

EMC Enclosures

Electromagnetic interference (EMI) may pose a problem when densely packed electronic assemblies have internal components that might interfere with each other. Electromagnetic shielding can be essential to assure proper operation of the electronic equipment. Hoffman EMC-designated enclosures provide a higher degree of protection against EMI than standard enclosures because the design has conductive sealing around the door seams while maintaining the environmental UL/CSA rating.



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EMC Enclosure Matrix

| EMC Enclosure Style | Material/finish | Gasket Type | Min. Size (in.) | Max. Size (in.) | Type | Shielding at 1 GHz (dB) |
|---------------------------------------|--------------------------------------|-----------------------------|-----------------------|-----------------------|---------|-------------------------|
| PROLINE® | Mild steel/painted, plated at gasket | Conductive fabric over foam | 27.16 x 23.62 x 23.62 | 86.61x39.37x23.62 | Type I | 20 |
| INLINE® Mild Steel Screw Cover | Mild steel/painted, plated at gasket | Conductive fabric over foam | 5.91 x 5.91 x 4.72 | 13.78 x 11.81 x 7.87 | Type I2 | >50 |
| INLINE® Mild Steel Hinge Cover | Mild steel/painted, plated at gasket | Conductive fabric over foam | 5.91 x 5.91 x 4.72 | 13.78 x 11.81 x 7.87 | Type I2 | >55 |
| Continuous Hinge Junction Boxes | Mild steel/plated finish | Woven plated steel mesh | 6.11 x 4.00 x 3.00 | 16.00 x 14.00 x 6.00 | Type I2 | >85 |
| Continuous Hinge Junction Boxes | Stainless steel | Embedded monel mesh | 6.11 x 4.00 x 3.00 | 16.00 x 14.00 x 6.00 | Type 4X | >90 |
| CONCEPT® | Mild steel | Finger stock | 12.00 x 12.00 x 6.00 | 36.00 x 24.00 x 12.00 | Type 4 | >35 |
| CONCEPT® | Stainless steel | Finger stock | 12.00 x 12.00 x 6.00 | 36.00 x 24.00 x 12.00 | Type 4X | >20 |
| Single Door Type I2 and I3 Enclosures | Mild steel/painted, plated at gasket | Woven plated steel mesh | 16.00 x 12.00 x 6.00 | 60.00 x 36.00 x 12.00 | Type I2 | >75 |
| Single Door Type I2 and I3 Enclosures | Stainless steel | Embedded monel mesh | 16.00 x 12.00 x 6.00 | 60.00 x 36.00 x 12.00 | Type 4X | >85 |
| QLINE® | Polycarbonate | Silver/Silicone | 4.72 x 3.15 x 3.35 | 15.75 x 7.87 x 5.20 | Type 4X | >40 |

The PROLINE system of modular components allows you to design your own full-featured enclosures with EMI/RFI shielding. For added convenience, specify the Hoffman Assemble-To-Order (A-T-O) program and your custom solution will ship pre-assembled.

PROLINE EMI/RFI Enclosures

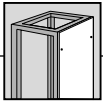
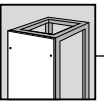
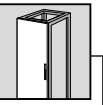
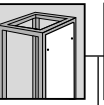
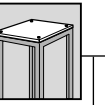
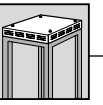
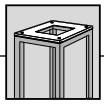
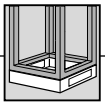
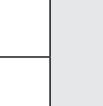
PROLINE EMI/RFI-shielded frames are welded 12 gauge steel with a plated finish to provide a conductive, corrosion-resistant finish. EMI/RFI-shielded external frame components such as doors, covers, sides, bases, and tops are available for use with the plated frames. All components are painted with RAL 7035 light gray textured polyester powder paint except for conductive surfaces. Components have a conductive finish and EMI/RFI gasketing.

Construction

- Metalized non-woven fabric EMI/RFI material covering UL94HP-rated urethane foam gasket
- Frame and external components are plated
- Exterior painted RAL 7035 light gray
- Interior is unpainted with a plated finish
- Tested in accordance with German Standard VG 95-373 and MIL-STD-285
- Shielding effectiveness appropriate for many applications; see attenuation graph on facing page



Component Selection Matrix Steel Sides, Covers, and Door Options

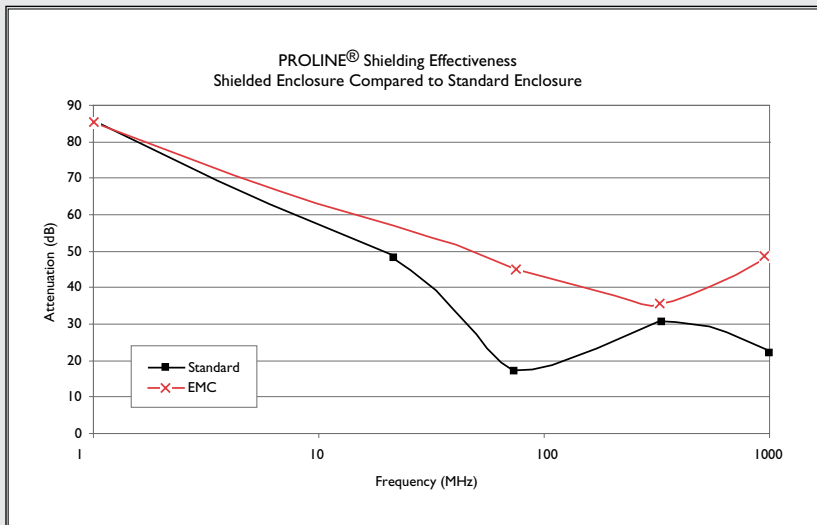
| Single-Bay PROLINE Frame | | |  |  |  |  |  |  |  |  |  |
|--------------------------|------|-----|---|---|---|---|---|--|---|---|---|
| A | B | C | Solid Side | Solid Cover | Solid Door | Barrier Panel | Solid Top | Vented Top | Top with Cutout | 0mm Solid Base | 100mm Solid Base |
| 700 | 600 | 600 | | | | | PT66HF2 | PVT3F66EMC | PPTHP66EMC | PB066HF2 | PB166HF |
| 700 | 800 | 600 | | | | | PT86HF2 | PVT3F86EMC | PPTHP86EMC | PB086HF2 | PB186HF |
| 1400 | 600 | 500 | | PCS146HF2 | PDS146HF2 | | PT65HF2 | | PPTHP65EMC | PB065HF2 | PB165HF |
| 1400 | 600 | 600 | PSS146HF2 | PCS146HF2 | PDS146HF2 | | PT66HF2 | PVT3F66EMC | PPTHP66EMC | PB066HF2 | PB166HF |
| 1400 | 600 | 800 | | PCS146HF2 | PDS146HF2 | | PT68HF2 | PVT3F68EMC | PPTHP68EMC | PB068HF2 | PB168HF |
| 1400 | 800 | 500 | PSS145HF2 | | | | PT85HF2 | PVT3F85EMC | PPTHP85EMC | PB085HF2 | PB185HF |
| 1400 | 800 | 600 | PSS146HF2 | | | | PT86HF2 | PVT3F86EMC | PPTHP86EMC | PB086HF2 | PB186HF |
| 1400 | 800 | 800 | PSS148HF2 | | | | PT88HF2 | PVT3F88EMC | PPTHP88EMC | PB088HF2 | PB188HF |
| 1600 | 600 | 400 | PSS164HF2 | | | | | | | | |
| 1600 | 600 | 500 | PSS165HF2 | | | PBB165EMC | | PVT3F65EMC | | | |
| 1600 | 600 | 600 | PSS166HF2 | | | PBB166EMC | PT66HF2 | PVT3F66EMC | PPTHP66EMC | PB066HF2 | PB166HF |
| 1600 | 600 | 800 | PSS168HF2 | | | PBB168EMC | PT68HF2 | PVT3F68EMC | PPTHP68EMC | PB068HF2 | PB168HF |
| 1600 | 700 | 600 | PSS166HF2 | | | PBB166EMC | | | | | |
| 1600 | 700 | 800 | PSS168HF2 | | | PBB168EMC | PT78HF2 | PVT3F78EMC | PPTHP78EMC | PB078HF2 | PB178HF |
| 1600 | 700 | 900 | PSS169HF2 | | | | | | | | |
| 1600 | 800 | 400 | PSS164HF2 | PCS168HF2 | PDS168HF2 | | | | | | |
| 1600 | 800 | 500 | PSS165HF2 | PCS168HF2 | PDS168HF2 | PBB165EMC | | | | | |
| 1600 | 800 | 600 | PSS166HF2 | PCS168HF2 | PDS168HF2 | PBB166EMC | PT86HF2 | PVT3F86EMC | PPTHP86EMC | PB086HF2 | PB186HF |
| 1600 | 800 | 800 | PSS168HF2 | PCS168HF2 | PDS168HF2 | PBB168EMC | PT88HF2 | PVT3F88EMC | PPTHP88EMC | PB088HF2 | PB188HF |
| 1800 | 600 | 400 | | PCS186HF2 | PDS186HF2 | | PT64HF2 | | | PB064HF2 | PB164HF |
| 1800 | 600 | 500 | | PCS186HF2 | PDS186HF2 | PBB185EMC | PT65HF2 | PVT3F65EMC | PPTHP65EMC | PB065HF2 | PB165HF |
| 1800 | 600 | 600 | PSS186HF2 | PCS186HF2 | PDS186HF2 | PBB186EMC | PT66HF2 | PVT3F66EMC | PPTHP66EMC | PB066HF2 | PB166HF |
| 1800 | 600 | 800 | PSS188HF2 | PCS186HF2 | PDS186HF2 | PBB188EMC | PT68HF2 | PVT3F68EMC | PPTHP68EMC | PB068HF2 | PB168HF |
| 1800 | 700 | 600 | PSS186HF2 | | | PBB186EMC | PT76HF2 | PVT3F76EMC | PPTHP76EMC | PB076HF2 | PB176HF |
| 1800 | 700 | 800 | PSS188HF2 | | | PBB188EMC | PT78HF2 | PVT3F78EMC | PPTHP78EMC | PB078HF2 | PB178HF |
| 1800 | 700 | 900 | | | | | PT79HF2 | PVT3F79EMC | PPTHP79EMC | PB079HF2 | PB179HF |
| 1800 | 800 | 400 | PSS184HF2 | PCS188HF2 | PDS188HF2 | | PT84HF2 | | | PB084HF2 | PB184HF |
| 1800 | 800 | 500 | PSS185HF2 | PCS188HF2 | PDS188HF2 | | PT85HF2 | PVT3F85EMC | PPTHP85EMC | PB085HF2 | PB185HF |
| 1800 | 800 | 600 | PSS186HF2 | PCS188HF2 | PDS188HF2 | PBB186EMC | PT86HF2 | PVT3F86EMC | PPTHP86EMC | PB086HF2 | PB186HF |
| 1800 | 800 | 800 | PSS188HF2 | PCS188HF2 | PDS188HF2 | PBB188EMC | PT88HF2 | PVT3F88EMC | PPTHP88EMC | PB088HF2 | PB188HF |
| 1800 | 1000 | 500 | PSS185HF2 | | | PBB185EMC | | | | | |
| 1800 | 1000 | 600 | PSS186HF2 | | | PBB186EMC | | | | | |
| 1800 | 1000 | 800 | PSS188HF2 | | | PBB188EMC | | | | | |

continued



Component Selection Matrix Steel Sides, Covers, and Door Options (continued)

| Single-Bay PROLINE Frame | | | | | | | | | | | |
|--------------------------|------|-----|------------|-------------|------------|---------------|-----------|------------|-----------------|----------------|------------------|
| A | B | C | Solid Side | Solid Cover | Solid Door | Barrier Panel | Solid Top | Vented Top | Top with Cutout | 0mm Solid Base | 100mm Solid Base |
| 2000 | 600 | 400 | PSS204HF2 | PCS206HF2 | PDS206HF2 | | PT64HF2 | | | PB064HF2 | PB164HF |
| 2000 | 400 | 500 | PSS205HF2 | | | PBB205EMC | | | | PB045HF2 | PB145HF |
| 2000 | 600 | 500 | PSS205HF2 | PCS206HF2 | PDS206HF2 | PBB205EMC | PT65HF2 | PVT3F65EMC | PPTHP65EMC | PB065HF2 | PB165HF |
| 2000 | 400 | 600 | PSS206HF2 | | | PBB206EMC | | | | PB046HF2 | PB146HF |
| 2000 | 600 | 600 | PSS206HF2 | PCS206HF2 | PDS206HF2 | PBB206EMC | PT66HF2 | PVT3F66EMC | PPTHP66EMC | PB066HF2 | PB166HF |
| 2000 | 600 | 800 | PSS208HF2 | PCS206HF2 | PDS206HF2 | PBB208EMC | PT68HF2 | PVT3F68EMC | PPTHP68EMC | PB068HF2 | PB168HF |
| 2000 | 700 | 600 | PSS206HF2 | PCS207HF2 | PDS207HF2 | PBB206EMC | PT76HF2 | PVT3F76EMC | PPTHP76EMC | PB076HF2 | PB176HF |
| 2000 | 700 | 800 | PSS208HF2 | PCS207HF2 | PDS207HF2 | PBB208EMC | PT78HF2 | PVT3F78EMC | PPTHP78EMC | PB078HF2 | PB178HF |
| 2000 | 700 | 900 | PSS209HF2 | PCS207HF2 | PDS207HF2 | | PT79HF2 | PVT3F79EMC | PPTHP79EMC | PB079HF2 | PB179HF |
| 2000 | 800 | 400 | PSS204HF2 | PCS208HF2 | PDS208HF2 | | PT84HF2 | | | PB084HF2 | PB184HF |
| 2000 | 800 | 500 | PSS205HF2 | PCS208HF2 | PDS208HF2 | PBB205EMC | PT85HF2 | PVT3F85EMC | PPTHP85EMC | PB085HF2 | PB185HF |
| 2000 | 800 | 600 | PSS206HF2 | PCS208HF2 | PDS208HF2 | PBB206EMC | PT86HF2 | PVT3F86EMC | PPTHP86EMC | PB086HF2 | PB186HF |
| 2000 | 800 | 800 | PSS208HF2 | PCS208HF2 | PDS208HF2 | PBB208EMC | PT88HF2 | PVT3F88EMC | PPTHP88EMC | PB088HF2 | PB188HF |
| 2000 | 800 | 900 | PSS209HF2 | PCS208HF2 | PDS208HF2 | | PT89HF2 | | PPTHP89EMC | PB089HF2 | PB189HF |
| 2000 | 1000 | 500 | PSS205HF2 | PCS2010HF2 | PDS2010HF2 | PBB205EMC | PT105HF2 | | PPTHP105EMC | PB0105HF2 | PB1105HF |
| 2000 | 1000 | 600 | PSS206HF2 | PCS2010HF2 | PDS2010HF2 | PBB206EMC | PT106HF2 | | PPTHP106EMC | PB0106HF2 | PB1106HF |
| 2000 | 1000 | 800 | PSS208HF2 | PCS2010HF2 | PDS2010HF2 | PBB208EMC | PT108HF2 | | PPTHP108EMC | PB0108HF2 | PB1108HF |
| 2200 | 600 | 600 | PSS226HF2 | PCS226HF2 | PDS226HF2 | PBB226EMC | PT66HF2 | PVT3F66EMC | PPTHP66EMC | PB066HF2 | PB166HF |
| 2200 | 600 | 800 | PSS228HF2 | PCS226HF2 | PDS226HF2 | PBB228EMC | PT68HF2 | PVT3F68EMC | PPTHP68EMC | PB068HF2 | PB168HF |
| 2200 | 700 | 600 | PSS226HF2 | | | PBB226EMC | PT76HF2 | PVT3F76EMC | PPTHP76EMC | PB076HF2 | PB176HF |
| 2200 | 700 | 800 | | | | PBB228EMC | PT78HF2 | PVT3F78EMC | PPTHP78EMC | PB078HF2 | PB178HF |
| 2200 | 700 | 900 | | | | | PT79HF2 | PVT3F79EMC | PPTHP79EMC | PB079HF2 | PB179HF |
| 2200 | 800 | 600 | PSS226HF2 | | | PBB226EMC | PT86HF2 | PVT3F86EMC | PPTHP86EMC | PB086HF2 | PB186HF |
| 2200 | 800 | 800 | PSS228HF2 | | | | PT88HF2 | PVT3F88EMC | PPTHP88EMC | PB088HF2 | PB188HF |
| 2200 | 1000 | 500 | | | | | PT105HF2 | | PPTHP105EMC | PB0105HF2 | PB1105HF |
| 2200 | 1000 | 600 | PSS226HF2 | | | PBB226EMC | PT106HF2 | | PPTHP106EMC | PB0106HF2 | PB1106HF |



**How to create your own enclosure
(See Modular Enclosure Systems
for product specifications)**

- Choose frame size that fits your application. (Frames can be joined to form a bank of cabinets.)
- Outfit the frame with doors, sides, a top, and a base (see selection overview above and on previous page).
- Integrate a mounting system.
- Manage and protect your equipment and cabling with shelving/storage and cable management accessories.

Continuous Hinge EMC Junction Boxes



Application

Continuous hinge EMC junction boxes for installations where electromagnetic compatibility and/or system security is required. Contain stray electromagnetic interference (EMI) signals produced by internal parts and also protect internal equipment from external EMI/RFI. Enclosure protects internal components from dust and light splashing of liquids.

Construction

- 16 gauge or 14 gauge steel (see table)
- Seams continuously welded and ground smooth, no holes or knockouts
- Continuous hinge
- Bonding provision on door
- Combination woven plated steel mesh and oil-resistant gasket
- Stainless steel cover clamps and screws on three sides of hinged door
- Weldnuts provided for mounting optional panels and terminal kits in size 6.00 x 4.00 in. (152 x 102mm) and larger
- Shielding effectiveness greater than 80 dB at 1 GHz

Finish

Plated finish provides corrosion-resistant conductive surfaces for gasket contact areas and conduit entries. Optional panels are white or have a conductive finish. See the Accessories chapter.

Industry Standards

UL 50, File No. E27567: Type 12, 13
NEMA/EEMAC Type 12, 13
JIC standard EGP-I-1967
CSA, File No. 42184: Type 12, 13
IEC 60529, IP54

Shielding effectiveness tested in accordance with:

IEEE 299
VG 95-373, part 15
MIL-STD-285

Accessories

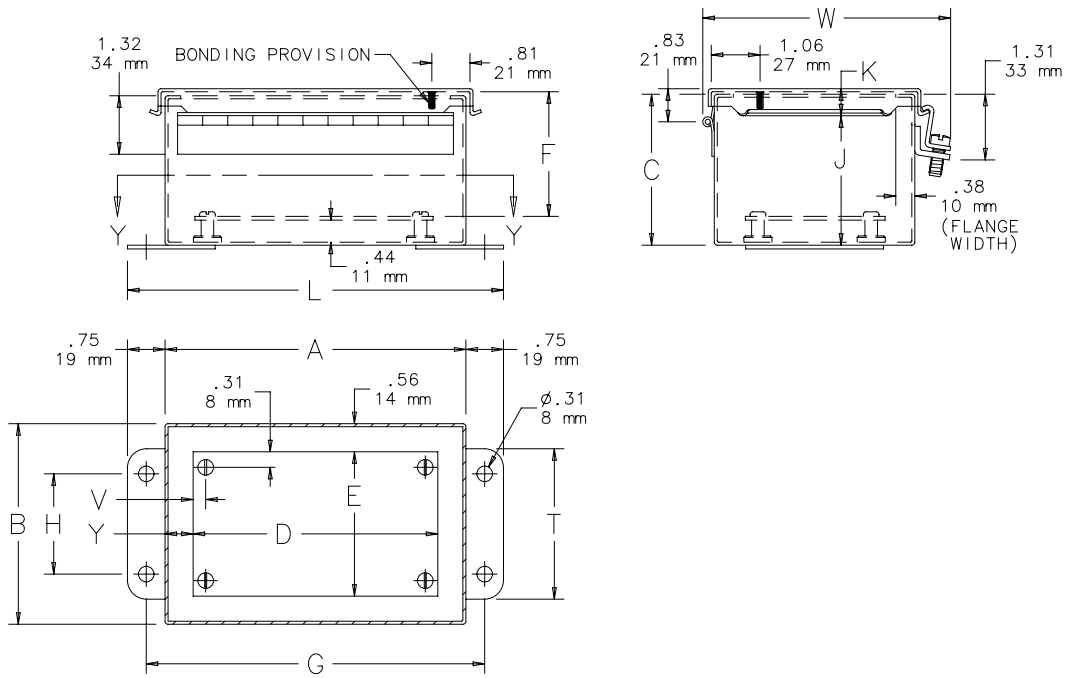
See the Accessories chapter
Corrosion Inhibitors
Electrical Interlocks
Fast-Operating Junction Clamp
Lock Kit
Panels (see table)
Swing-Out Panel Kit
Terminal Kit Assembly
Wiring Duct

Standard Sizes Continuous Hinge EMC Junction Boxes

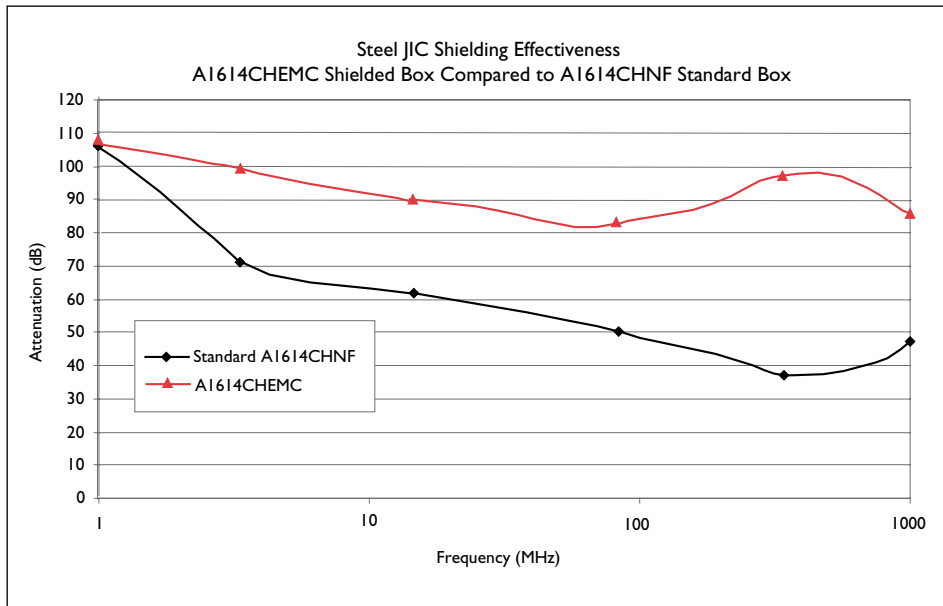
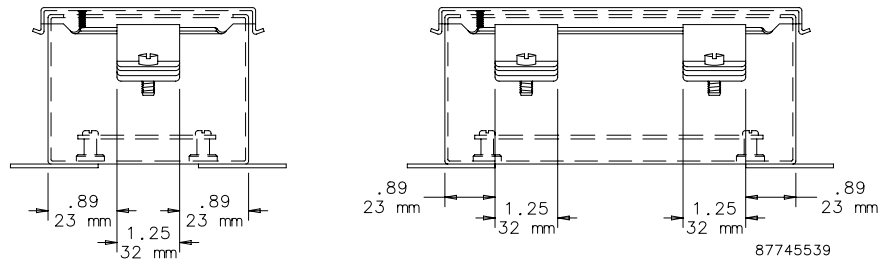
| Box Catalog Number | Gauge. | Box Size A x B x C | Panel ^a Catalog Number | Panel Size D x E | Mounting G x H | Overall L x W | F | J | K | T | V | Y |
|--------------------|--------|---|-----------------------------------|------------------------------|------------------------------|------------------------------|---------------|---------------|--------------|----------------|-------------|--------------|
| A604CHEMC | 16 | 6.00 x 4.00 x 3.00 (152 x 102 x 76) | A6P4 A6P4G | 4.88 x 2.88 (124 x 73) | 6.75 x 2.00 (171 x 51) | 7.50 x 4.81 (191 x 122) | 2.53 (64) | 2.62 (66) | 0.54 (14) | 3.00 (76) | 0.31 (8) | 0.56 (14) |
| A806CHEMC | 14 | 8.00 x 6.00 x 3.50 (203 x 152 x 89) | A8P6 A8P6G | 6.75 x 4.88 (171 x 124) | 8.75 x 4.00 (222 x 102) | 9.51 x 6.81 (241 x 173) | 3.03 (77) | 3.12 (79) | 0.56 (14) | 5.00 (127) | 0.25 (6) | 0.62 (16) |
| A606CHEMC | 16 | 6.00 x 6.00 x 4.00 (152 x 152 x 102) | A6P6 A8P6G | 4.88 x 4.88 (124 x 124) | 6.75 x 4.00 (171 x 102) | 7.50 x 6.81 (191 x 173) | 3.53 (90) | 3.62 (92) | 0.54 (14) | 5.00 (127) | 0.31 (8) | 0.56 (14) |
| A1008CHEMC | 14 | 10.00 x 8.00 x 4.00 (254 x 203 x 102) | A10P8 A10P8G | 8.75 x 6.88 (222 x 175) | 10.75 x 6.00 (273 x 152) | 11.50 x 8.81 (292 x 224) | 3.53 (90) | 3.62 (92) | 0.56 (14) | 7.00 (178) | 0.25 (6) | 0.62 (16) |
| A1210CHEMC | 14 | 12.00 x 10.00 x 5.00 (305 x 254 x 127) | A12P10 A12P10G | 10.75 x 8.88 (273 x 226) | 12.75 x 8.00 (324 x 203) | 13.50 x 10.81 (343 x 275) | 4.53 (115) | 4.62 (117) | 0.56 (14) | 9.00 (229) | 0.25 (6) | 0.62 (16) |
| A1412CHEMC | 14 | 14.00 x 12.00 x 6.00 (356 x 305 x 152) | A14P12 A14P12G | 12.75 x 10.88 (324 x 276) | 14.75 x 10.00 (375 x 254) | 15.50 x 12.81 (394 x 325) | 5.53 (140) | 5.62 (143) | 0.56 (14) | 11.00 (279) | 0.25 (6) | 0.62 (16) |
| A1614CHEMC | 14 | 16.00 x 14.00 x 6.00 (406 x 356 x 152) | A16P14 A16P14G | 14.75 x 12.88 (375 x 327) | 16.75 x 12.00 (425 x 305) | 17.50 x 14.81 (445 x 376) | 5.53 (140) | 5.62 (143) | 0.56 (14) | 13.00 (330) | 0.25 (6) | 0.62 (16) |

^a Purchase panels separately. Panel catalog numbers ending in G have a conductive finish.

Continuous Hinge EMC Junction Boxes



SECTION Y-Y



Stainless Steel Continuous Hinge EMC Junction Boxes



Application

EMC junction boxes provide protection for housing electrical components in highly corrosive environments where electromagnetic compatibility and environmental protection are required. These boxes isolate equipment from stray external electromagnetic interference (EMI) and contain EMI that is produced by interior components.

These boxes are used in indoor and outdoor settings that are frequently wet or have constant exposure to water, other liquids, or contaminants.

Construction

- 16 or 14 gauge Type 304 stainless steel
- Seams continuously welded and ground smooth, no holes or knockouts
- Patented seamless foam-in-place gasket adjacent to monel mesh assures watertight, dusttight, and EMI seal
- Stainless steel screws and clamps assure watertight seal
- Removable door with continuous hinge
- Weldnuts provided for mounting optional panels and terminal kits
- Bonding provision on door

Finish

Cover and sides of body have a smooth brushed finish. Optional stainless steel and conductive panels are unpainted. Optional steel panels are white.

Industry Standards

UL 50, File No. E27567: Type 4, 4X, 12 (see table)
UL 508A, File No. E61997: Type 4, 4X, 12 (see table)
NEMA/EEMAC Type 4, 4X, 12, 13
CSA File No. 42184: Type 4, 4X, 12
IEC 60529, IP66

Shielding effectiveness tested in accordance with:

IEEE-299
VG 95-373, part 15
MIL-STD-285

Accessories

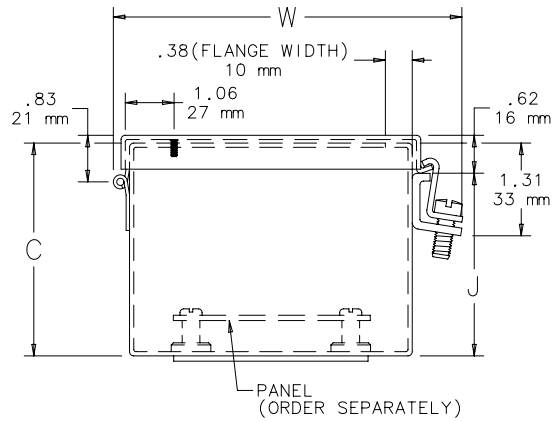
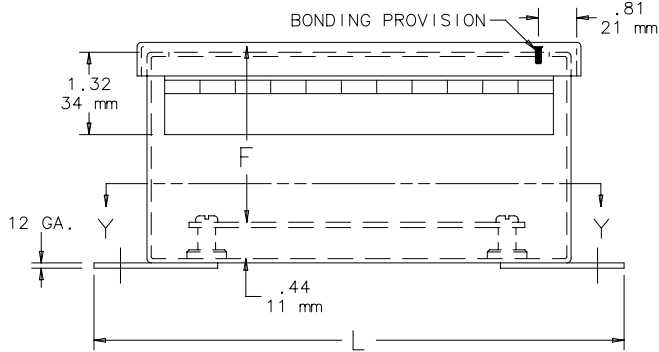
See the Accessories chapter
Corrosion Inhibitors
Electrical Interlocks
Fast-Operating Junction Clamp
Lock Kit
Panels (see table)
Swing-Out Panel Kit
Terminal Kit Assembly
Wiring Duct

Standard Sizes Stainless Steel Continuous Hinge EMC Junction Boxes

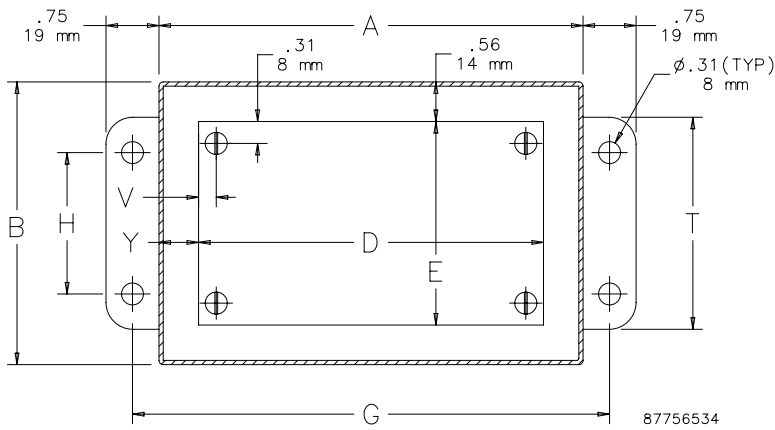
| Catalog Number | Body Ga | Cover Ga. | Box Size A x B x C | Stainless Steel Panel Catalog Number ^a | Conductive Steel Panel Catalog Number ^a | Panel Size D x E | Mounting G x H | Overall L x W | F | J | N | T | V | Y |
|----------------------------|---------|-----------|---|---|--|------------------------------|------------------------------|------------------------------|---------------|---------------|--------------|----------------|-------------|--------------|
| ^b A6044CHEMCSS | 16 | 16 | 6.00 x 4.00 x 4.00 (152 x 102 x 102) | A6P4SS | A6P4G | 4.88 x 2.88 (124 x 73) | 6.75 x 2.00 (171 x 51) | 7.50 x 4.94 (191 x 125) | 3.50 (89) | 3.62 (92) | 2.38 (60) | 3.00 (76) | 0.31 (8) | 0.56 (14) |
| ^c A606CHEMCSS | 16 | 16 | 6.00 x 6.00 x 4.00 (152 x 152 x 102) | A6P6SS | A6P6G | 4.88 x 4.88 (124 x 124) | 6.75 x 4.00 (171 x 102) | 7.50 x 6.94 (191 x 176) | 3.50 (89) | 3.62 (92) | 2.38 (60) | 5.00 (127) | 0.31 (8) | 0.56 (14) |
| ^c A8064CHEMCSS | 14 | 16 | 8.00 x 6.00 x 4.00 (203 x 152 x 102) | A8P6SS | A8P6G | 6.75 x 4.88 (171 x 124) | 8.75 x 4.00 (222 x 102) | 9.50 x 6.94 (241 x 176) | 3.50 (89) | 3.62 (92) | 1.38 (35) | 5.00 (127) | 0.25 (6) | 0.62 (16) |
| ^c A1008CHEMCSS | 14 | 16 | 10.00 x 8.00 x 4.00 (254 x 203 x 102) | A10P8SS | A10P8G | 8.75 x 6.88 (222 x 175) | 10.75 x 6.00 (273 x 152) | 11.50 x 8.94 (292 x 227) | 3.50 (89) | 3.62 (92) | 1.38 (35) | 7.00 (178) | 0.25 (6) | 0.62 (16) |
| ^c A12106CHEMCSS | 14 | 16 | 12.00 x 10.00 x 6.00 (305 x 254 x 152) | A12P10SS | A12P10G | 10.75 x 8.88 (273 x 225) | 12.75 x 8.00 (324 x 203) | 13.50 x 10.94 (343 x 278) | 5.50 (140) | 5.62 (143) | 2.38 (60) | 9.00 (229) | 0.25 (6) | 0.62 (16) |
| ^c A1212CHEMCSS | 14 | 16 | 12.00 x 12.00 x 6.00 (305 x 305 x 152) | A12P12SS | A12P12G | 10.75 x 10.88 (324 x 276) | 12.75 x 10.00 (324 x 254) | 13.50 x 12.94 (343 x 329) | 5.50 (140) | 5.62 (143) | 2.38 (60) | 11.00 (279) | 0.25 (6) | 0.62 (16) |
| ^c A1412CHEMCSS | 14 | 16 | 14.00 x 12.00 x 6.00 (356 x 305 x 152) | A14P12SS | A14P12G | 12.75 x 10.88 (324 x 276) | 14.75 x 10.00 (375 x 254) | 15.50 x 12.94 (394 x 329) | 5.50 (140) | 5.62 (143) | 2.38 (60) | 11.00 (279) | 0.25 (6) | 0.62 (16) |
| ^c A1614CHEMCSS | 14 | 16 | 16.00 x 14.00 x 6.00 (406 x 356 x 152) | A16P14SS | A16P14G | 14.75 x 12.88 (375 x 327) | 16.75 x 12.00 (425 x 305) | 17.50 x 14.94 (445 x 379) | 5.50 (140) | 5.62 (143) | 2.38 (60) | 13.00 (330) | 0.25 (6) | 0.62 (16) |

^a Purchase panels separately. ^b UL 508A ^c UL 50

Stainless Steel Continuous Hinge EMC Junction Boxes

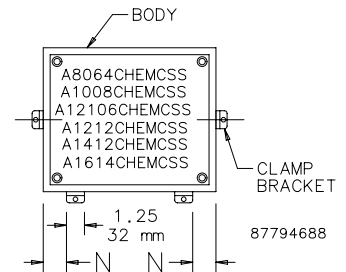
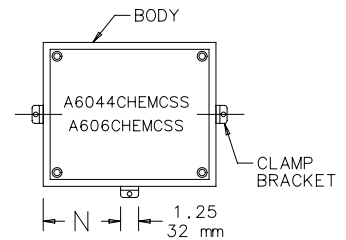


NOTE: 1. Optional panels are 14 gauge steel, conductive steel, or stainless steel.
2. Panel screws are No. 10-32 pan head.



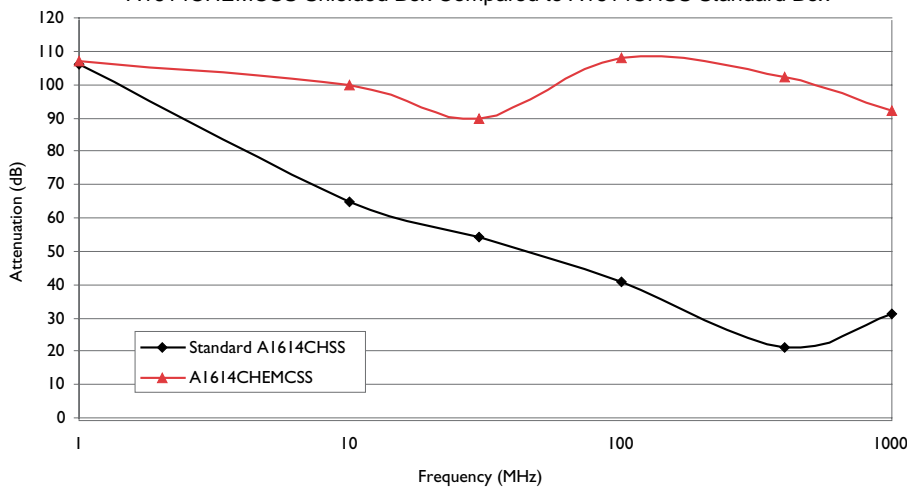
SECTION Y-Y

Clamp Bracket Locations



Stainless Steel JIC Shielding Effectiveness

A1614CHEMCSS Shielded Box Compared to A1614CHSS Standard Box



CONCEPT® EMC Single-Door Wall-Mount Enclosures



Application

Designed to house sensitive electronics and communications equipment in installations where electromagnetic compatibility and environmental protection are required. These enclosures contain stray electromagnetic and radio frequency interference produced by interior components and also protect internal equipment from external EMC. Enclosure will protect internal components against windblown dust and water.

Construction

- 16 gauge or 14 gauge steel (see table)
- Seams continuously welded and ground smooth
- Minimum width body flange provides maximum door opening
- Body flange trough excludes liquids and contaminants
- Panel mounting studs fit optional CONCEPT panels and other accessories
- Mounting holes in back of body for direct mounting or for optional external mounting brackets
- Hidden 210° hinges for clean aesthetic appearance
- Removable door
- Hinge mounting brackets for wire management or optional accessories
- Stainless steel spring finger gasket provides excellent EMI/RFI protection
- Quarter-turn latches for security and ease of use
- Integral body grounding stud
- Door bars provided for wire management and bonding
- Furnished hardware kit consists of panel mounting nuts, grounding hardware, and sealing washers for wall mounting holes
- Installation instructions for enclosure and accessories provided

Finish

Exterior and interior painted with RAL 7035 textured light gray polyester powder paint over plating.

Industry Standards

NOTE: Mounting brackets required to maintain UL/CSA ratings.

UL 508A, File No. E61997: Type 4, 12
NEMA/EEMAC Type 4, Type 12, 13
CSA, File No. 42186: Type 4, 12
VDE IP66
IEC 60529, IP66

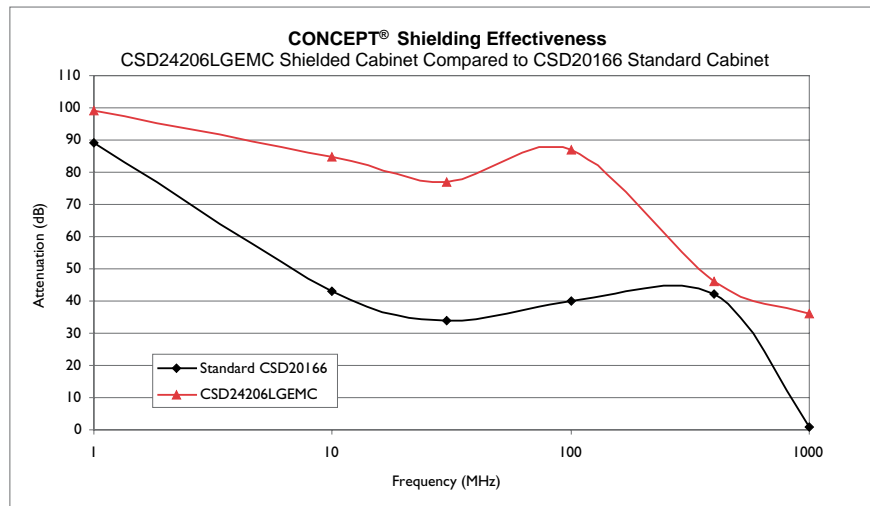
Shielding effectiveness tested in accordance with:

IEEE 299
VVG 95-373, part 15
MIL-STD-285

Accessories

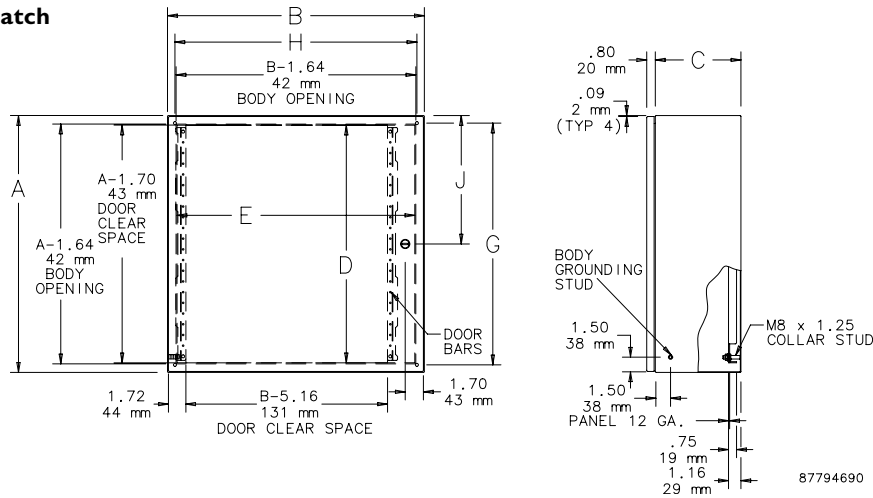
See the *Accessories* chapter

Corrosion Inhibitors
Data Pocket
Dead Front Kit
DIN Rail Kit
Electric Heater
Fan Cooling Products
Grid Straps
Handles and Latches
Key Inserts
Lighting Kits
Mounting Channels
Mounting Bracket Kit (required to maintain UL/CSA external mounting requirement)
Panel Conversion Kit
Panels: plated, white-painted
Panels, NEMA
Pole Mounting Kit
Rack Mounting Angles
Swing-Out Panel Kit
Swing-Out Rack Frames
Terminal Kit Assembly
Touch-Up Paint RAL 7035
Wiring Duct

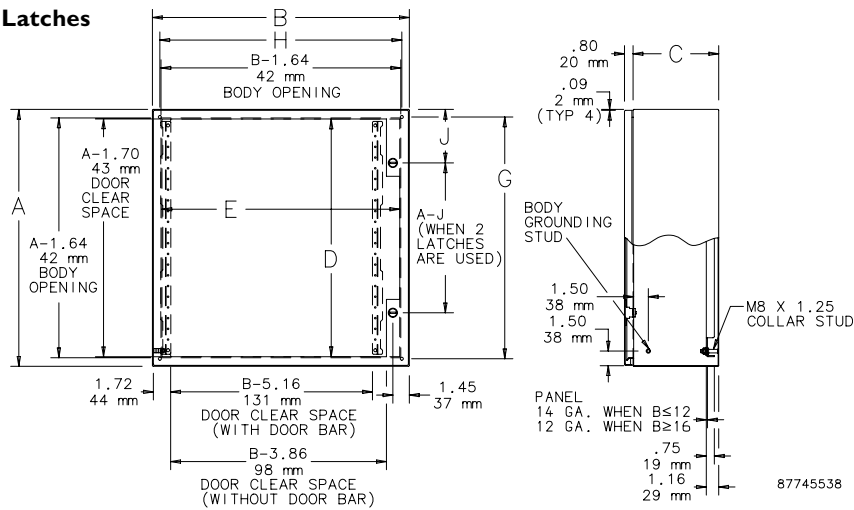


CONCEPT® EMC Single-Door Wall-Mount Enclosures

Enclosures with One Latch



Enclosures with Two Latches



Standard Sizes CONCEPT EMC Single-Door Wall-Mount Enclosures

| Catalog Number | Door Ga. | Body Ga. | Enclosure Size A x B x C in. | Enclosure Size A x B x C mm | CONCEPT Panel Catalog Number ^a | Panel Size D x E in. | Panel Size D x E mm | Mounting G x H in. | Mounting G x H mm | Latches Qty | J in. | J mm |
|----------------|----------|----------|------------------------------|-----------------------------|---|----------------------|---------------------|--------------------|-------------------|-------------|-------|------|
| CSD12126LGEMC | 16 | 16 | 12.00 x 12.00 x 6.00 | 305 x 305 x 152 | CP1212 CP1212G | 10.20 x 10.20 | 259 x 259 | 10.50 x 10.50 | 267 x 267 | 1 | 6.00 | 152 |
| CSD16126LGEMC | 16 | 16 | 16.00 x 12.00 x 6.00 | 406 x 305 x 152 | CP1612 CP1612G | 14.20 x 10.20 | 361 x 259 | 14.50 x 10.50 | 368 x 267 | 1 | 8.00 | 203 |
| CSD16166LGEMC | 16 | 16 | 16.00 x 16.00 x 6.00 | 406 x 406 x 152 | CP1616 CP1612G | 14.20 x 14.20 | 361 x 361 | 14.50 x 14.50 | 368 x 368 | 1 | 8.00 | 203 |
| CSD16206LGEMC | 16 | 16 | 16.00 x 20.00 x 6.00 | 406 x 508 x 152 | CP2016 CP2016G | 18.20 x 14.20 | 462 x 361 | 14.50 x 18.50 | 368 x 470 | 1 | 8.00 | 203 |
| CSD20166LGEMC | 16 | 16 | 20.00 x 16.00 x 6.00 | 508 x 406 x 152 | CP2016 CP2016G | 18.20 x 14.20 | 462 x 361 | 18.50 x 14.50 | 470 x 368 | 1 | 10.00 | 254 |
| CSD24206LGEMC | 16 | 16 | 24.00 x 20.00 x 6.00 | 610 x 508 x 152 | CP2420 CP2420G | 22.20 x 18.20 | 564 x 462 | 22.50 x 18.50 | 572 x 470 | 1 | 12.00 | 305 |
| CSD24248LGEMC | 14 | 16 | 24.00 x 24.00 x 8.00 | 610 x 610 x 203 | CP2424 CP2424G | 22.20 x 22.20 | 564 x 564 | 22.50 x 22.50 | 572 x 572 | 2 | 5.00 | 127 |
| CSD30248LGEMC | 14 | 16 | 30.00 x 24.00 x 8.00 | 762 x 610 x 203 | CP3024 CP3024G | 28.20 x 22.20 | 716 x 564 | 28.50 x 22.50 | 724 x 572 | 2 | 5.00 | 127 |
| CSD36308LGEMC | 14 | 14 | 36.00 x 30.00 x 8.00 | 914 x 762 x 203 | CP3630 CP3630G | 34.20 x 28.20 | 869 x 716 | 34.50 x 28.50 | 876 x 724 | 2 | 5.00 | 127 |
| CSD242412LGEMC | 14 | 16 | 24.00 x 24.00 x 12.00 | 610 x 610 x 305 | CP2424 CP2424G | 22.20 x 22.20 | 564 x 564 | 22.50 x 22.50 | 572 x 572 | 2 | 5.00 | 127 |
| CSD362412LGEMC | 14 | 16 | 36.00 x 24.00 x 12.00 | 914 x 610 x 305 | CP3624 CP3624G | 34.20 x 22.20 | 869 x 564 | 34.50 x 22.50 | 876 x 572 | 2 | 5.00 | 127 |

^a Purchase panels separately. Panel catalog numbers ending in G have a conductive finish.

CONCEPT® EMC Stainless Steel Single-Door Wall-Mount Enclosures



Application

The CONCEPT EMC stainless steel enclosure, with its streamlined design and UL Type 4X rating, is a perfect fit for mounting electrical or high tech electronic equipment in a variety of indoor and outdoor settings. It is typically used where corrosion resistance, electromagnetic compatibility, and environmental protection are needed.

These enclosures isolate equipment from stray external electromagnetic interference (EMI) and contain EMI that is produced by interior components.

Construction

- Manufactured from 16 or 14 gauge Type 304 stainless steel
- Seams continuously welded and ground smooth
- Minimum width body flange provides maximum door opening
- Body flange trough excludes liquids and contaminants
- Panel mounting studs fit optional CONCEPT panels and other accessories
- Mounting holes in back of body for direct mounting or for optional external mounting brackets
- Type 304 stainless steel hidden hinges promote clean aesthetic appearance
- Standard full access door opening
- Removable door
- Seamless foam-in-place gasket adjacent to spring finger provides EMI, oil-tight, and dust-tight seal against contaminants
- Quarter-turn latches furnished with flush slotted insert. Optional handles or inserts are available.
- Hinge mounting brackets for wire management or optional accessories
- Self-grounding latch system with double seal provides maximum protection against leakage
- Integral body grounding stud
- Furnished hardware kit consists of panel mounting nuts, grounding hardware, and sealing washers for wall mounting holes
- Installation instructions for enclosure and accessories are provided

Finish

Enclosures are unpainted. Cover and body have smooth brushed finish.

- Optional CONCEPT panels are white-painted or conductive.
- Optional NEMA panels are white-painted, conductive, aluminum, or stainless steel.

Industry Standards

NOTE: Mounting brackets required to maintain UL/CSA ratings.

UL 508A, File No. E61997: Type 4, 4X, 12
NEMA/EEMAC Type 4, 4X, 12, 13
CSA File No. 42186: Type 4, 4X, 12
VDE IP66
IEC 60529, IP66

Shielding effectiveness tested in accordance with:

IEEE 299
VG 95-373, part 15
MIL-STD-285

Patents

This product is covered by the following patents.

US 5894106
DE 19614694
FR 2747533
GB 2308016
IT 1290830

Accessories

See the Accessories chapter

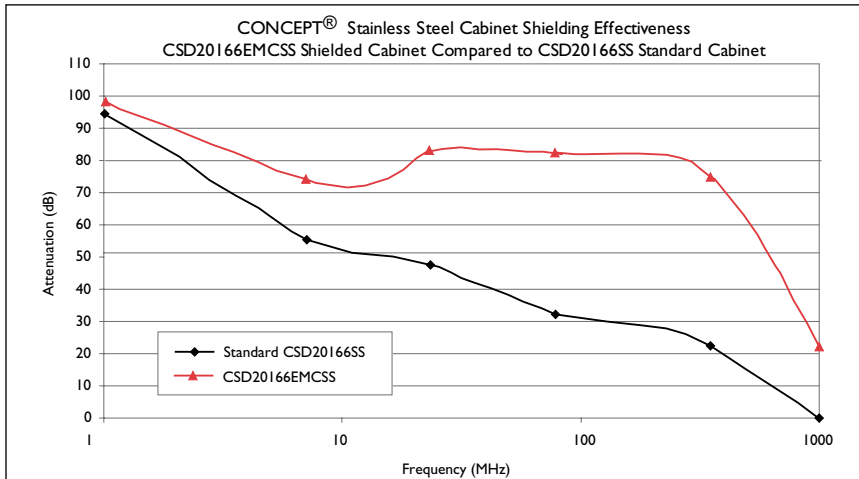
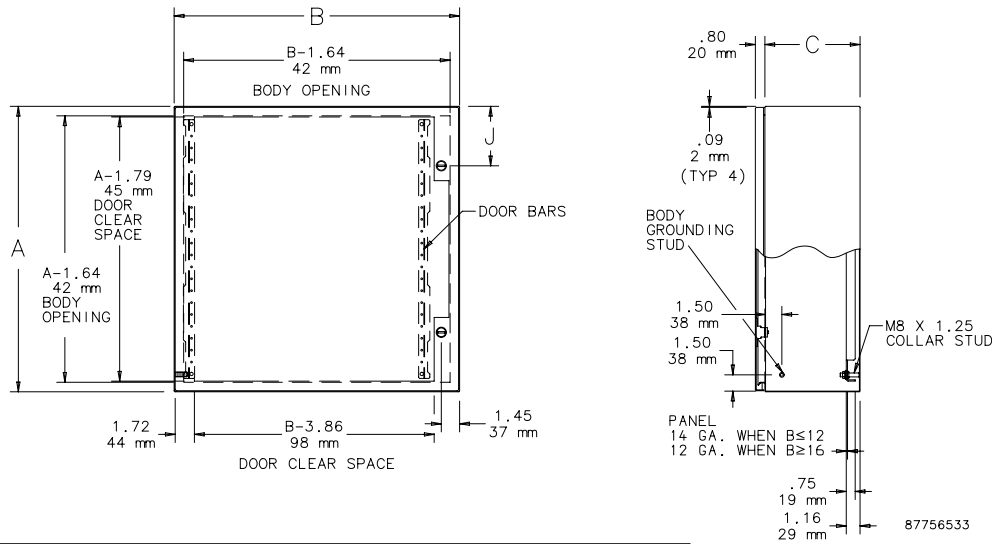
Corrosion Inhibitors
Panels—conductive, white-painted
Panels—NEMA
Terminal Kit Assembly

CONCEPT® EMC Stainless Steel Single-Door Wall-Mount Enclosures

Standard Sizes CONCEPT EMC Stainless Steel Single-Door Wall-Mount Enclosures

| Catalog Number | Door Gauge | Body Gauge | Enclosure Size A x B x C | CONCEPT Panel Catalog Number ^a | Panel Size D x E | Mounting G x H | Qty Latches | J |
|----------------|------------|------------|--|--|------------------------------|------------------------------|-------------|----------------|
| CSD12126EMCSS | 16 | 16 | 12.00 x 12.00 x 6.00 (305 x 305 x 152) | CP1212 CP1212G | 10.20 x 10.20 (259 x 259) | 10.50 x 10.50 (267 x 267) | 1 | 6.00 (152) |
| CSD16126EMCSS | 16 | 16 | 16.00 x 12.00 x 6.00 (406 x 305 x 152) | CP1612 CP1612G | 14.20 x 10.20 (361 x 259) | 14.50 x 10.50 (368 x 267) | 1 | 8.00 (203) |
| CSD16166EMCSS | 16 | 16 | 16.00 x 16.00 x 6.00 (406 x 406 x 152) | CP1616 CP1616G | 14.20 x 14.20 (361 x 361) | 14.50 x 14.50 (368 x 368) | 1 | 8.00 (203) |
| CSD20166EMCSS | 16 | 16 | 20.00 x 16.00 x 6.00 (508 x 406 x 152) | CP2016 CP2016G | 18.20 x 14.50 (462 x 361) | 18.50 x 14.50 (470 x 368) | 1 | 10.00 (254) |
| CSD16208EMCSS | 16 | 16 | 16.00 x 20.00 x 8.00 (406 x 508 x 203) | CP2016 CP2016G | 18.20 x 14.20 (462 x 361) | 14.50 x 18.50 (368 x 470) | 1 | 8.00 (203) |
| CSD24208EMCSS | 16 | 16 | 24.00 x 20.00 x 8.00 (610 x 508 x 203) | CP2420 CP2420G | 22.20 x 18.20 (564 x 462) | 22.50 x 18.50 (572 x 470) | 1 | 12.00 (305) |
| CSD24248EMCSS | 14 | 16 | 24.00 x 24.00 x 8.00 (610 x 610 x 203) | CP2424 CP2424G | 22.20 x 22.20 (564 x 564) | 22.50 x 22.50 (572 x 572) | 2 | 5.00 (127) |
| CSD30248EMCSS | 14 | 16 | 30.00 x 24.00 x 8.00 (762 x 610 x 203) | CP3024 CP3024G | 28.20 x 22.20 (716 x 564) | 28.50 x 22.50 (724 x 572) | 2 | 5.00 (127) |
| CSD36308EMCSS | 14 | 14 | 36.00 x 30.00 x 8.00 (914 x 762 x 203) | CP3630 CP3630G | 34.20 x 28.20 (869 x 716) | 34.50 x 28.50 (876 x 724) | 2 | 5.00 (127) |
| CSD242412EMCSS | 14 | 14 | 24.00 x 24.00 x 12.00 (610 x 610 x 305) | CP2424 CP2424G | 22.20 x 22.20 (564 x 564) | 22.50 x 22.50 (572 x 572) | 2 | 5.00 (127) |
| CSD362412EMCSS | 14 | 14 | 36.00 x 24.00 x 12.00 (914 x 610 x 305) | CP3624 CP3624G | 34.20 x 22.20 (869 x 564) | 34.50 x 22.50 (876 x 572) | 2 | 5.00 (127) |

^a Purchase panels separately. Panel catalog numbers ending in G have a conductive finish.





Application

Designed to house sensitive electronics and communications equipment in installations where electromagnetic compatibility and/or system security is required. These enclosures protect equipment which should be isolated from stray electromagnetic and radio frequency interference (EMI/RFI) and also contain stray EMI/RFI signals produced by internal components. Enclosure will protect internal components against dust, dirt, oil, and water.

Construction

- 14 gauge or 16 gauge steel (see table)
- Seams continuously welded and ground smooth, no holes or knockouts
- Rolled flange around three sides of door and all sides of enclosure opening keeps liquids and contaminants out and provides wide contact area for shielding gasket
- Combination gasket of woven plated steel mesh and oil-resistant material provides EMI/RFI seal as well as oiltight and dusttight seal between door and body
- Stainless steel door clamp assembly on three sides of hinged door provides positive clamping
- Hasp and staple provided for padlocking
- Bonding provision on door
- Data pocket is high-impact thermoplastic
- Collar studs provided for mounting optional panels

Finish

Plated inside and out. Optional panels have white or conductive finish.

Industry Standards

UL 508A, File No. E61997: Type I2
NEMA/EEMAC Type I2
CSA, File No. 42186: Type I2
VDE IP66
IEC 60529. IP54

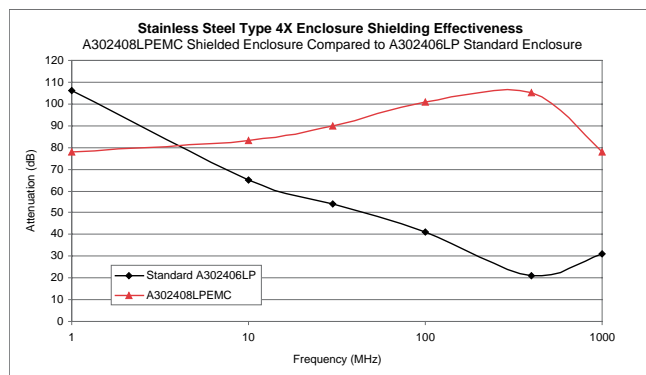
Shielding effectiveness tested in accordance with:

IEEE 299
VG 95-373, part 15
MIL-STD-285

Accessories

See the Accessories chapter

- Corrosion Inhibitors
- Door Stop Kit
- Drip Shield Kit
- Electrical Interlocks
- Enclosure Stabilizer
- Fast Operating Clamp Assembly
- Floor Stand Kit
- Lighting Kits
- Lock Kit
- Panel Support Kit
- Panels: conductive, white-painted, stainless steel, composite, or aluminum
- Rack Mounting Angle Kit
- Swing-Out Panel Kit
- Terminal Block Kit
- Wiring Duct

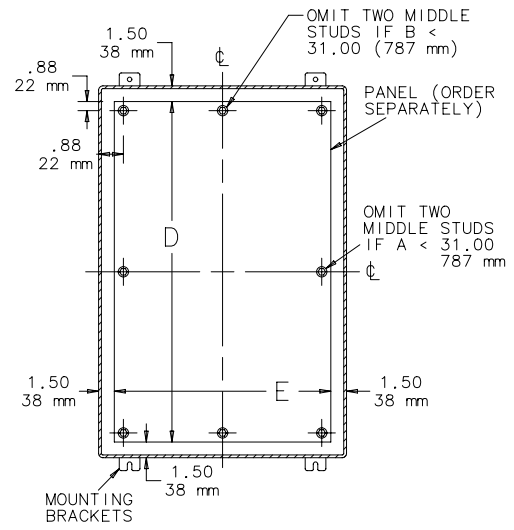
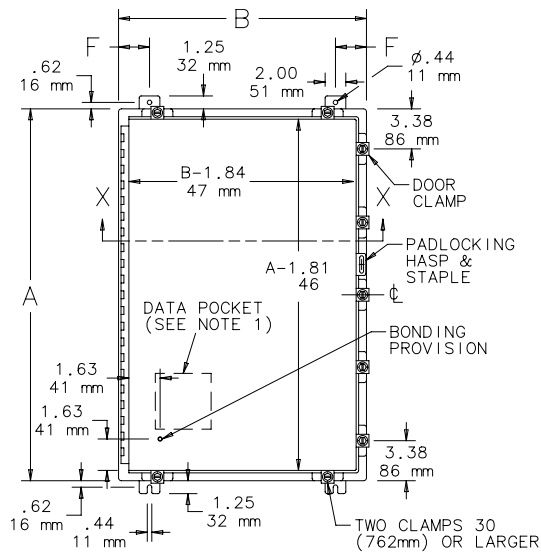


Single-Door Type I2 EMC Enclosures

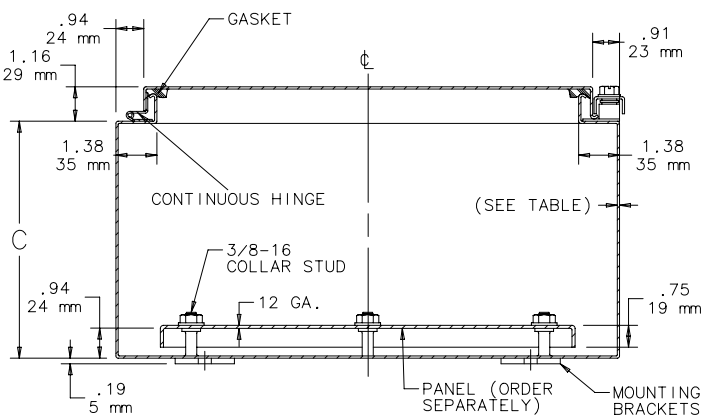
Standard Sizes Single-Door Type I2 EMC Enclosures

| Catalog Number | Body Gauge | Door Gauge | Enclosure Size A x B x C (in.) | Enclosure Size A x B x C (mm) | Panel Catalog Number ^a | D x E in. | D x E mm | F in. | F mm |
|----------------|------------|------------|--------------------------------|-------------------------------|-----------------------------------|---------------|------------|-------|------|
| A161206LPEMC | 16 | 14 | 16.00 x 12.00 x 6.00 | 406 x 305 x 152 | A16P12 A16P12G | 13.00 x 9.00 | 330 x 229 | 1.25 | 32 |
| A201606LPEMC | 16 | 14 | 20.00 x 16.00 x 6.00 | 508 x 406 x 152 | A20P16 A20P16G | 17.00 x 13.00 | 432 x 330 | 3.00 | 76 |
| A242006LPEMC | 16 | 14 | 24.00 x 20.00 x 6.00 | 610 x 508 x 152 | A24P20 A24P20G | 21.00 x 17.00 | 533 x 432 | 3.00 | 76 |
| A242408LPEMC | 16 | 14 | 24.00 x 24.00 x 8.00 | 610 x 610 x 203 | A24P24 A24P24G | 21.00 x 21.00 | 533 x 533 | 3.00 | 76 |
| A302408LPEMC | 16 | 14 | 30.00 x 24.00 x 8.00 | 762 x 610 x 203 | A30P24 A30P24G | 27.00 x 21.00 | 686 x 533 | 3.00 | 76 |
| A363008LPEMC | 14 | 14 | 36.00 x 30.00 x 8.00 | 914 x 762 x 203 | A36P30 A36P30G | 33.00 x 27.00 | 838 x 686 | 3.00 | 76 |
| A483608LPEMC | 14 | 14 | 48.00 x 36.00 x 8.00 | 1219 x 914 x 203 | A48P36 A48P36G | 45.00 x 33.00 | 1143 x 838 | 3.00 | 76 |
| A603612LPEMC | 14 | 14 | 60.00 x 36.00 x 12.00 | 1524 x 914 x 305 | A60P36 A60P36G | 57.00 x 33.00 | 1448 x 838 | 3.00 | 76 |

^a Purchase panels separately. Optional stainless steel, conductive, composite, and aluminum panels are available for most sizes. Panel catalog numbers ending in G have conductive finish. See the Accessories chapter.



SECTION Y-Y



SECTION X-X

87745541



Application

Provides unmatched protection for housing electrical components in highly corrosive environments where electromagnetic compatibility and environmental protection are required. These enclosures are used in indoor and outdoor settings that are frequently wet or have constant exposure to water, other liquids, or contaminants.

These enclosures isolate equipment from stray electromagnetic interference (EMI) and contain EMI that is produced by interior components.

Construction

- 14 gauge Type 304 stainless steel bodies and doors
- Seams continuously welded and ground smooth, no holes or knockouts
- Seamless foam-in-place gasket adjacent to woven monel mesh assures watertight, dust-tight, and EMI seal
- Body stiffener in larger enclosures for extra rigidity
- Rolled lip around three sides of door and all sides of enclosure opening excludes liquids and contaminants
- Stainless steel door clamp assembly assures watertight seal
- Hasp and staple for padlocking
- Removable door with continuous hinge
- Data pocket is high impact thermoplastic
- Collar studs provided for mounting optional panels

Finish

Enclosures are unpainted. Cover, sides, top, and bottom have smooth brushed finish.

Industry Standards

UL 508A, File No. E61997: Type 4, 4X, 12
NEMA/EEMAC Type 3, Type 4, 4X, 12, 13
CSA File No. 42186: Type 4, 4X, 12
IEC 60529, IP66

Shielding effectiveness tested in accordance with:

IEEE 299
VG 95-373, part 15
MIL-STD-285

Patents

This product is covered by the following patents.

US 6,188,014
US 6,408,506

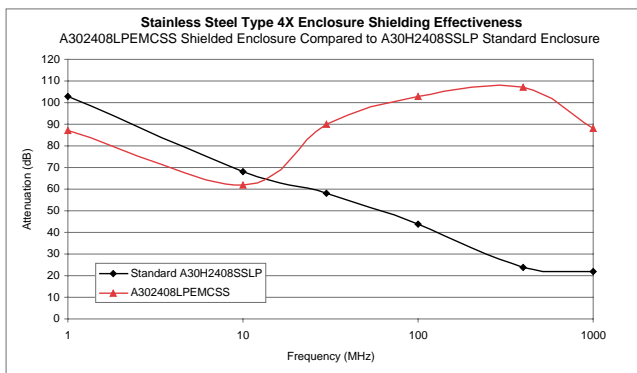
Accessories

Most standard accessories fit these enclosures. See the Accessories chapter

Electrical Interlocks
Fast Operating Clamp Assembly
Lighting Packages
Panel Support Kit
Panels (see table)
Rack Mounting Angle Kit
Swing-Out Panel Kit
Terminal Block Kit Assembly

NOTES

1. Removable data pocket included (see table for size).
 - Large data pocket 12.00 in. x 12.00 in. (305mm x 305mm)
 - Small data pocket 6.00 in. x 6.00 in. (152mm x 152mm)
 - Large data pocket furnished if A=30.00 in. (762mm) or more and B=20.00 in. (508mm) or more.
2. Maximum spacing between door clamps is 15.00 inches (382mm).
3. Panels have flanges along two sides when the side dimension is more than 21.00 inches (533mm). Panels A24P20 and A24P24 have flanges on all four sides.

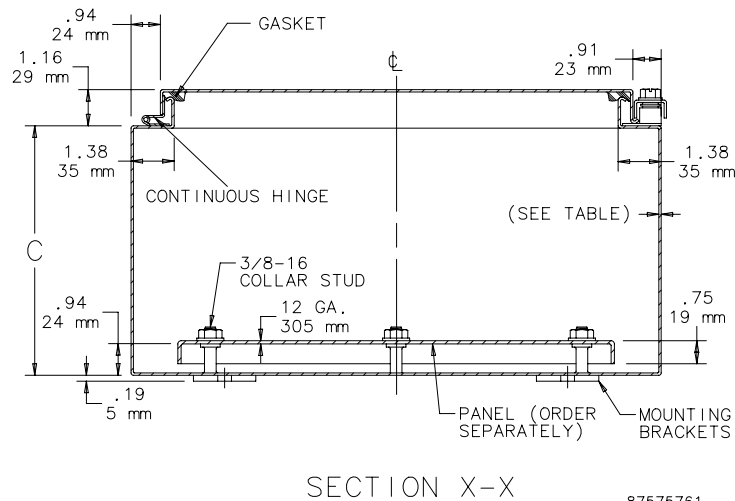
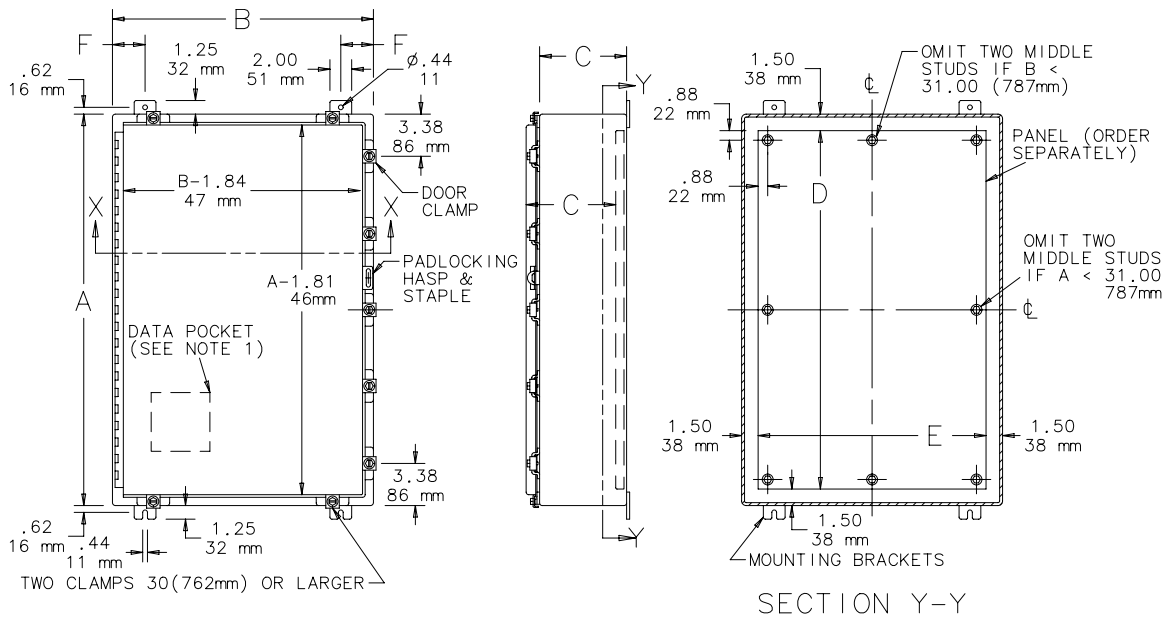


Stainless Steel Type 4X EMC Enclosures

Standard Sizes Stainless Steel Type 4X EMC Enclosures

| Catalog Number | Enclosure Size A x B x C in. | Enclosure Size A x B x C mm | Conductive Steel Panel Catalog Number ^a | Panel Size D x E in. | Panel Size D x E mm | F in. | F mm | Clamps qty | Data Pocket |
|----------------|------------------------------------|-----------------------------------|--|----------------------------|---------------------------|----------|---------|---------------|----------------|
| A161206LPEMCSS | 16.00 x 12.00 x 6.00 | 406 x 305 x 152 | A16P12G | 13.00 x 9.00 | 330 x 229 | 1.25 | 32 | 4 | Small |
| A201606LPEMCSS | 20.00 x 16.00 x 6.00 | 508 x 406 x 152 | A20P16G | 17.00 x 13.00 | 432 x 330 | 3.00 | 76 | 4 | Small |
| A242006LPEMCSS | 24.00 x 20.00 x 6.00 | 610 x 508 x 152 | A24P20G | 21.00 x 17.00 | 533 x 432 | 3.00 | 76 | 5 | Small |
| A242408LPEMCSS | 24.00 x 24.00 x 8.00 | 610 x 610 x 203 | A24P24G | 21.00 x 21.00 | 533 x 533 | 3.00 | 76 | 5 | Small |
| A302408LPEMCSS | 30.00 x 24.00 x 8.00 | 762 x 610 x 203 | A30P24G | 27.00 x 21.00 | 686 x 533 | 3.00 | 76 | 5 | Large |
| A363008LPEMCSS | 36.00 x 30.00 x 8.00 | 914 x 762 x 203 | A36P30G | 33.00 x 27.00 | 838 x 686 | 3.00 | 76 | 7 | Large |
| A483608LPEMCSS | 48.00 x 36.00 x 8.00 | 1219 x 914 x 203 | A48P36G | 45.00 x 33.00 | 1143 x 838 | 3.00 | 76 | 8 | Large |
| A603612LPEMCSS | 60.00 x 36.00 x 12.00 | 1524 x 914 x 305 | A60P36G | 57.00 x 33.00 | 1448 x 838 | 3.00 | 76 | 9 | Large |

^a Purchase panels separately. Optional conductive, mild steel, stainless steel, aluminum, and composite panels are available for most sizes. See the Accessories chapter..



87575761



Application

INLINE EMC enclosures house and protect sensitive electrical or electronic components from harsh, dirty environments where electromagnetic compatibility and/or system security are required. Use in installations where dirt, dust, oil, water, or other contaminants are present. Streamlined styling, flush latches, and an attractive durable finish complement high tech electronic equipment. These boxes contain stray electromagnetic interference (EMI) signals produced by internal parts and also protect internal equipment from external EMI. Enclosure protects internal components from dust and light splashing of liquids.

Construction

- 16 gauge (1.4mm) steel
- Seams continuously welded and ground smooth
- Body flange trough excludes liquids and contaminants, directing liquids away from enclosure opening
- Large perimeter opening facilitates component installation, maintenance, or conversion
- Fastening holes in back of body for direct mounting or optional external mounting brackets
- Ground studs (M6) with base flange provided on cover and body
- Metalized non-woven fabric EMI/RFI material covering UL94HP-rated urethane foam gasket
- Corrosion-resistant interior surfaces for gasket contact areas and conduit entries
- Shielding effectiveness greater than 50 dB at 1 GHz
- Furnished hardware kit consists of panel mounting screws, grounding hardware, and sealing washers for wall-mounting holes
- Installation instructions for enclosure and accessories are provided
- Optional 12 gauge (2.7mm) panels are available

INLINE EMC screw-cover enclosures

- Captivated cover screws with sealing bushings made of a durable composite material
- Integral compression stops maintain optimal gasket compression

INLINE EMC hinged-door enclosures

- 180-degree door opening
- Removable solid door with two barrel hinges
- Self-grounding quarter-turn latch

Finish

Textured RAL 7035 light gray polyester powder coating inside and out over phosphatized surfaces with a plated interior.

Optional steel subpanels are available with conductive or white enamel finish.

Industry Standards

UL 508A, File No. E61997: Type 12

NEMA/EEMAC Type 12

IEC 60529, IP54

Shielding effectiveness tested in accordance with:

IEEE 299

VG 95-373, part 15

MIL-STD-285

Patent

This product is covered by the following patent.

US 5,683,005

Accessories

DIN Rail or Panel Mounting Bracket

DIN Rails

Grounding Kit

Key Inserts

Mounting Bracket Kit

Panels

Touch-Up Paint (ATPG7035)

Wing Knob Latch

INLINE® EMC Instrumentation Enclosures

Standard Sizes INLINE Screw-Cover EMC Enclosures

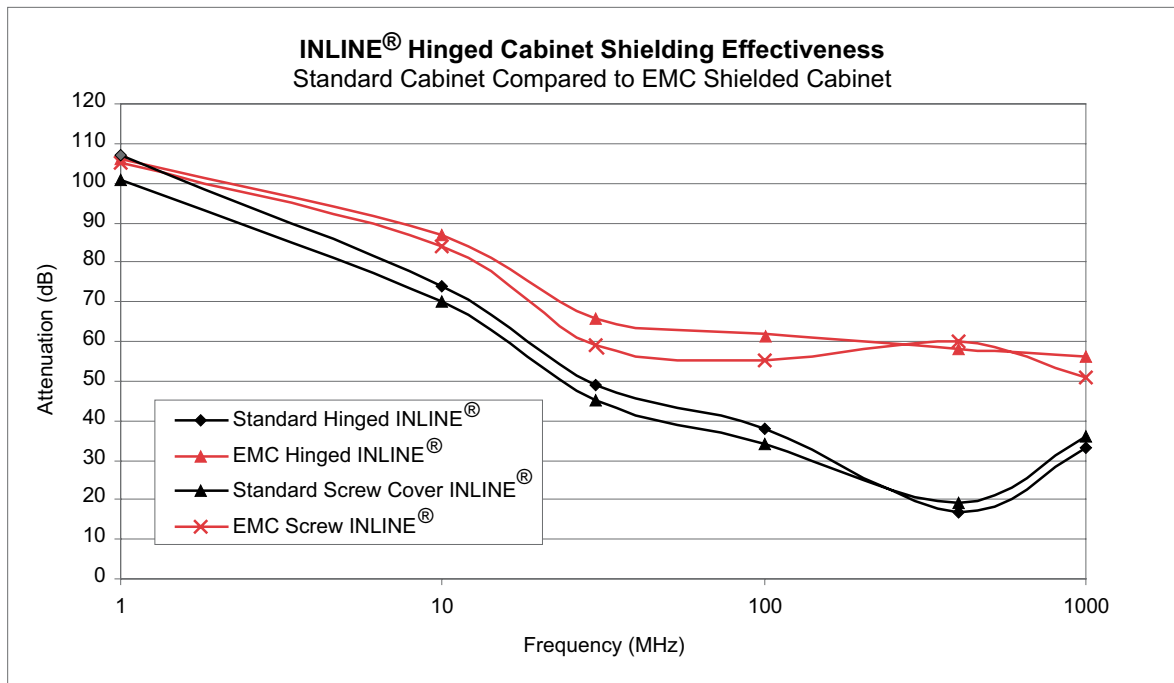
| Screw Cover EMC Enclosure Catalog Number | Enclosure Size A x B x C mm | Enclosure Size A x B x C in. | Steel Panel Catalog Number ^a | Conductive Steel Panel Catalog Number ^a | Panel Size D x E mm. | Panel Size D x E in. | Panel Size G x H mm. | Panel Size G x H in. | F mm. | F in. |
|--|-----------------------------|------------------------------|---|--|----------------------|----------------------|----------------------|----------------------|-------|-------|
| LSC151512EMC | 150 x 150 x 120 | 5.91 x 5.91 x 4.72 | LP1515 | LP1515G | 131 x 131 | 5.16 x 5.16 | 132 x 85 | 5.20 x 3.35 | 105 | 4.13 |
| LSC201512EMC | 200 x 150 x 120 | 7.87 x 5.91 x 4.72 | LP2015 | LP2015G | 181 x 131 | 7.13 x 5.16 | 182 x 85 | 7.17 x 3.35 | 105 | 4.13 |
| LSC252015EMC | 250 x 200 x 150 | 9.84 x 7.87 x 5.91 | LP2520 | LP2520G | 231 x 181 | 9.09 x 7.13 | 232 x 135 | 9.13 x 5.31 | 135 | 5.31 |
| LSC302515EMC | 300 x 250 x 150 | 11.81 x 9.84 x 5.91 | LP3025 | LP3025G | 281 x 231 | 11.06 x 9.09 | 282 x 185 | 11.10 x 7.28 | 135 | 5.31 |
| LSC353020EMC | 350 x 300 x 200 | 13.78 x 11.81 x 7.87 | LP3530 | LP3530G | 331 x 281 | 13.03 x 11.06 | 332 x 235 | 13.07 x 9.25 | 185 | 7.28 |

^a Purchase panels separately.

Standard Sizes INLINE Hinged-Door EMC Enclosures

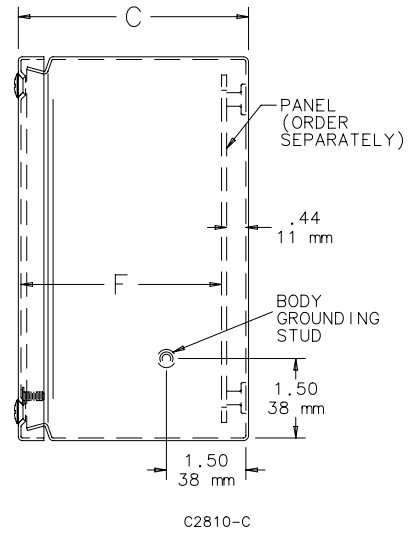
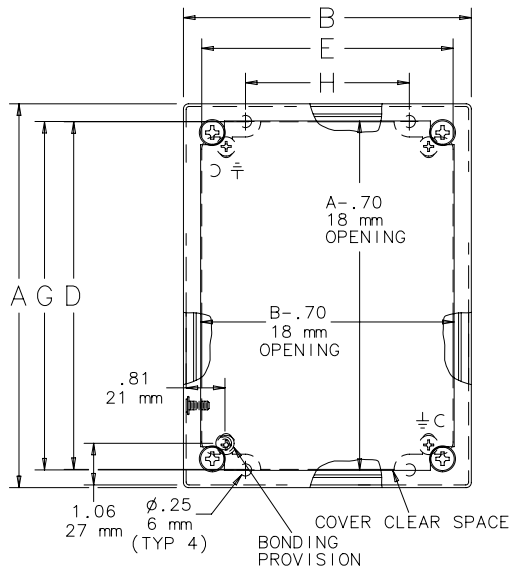
| EMC Enclosure Catalog Number | Enclosure Size A x B x C mm | Enclosure Size A x B x C in. | Steel Panel Catalog Number ^a | Conductive Steel Panel Catalog Number ^a | Panel Size D x E mm. | Panel Size D x E in. | Panel Size G x H mm. | Panel Size G x H in. | F mm. | F in. |
|------------------------------|-----------------------------|------------------------------|---|--|----------------------|----------------------|----------------------|----------------------|-------|-------|
| LHC151512EMC | 150 x 150 x 120 | 5.91 x 5.91 x 4.72 | LP1515 | LP1515G | 131 x 131 | 5.16 x 5.16 | 132 x 85 | 5.20 x 3.35 | 105 | 4.13 |
| LHC201512EMC | 200 x 150 x 120 | 7.87 x 5.91 x 4.72 | LP2015 | LP2015G | 181 x 131 | 7.13 x 5.16 | 182 x 85 | 7.17 x 3.35 | 105 | 4.13 |
| LHC252015EMC | 250 x 200 x 150 | 9.84 x 7.87 x 5.91 | LP2520 | LP2520G | 231 x 181 | 9.09 x 7.13 | 232 x 135 | 9.13 x 5.31 | 135 | 5.31 |
| LHC302515EMC | 300 x 250 x 150 | 11.81 x 9.84 x 5.91 | LP3025 | LP3025G | 281 x 231 | 11.06 x 9.09 | 282 x 185 | 11.10 x 7.28 | 135 | 5.31 |
| LHC353020EMC | 350 x 300 x 200 | 13.78 x 11.81 x 7.87 | LP3530 | LP3530G | 331 x 281 | 13.03 x 11.06 | 332 x 235 | 13.07 x 9.25 | 185 | 7.28 |

^a Purchase panels separately.



INLINE® EMC Instrumentation Enclosures

INLINE EMC Screw Cover Enclosure



NOTE: Rear mounting holes will accommodate M6-1.0 or 1/4-20 UNC mounting screws (supplied by customer).



- Cover screws protected by removable caps that are both aesthetic and provide tamper resistance
- Molded internal pads for mounting optional panels, rails, and other components
- Molded internal rails for mounting adjustable depth panel kit
- Screws provided for mounting optional panel

Finish

Enclosures are RAL 7035 light gray outside. Optional panels are conductive steel.

Industry Standards

UL 508A, File No. E61997: Type 4, 4X, 12, 13
cUL C22.2 No. 94: Type 4, 4X, 12, 13
IEC 60529, IP66
Flammability Evaluated per UL 508A

Shielding effectiveness tested in accordance with:

IEEE 299
VG 95-373, part 15
MIL-STD-285

Accessories

The accessories shown for QLINE D models in the Corrosion-Resistant chapter can also be used with QLINE D EMC models.

- Panels
- DIN Rails
- Hardware Kit
- Hinge Kit
- Mounting Bracket Kit

Application

Designed to house sensitive communications equipment, electronics, and similar equipment in wet, dusty, and/or corrosive environments where electromagnetic compatibility and/or system security is required.

These enclosures isolate equipment from stray external electromagnetic interference (EMI) and contain EMI produced by interior components.

Construction

- Body is impact-resistant polycarbonate
- EMC conductive coating in body and cover
- Gasket of silver/silicone
- Mounting holes molded directly under cover screws
- Cross-point captivated cover screws are stainless steel
- Mounting tracks along body side walls and bosses on cover for PC card installation

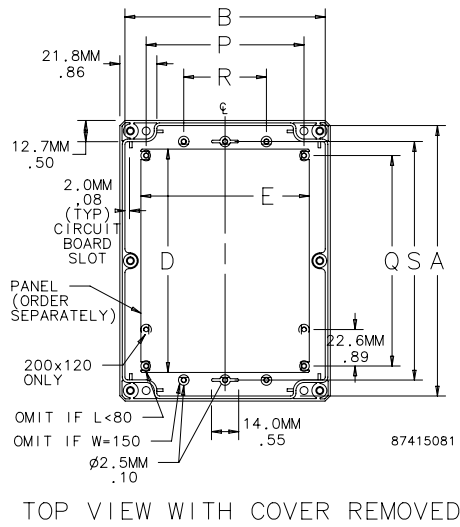
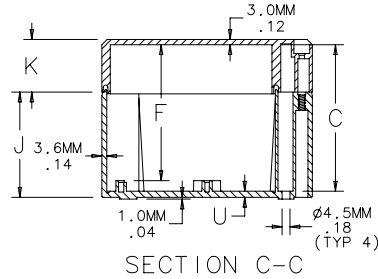
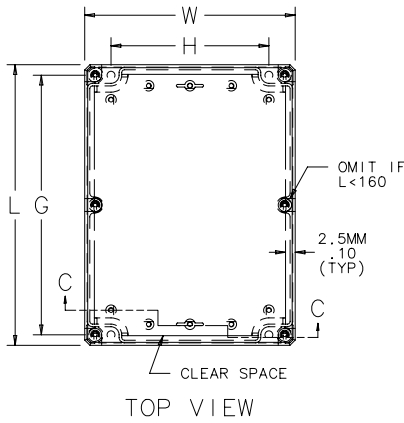
Standard Sizes QLINE D EMC Polycarbonate Enclosures

| Enclosure Catalog Number | External Dimensions L x W mm (in.) | Internal Dimensions A x B x C mm (in.) | Panel Catalog Number ^a | Panel Size D x E mm (in.) | Mounting G x H mm (in.) | F mm (in.) | J mm (in.) | K mm (in.) | P mm (in.) | Q mm (in.) | R mm (in.) | S mm (in.) | U mm (in.) |
|--------------------------|------------------------------------|--|-----------------------------------|----------------------------|----------------------------|----------------|--------------|--------------|---------------|---------------|--------------|---------------|---------------|
| Q1286PCEMC | 120 x 80 (4.72 x 3.15) | 114 x 74 x 49 (4.47 x 2.89 x 1.93) | Q128PD | 91 x 65 (3.58 x 2.56) | 108 x 50 (4.25 x 1.97) | 42 (1.65) | 40 (1.57) | 15 (0.59) | 58 (2.28) | 82 (3.21) | — | 96 (3.78) | 3 (0.12) |
| Q1289PCEMC | 120 x 80 (4.72 x 3.15) | 113 x 73 x 79 (4.45 x 2.87 x 3.11) | Q128PD | 91 x 65 (3.58 x 2.56) | 108 x 50 (4.25 x 1.97) | 72 (2.83) | 70 (2.76) | 15 (0.59) | 58 (2.28) | 82 (3.21) | — | 96 (3.78) | 3 (0.12) |
| Q16129PCEMC | 160 x 120 (6.30 x 4.72) | 153 x 113 x 84 (6.02 x 4.45 x 3.29) | Q1612PD | 130 x 100 (5.12 x 3.94) | 148 x 90 (5.83 x 3.54) | 77.5 (3.05) | 60 (2.36) | 30 (1.18) | 90 (3.54) | 120 (4.72) | — | 136 (5.35) | 3 (0.12) |
| Q1689PCEMC | 160 x 80 (6.30 x 3.15) | 153 x 73 x 79 (6.02 x 2.87 x 3.11) | Q168PD | 131 x 65 (5.16 x 2.56) | 148 x 50 (5.83 x 1.97) | 72 (2.83) | 70 (2.76) | 15 (0.59) | 58 (2.28) | 122 (4.78) | — | 136 (5.35) | 3 (0.12) |
| Q20129PCEMC | 200 x 120 (7.87 x 4.72) | 193 x 113 x 79 (7.60 x 4.45 x 3.11) | Q2012PD | 170 x 100 (6.69 x 3.94) | 188 x 90 (7.40 x 3.54) | 72 (2.83) | 70 (2.76) | 15 (0.59) | 90 (3.54) | 160 (6.30) | 40 (1.57) | 176 (6.93) | 3 (0.12) |
| Q24169PCEMC | 240 x 160 (9.45 x 6.30) | 233 x 153 x 84 (9.17 x 6.02 x 3.29) | Q2416PD | 211 x 148 (8.31 x 5.83) | 228 x 130 (8.98 x 5.12) | 77.5 (3.05) | 75 (2.95) | 15 (0.59) | 138 (5.43) | 202 (7.93) | 75 (2.95) | 215 (8.46) | 3.5 (0.14) |

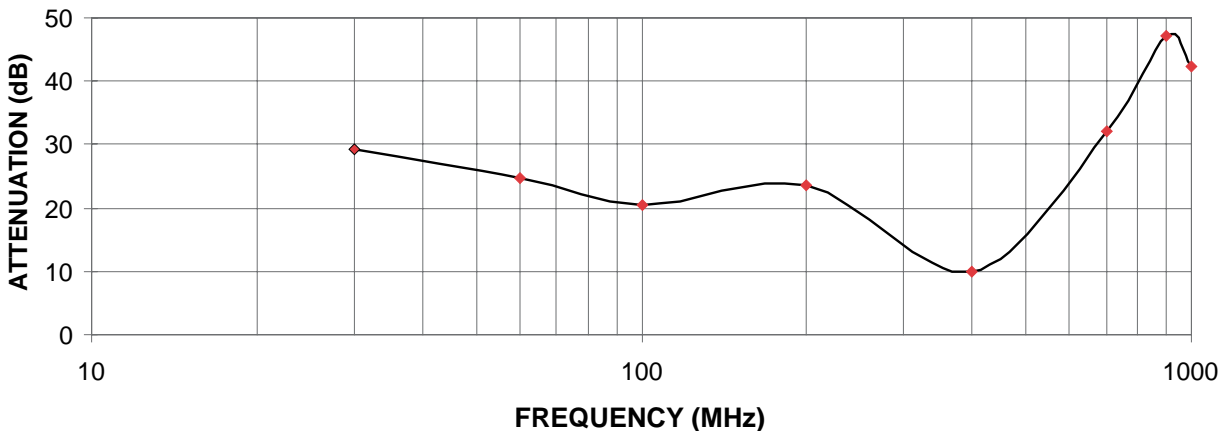
^a Purchase panels separately.

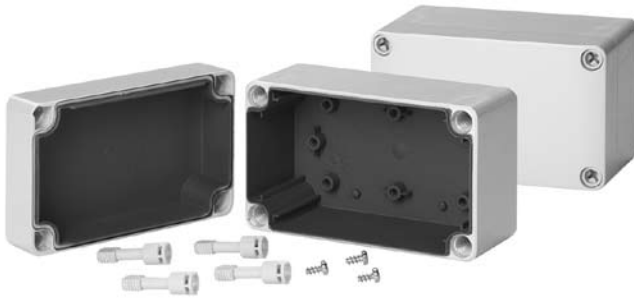
QLINE® D Polycarbonate EMC Enclosures

EMC Enclosures



Q1286PC EMC QLINE® D Enclosure Shielding Effectiveness





Application

Contoured body with flush cover screws provides an attractive and contemporary appearance. Enclosures can be used as insulated electrical junction boxes, terminal wiring boxes, instrument housings, and as housings for electrical controls in wet, dusty, and/or corrosive environments that may also be subject to occasional submersion and where electromagnetic compatibility and/or system security is required.

These enclosures isolate equipment from stray external EMI and contain EMI that is produced by interior components.

Construction

- Body is impact-resistant polycarbonate
- EMC conductive coating in body and cover
- Gasket of silver/silicone
- Mounting holes molded directly under cover screws
- Screws provided for mounting optional panel
- Polycarbonate material is easily punched, drilled, filed, or sawed
- Cross-point flush cover screws are strong, durable polyamide
- Mounting tracks along body side walls for PC card installation
- Molded internal pads for mounting optional panels, rails, and other components

Finish

Enclosure material is RAL 7035 light gray outside. Optional panels are conductive steel.

Industry Standards

UL 508A, File No. E61997: Type 4, 4X, I2, I3
cUL C22.2 No. 94: Type 4, 4X, I2, I3
IEC 60529, IP66
Flammability Evaluated per UL 508A

Shielding effectiveness tested in accordance with:

IEEE 299
VG 95-373, part I5
MIL-STD-285
See QLINE D in this chapter for an example graph showing shielding effectiveness in QLINE enclosures.

Accessories

The accessories shown for QLINE E models in the Corrosion-Resistant chapter can also be used with QLINE E EMC models.

- Panels
- Brass Insert Kit
- DIN Rails
- Hardware Kit
- Hinge Kit
- Mounting Bracket Kit

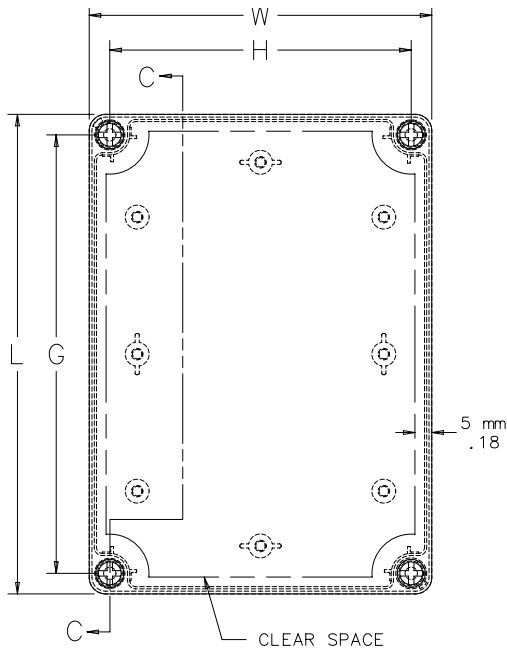
Standard Sizes QLINE E EMC Polycarbonate Enclosures

| Enclosure Catalog Number | External Dimensions L x W mm (in.) | Internal Dimensions A x B x C mm (in.) | Panel Catalog Number ^a | Panel Size D x E mm (in.) | Mounting G x H mm (in.) | F mm (in.) | K mm (in.) | P mm (in.) | Q mm (in.) | S mm (in.) | T mm (in.) | W mm (in.) | X mm (in.) |
|--------------------------|------------------------------------|--|-----------------------------------|----------------------------|----------------------------|----------------|--------------|-----------------|-----------------|---------------|--------------|----------------|--------------|
| Q1388PCEMC | 125 x 75 (4.92 x 2.95) | 118.5 x 68.5 x 67.4 (4.67 x 2.70 x 2.65) | Q138PE | 98 x 48 (3.86 x 1.89) | 110 x 60 (4.33 x 2.36) | 60.5 (2.38) | 25 (0.98) | 40 (1.57) | 75 (2.95) | 90 (3.54) | — | — | — |
| Q13138PCEMC | 125 x 125 (4.92 x 4.92) | 118.5 x 118.5 x 67.4 (4.67 x 4.67 x 2.65) | Q1313PE | 98 x 98 (3.86 x 3.86) | 110 x 110 (4.33 x 4.33) | 60.5 (2.38) | 25 (0.98) | 90 (3.54) | 75 (2.95) | 90 (3.54) | — | 22.5 (0.89) | — |
| Q131310PCEMC | 125 x 125 (4.92 x 4.92) | 118.5 x 68.5 x 92.4 (4.67 x 4.67 x 2.65) | Q1313PE | 98 x 98 (3.86 x 3.86) | 110 x 110 (4.33 x 4.33) | 85.5 (3.37) | 25 (0.98) | 90 (3.54) | 75 (2.95) | 90 (3.54) | — | 22.5 (0.89) | — |
| Q18138PCEMC | 175 x 125 (6.89 x 4.92) | 168.5 x 118.5 x 67.4 (6.63 x 4.67 x 2.65) | Q1813PE | 148 x 98 (5.83 x 3.86) | 160 x 110 (6.30 x 4.33) | 60.5 (2.38) | 25 (0.98) | 90 (3.54) | 100 (3.94) | 140 (5.51) | 15 (0.59) | 22.5 (0.89) | — |
| Q181310PCEMC | 175 x 125 (6.89 x 4.92) | 168.5 x 118.5 x 92.4 (6.63 x 4.67 x 3.64) | Q1813PE | 148 x 98 (5.83 x 3.86) | 160 x 110 (6.30 x 4.33) | 85.5 (3.37) | 50 (1.97) | 90 (3.54) | 100 (3.94) | 140 (5.51) | 15 (0.59) | 22.5 (0.89) | — |
| Q18188PCEMC | 175 x 175 (6.89 x 6.89) | 168.5 x 168.5 x 67.4 (6.63 x 6.63 x 2.65) | Q1818PE | 148 x 148 (5.83 x 5.83) | 160 x 160 (6.30 x 6.30) | 60.5 (2.38) | 25 (0.98) | 140 (5.51) | 125 (4.92) | 140 (5.51) | — | 15 (0.59) | 35 (1.38) |
| Q25188PCEMC | 250 x 175 (9.84 x 6.89) | 243.5 x 168.5 x 67.4 (9.59 x 6.63 x 2.65) | Q2518PE | 223 x 148 (8.78 x 5.83) | 235 x 160 (9.25 x 6.30) | 60.5 (2.38) | 25 (0.98) | 138.5 (5.45) | 201.6 (7.94) | 215 (8.46) | 15 (0.59) | 15 (0.59) | 35 (1.38) |

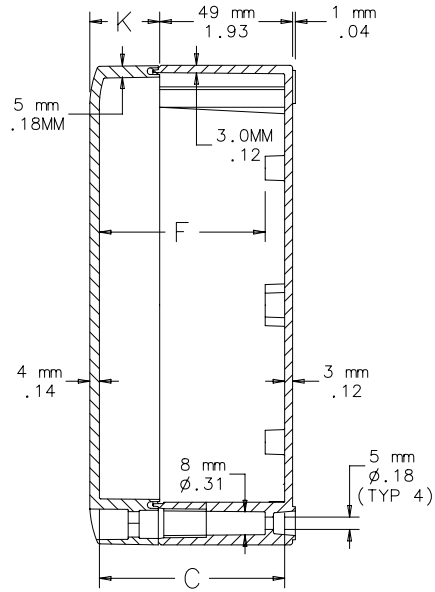
^a Purchase panels separately.

QLINE® E Polycarbonate EMC Enclosures

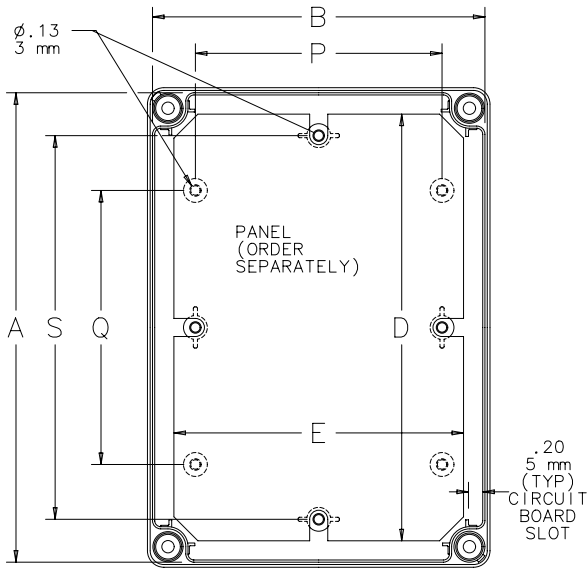
EMC Enclosures



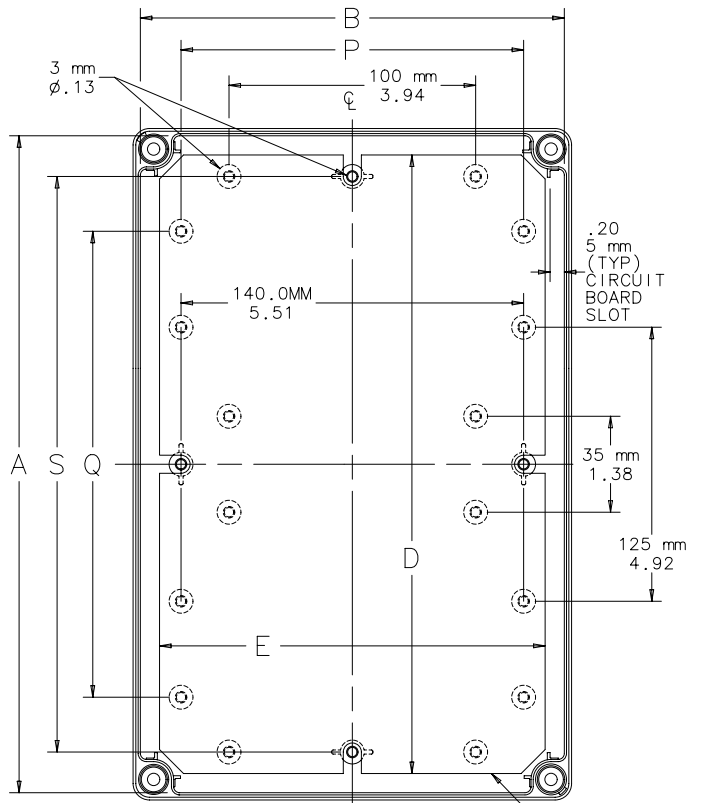
TOP VIEW



SECTION C-C



TOP VIEW WITH
COVER REMOVED



TOP VIEW WITH COVER
REMOVED (WHEN L=250)

87415077

QLINE® I Polycarbonate EMC Enclosures



Application

Designed for use as insulated electrical junction boxes, terminal wiring boxes, instrument housings, electrical control boxes, and pushbutton housings in wet, dusty, and corrosive environments, and where electromagnetic compatibility and/or system security is required.

These enclosures isolate equipment from stray external electromagnetic interference (EMI) and contain EMI produced by interior components.

Construction

- Body is impact-resistant polycarbonate
- Polycarbonate material is easily punched, drilled, filed, or sawed
- EMC conductive coating in body and cover
- Gasket of silver/silicone
- Mounting holes molded directly under cover screws
- Molded internal pads for mounting optional panels, rails, and other components
- Molded internal rails for mounting adjustable depth panel kit
- Screws provided for mounting optional panel
- Optional extension rings are molded polycarbonate
- Easily removable covers attached to body with strong, durable polyamide cross-point cover screws.

Finish

Enclosure material is RAL 7035 light gray outside. Optional panels are conductive steel.

Industry Standards

UL 508A, File No. E61997: Type 4, 4X, 12, 13

cUL C22.2 No. 94: Type 4, 4X, 12, 13

IEC 60529, IP66

Flammability Evaluated per UL 508A

Shielding effectiveness tested in accordance with:

IEEE 299

VG 95-373, part 15

MIL-STD-285

See *QLINE D* in this chapter for an example graph showing shielding effectiveness in *QLINE* enclosures.

Accessories

The accessories shown for *QLINE I* models in the *Corrosion-Resistant* chapter can also be used with *QLINE I EMC* models.

Brass Insert Kit

Cover Screw Kit

DIN Rails

Hardware Kit

Hinge Kit

Mounting Bracket Kit

Panel Depth Fitting

Panel Extenders

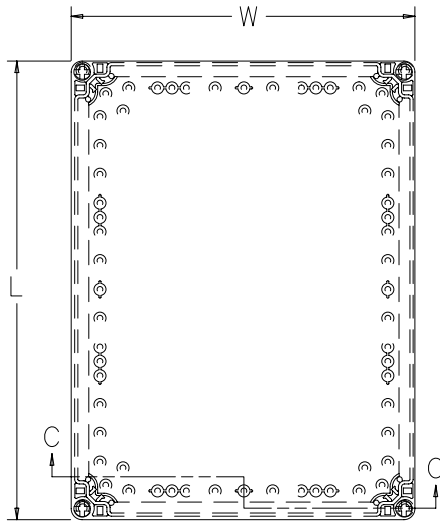
Standard Sizes QLINE I Polycarbonate EMC Enclosures

| Enclosure Catalog Number | External Dimensions L x W mm (in.) | Internal Dimensions A x B mm (in.) | Panel Catalog Number ^a | Panel Size D x E mm (in.) | Mounting G x H mm (in.) | F mm (in.) | P mm (in.) | Q mm (in.) | R mm (in.) | S mm (in.) | T mm (in.) | U mm (in.) | Y mm (in.) | Z mm (in.) |
|--------------------------|------------------------------------|------------------------------------|-----------------------------------|------------------------------|------------------------------|---------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|
| Q202013PCEMC | 200 x 200 (7.87 x 7.87) | 188 x 188 (7.40 x 7.40) | Q2020PI | 160 x 160 (6.30 x 6.30) | 180 x 180 (7.09 x 7.09) | 115 (4.53) | 150 (5.91) | 150 (5.91) | 140 (5.51) | 140 (5.51) | 120 (4.72) | 110 (4.33) | 100 (3.94) | 100 (3.94) |
| Q302013PCEMC | 300 x 200 (11.81 x 7.87) | 288 x 188 (11.34 x 7.40) | Q3020PI | 260 x 160 (10.24 x 6.30) | 280 x 180 (11.02 x 7.09) | 115 (4.53) | 150 (5.91) | 250 (9.84) | 140 (5.51) | 240 (9.45) | 120 (4.72) | 210 (8.27) | 100 (3.94) | 200 (7.87) |
| Q303013PCEMC | 300 x 300 (11.81 x 11.81) | 288 x 288 (11.34 x 11.34) | Q3030PI | 260 x 260 (10.24 x 10.24) | 280 x 280 (11.02 x 11.02) | 115 (4.53) | 250 (9.84) | 250 (9.84) | 240 (9.45) | 240 (9.45) | 220 (8.66) | 210 (8.27) | 200 (7.87) | 200 (7.87) |
| Q402013PCEMC | 400 x 200 (15.75 x 7.87) | 388 x 188 (15.28 x 7.40) | Q4020PI | 360 x 160 (14.17 x 6.30) | 380 x 180 (14.96 x 7.09) | 115 (4.53) | 150 (5.91) | 350 (13.78) | 140 (5.51) | 340 (13.39) | 120 (4.72) | 310 (12.20) | 100 (3.94) | 300 (11.81) |

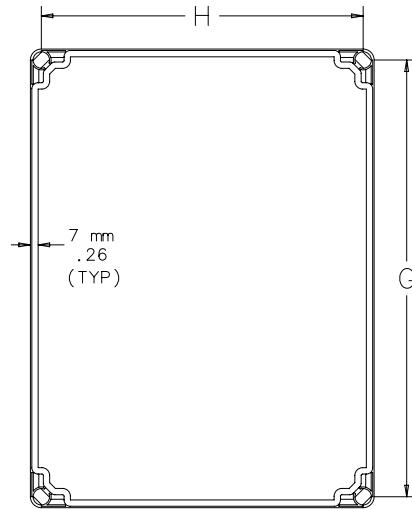
^a Purchase panels separately.

QLINE® I Polycarbonate EMC Enclosures

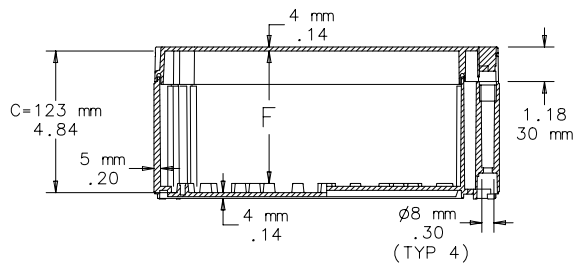
EMC Enclosures



TOP VIEW

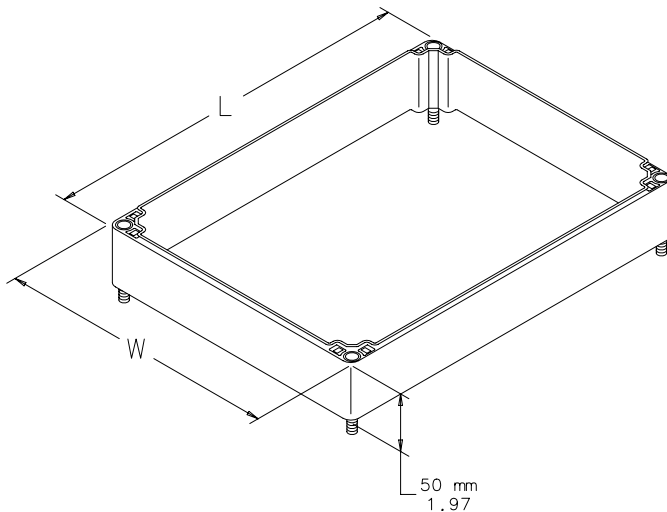


BOTTOM VIEW

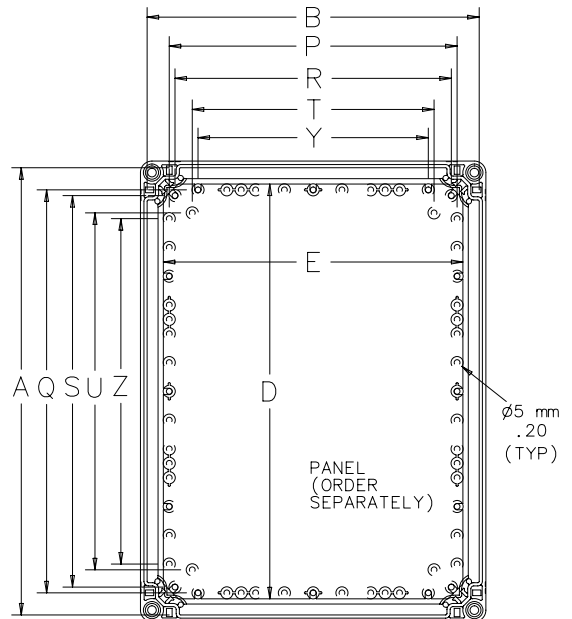


SECTION C-C

NOTE: Panel screws are M5 pan head.



OPTIONAL EXTENSION RING



TOP VIEW WITH COVER REMOVED

87415075

EMC Accessories

Bulletins
A80, DPY, P20

Bonding Straps



Bonding straps assist in maintaining a constant voltage potential across a ground plane.

| Catalog Number | Length (mm) | Length (in.) | Package Quantity |
|----------------|-------------|--------------|------------------|
| ABS6 | 152 | 6.00 | 3 |
| ABS12 | 305 | 12.00 | 3 |
| ABS18 | 457 | 18.00 | 3 |

EMC Cable Strain Reliefs



These cable strain reliefs have provisions for grounding the EMC shielding of cables entering an enclosure while maintaining a NEMA Type 4 seal.

| Catalog Number | Cable Diameter | | Hole Diameter | |
|----------------|----------------|-------------|---------------|-------|
| | (mm) | (in.) | (mm) | (in.) |
| ACSR4EMC | 4 - 6 | 0.16 - 0.24 | 16 | 0.63 |
| ACSR6EMC | 6 - 10 | 0.24 - 0.39 | 19 | 0.75 |
| ACSR10EMC | 10 - 14 | 0.39 - 0.55 | 23 | 0.91 |
| ACSR14EMC | 14 - 17 | 0.55 - 0.67 | 23 | 0.91 |
| ACSR117EMC | 17 - 20 | 0.67 - 0.79 | 29 | 1.14 |
| ACSR19EMC | 19 - 23 | 0.75 - 0.91 | 38 | 1.48 |
| ACSR22EMC | 22 - 27 | 0.87 - 1.06 | 38 | 1.48 |
| ACSR25EMC | 25 - 30 | 0.98 - 1.18 | 47 | 1.87 |
| ACSR29EMC | 29 - 32 | 1.14 - 1.26 | 47 | 1.87 |

Cable Clamp Rail Mounting Brackets



These brackets have provision for multiple rail mounting configurations. They provide the conductivity required to ground the shielding on EMC-shielded cable when used in conjunction with gland plates. Sold in pairs.

| Catalog Number | Quantity |
|----------------|----------|
| ACCEMC | 2 |

Bonding Cable Clamps



These cable clamps are used when securing cables. They provide the conductivity required to ground the shielding on EMC-shielded cable.

| Catalog Number | Max. Cable Diameter | |
|----------------|---------------------|-------|
| | (mm) | (in.) |
| ABCC6 | 6 | 0.25 |
| ABCC95 | 10 | 0.38 |
| ABCC125 | 13 | 0.50 |
| ABCC19 | 19 | 0.75 |
| ABCC254 | 25 | 1.00 |

EMC Accessories

Bulletins
A80, DPY, P20

Cable Clamp Mounting Rails



Optional cable clamp mounting rail. Use with cable clamps or ties to manage incoming cable. Rails are plated and include all mounting hardware. Order clamps or ties separately.

| Catalog Number | Fits |
|----------------|-------------------|
| PCL6R | 600mm wide frames |
| PCL7R | 700mm wide frames |
| PCL8R | 800mm wide frames |

Cable Clamps



Used for strain relief and cable mounting. Plated steel clamps attach quickly to cable support rails or C-rails. Cables are cushioned between plastic cables.

| Catalog Number | Fits | Quantity |
|----------------|----------------------|------------|
| PCL13 | Up to 1/2 in. cable | 5 per pkg. |
| PCL19 | 1/2 to 3/4 in. cable | 5 per pkg. |
| PCL25 | 3/4 to 1 in. cable | 5 per pkg. |
| PCL32 | 1 to 1-1/4 in. cable | 5 per pkg. |

Universal Clips and Cable Ties



Used on mounting rail to manage incoming cable. Made of plastic. Sold in package of 10 clips and 10 ties.

| Catalog Number | Description | Quantity |
|----------------|----------------|-------------|
| PCL1U | Universal ties | 10 per pkg. |

Additional Accessories

See the Industrial Enclosures, Corrosion-Resistant Enclosures, and Accessories chapters for additional accessories that can be used with EMC enclosures.