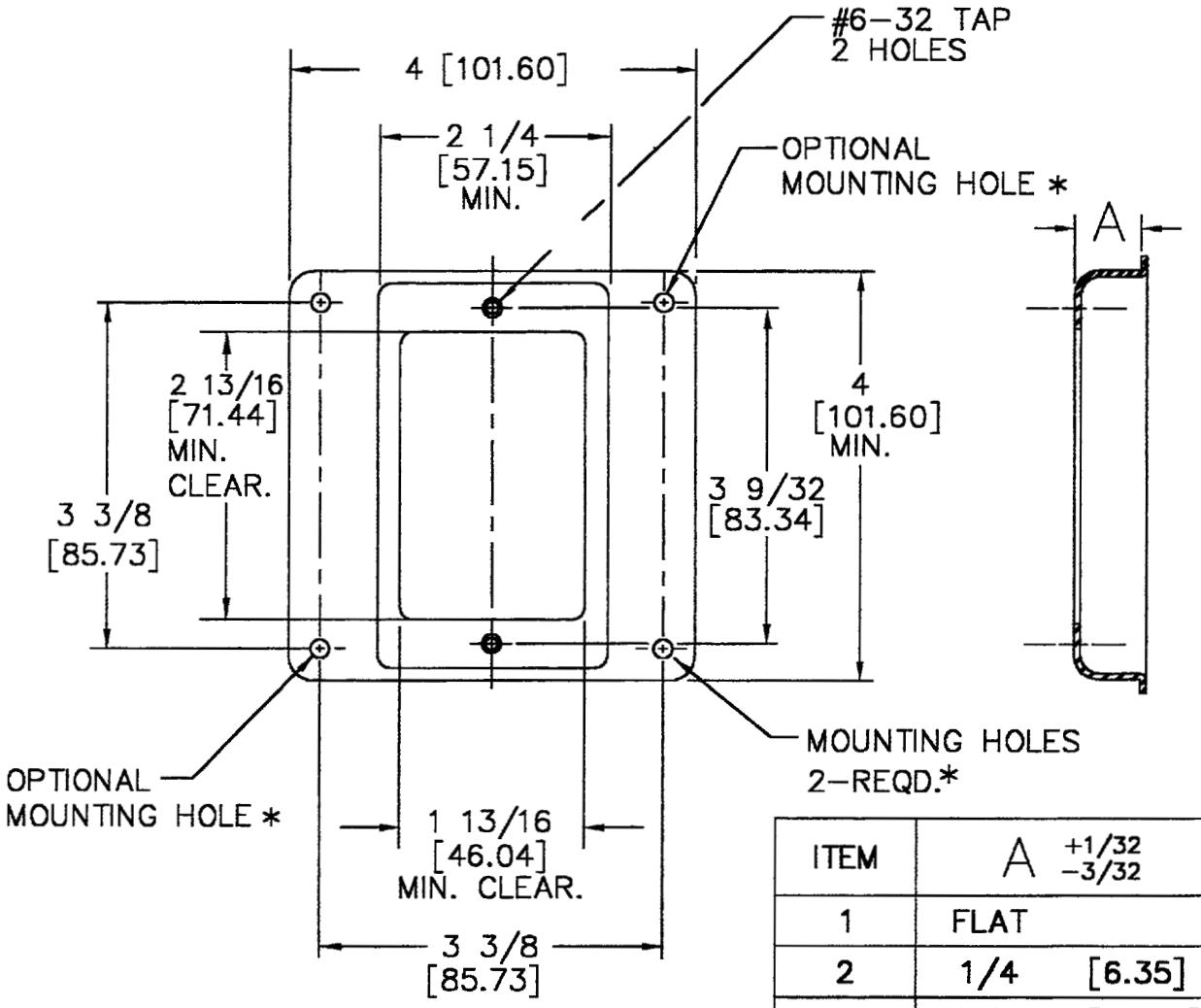
ITEM	A MIN.	B	C	D $^{+1/32}_{-3/32}$
1	4 [101.60]	3 3/8 [85.73]	3 3/8 [85.73]	1/2 [12.70]
2	4 [101.60]	3 3/8 [85.73]	3 3/8 [85.73]	5/8 [15.88]
3	4 [101.60]	3 3/8 [85.73]	3 3/8 [85.73]	3/4 [19.05]
4	4 [101.60]	3 3/8 [85.73]	3 3/8 [85.73]	1 [25.40]
5	4 [101.60]	3 3/8 [85.73]	3 3/8 [85.73]	1 1/4[31.75]
6	4 11/16[119.06]	4 1/4 [107.95]	2 3/4 [69.85]	1/2 [12.70]
7	4 11/16[119.06]	4 1/4 [107.95]	2 3/4 [69.85]	5/8 [15.88]
8	4 11/16[119.06]	4 1/4 [107.95]	2 3/4 [69.85]	3/4 [19.05]
9	4 11/16[119.06]	4 1/4 [107.95]	2 3/4 [69.85]	1 [25.40]
10	4 11/16[119.06]	4 1/4 [107.95]	2 3/4 [69.85]	1 1/4[31.75]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
* SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 312

RAISED COVER WITH CENTER BLANKED OUT FOR 4" AND 4 11/16" SQUARE BOX

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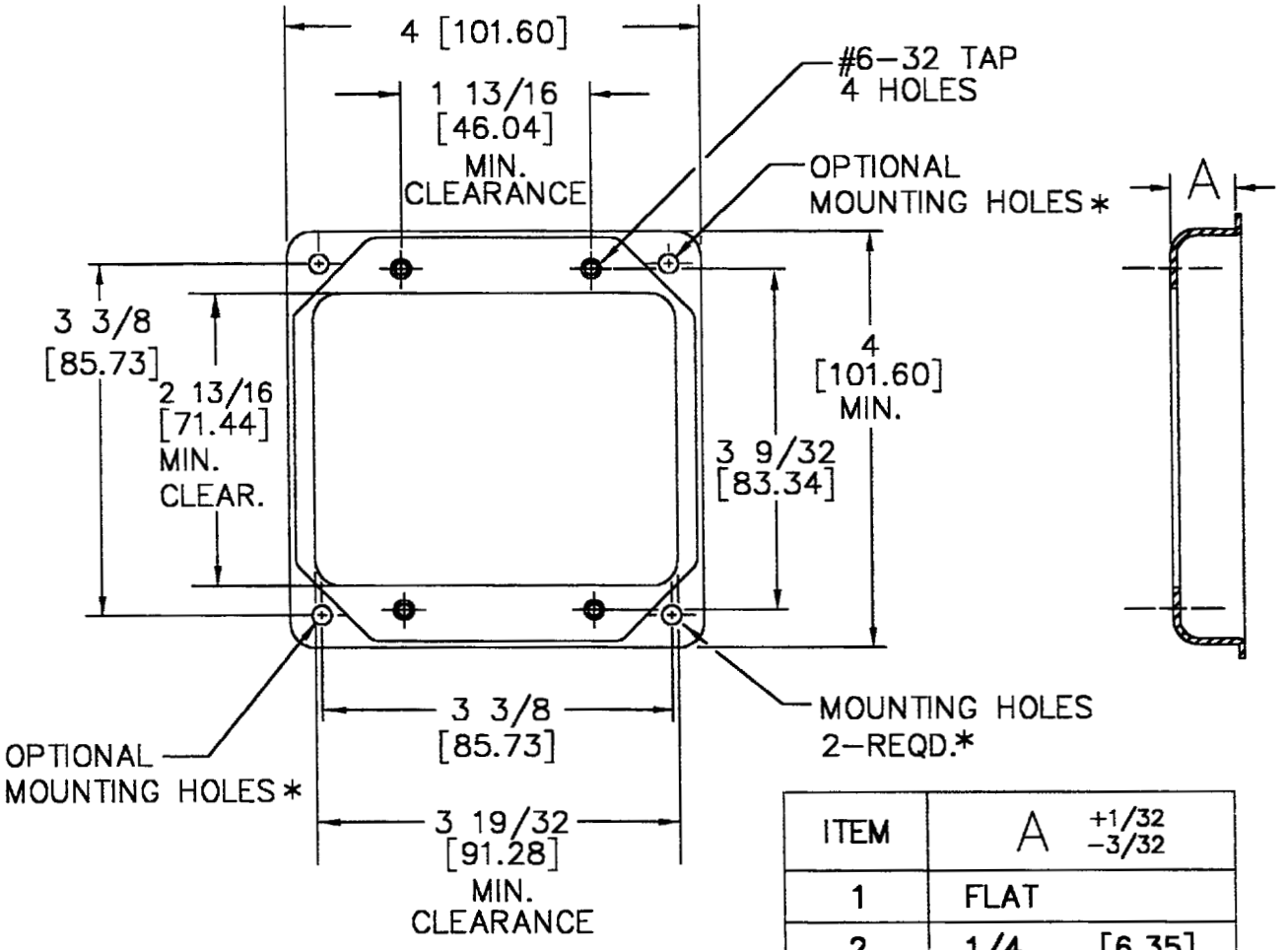


ITEM	A +1/32 −3/32	
1	FLAT	
2	1/4	[6.35]
3	1/2	[12.70]
4	5/8	[15.88]
5	3/4	[19.05]
6	1	[25.40]
7	1 1/4	[31.75]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 313
ONE–DEVICE COVER FOR 4" SQUARE BOX

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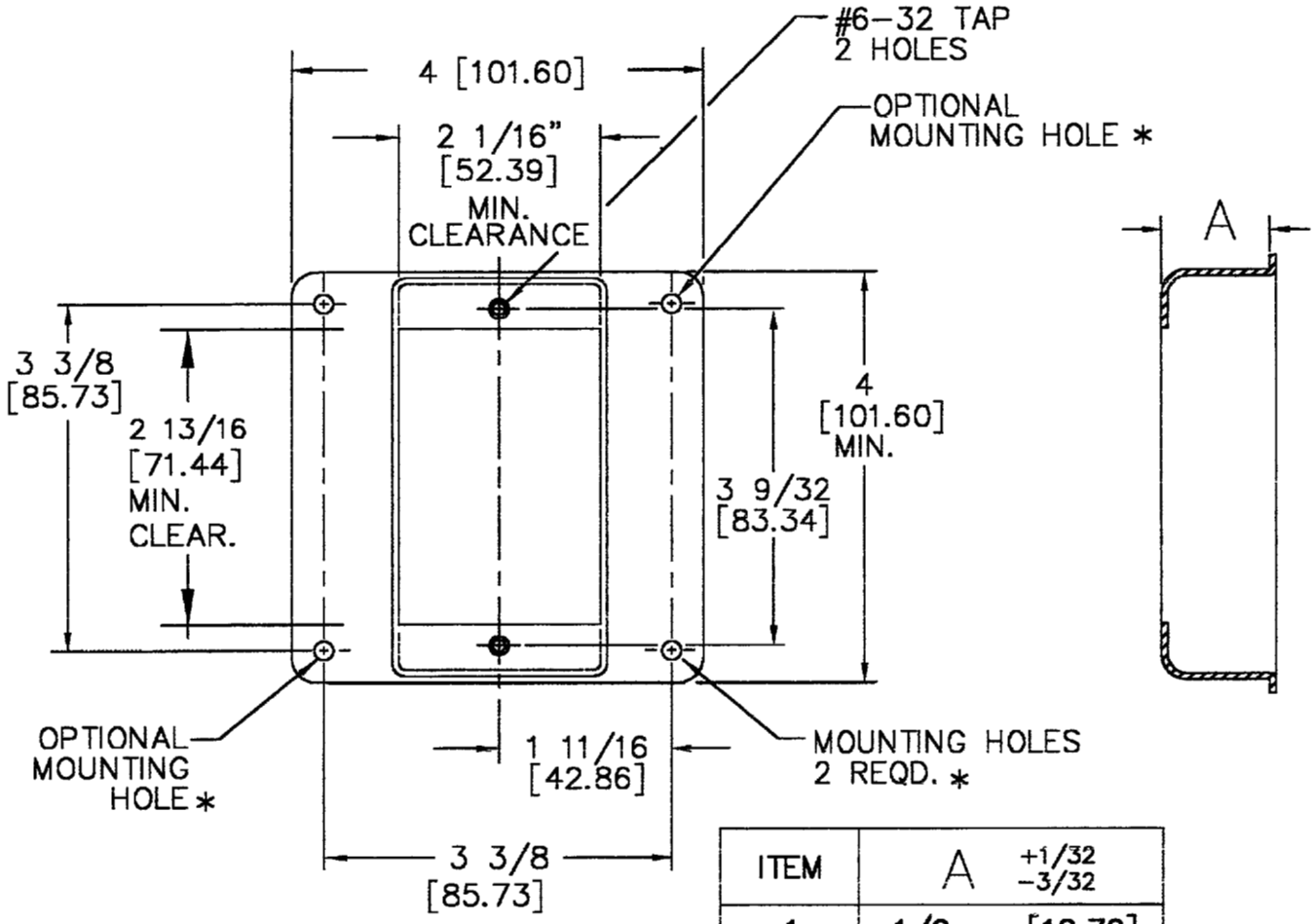


ITEM	A +1/32 −3/32	
1	FLAT	
2	1/4	[6.35]
3	1/2	[12.70]
4	5/8	[15.88]
5	3/4	[19.05]
6	1	[25.40]
7	1 1/4	[31.75]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 314
TWO–DEVICE COVER FOR 4" SQUARE BOX

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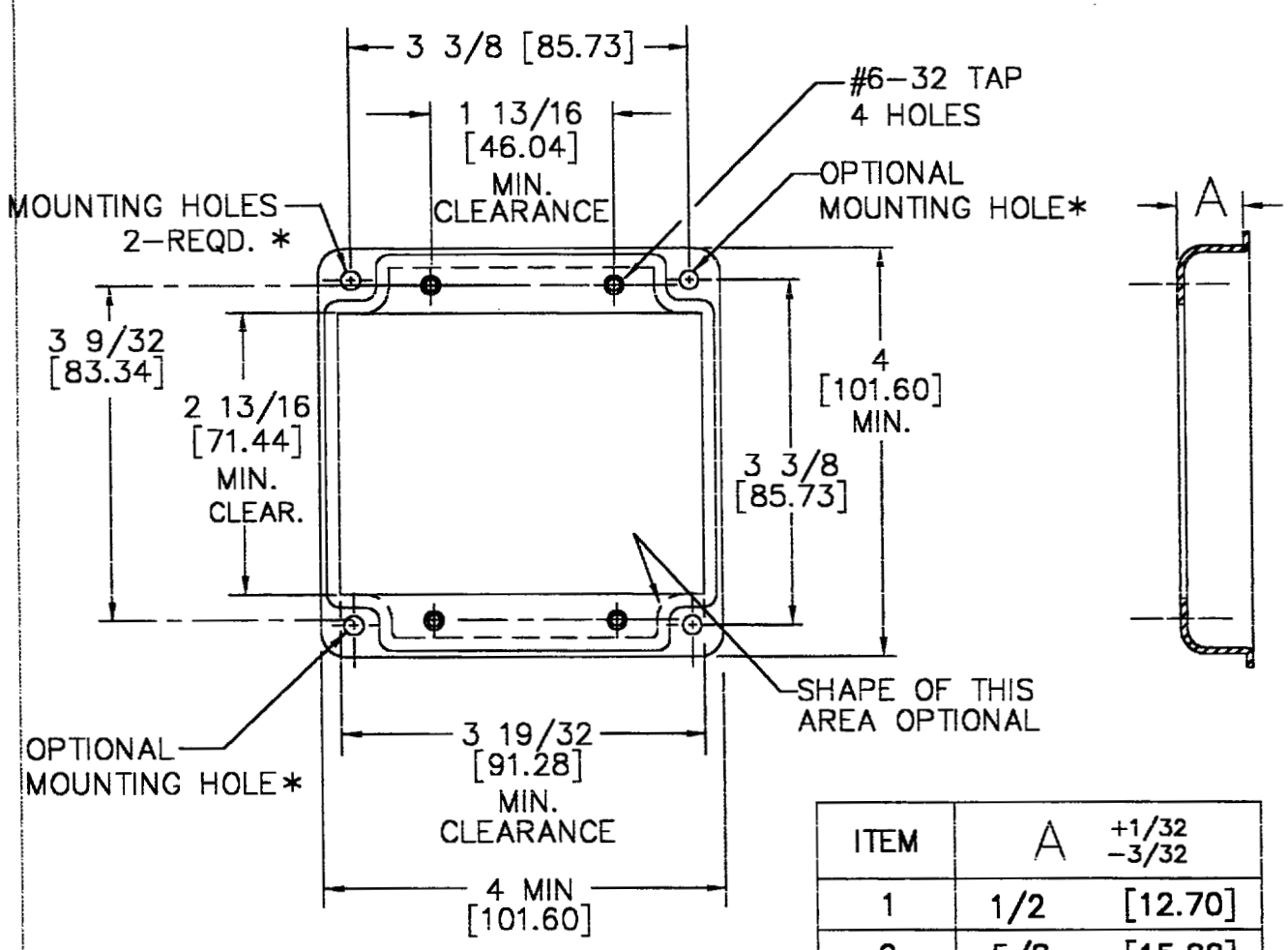
ITEM	A +1/32 −3/32	
1	1/2	[12.70]
2	5/8	[15.88]
3	3/4	[19.05]
4	1	[25.40]
5	1 1/4	[31.75]
6	1 1/2	[38.10]
7	2	[50.80]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 315

ONE–DEVICE TILE COVER FOR 4" SQUARE BOX

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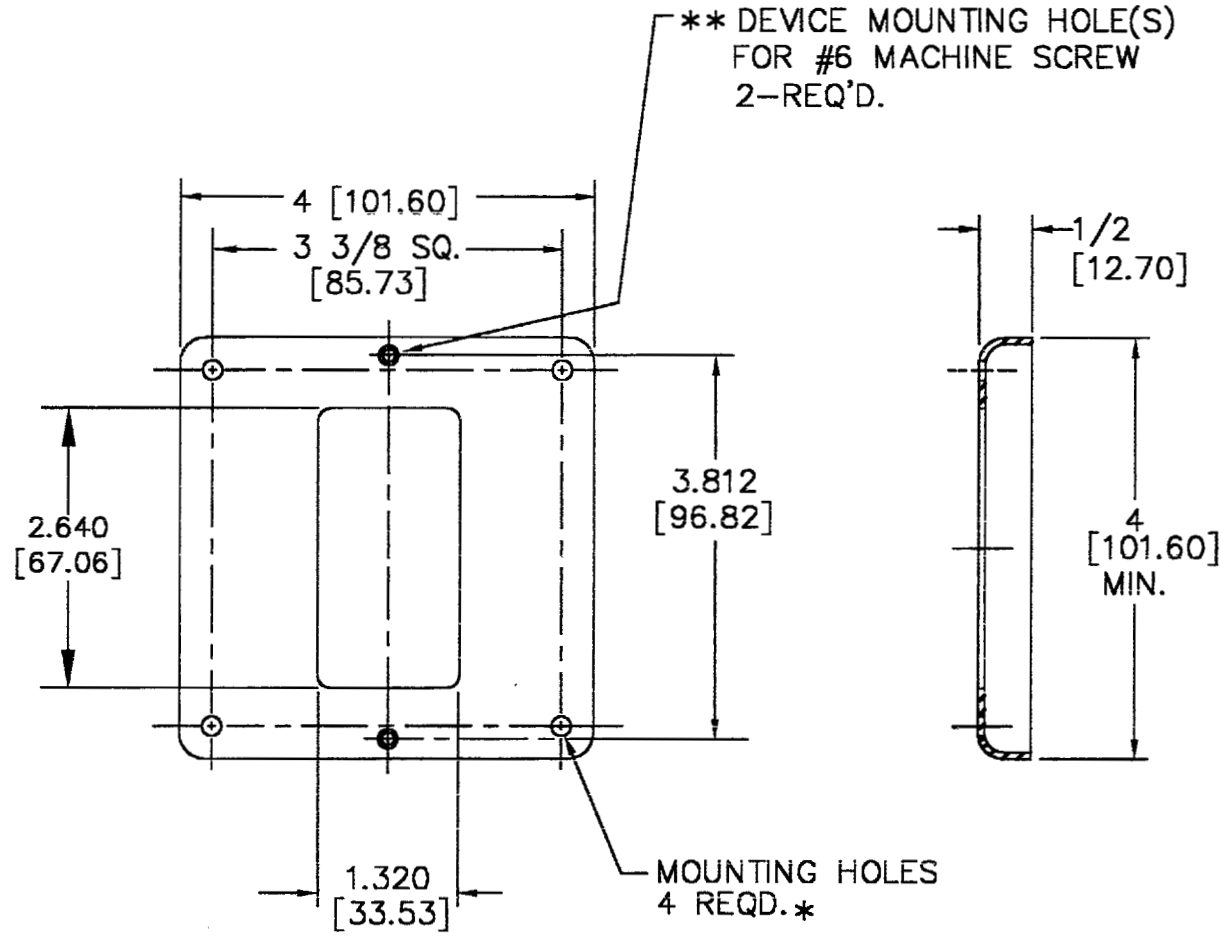
ITEM	A +1/32 −3/32	
1	1/2	[12.70]
2	5/8	[15.88]
3	3/4	[19.05]
4	1	[25.40]
5	1 1/4	[31.75]
6	1 1/2	[38.10]
7	2	[50.80]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 316

TWO–DEVICE TILE COVER FOR 4" SQUARE BOX

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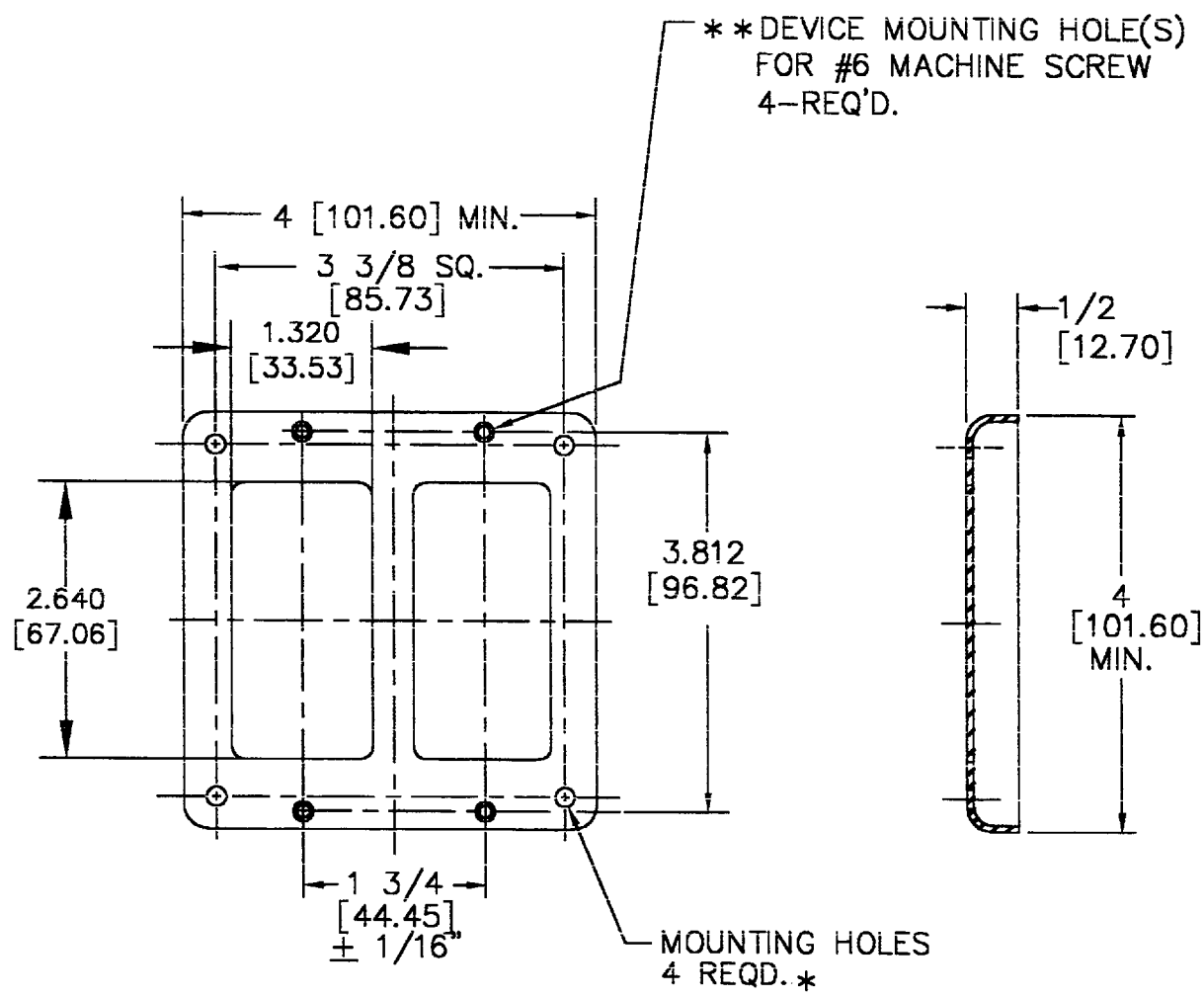


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 317

SURFACE COVER FOR ONE GFCI RECEPTACLE FOR 4" SQUARE BOX

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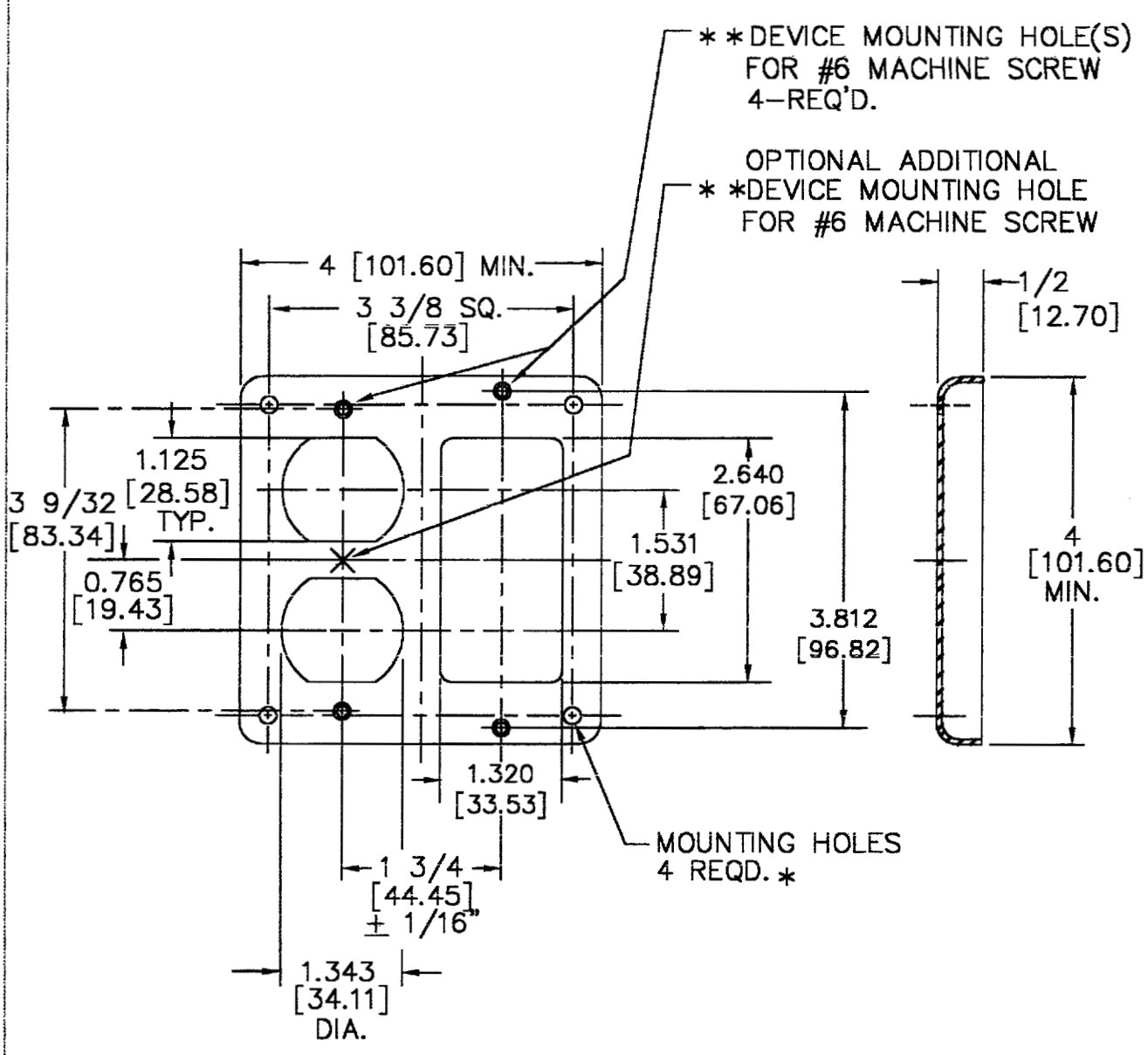


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 318

SURFACE COVER FOR TWO GFCI RECEPTACLES FOR 4" SQUARE BOX

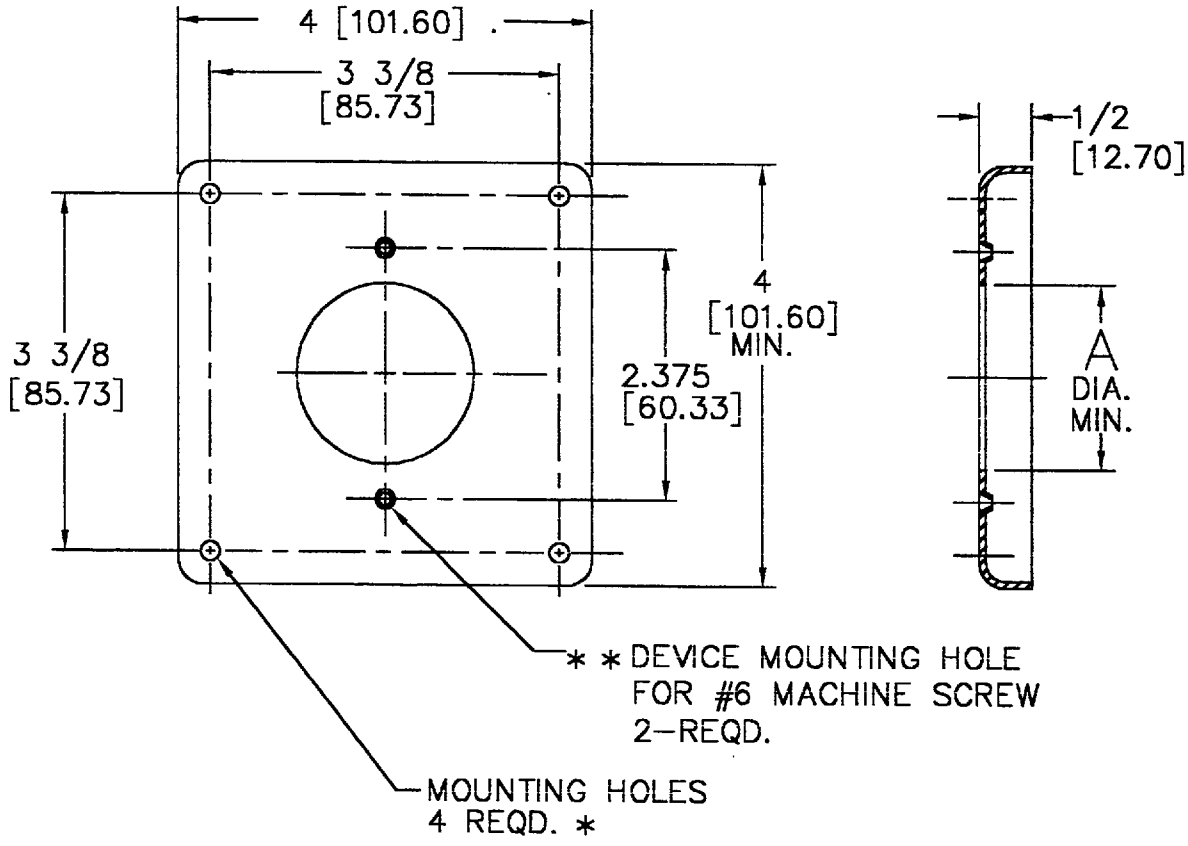
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NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 319
SURFACE COVER FOR ONE DUPLEX AND ONE GFCI RECEPTACLE
FOR 4" SQUARE BOX

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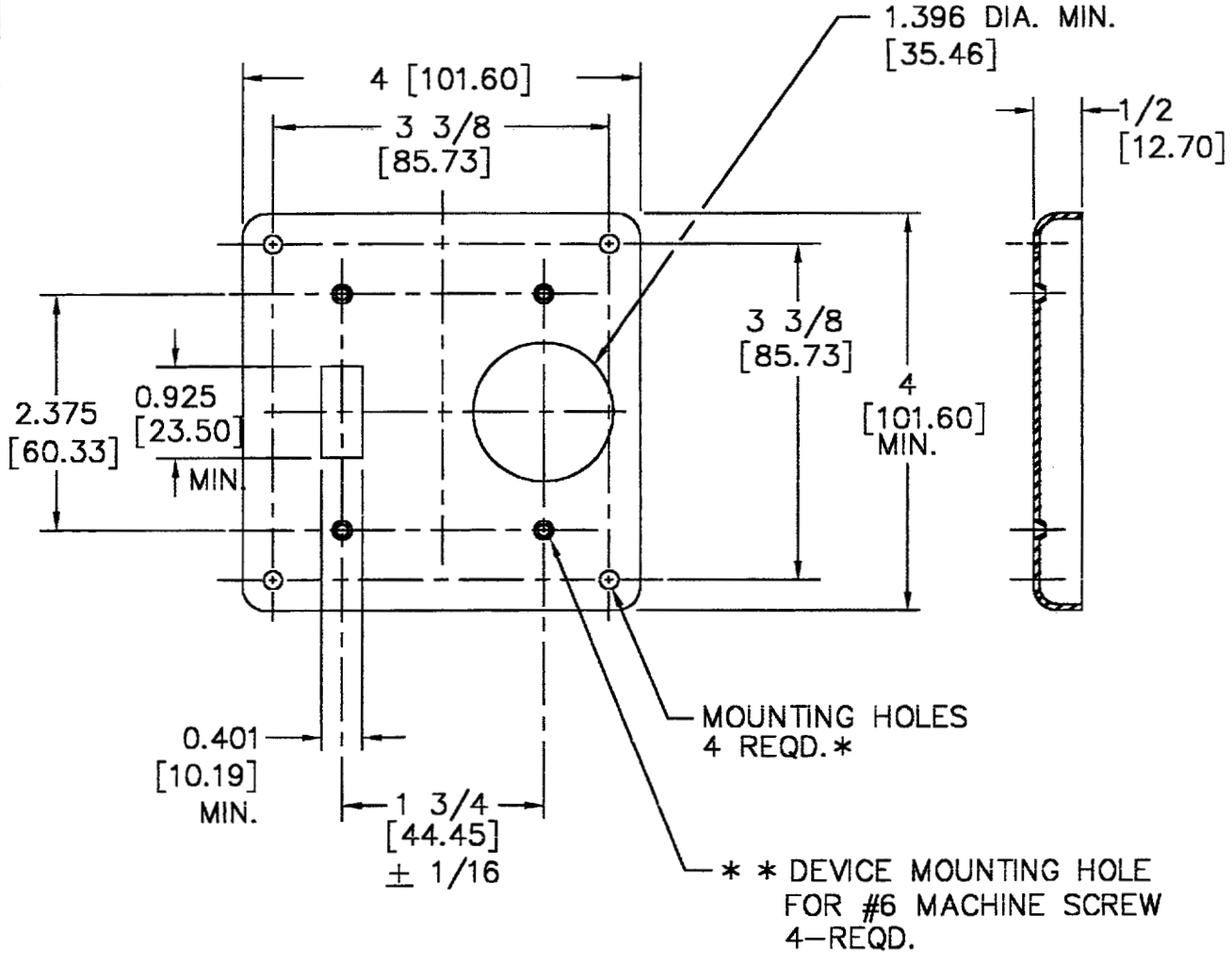
ITEM	A MIN.	
1	1.396	[35.46]
2	1.586	[40.28]
3	1.711	[43.46]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 320

SURFACE COVER FOR SINGLE RECEPTACLE FOR 4" SQUARE BOX

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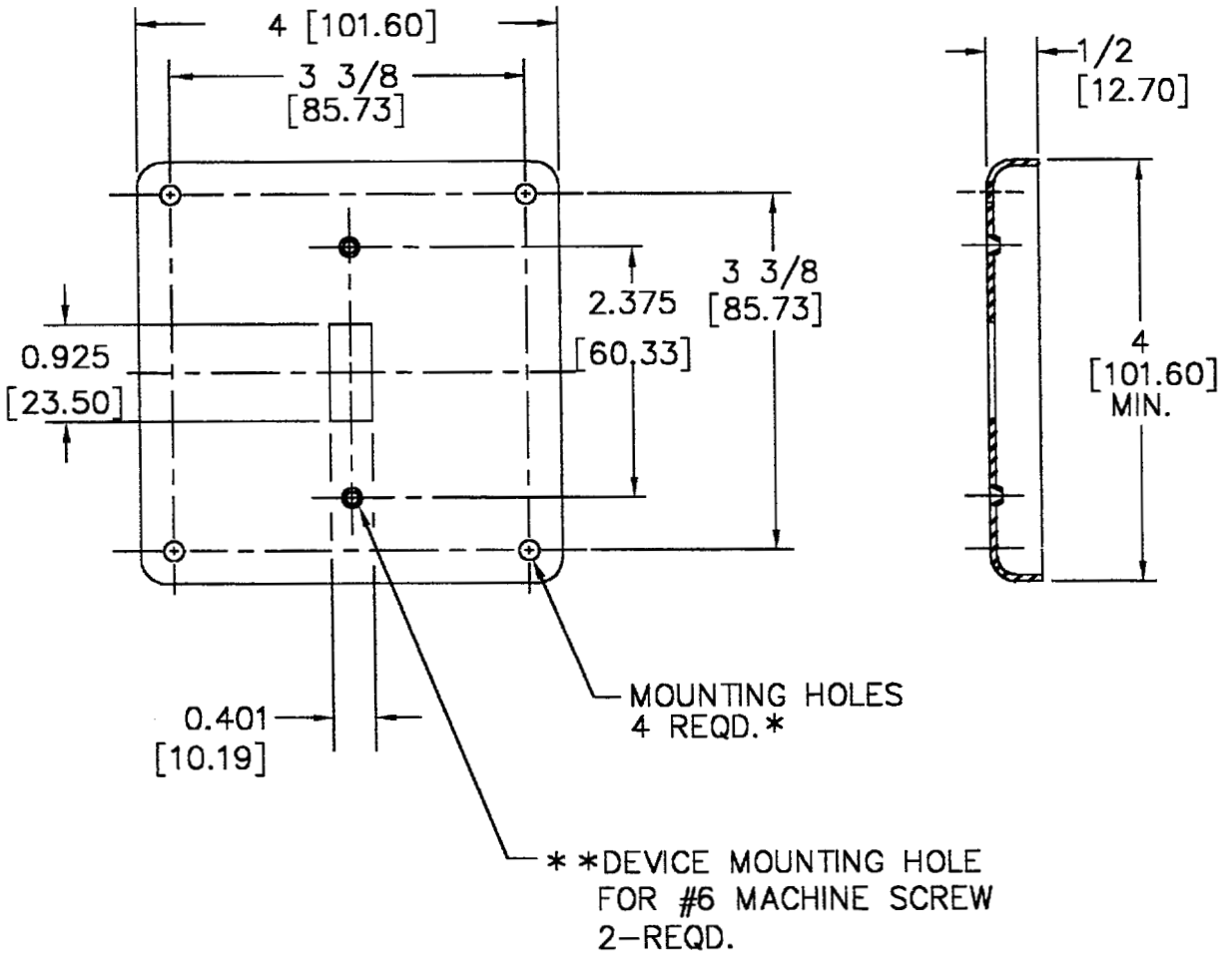


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1—2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2—6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2—7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2—9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 321

SURFACE COVER FOR ONE TOGGLE SWITCH AND ONE SINGLE RECEPTACLE FOR 4" SQUARE BOX

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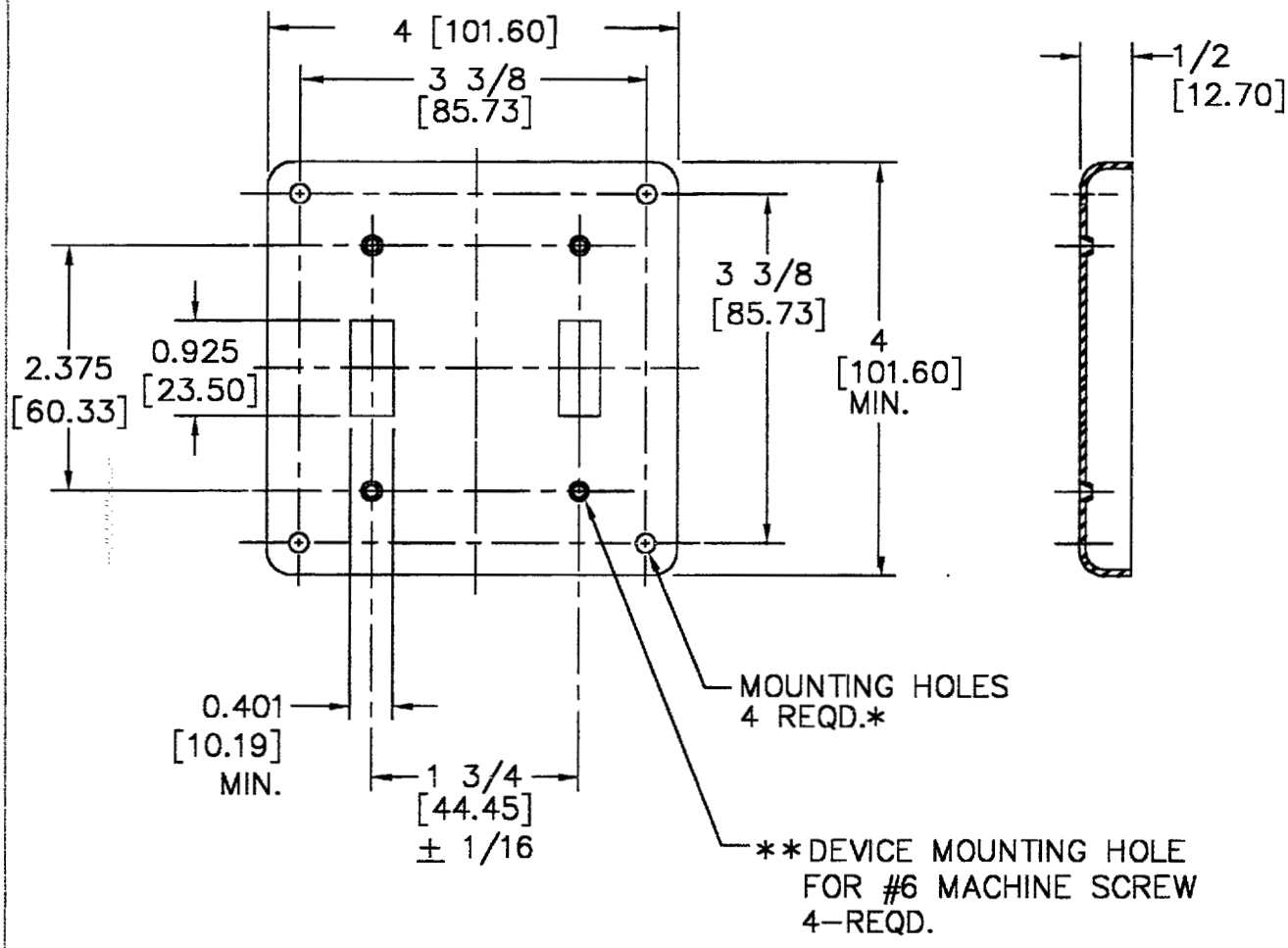


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 322

SURFACE COVER FOR ONE TOGGLE SWITCH FOR 4" SQUARE BOX

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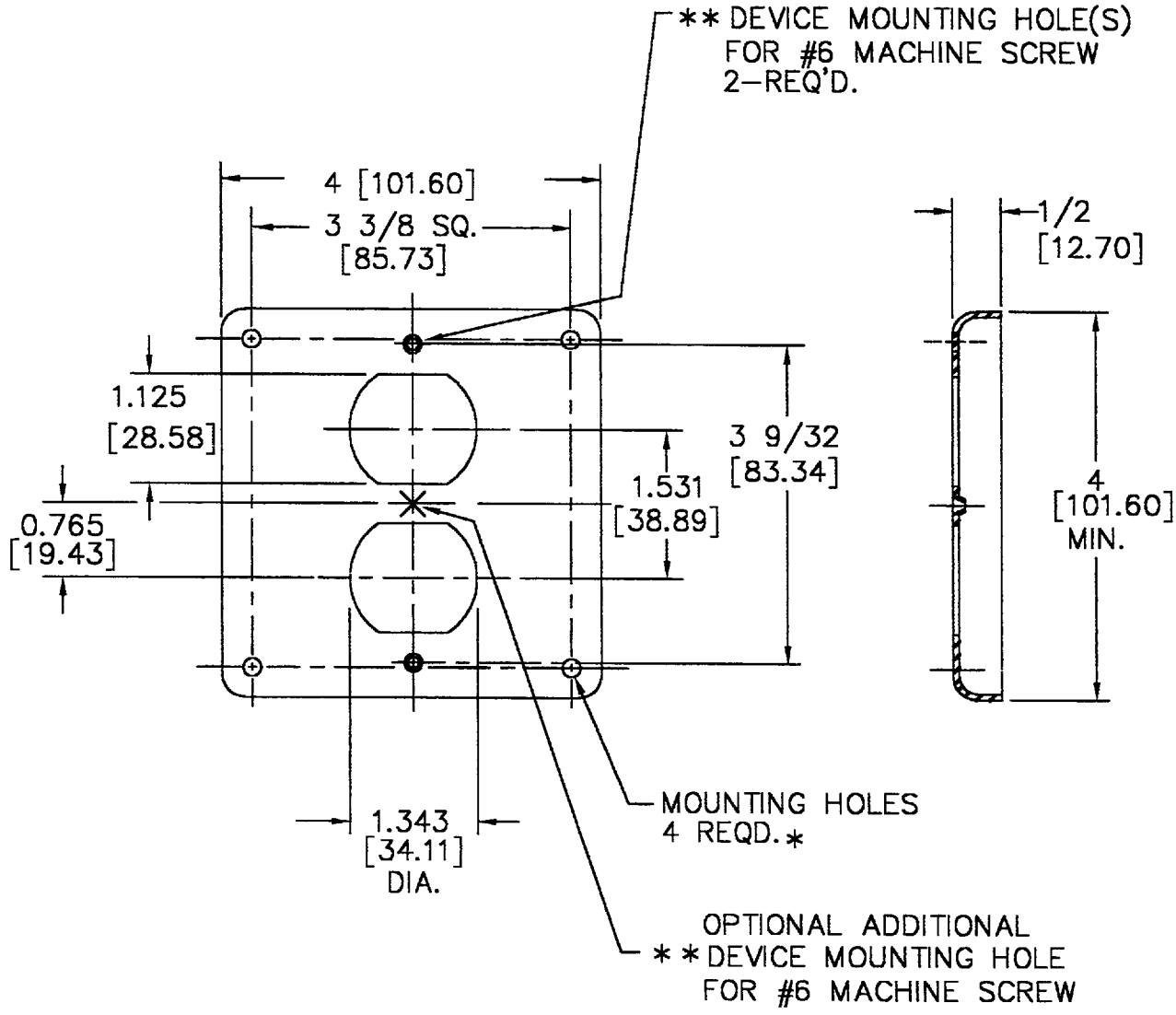


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2-7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2-9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 323

SURFACE COVER FOR TWO TOGGLE SWITCHES FOR 4" SQUARE BOX

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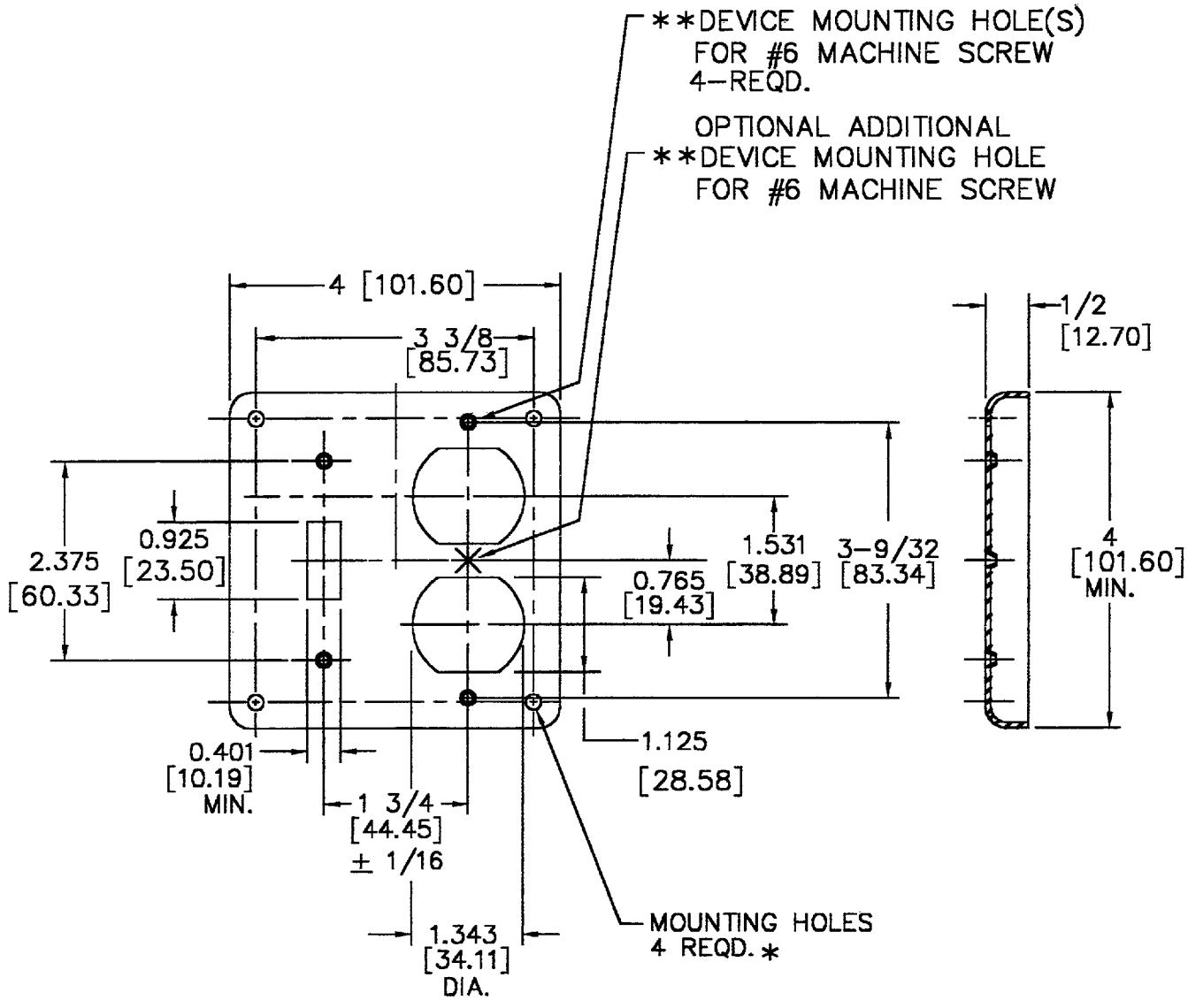


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 324

SURFACE COVER FOR ONE DUPLEX RECEPTACLE FOR 4" SQUARE BOX

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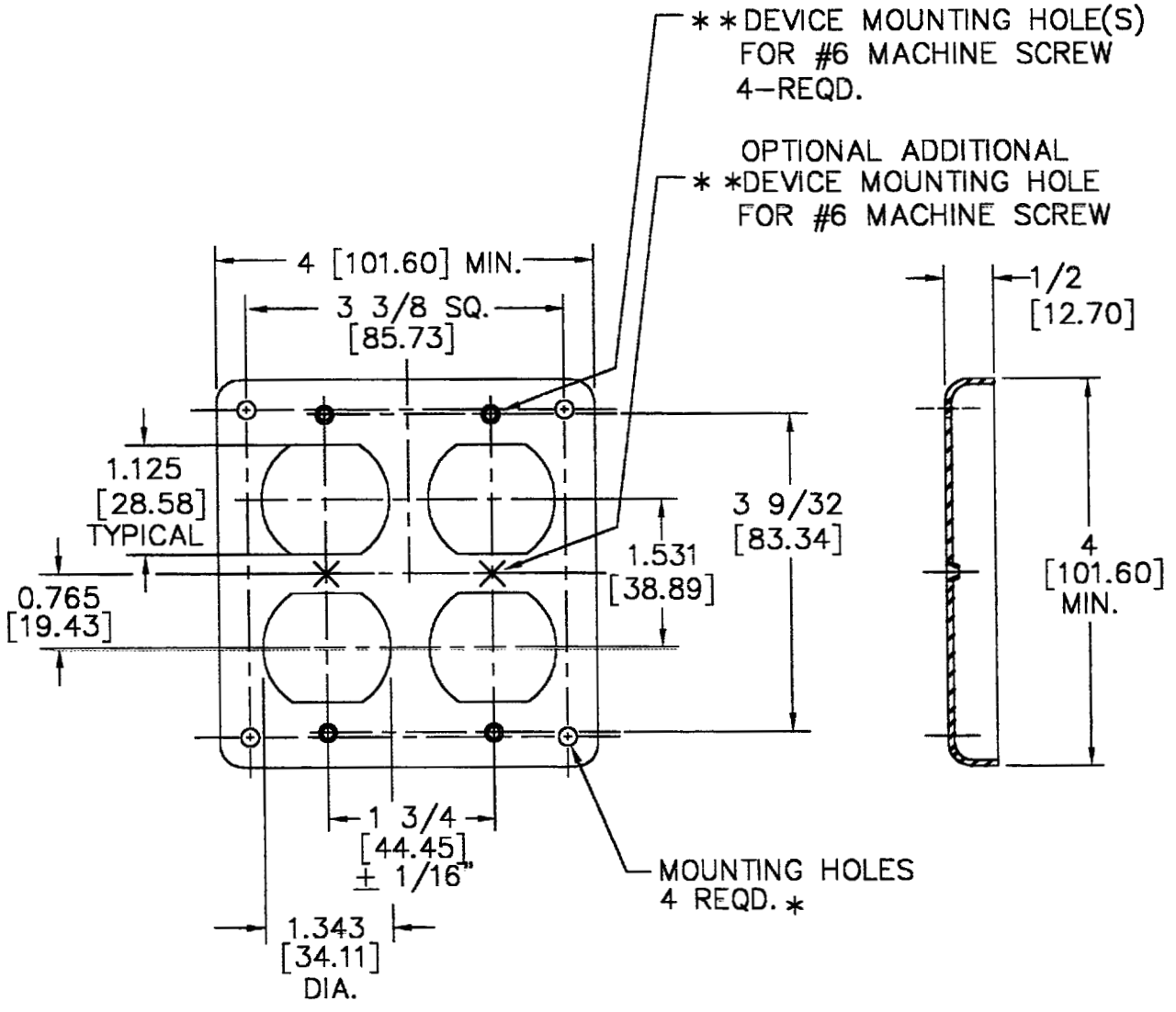


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 325

SURFACE COVER FOR ONE TOGGLE SWITCH AND ONE DUPLEX RECEPTACLE 4" SQUARE BOX

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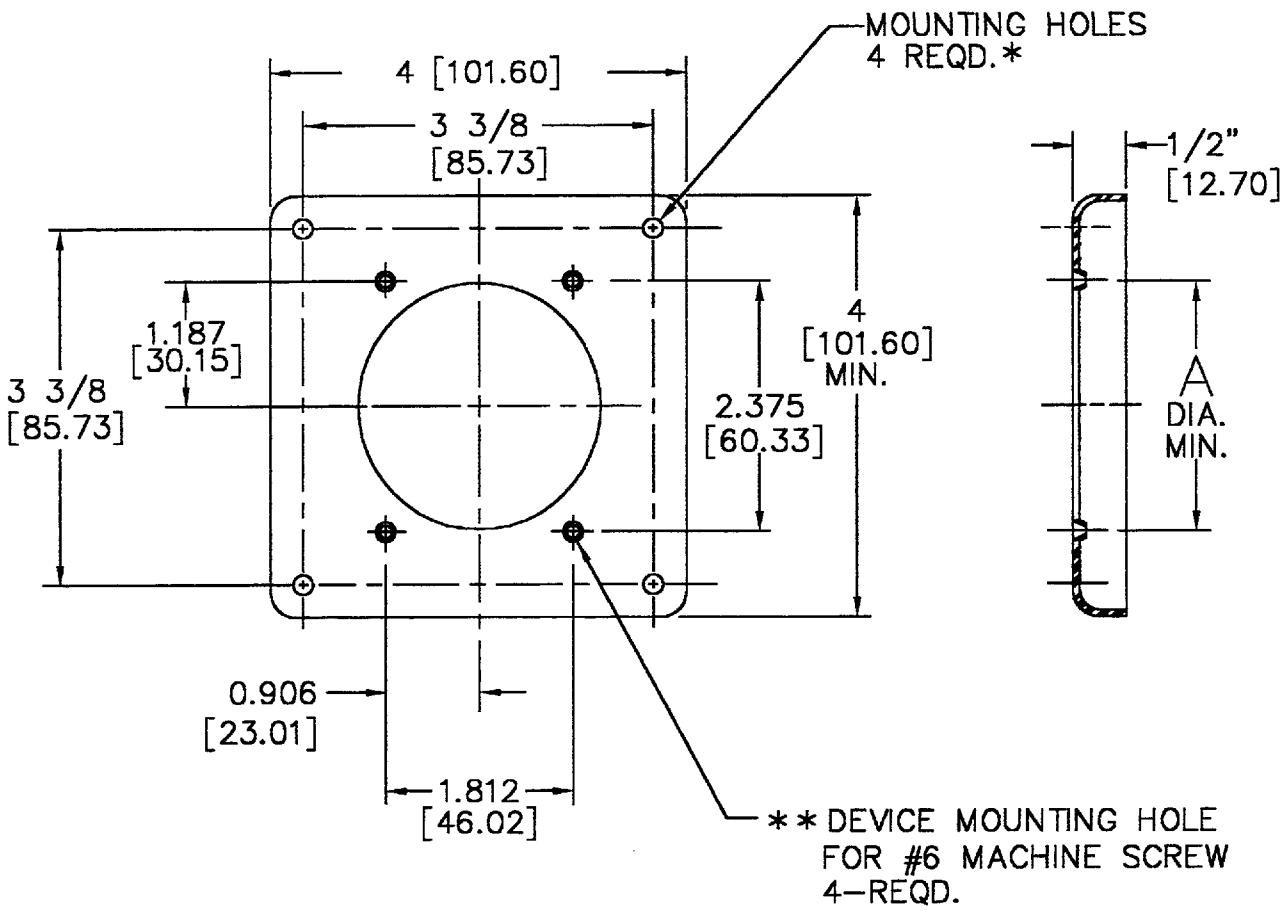


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 326

SURFACE COVER FOR TWO DUPLEX RECEPTACLES FOR 4" SQUARE BOX

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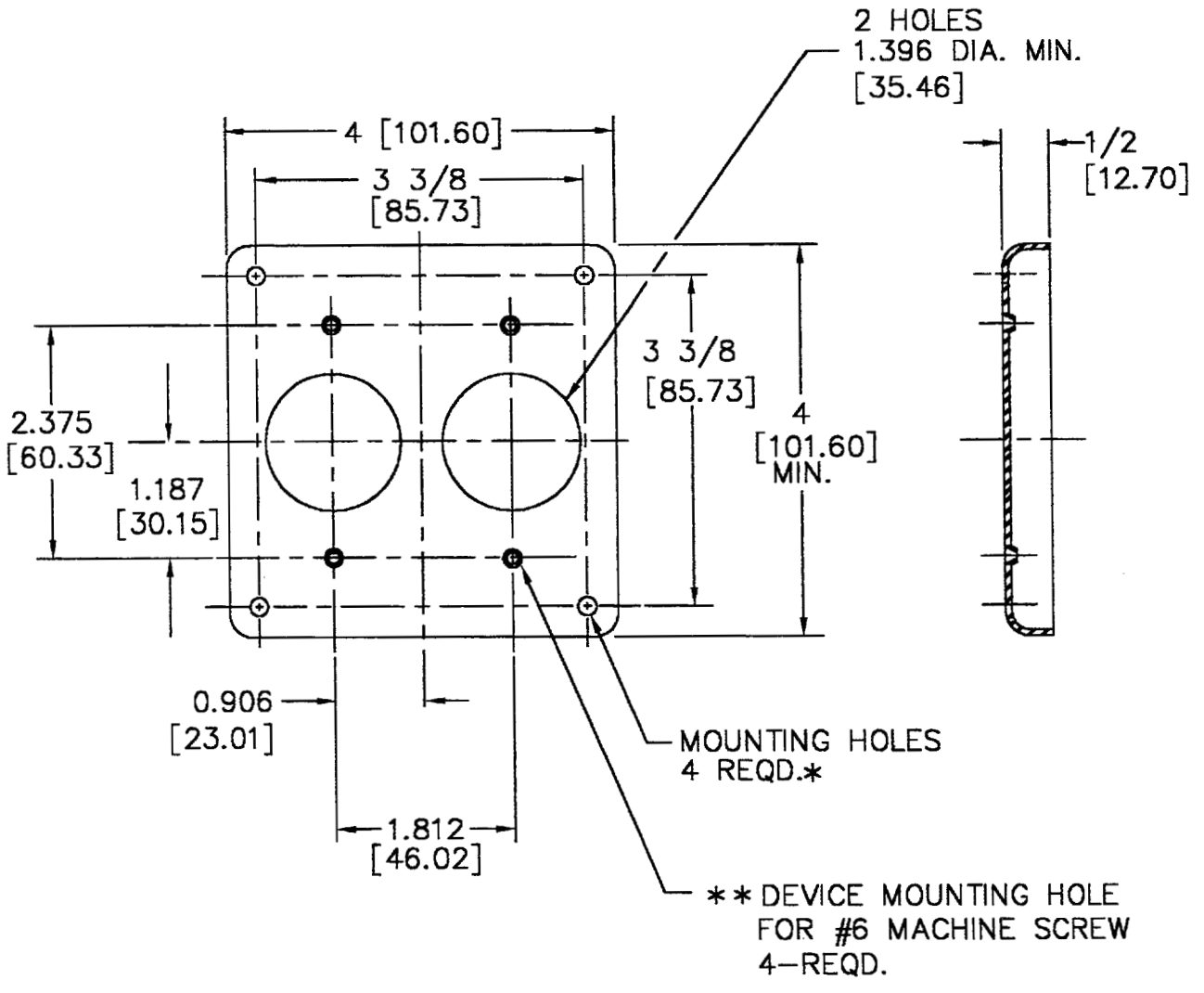
ITEM	A MIN.
1	2.140 [54.36]
2	2.452 [62.28]
3	2.625 [66.68]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2-7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2-9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 327

SURFACE COVER FOR 30-50-60 AMPERE AND 3-WIRE RECEPTACLE FOR 4" SQUARE BOX

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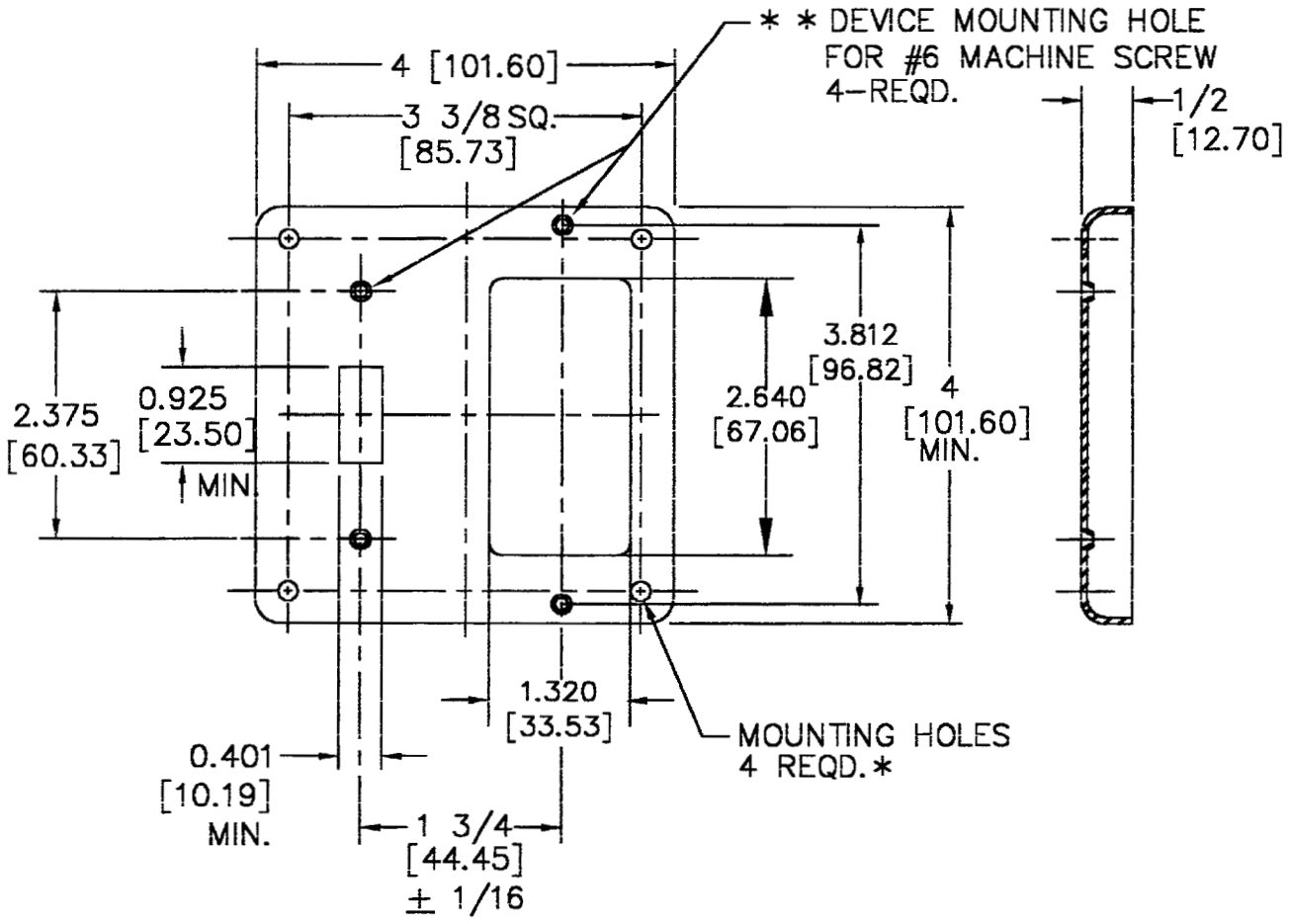


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1—2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2—6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2—7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2—9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 328

SURFACE COVER FOR TWO SINGLE RECEPTACLES FOR 4" SQUARE BOX

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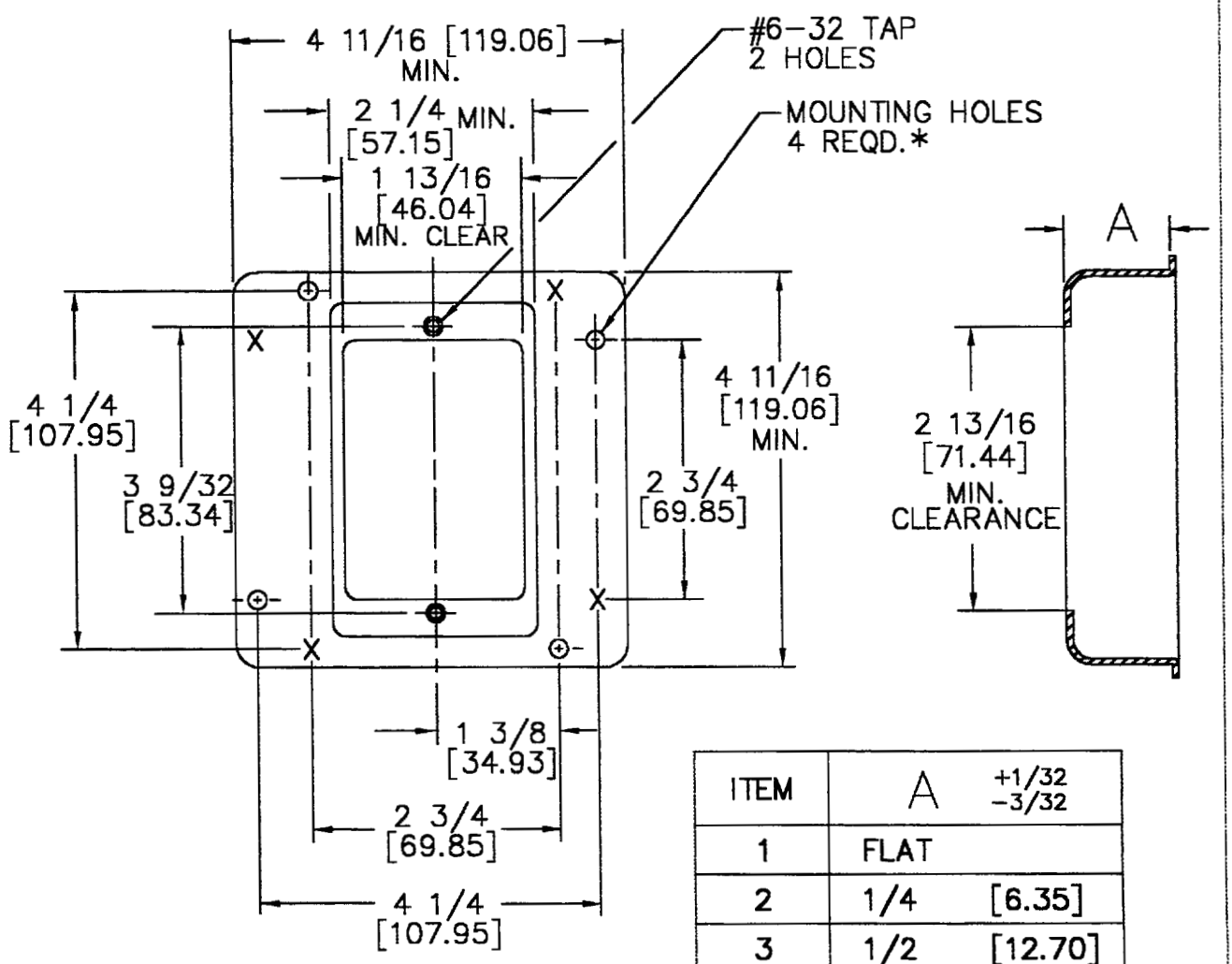


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 329

SURFACE COVER FOR ONE TOGGLE SWITCH AND ONE GFCI RECEPTACLE FOR 4" SQUARE BOX

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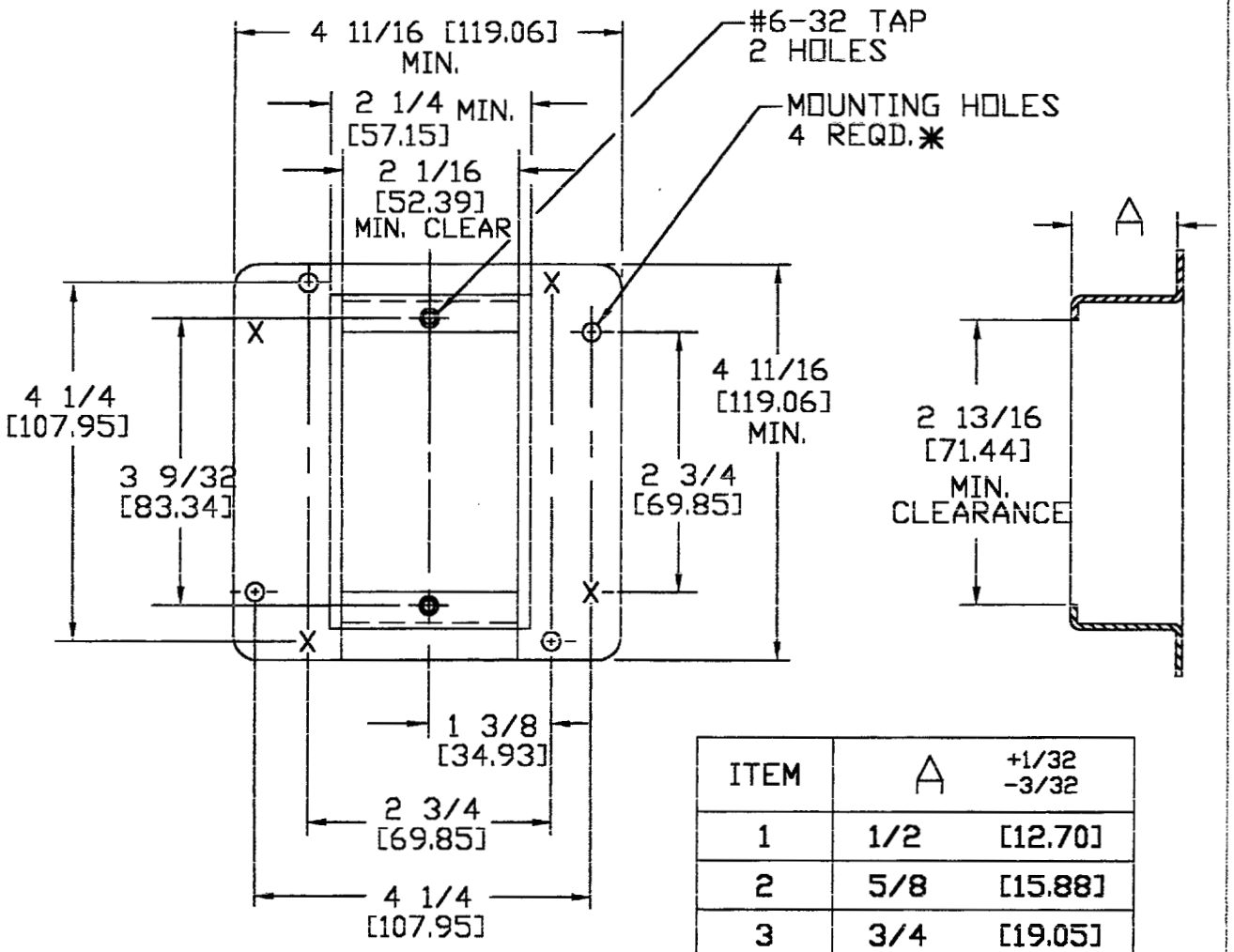
X—ALTERNATE MOUNTING HOLE LOCATION *

ITEM	A	+1/32 −3/32
1	FLAT	
2	1/4	[6.35]
3	1/2	[12.70]
4	5/8	[15.88]
5	3/4	[19.05]
6	1	[25.40]
7	1 1/4	[31.75]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
* SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 330
ONE–DEVICE COVER FOR 4 11/16" SQUARE BOX

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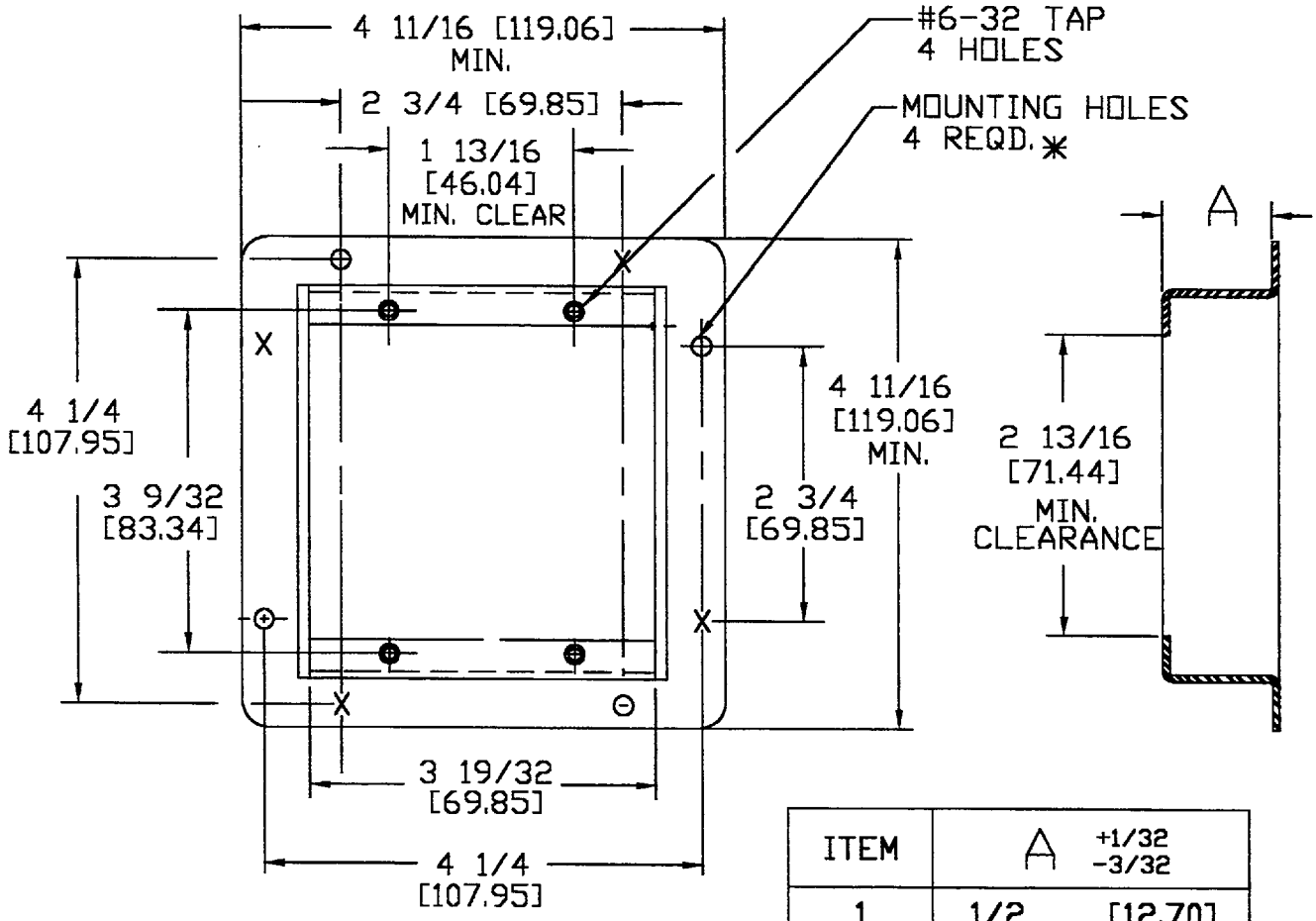


ITEM	A	+1/32 -3/32
1	1/2	[12.70]
2	5/8	[15.88]
3	3/4	[19.05]
4	1	[25.40]
5	1 1/4	[31.75]
6	1 1/2	[38.10]
7	2	[50.80]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 332
ONE-DEVICE TILE COVER FOR 4 11/16" SQUARE BOX

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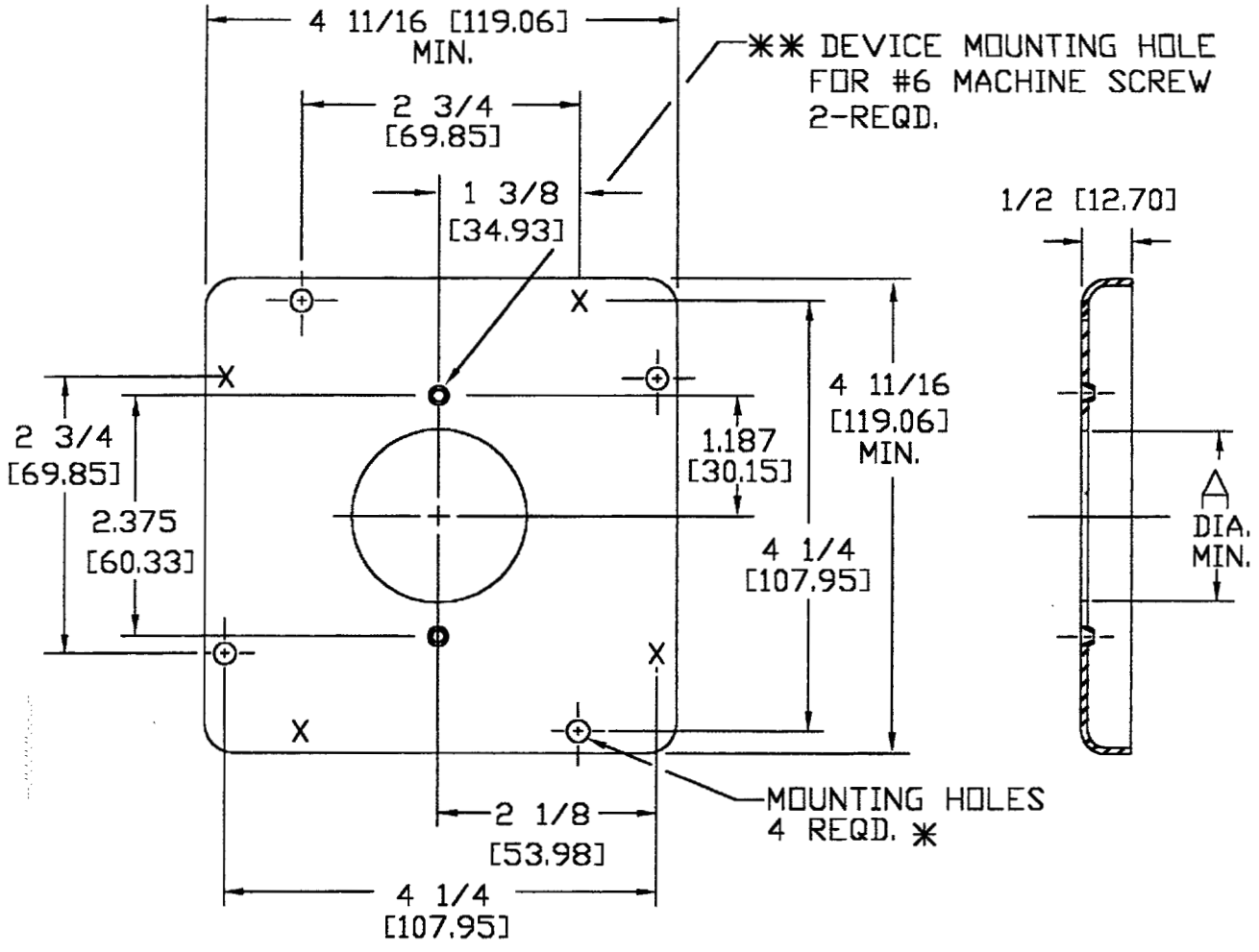
ITEM	A +1/32 -3/32	
1	1/2	[12.70]
2	5/8	[15.88]
3	3/4	[19.05]
4	1	[25.40]
5	1 1/4	[31.75]
6	1 1/2	[38.10]
7	2	[50.80]

X-ALTERNATE MOUNTING
HOLE LOCATION ✳

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
✳ SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 333
TWO-DEVICE TILE COVER FOR 4 11/16" SQUARE BOX

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ITEM	△ MIN.	
1	1.396	[35.46]
2	1.586	[40.28]
3	1.711	[43.46]

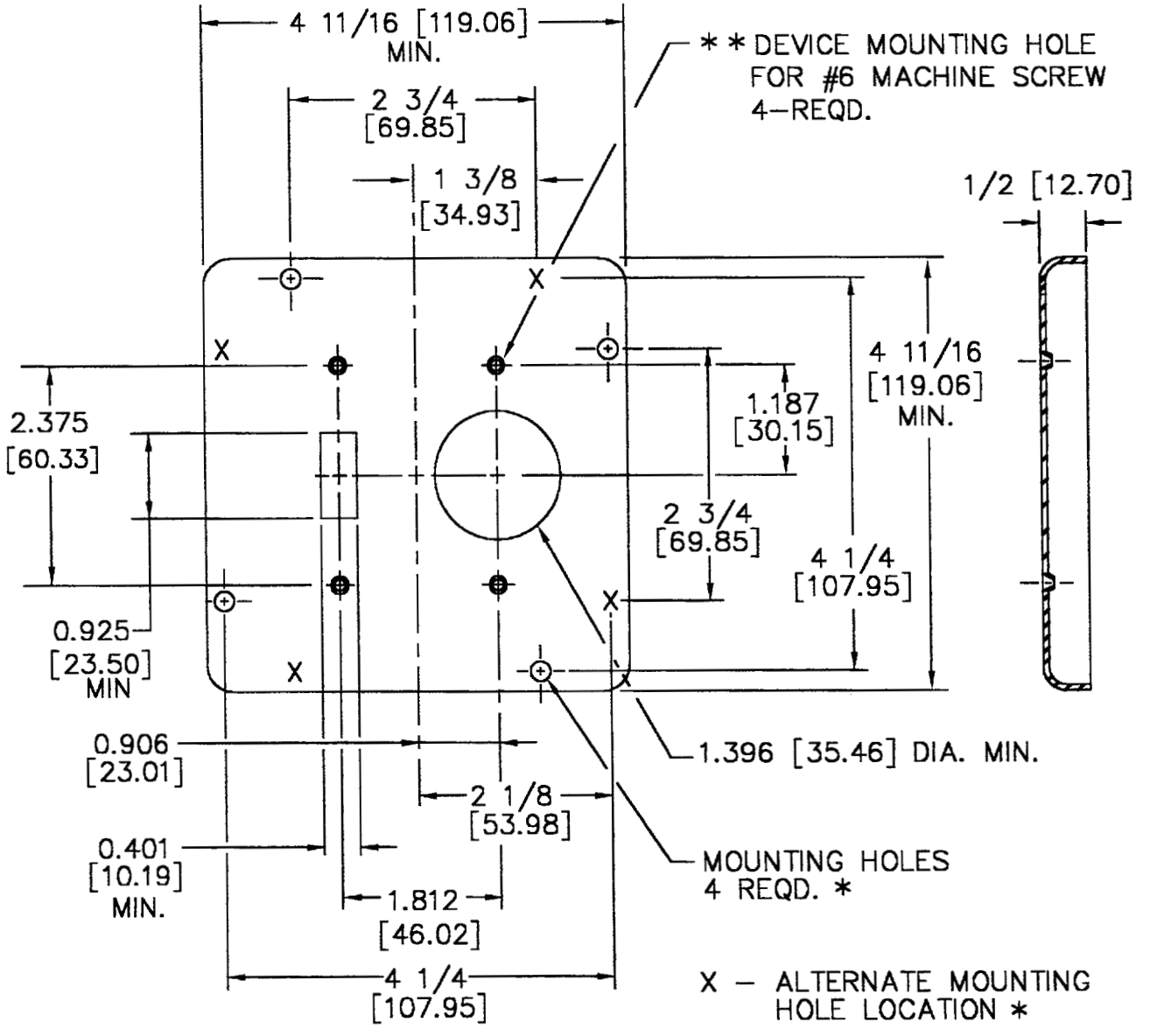
X – ALTERNATE MOUNTING HOLE LOCATION *

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2-7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2-9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 340

SURFACE COVER FOR SINGLE RECEPTACLES FOR 4 11/16" SQUARE BOX

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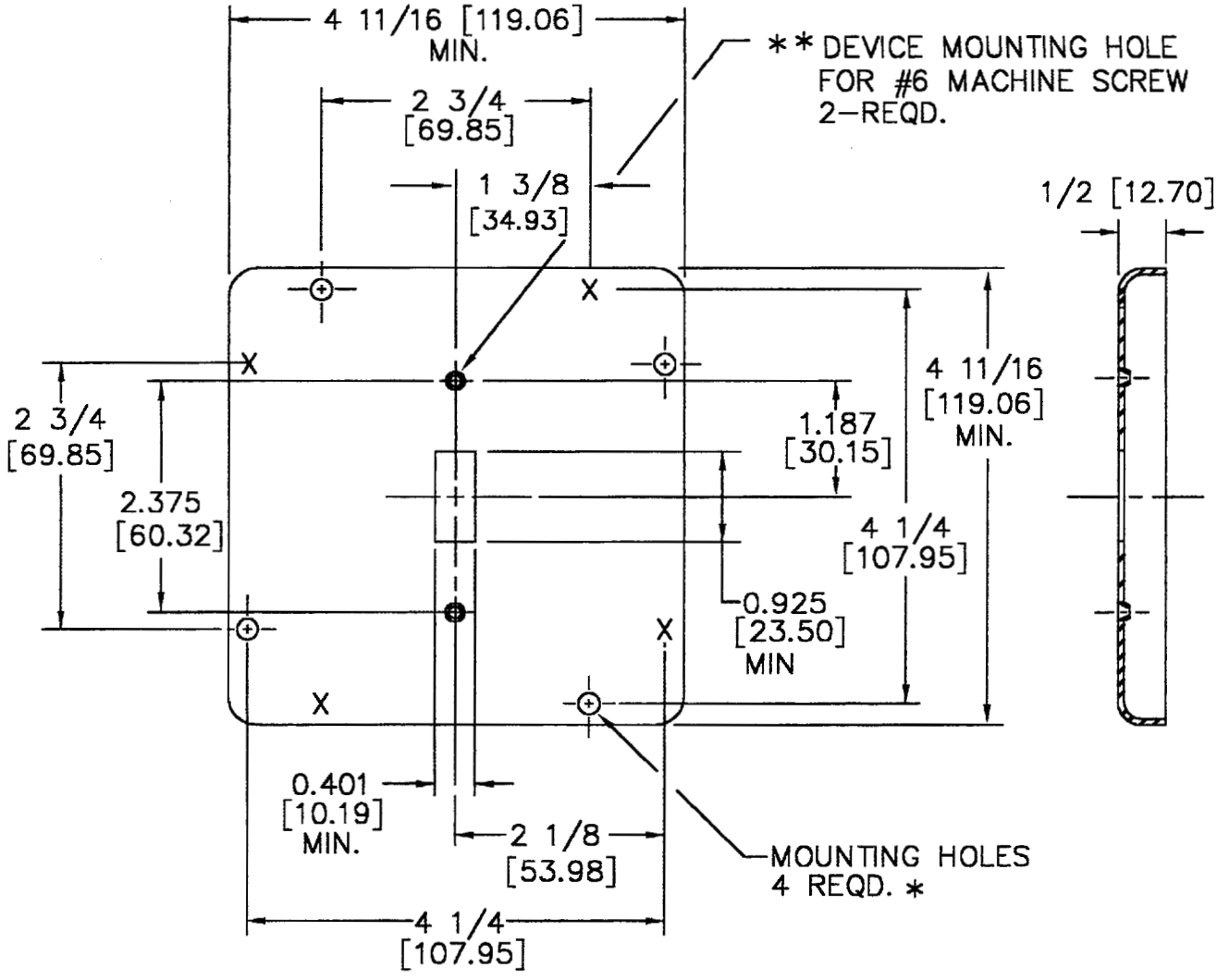
NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
* * SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 341

SURFACE COVER FOR ONE TOGGLE SWITCH AND ONE SINGLE RECEPTACLE FOR 4 11/16" SQUARE BOX

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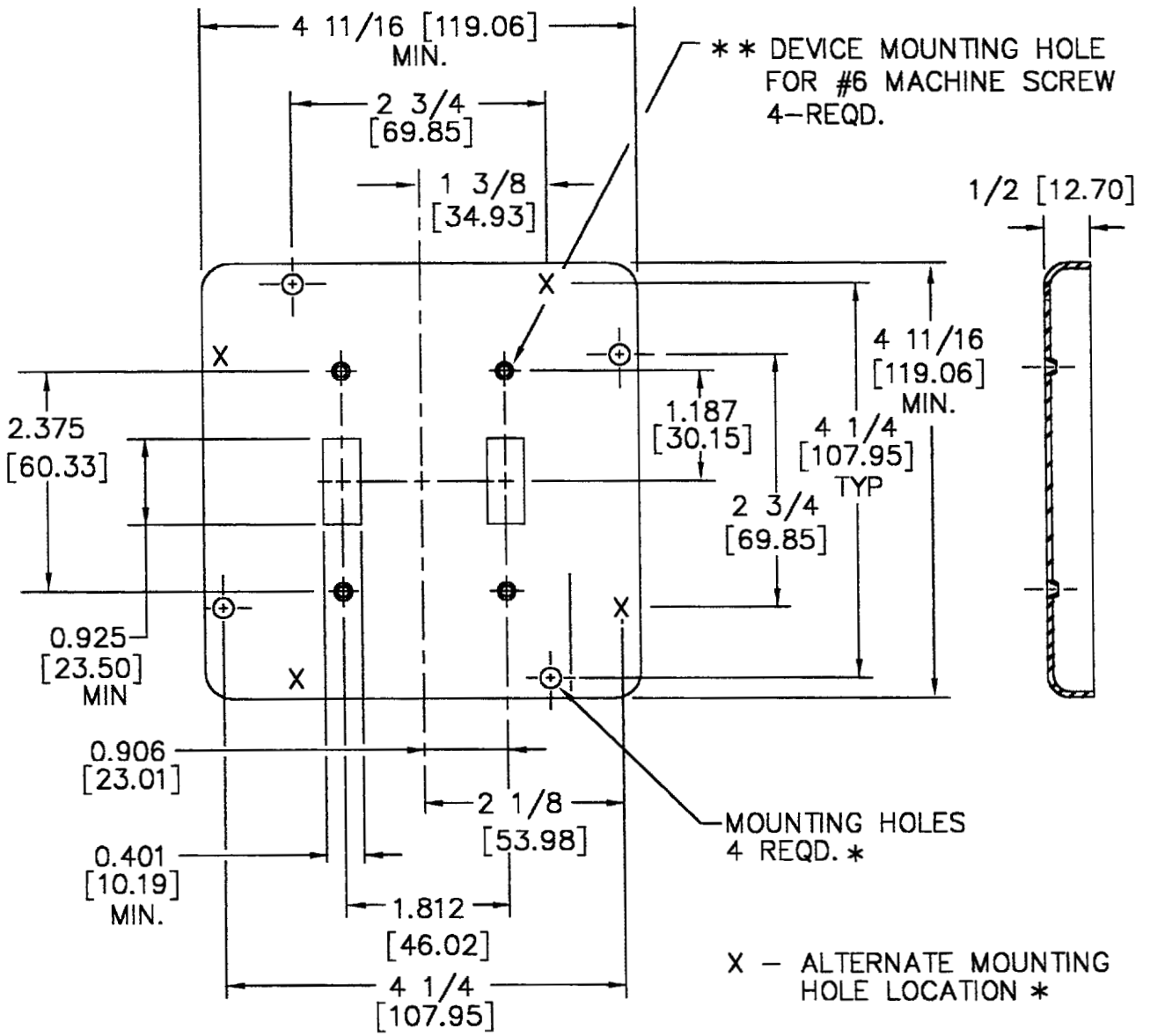


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2-7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2-9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 342

SURFACE COVER FOR ONE TOGGLE SWITCH FOR 4 11/16" SQUARE BOX

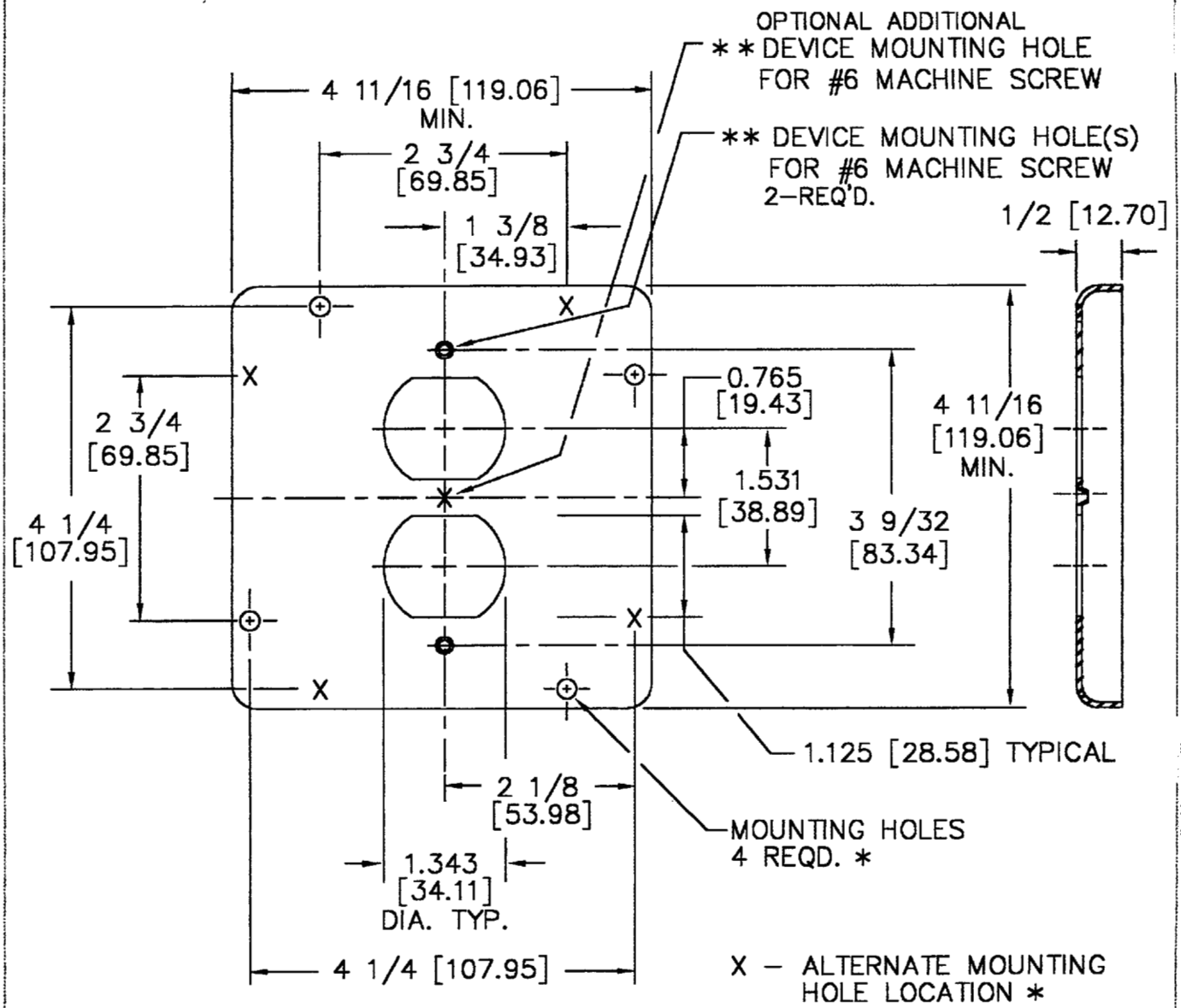
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NOTES:
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SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 343
SURFACE COVER FOR TWO TOGGLE SWITCHES FOR 4 11/16" SQUARE BOX

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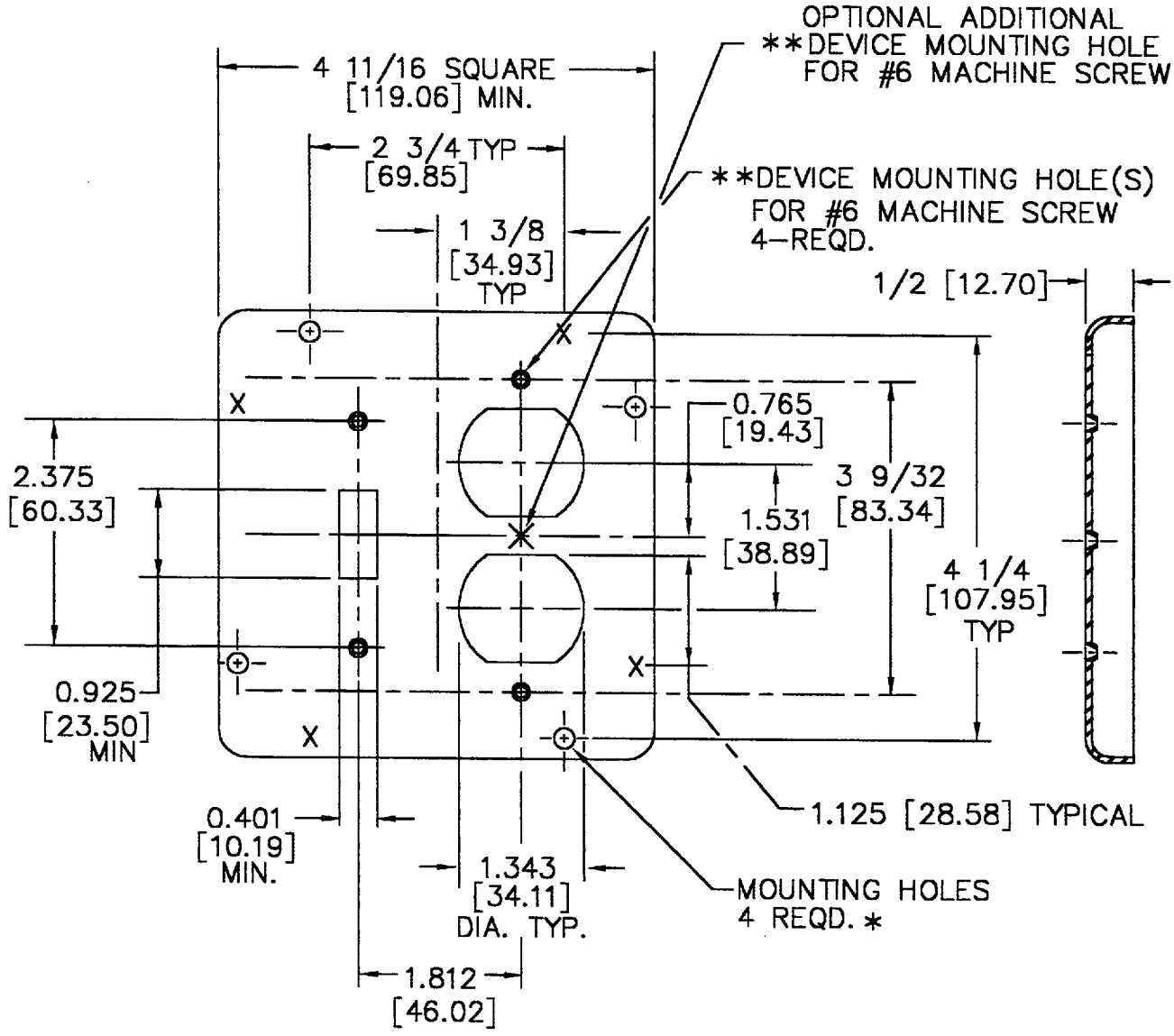


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2-7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2-9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 344

SURFACE COVER FOR ONE DUPLEX RECEPTACLE FOR 4 11/16" SQUARE BOX

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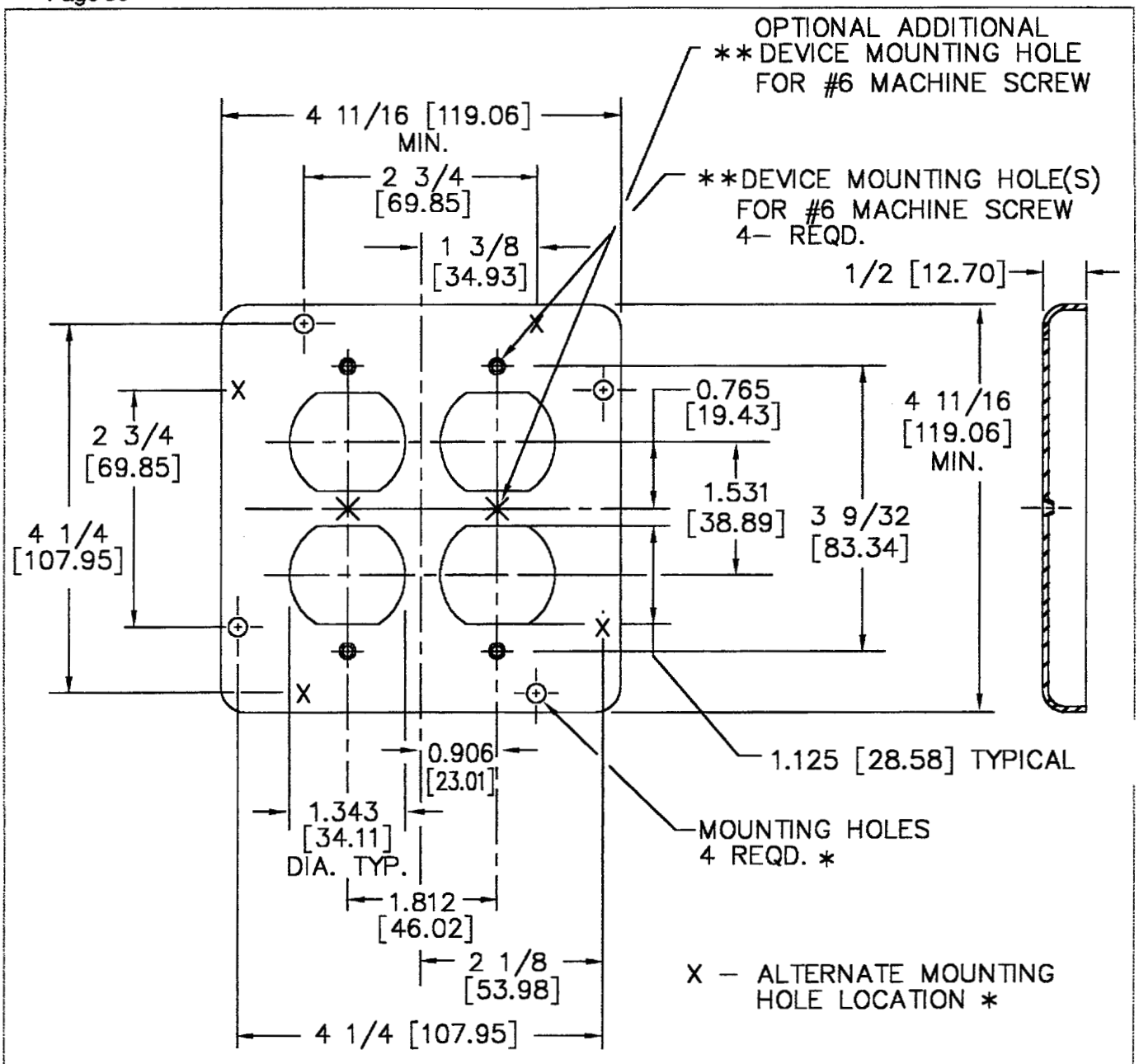


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2-7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2-9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 345

SURFACE COVER FOR ONE TOGGLE SWITCH AND ONE DUPLEX RECEPTACLE FOR 4 11/16" SQUARE BOX

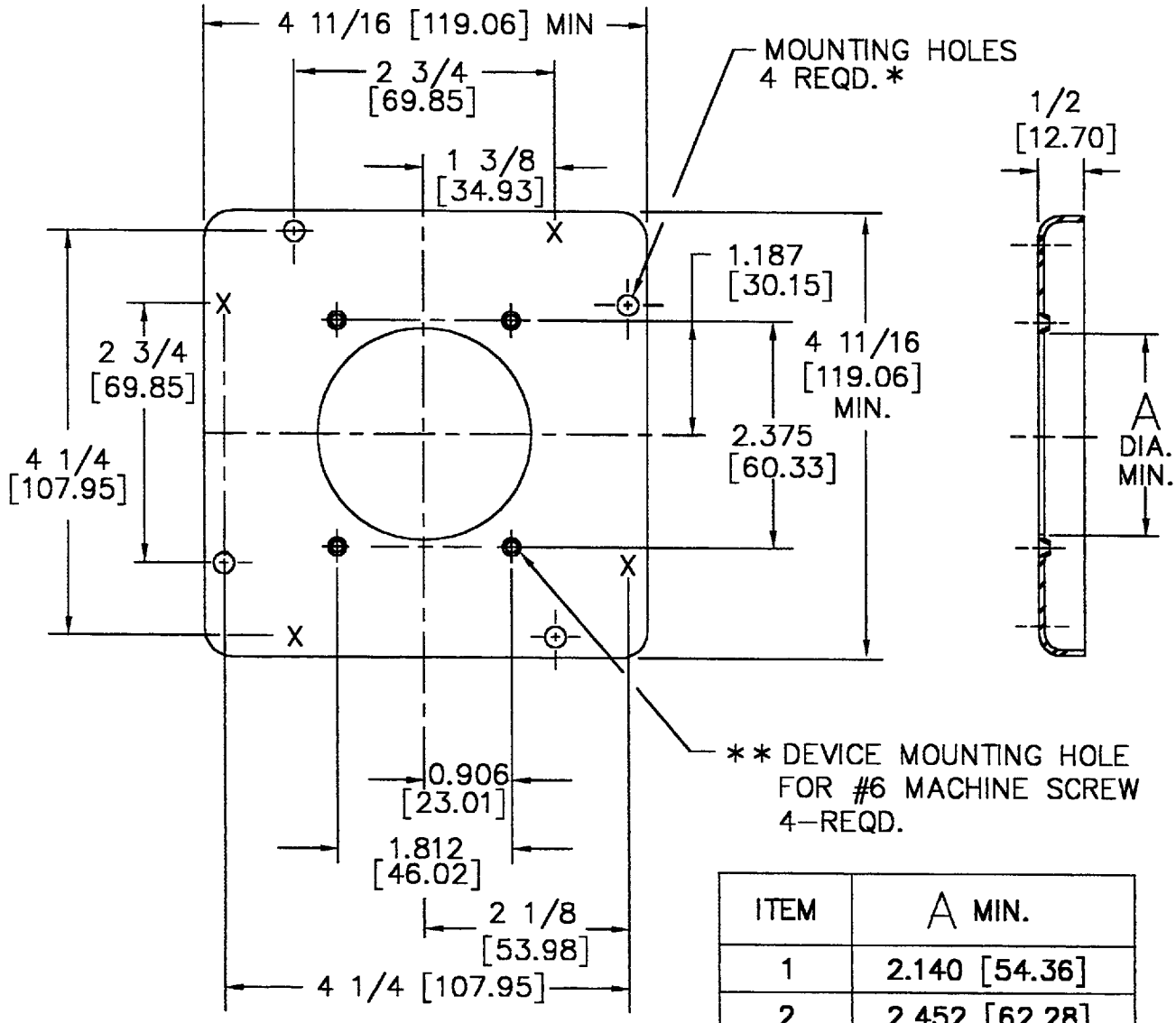
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NOTES:
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SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 346
SURFACE COVER FOR TWO DUPLEX RECEPTACLES FOR 4 11/16" SQUARE BOX

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ITEM	A MIN.
1	2.140 [54.36]
2	2.452 [62.28]
3	2.625 [66.68]

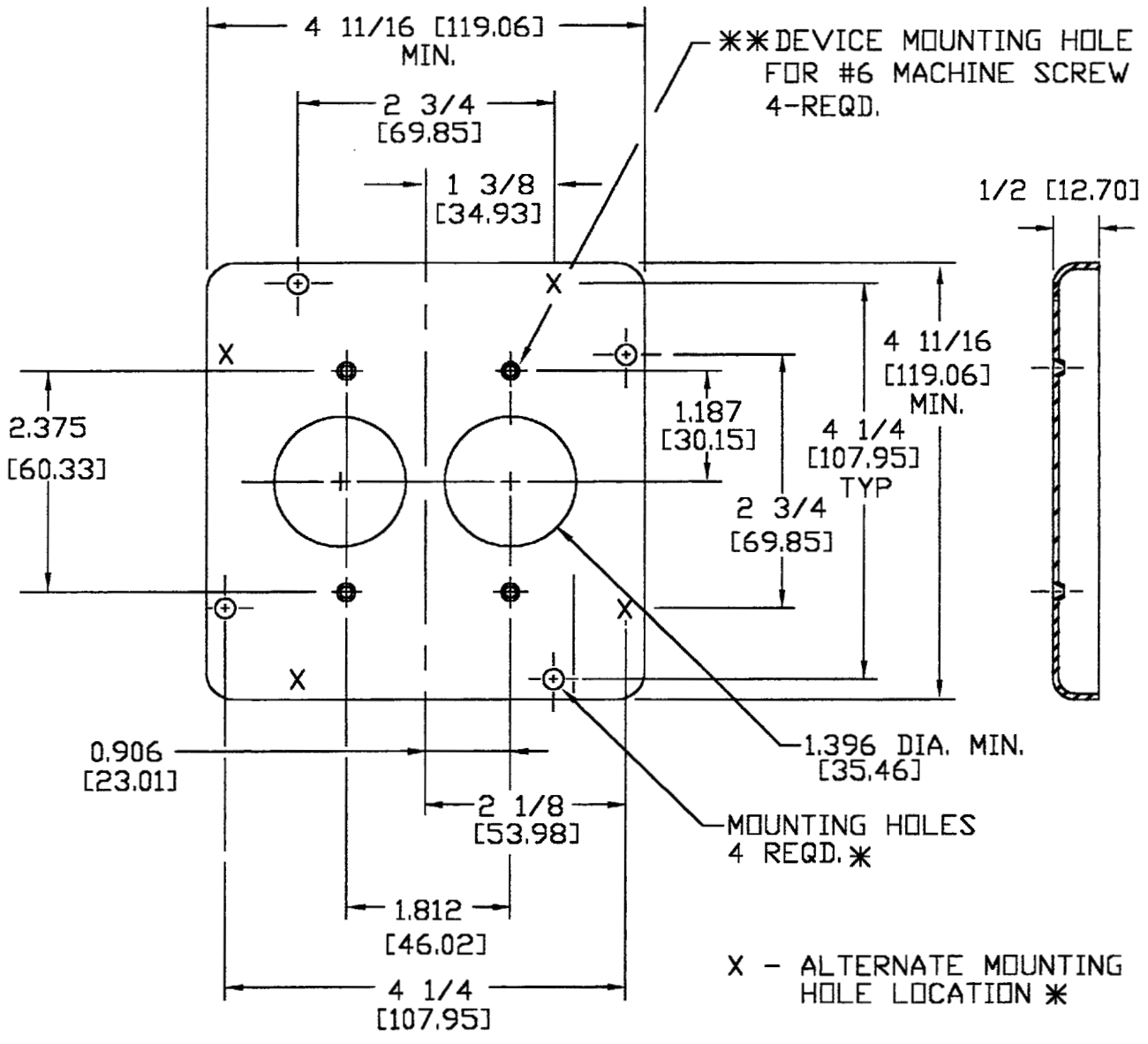
X – ALTERNATE MOUNTING HOLE LOCATION *

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2–9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 347

SURFACE COVER FOR 30–50–60 AMPERE AND 3–WIRE RECEPTACLE
4 11/16" SQUARE BOX

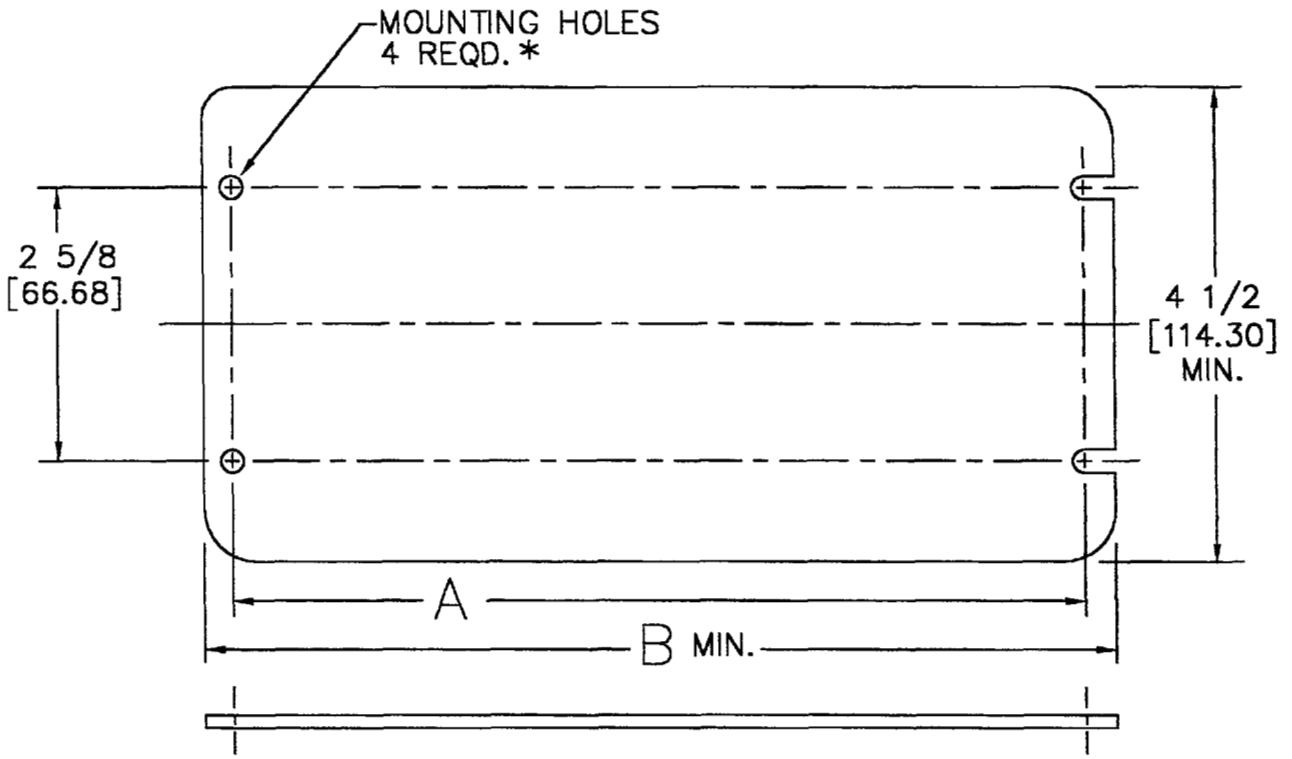
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NOTES:
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SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
** SEE FIGURE 2-7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS
SEE FIGURE 2-9 FOR ALTERNATE COVER CONFIGURATIONS

Figure 348
SURFACE COVER FOR TWO SINGLE RECEPTACLES
FOR 4 11/16" SQUARE BOX

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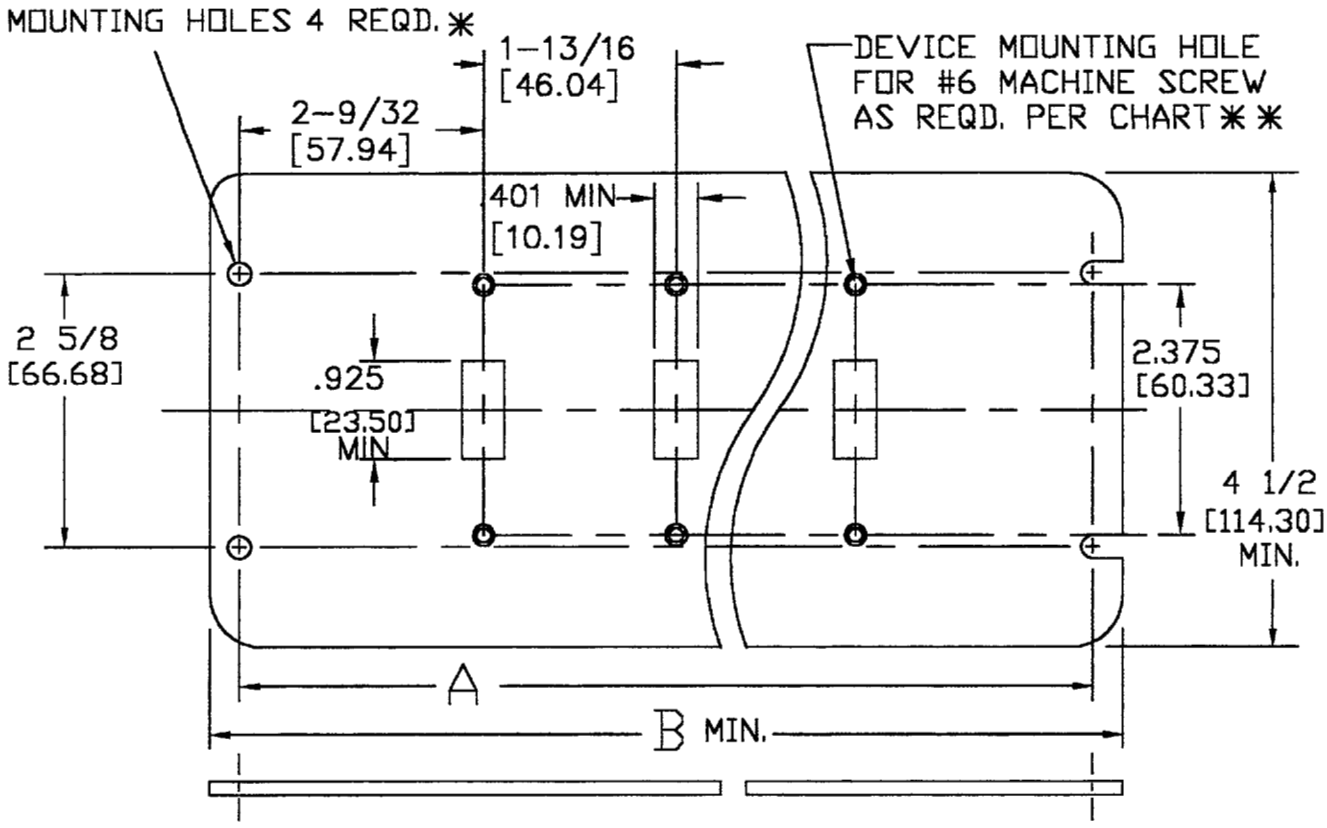


ITEM	NO. OF GANGS	A	B MIN.
1	2	6 3/8 [161.92]	6 13/16 [173.04]
2	3	8 3/16 [207.96]	8 5/8 [219.08]
3	4	10 [254.00]	10 7/16 [265.11]
4	5	11 13/16 [300.04]	12 1/4 [311.15]
5	6	13 5/8 [346.08]	14 1/16 [357.19]
6	7	15 7/16 [392.11]	15 7/8 [403.23]
7	8	17 1/4 [438.15]	17 11/16 [449.26]
8	9	19 1/16 [484.19]	19 1/2 [495.30]
9	10	20 7/8 [530.23]	21 5/16 [541.34]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 350
FLAT BLANK COVERS FOR GANG BOXES

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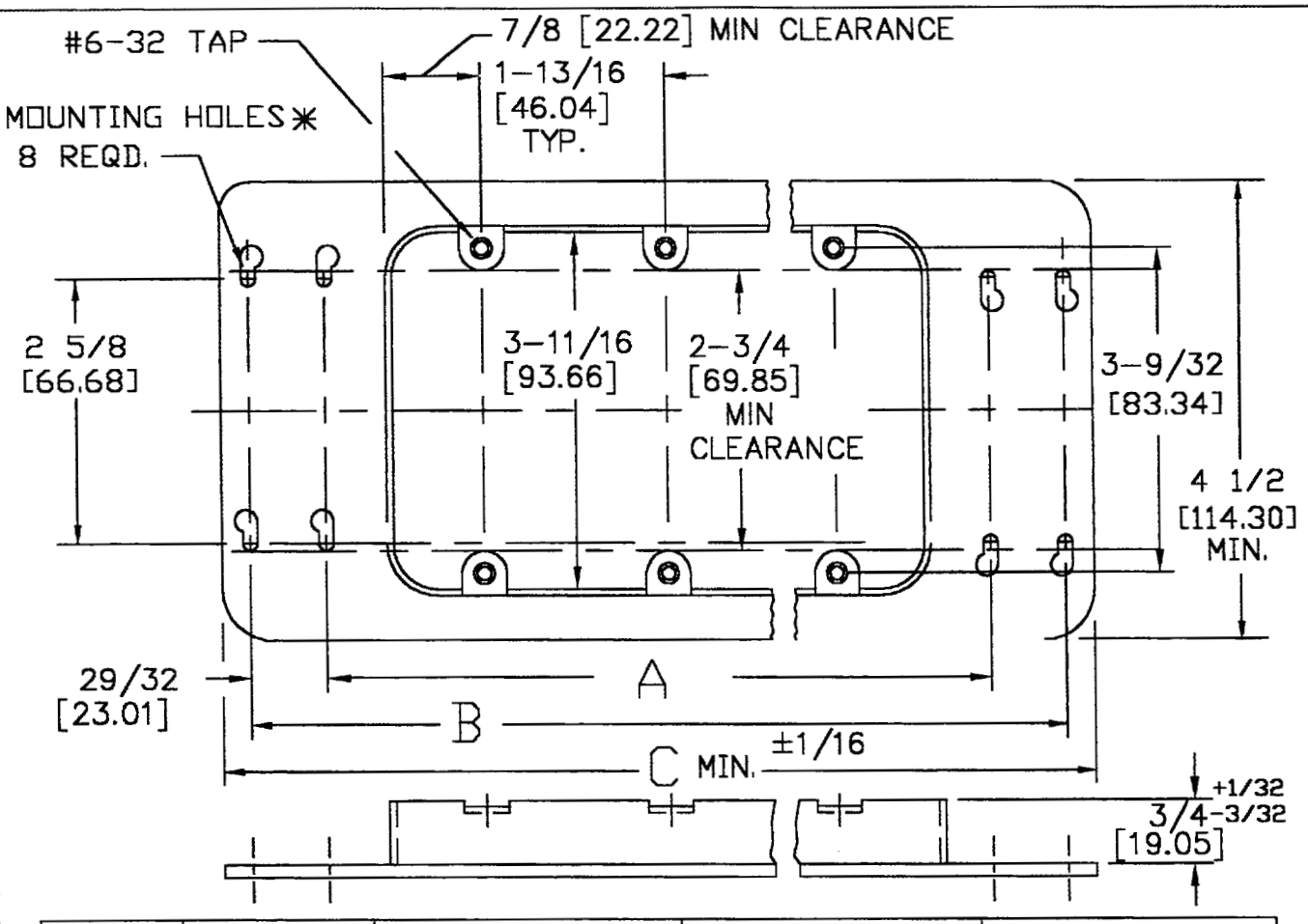


ITEM	NO. OF GANGS	A	B MIN.
1	2	6 3/8 [161.93]	6 13/16 [173.04]
2	3	8 3/16 [207.96]	8 5/8 [219.08]
3	4	10 [254.00]	10 7/16 [265.11]
4	5	11 13/16 [300.04]	12 1/4 [311.15]
5	6	13 5/8 [346.08]	14 1/16 [357.19]
6	7	15 7/16 [392.11]	15 7/8 [403.23]
7	8	17 1/4 [438.15]	17 11/16 [449.26]
8	9	19 1/16 [484.19]	19 1/2 [495.30]
9	10	20 7/8 [530.23]	21 5/16 [541.34]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
✳ SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS
✳✳ SEE FIGURE 2–7 FOR ALTERNATE DEVICE MOUNTING HOLE DESIGNS

FIGURE 35 I
FLAT TOGGLE SWITCH COVERS

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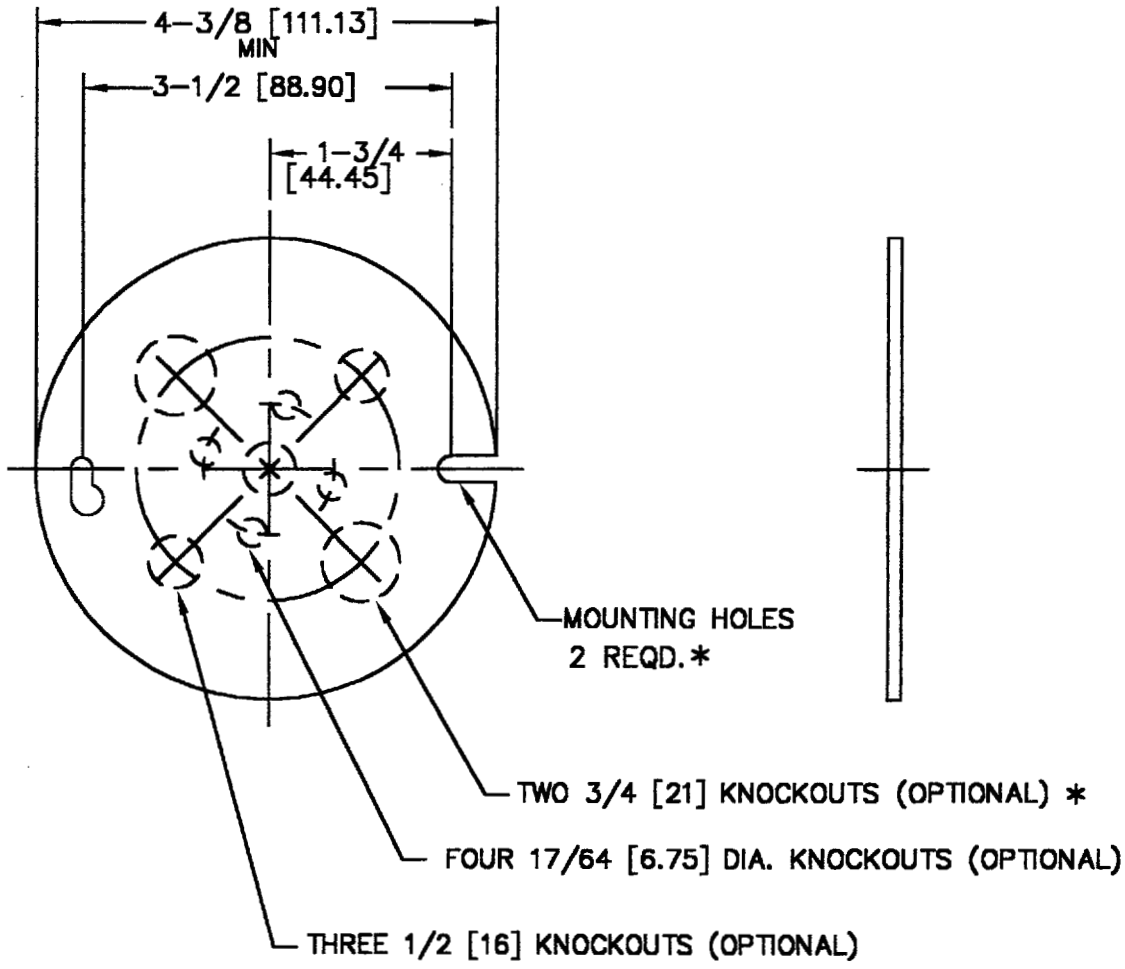


ITEM	NO. OF GANGS	A	B	C MIN.
1	2	4 9/16 [115.89]	6-3/8 [161.93]	6 13/16 [173.04]
2	3	6 3/8 [161.93]	8-3/16 [207.96]	8 5/8 [219.07]
3	4	8 3/16 [207.96]	10 [254.00]	10 7/16 [265.11]
4	5	10 [254.00]	11-13/16 [300.04]	12 1/4 [311.15]
5	6	11 13/16 [300.04]	13-5/8 [346.08]	14 1/16 [357.19]
6	7	13 5/8 [346.08]	15-7/16 [392.11]	15 7/8 [403.22]
7	8	15 7/16 [392.11]	17-1/4 [438.15]	17 11/16 [449.26]
8	9	17 1/4 [438.15]	19-1/16 [484.19]	19 1/2 [495.30]
9	10	19 1/16 [484.19]	20-7/8 [530.23]	21 5/16 [541.34]

NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1-2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2-6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 352
RAISED COVERS FOR GANG BOXES

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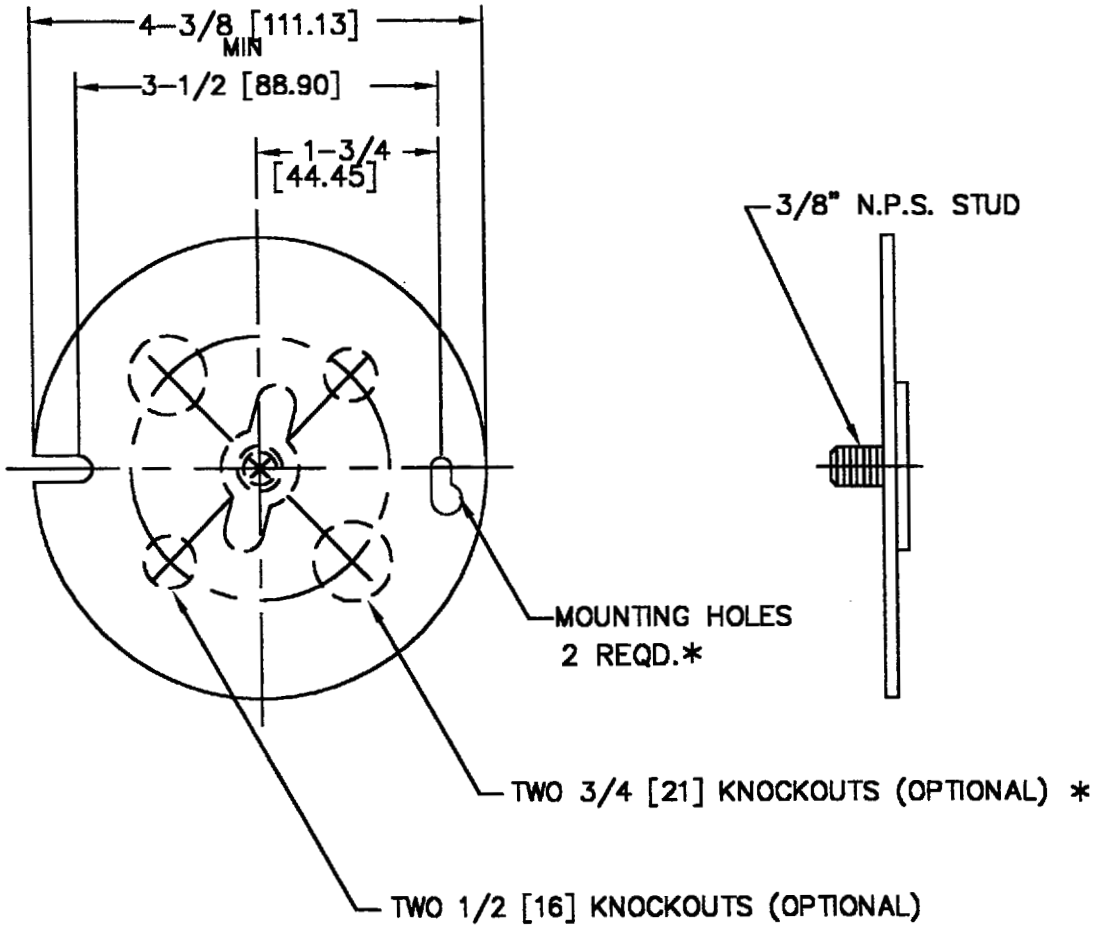


NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS
** SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 360

CONCRETE BACKPLATE COMBINATION 1/2[16] AND 3/4[21] KNOCKOUTS (OPTIONAL)

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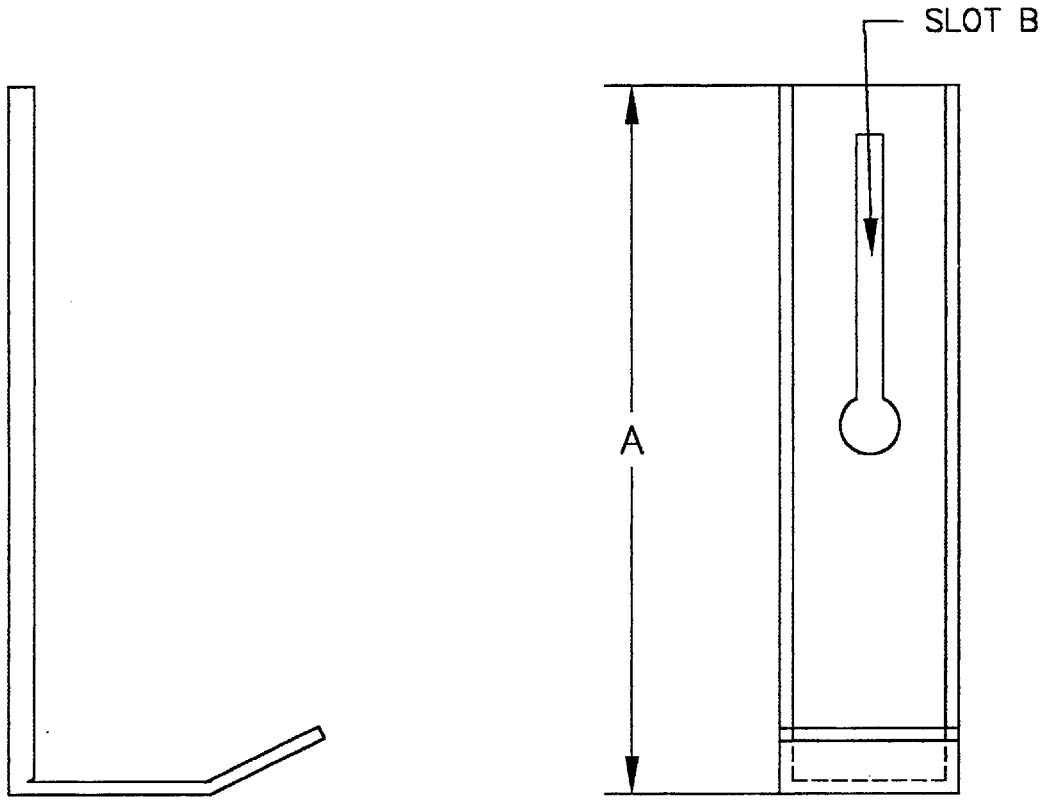


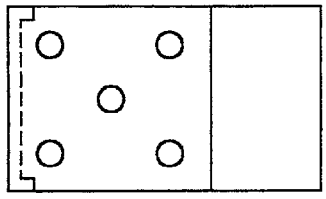
NOTES:
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS
* SEE FIGURE 2–5 FOR ALTERNATE KNOCKOUT CONFIGURATIONS
** SEE FIGURE 2–6 FOR ALTERNATE COVER MOUNTING HOLE DESIGNS

Figure 361

CONCRETE BACKPLATE WITH STUD, 1/2[16] AND 3/4[21] KNOCKOUTS (OPTIONAL)

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ITEM	A	B
1	12 [304.80]	YES
2	12 [304.80]	NONE
3	20 [508.00]	YES
4	20 [508.00]	NONE
5	30 [762.00]	YES

NOTES
ALL DIMENSIONS IN INCHES AND [MILLIMETERS].
SEE PARAGRAPHS 2.1–2.9 FOR ADDITIONAL DETAILS & VARIATIONS

Figure 400
BOX AND CONDUIT SUPPORT

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