

JIS

JAPANESE INDUSTRIAL STANDARD

Boxes for rigid metal conduits

Ⓒ JIS C 8336—1991

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Boxes for rigid metal conduits

C 8336-1991

1. Scope

This Japanese Industrial Standard specifies switch boxes, outlet boxes, concrete boxes and box covers for use with the conduits specified in JIS C 8305.

Remarks: The following standards are cited in this Standard:

JIS C 8305 Rigid Steel Conduits

JIS C 8359 General Rules for Fittings of Metal Conduits
and Underfloor Ducts

2. Classification

The classification of boxes is as given in Table 1, and of the cover types are as given in Table 2.

Table 1. Classification of boxes

Unit: mm

Classification			Attached Fig.	Thick- ness of steel sheet
Name of box	Nominal designation			
Switch box	For one small switch (without cover)	-	1	1.2
	For one switch (without cover)	Shallow type Deep type	2	
	For precast concrete	Shallow type Deep type	3	1.6
	For two switches (without cover)	Shallow type Deep type	4	1.2
	For one switch (with cover)	-	5, 6	1.6
	For two switches (with cover)	-	7, 8	
	For three switches (with cover)	-	7, 8	
	For four switches (with cover)	-	7, 8	
	For five switches (with cover)	-	7, 8	
Outlet box	Octagonal	Shallow type Deep type	9	1.6
	Medium square	Shallow type Deep type	11	
	Large square	Shallow type Deep type	11	
	Octagonal for precast concrete	Shallow type Deep type	10	
Con- crete box	Octagonal	-	13, 14	2.0
	Medium square	-	15, 16	
	Large square	-	17, 18	
	Octagonal for precast concrete	-	19, 20	1.6

Table 2. Classification of covers

Classification		Name of applicable			Thick- ness of steel sheet mm
		Octagonal outlet box, Octagonal concrete box	Medium square outlet box, Medium square concrete box	Large square outlet box, Large square concrete box	
Name of cover		Nominal designation			
		Octagonal	Medium square	Large square	
Blank cover		①	②	③	1.6
Cover with round opening	Surface cover	④	⑤	⑥	
	Flat cover	⑦	⑧	⑨	
Switch cover	For one switch	Surface cover	⑩	⑪	
		Flat cover	⑫	⑬	
	For two switch- es	Surface cover	-	⑮	
		Flat cover	-	⑰	
Fluorescent lamp cover	Surface cover	⑱	⑲	⑳	
	Flat cover	㉑	㉒	㉓	

Remarks: Figures in circles indicate the number given in Attached Fig. 21.

3. Performance

The rust prevention shall comply with the provision of 4.2 (rust prevention) of JIS C 8359 when subjected to the test of 7.2.

Boxes for which rust prevention is supplied by synthetic resin coating shall conform to 4.3 (coating performance) of JIS C 8359, and those for which rust prevention is supplied by painting shall conform to 4.4 (paint film performance) of JIS C 8359.

4. Construction

In addition to compliance with 5 (construction) of JIS C 8359, the construction shall satisfy the following requirements:

- (1) The boxes and covers shall be made of steel sheet of thickness given in Tables 1 and 2 by means of press or welding work.
- (2) Knockouts shall be so arranged on the box that the use of lock nuts, bushings and the like is not disturbed.
- (3) When a part to which a cover or apparatus is mounted, commonly referred to as a flange, is provided on a box, it shall be made by press, welding or other tightening method, including caulking.
- (4) The dimensions and shapes of set screw holes for covers is arbitrary, but shall allow for secure fixing of the cover to the box.
- (5) Holes of ϕ 6 mm used for mounting on a structure may be substituted by knockouts.

5. Shapes and dimensions

The shapes and dimensions shall be as given in Attached Figs. 1 to 21. The figures show examples of shapes. The tolerances on dimensions shall follow 6 (dimensions and tolerances) of JIS C 8359.

The diameters of knockouts for use in conduit connecting shall be as given in Table 3.

Table 3. Diameter of knockouts for use in conduit connecting

For thin wall steel Unit: mm		For thick wall steel Unit: mm	
Nominal size of knockout	Diameter of knockout	Nominal size of knockout	Diameter of knockout
C19	19.6	G16	21.5
C25	26.1	G22	27.1
C31	32.5	G28	34.0

Remarks: The nominal size of a knockout is the nominal size of the applicable conduit.

6. Materials

The materials shall follow 7 (materials of principal parts) of JIS C 8359.

7. Test methods

7.1 Construction test The construction test shall examine whether the box complies with the provisions of 4 to 6 and 10.

7.2 Rust prevention test The rust prevention test shall follow 8.3 (rust prevention test) of JIS C 8359.

The coating performance test of boxes for which rust prevention is supplied by synthetic resin coating shall be performed as given in 8.4 (coating performance test) of JIS C 8359, and the paint film test of those for which rust prevention is supplied by painting shall be performed as given in 8.5 (paint film test) of JIS C 8359.

8. Inspection

8.1 Type inspection When the type inspection is carried out on the following items in accordance with the method of 7, the results shall comply with the provisions specified in 3 to 6 and 10.

- (1) Rust prevention
- (2) Construction
- (3) Shape and dimensions
- (4) Materials
- (5) Marking

8.2 Delivery inspection When the delivery inspection is carried out on the items of 8.1 in accordance with the method of 7, the results shall comply with the provisions specified in 3 to 6 and 10. A part of or all of this inspection may, however, be omitted upon agreement between the purchaser and the supplier.

9. Designation of product

The designation of product shall follow 10 (designation of product) of JIS C 8359.

Example 1: Medium square outlet box shallow type G16 - G22

Example 2: Switch box for one switch (with cover) C19 - C25

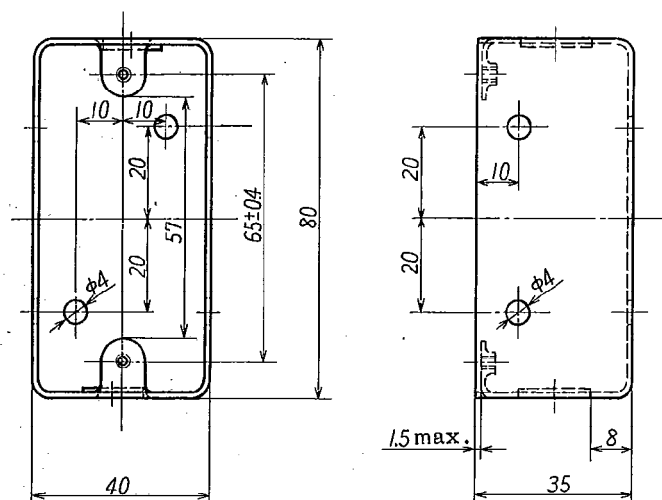
Example 3: Large square raised cover with round opening

10. Marking

The marking shall follow 11 (marking) of JIS C 8359.

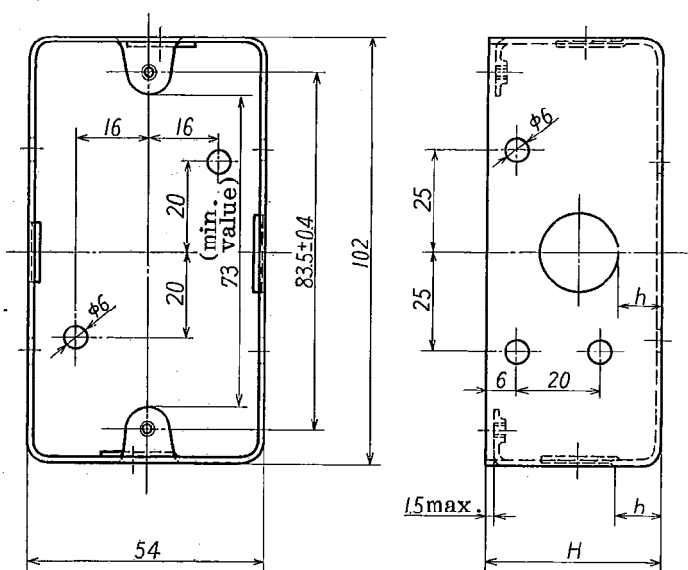
Attached Fig. 1. Switch box for one small switch (without cover)

Unit: mm



Attached Fig. 2. Switch box for one switch (without cover)

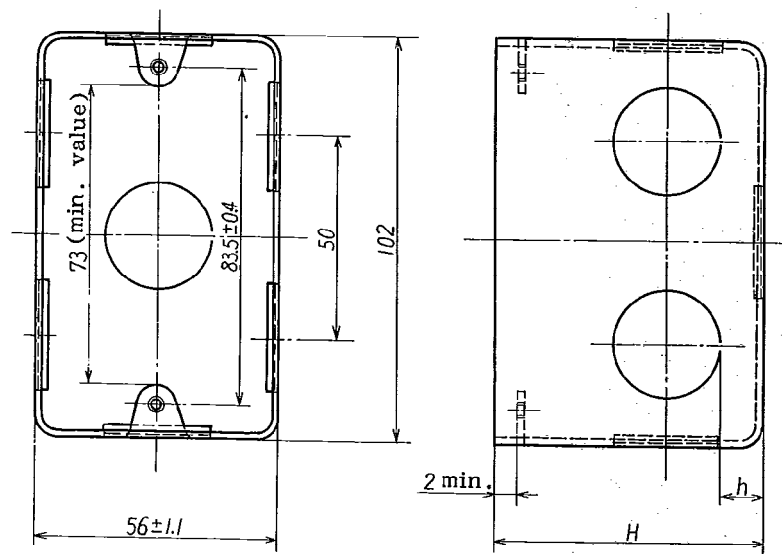
Unit: mm



Classification	H	h
Shallow type	35	8
Deep type	44	10

Attached Fig. 3. Switch box for precast concrete

Unit: mm



Classification	H	h (min. value)
Shallow type	50 ± 1.1	8 ± 0.6
Deep type	65 ± 1.1	