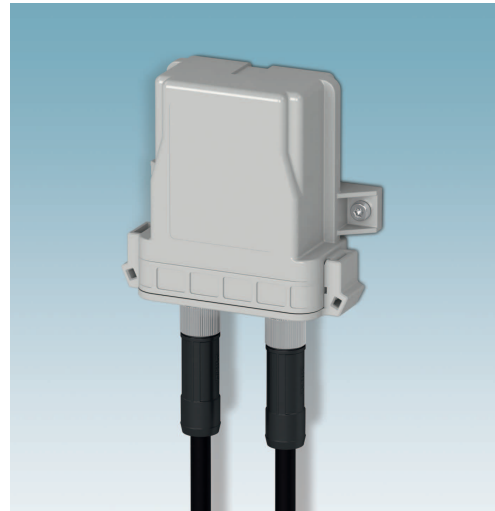


Environmental case system mini (ECS...)

Electronic enclosures

Data sheet
4112_en_A

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1 Description

The Environmental Case System (ECS) is an enclosure system to protect devices from the elements in outdoor or indoor applications. The ECS... product line consists of a base and faceplate that are combined to make a complete enclosure system. This data sheet covers an expansion to the family for the smallest size of the ECS... product line (ECS-...-64X80-...).

The ECS-...-64X80-... enclosure is available in two different locking methods: screw and mechanical latch. Both locking methods are available with or without a breather vent to alleviate pressure buildup when the enclosure is sealed and reduce condensation formation.

Faceplates for the ECS-...-64X80-... are available with locking methods to match the enclosures and will be blank for customization to meet application requirements.

Wall, machine, and pole mounting options allow flexibility for different applications.

i Make sure you always use the latest documentation. It can be downloaded at phoenixcontact.net/products.

i This document is valid for all products listed in the “Ordering data” on page 4.

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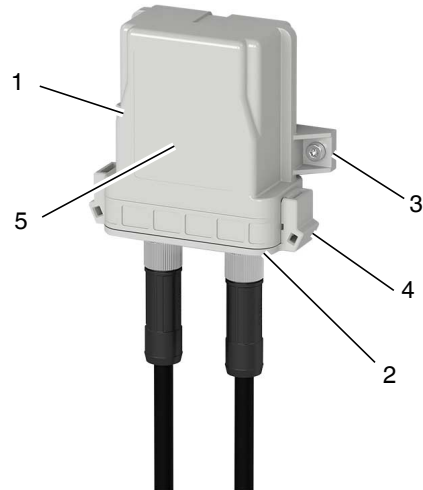
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2 Overview of the ECS-...-64X80-...

Figure 1 Typical ECS-...-64X80-... assembly (mechanical latch shown)



- | | | | |
|---|---------------|---|---------------------------------|
| 1 | Base | 4 | Locking mechanism (latch shown) |
| 2 | Faceplate | 5 | Label area |
| 3 | Mounting foot | | |

The ECS.. system provides two locking mechanisms to secure the faceplate to the base.

- Mechanical latch: No tools are required to secure the faceplate to the base but a flat screwdriver is required to release the faceplate for removal.
- Screw latch: Faceplate is secured to the base using a screw that accepts a flat blade screwdriver.

3 Ordering data

Products

Description	Type	Order No.	Pcs./Pkt.
Base, mechanical latch, non-vented, gray	ECS-B-64X80-L-UV-NV GY	1186431	5
Base, screw latch, non-vented, gray	ECS-B-64X80-S-UV-NV GY	1186433	5
Base, mechanical latch, vented, gray	ECS-B-64X80-L-UV-V GY	1196942	5
Base, screw latch, vented, gray	ECS-B-64X80-S-UV-V GY	1196941	5
Faceplate, mechanical latch, blank, gray	ECS-P-64X80-L-UV-B GY	1186436	5
Faceplate, screw latch, blank, gray	ECS-P-64X80-S-UV-B GY	1186435	5

4 Technical data

General data

Ambient temperature, operating	-40 ... 100°C
Ambient temperature, storage	-40 ... 100°C
UL 94 flammability rating	V0
Material	Polycarbonate
Color	Gray (similar to RAL 7042)
Power dissipation, P_v , at 20°C (vertical mounting position)	11.5 W (without solar radiation influence)
Degree of protection	IP66/67/69
NEMA 250 enclosure rating	6

Conformance

UL 746C (Outdoor suitability)	f1
IEC 60068 (Vibration)	15g: 10-2000-10 Hz X, Y, Z for 2.5 h, with load of 100 g
IEC 60068 (Shock)	50g, 20 pulses, with load of 100 g
EN 50102 (Impact)	IK08
IEC 60068 (Salt fog)	96 h

5 Dimensions

5.1 External

Figure 2 Assembled latch enclosure and blank face-plates

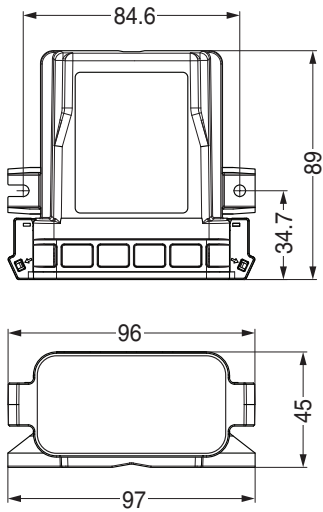
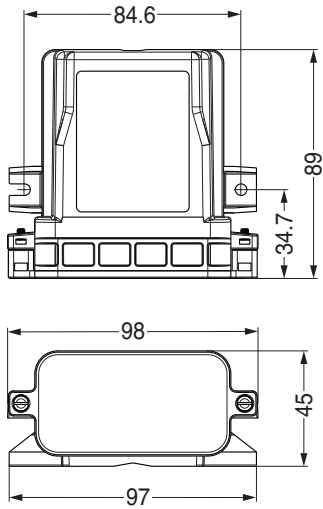
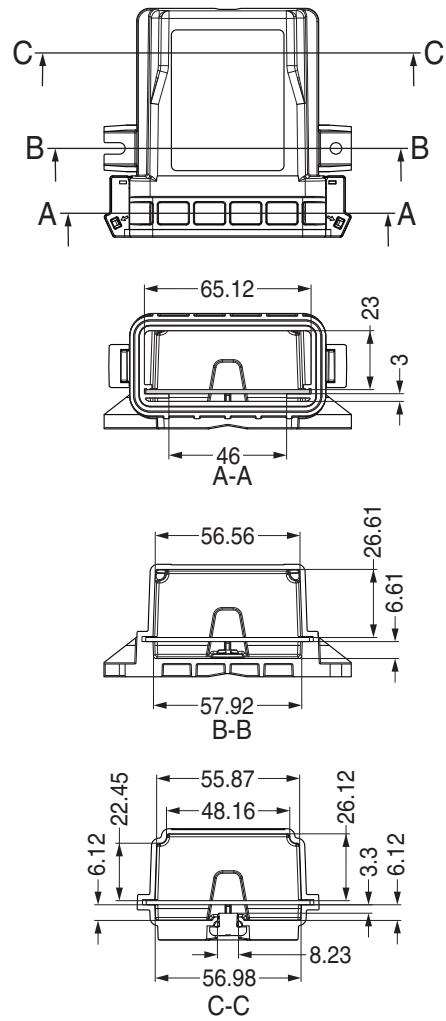


Figure 3 Assembled screw latch enclosure and blank face plates



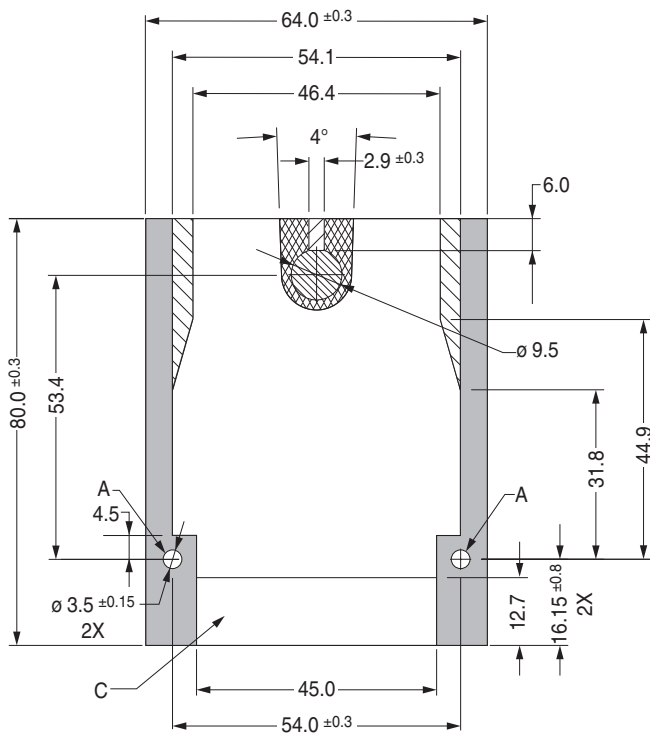
5.2 Internal







Figure 4 Inside view of enclosure



5.3 PCB dimensions

Figure 5 Circuit board design dimensions and restrictions for ECS-...-64X80-... enclosures



-  Component/Trace keep-out zone
-  Maximum component height above PCB = 21.8 mm
Maximum component height below PCB = 5.4 mm
-  Maximum component height above PCB = 25.5 mm
Maximum component height below PCB = 4.2 mm
-  Maximum component height above PCB = 25.5 mm
Maximum component height below PCB = No trace or components
-  Maximum component height above PCB = 25.5 mm
Maximum component height below PCB = 2.8 mm
-  Maximum component height above PCB = 25.5 mm
Maximum component height below PCB = 5.4 mm

General information

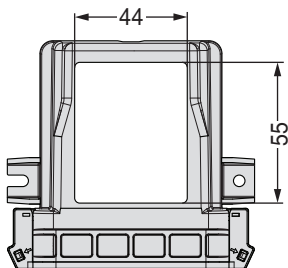
- Simplified representation
- Document excluded from change process
- Linear dimensions (mm)
- Web: PhoenixContact.com webcode #0857

Additional information

- A) PCB mounting hardware hole
- B) PCB thickness = 1.57 mm (0.062 in.)
- C) Area for faceplate PCB connections

5.4 Label area

Figure 6 Label area



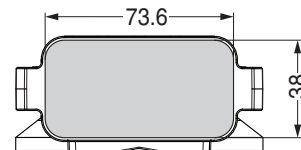
6 Connection technology

The ECS-...-64X80-... enclosures provides for the use of any existing IP6x-rated connection technology in the market.

6.1 ECS-P-... faceplate

The ECS-P-... faceplate allows users to customize the faceplate to meet specific application requirements. The ECS-...-64X80-... is only available with a blank faceplate, but the faceplate provides a large sealing surface on the front of the faceplate.

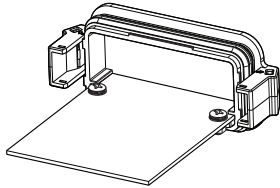
Figure 7 Available faceplate connector area



7 Installation

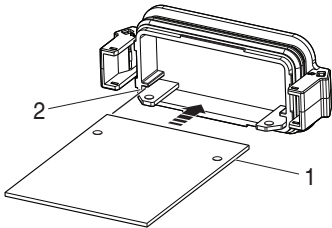
7.1 Printed circuit board to faceplate assembly

Figure 8 PCB and ECS-P-... assembly



1. Place the circuit board (1) into the press-fit slots (2) on the ECS-P-.... Apply pressure until the circuit board is fully seated in the slots.

Figure 9 Circuit board seated in slot

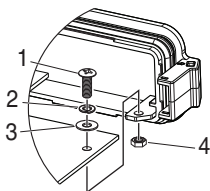


2. Additional hardware can be utilized to secure the circuit board to the faceplate through the provide holes in the press-fit slot base.



Hardware is not provided with the faceplate and must be sourced locally. Recommendations are shown in Figure 10.

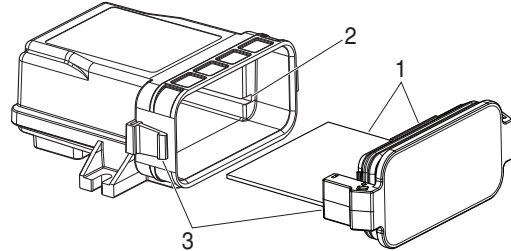
Figure 10 Optional hardware recommendations



- 1 M3 x 8 screw
- 2 M3 lock washer
- 3 M3 flat washer
- 4 M3 nut

7.2 Assembly of faceplate and base

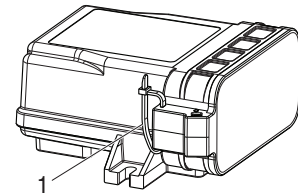
Figure 11 Assembly of faceplate to base



1. Align the PCB and ECS-P-... assembly (1) with the slots in the base (2).
2. Gently slide the PCB and ECS-P-... assembly (2) into the ECS-B base (1).
3. To secure the faceplate to the base:
 - For ECS-...-L-...: Press the ECS-...-L-... faceplate into the latches on the ECS-B-... base until they snap together (3).
 - For ECS-...-S-...: Torque the two faceplate screws to 0.8 Nm using a 3.5 mm flat blade screwdriver (not shown).

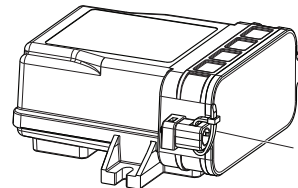
7.3 Tamper protection

Figure 12 Tamper protection on ECS-...-L-... enclosures



- 1 Zip tie

Figure 13 Tamper protection on ECS-...-S-... enclosures



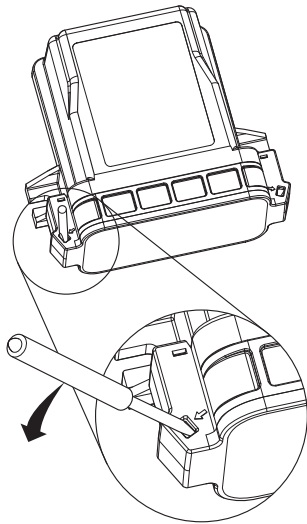
- 1 Zip tie

Insert a zip tie (obtained locally) as shown to prevent the faceplate from being removed from the base.

7.4 Disassembly

ECS-...-L-...

Figure 14 Faceplate removal from the ECS-...-L-...



1. Insert a flat screwdriver (maximum shaft diameter of 3.5 mm) into the square opening in the top of the faceplate.

i The recommended screwdriver is Order No. 1004302.

2. Pivot the screwdriver in the direction of the arrow molded into the faceplate.
3. Repeat the process on the other side of the faceplate. Be sure to hold the faceplate assembly to prevent it from falling out of the base when released.
4. With both latches released, pull the ECS-P-... faceplate assembly straight out of the base.

ECS-...-S-...

1. Use a 3.5 mm flat screwdriver (Order No. 1004302) to turn the two faceplate screws counterclockwise until the screws disengage from the base.
2. Pull the ECS-P-... faceplate assembly straight out of the base.

7.5 Mounting the ECS-...-64X80-...

The ECS-...-64X80-... may be mounted directly to a wall or to a pole utilizing the integrated pole-mount feature.

7.5.1 Wall mount

The ECS-...-64X80-... enclosure accepts hardware for wall mounting of up to 4 mm diameter.

i Mounting hardware is not included and must be obtained locally. Select mounting hardware that is appropriate for the mounting surface.

Use the base as a template or refer to the [Figure 2](#) and [Figure 3](#) on [page 5](#) for hole locations.

7.5.2 Pole mount

The ECS-...-64X80-... enclosure may be attached to round or square pole using the integrated feature on the bottom of the ECS-B-... base and a hose or band clamp (maximum band width of 16 mm).

i The hose/band clamp is not included and must be obtained locally.

The recommended pole size for mounting the ECS-...-64X80-... is 2.54 to 15 cm (1 to 6 in.) diameter.

Figure 15 Typical pole-mounted ECS-...-64X80-...

