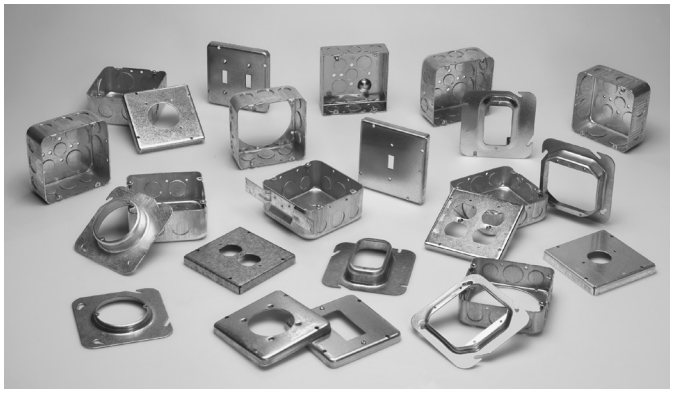
4 11/16" SQUARE OUTLET BOXES & COVERS

Applications:

- For use with conduit
- For use in commercial and industrial applications, where larger sized conductor or wiring devices are needed and additional volume is required
- Available in red for fire alarm applications

Features:

- Ideal for exposed work applications, providing an easy method for the installation of electrical devices (switches, receptacles, fans, lights, etc.)
- Raised ground screw location in the welded boxes saves time in installation
- Concentric knockouts have a ½" and ¾" knockout in the same location for customer flexibility
- Knockouts are suitable for use without a bonding jumper in circuits above or below 250 volts
- Available in two depths for differing cubic capacity requirements
- Welded or drawn construction to match customer preference
- Extensive cover offering to meet various customer applications and needs



Certifications and compliances:

- UL Listed

4 11/16" SQUARE OUTLET BOXES – 29.5 CUBIC INCH CAPACITY

1½" DEEP WITH CONDUIT KOs

UL LISTED

TP548

TP549

Cat. #	Description	Grounding method	Knockouts		Unit qty.	Wt. lbs. per 100
			Sides	Bottom		
TP548	Drawn	-	8 - ½", 4 - ¾"	3 - ½", 2 - ¾"	25	84
TP549C	Drawn	Ground bump	8 - ½", 4 - ½" + ¾" C	3 - ½", 2 - ¾"	25	75

CcUL Listed.

General information

Compliances:

Article 314 of the National Electrical Code® (NEC®) covers the installation and use of boxes. The article includes table references that guide the electrician in the selection of the proper size box necessary to safely accommodate electrical service requirements. The box capacity table is reproduced in part from NEC as a quick reference and guide. The NEC should be consulted for complete details.

Outlet boxes for fixture or fan support:

A box, with or without a bracket or bar hanger, intended for support of a fixture/luminaire weighing 50 lbs. or less is marked "FOR FIXTURE/LUMINAIRE SUPPORT" on the carton to indicate that the box is intended for fixture/luminaire support. A box, with or without a bracket or bar hanger, intended for support of a fixture/luminaire weighing more than 50 lbs. is marked with the weight of the fixture/luminaire to be supported. Metallic device boxes and device plaster rings have not been investigated for support of a ceiling fixture/luminaire unless marked for use in ceilings, walls and with the weight of the product to be supported. Metallic device boxes intended to be installed in an existing structure have been investigated for the support of utilization equipment weighing not more than 6 lbs.

Knockouts:

Under File No. E-23156, Eaton's Crouse-Hinds Series concentric and "moon" KO style boxes, the following is stated "Suitable for bonding without any additional bonding means around concentric (or eccentric) knockouts where used in circuits above or below 250V."

Fire resistance rating wall penetrations:

Eaton's Crouse-Hinds series products are produced in accordance with the requirements of UL514A, UL514B and UL514C, and are classified for fire resistance according to the standard, Fire Tests of Building Construction and Materials, ANSI/UL263, ASTM E 119 and NFPA 251. This listing is based on products when used in a fire rated (2 HR) wall or ceiling. Eaton's Crouse-Hinds series steel boxes are listed with UL File No. E-23156 and non-metallic boxes are listed with UL File No. E-102328 and UL (2 HR fire rated) File No. R9933.

NEMA standards:

Eaton's Crouse-Hinds series switch and outlet boxes comply with the requirements of NEMA Standard OS-1 and Federal Spec. W-J-800F.

Grounding hole:

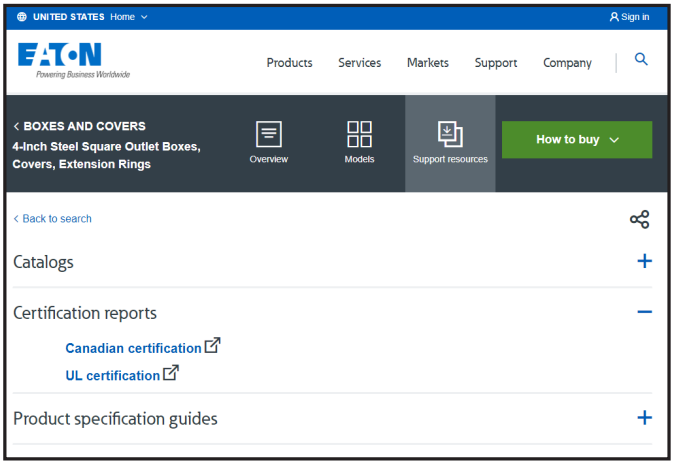
The majority of Crouse-Hinds outlet boxes have at least one tapped #10-32 grounding hole.

Combination screw heads:

Cover and clamp screws have combination slotted/Phillips screw heads. Self-tapping screws provide for 100% thread engagement.

Third party certification information:

Third party certification documents can be found on the product detail page of the Eaton website. Just click on the resource tab and click on the link to view the third party document. Document can then be saved or printed.



Standard materials – steel covers, outlet and switch boxes:

- Steel boxes and covers are made of .0625 inch thick pre-galvanized sheet steel
- Handy box covers are made of .030 inch thick galvanized sheet steel

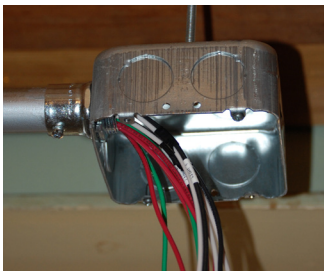
Calculating box size and wire fill

Calculate the minimum box size:

NEC® 314.16 (A) and (B) describes the detailed way of counting wires, as well as clamps, fittings or devices (i.e., switches, receptacles, combination devices) – by establishing an equivalent conductor value for each. Those values are added together to get a total number of conductors. The minimum size box is the smallest one in Table 314.16(A) that can accommodate that number of conductors.

1. No matter how many ground wires come into a box, they only count as one conductor within the box.
2. Any wire running unbroken through the box counts as one wire.
3. Each wire coming into a splice device (crimp or twist-on type) is counted as one wire.
4. Each wire coming into the box and connecting to a device counts as one wire of that size.
5. Fixture studs, cable clamps and hickeys are to be counted as one regardless of how many there may be. If a box contains two cable clamps, the total is only to be increased by one.
6. Where devices are mounted in the box, the total conductor count must be increased by two for each mounting strap.

Example #1:



Conduit Boxes: Supply power to a switch that will control a remote light with #14 conductors. Metal conduit and fittings will be used as the wire way. You must provide space for four conductors and one switch, totaling 6. Read across the line "Allowances" in the Box Fill table to column 6, then read down to the minimum cubic inches required for #14 conductor. This example requires a minimum of 12.0 cubic inches.

Example #2:

Cable Boxes: This example will illustrate how the minimum size is determined for a box with cable clamps fed by two #12-2 nonmetallic sheathed cables and supplying a 15A duplex receptacle. After supplying the receptacle, the conductors are extended to other outlets.

Circuit conductors	4
Ground conductors	1
Cable clamps	1
Device (receptacle)	2
Total	8

Using the Box Fill table from the next page, read across the line "Allowances" to column 8, then down to the minimum cubic inches required for #12 conductor. This example requires a minimum of 18.0 cubic inches.

Table 314.16(A) metal boxes

Box dimension (in.)	Min. Cu. in.	Maximum number of conductors (arranged by AWG size)						
Trade Size or Type	Cap.	No. 18	No. 16	No. 14	No. 12	No. 10	No. 8	No. 6
4 X 1¼ round or octagonal	12.5	8	7	6	5	5	5	2
4 X 1½ round or octagonal	15.5	10	8	7	6	6	5	3
4 X 2⅛ round or octagonal	21.5	14	12	10	9	8	7	4
4 X 1¼ square	18.0	12	10	9	8	7	6	3
4 X 1½ square	21.0	14	12	10	9	8	7	4
4 X 2⅛ square	30.3	20	17	15	13	12	10	6
4 11/16 X 1¼ square	25.5	17	14	12	11	10	8	5
4 11/16 X 1½ square	29.5	19	16	14	13	11	9	5
4 11/16 X 2⅛ square	42.0	28	24	21	18	16	14	8
3 X 2 x 1½ device	7.5	5	4	3	3	3	2	1
3 X 2 x 2 device	10.0	6	5	5	4	4	3	2
3 X 2 x 2¼ device	10.5	7	6	5	4	4	3	2
3 X 2 x 2½ device	12.5	8	7	6	5	5	4	2
3 X 2 x 2¾ device	14.0	9	8	7	6	5	4	2
3 X 2 x 3½ device	18.0	12	10	9	8	7	6	3
4 X 2⅛ x 1½ device	10.3	6	5	5	4	4	3	2
4 X 2⅛ x 1⅞ device	13.0	8	7	6	5	5	4	2
4 X 2⅛ x 2⅛ device	14.5	9	8	7	6	5	4	2
3¾ X 2 x 2½ masonry box/gang	14.0	9	8	7	6	5	4	2
3¾ X 2 x 3½ masonry box/gang	21.0	14	12	10	9	8	7	4
FS - 1¾ single cover gang	13.5	9	7	6	6	5	4	2
FD - 2⅜ single cover gang	18.0	12	10	9	8	7	6	3
FS - 1¾ multiple cover gang	18.0	12	10	9	8	7	6	3
FD - 2⅜ multiple cover gang	24.0	16	13	12	10	9	8	4

Table 314.16(B) volume required per conductor

Size of conductor	Free space within box for each conductor
No. 18	1.5 cubic inches
No. 16	1.75 cubic inches
No. 14	2 cubic inches
No. 12	2.25 cubic inches
No. 10	2.5 cubic inches
No. 8	3 cubic inches
No. 6	5 cubic inches

For SI units: one cubic inch = 16.4 cm^3.