

ZONEX NON-METALLIC TERMINAL ENCLOSURE



INDUSTRY STANDARDS

ATEX Directive 94/9/EC

ATEX

TUV 13 ATEX120808U

Ex e IIC Gb

Ex ta IIIC Da IP66

EN60079-0

EN60079-7

EN60079-31

Service temperature -50°C to +100°C

IECEX

IECEX TUV 13.0001U

Ex e IIC Gb

Ex ta IIIC Da IP66

IEC 60079-0

IEC 60079-7

IEC 60079-31

Service temperature -50°C to +100°C

Type 4, 4X, 12; File No. E61997
 UL508A Listed
 cUL Listed per CSA C22.2 No. 94; Type 4, 4X, 12; File No. E61997

NEMA / EEMAC Type 4, 4X, 12

IEC 60529, IP66



NEMA 4X enclosure (as a component) is suitable and complies with NEC Class I, Division 2, Groups A, B, C, D assemblies* (as a component) is suitable and complies with NEC Class I, Division 2, Groups A, B, C, D assemblies*

APPLICATION

ZONEX Non-Metallic Terminal Enclosure is ideal for field terminations in hazardous locations. The enclosure meets national and international standards and certifications. It can be used to protect equipment and terminations from corrosive contaminants while meeting rigorous demands. The cabinet is ideal for either panel- or din-mounted components. The enclosure meets ATEX Directives 94/9/EC and IECEx standards for increased safety in housing electrical components in Zone 1 and Zone 2 applications.

SCOPE OF DELIVERY

- Enclosure
- Cover
- Assembly kit
- Installation instruction

FEATURES

- Compression-molded, high-impact strength, fiberglass body and cover
- Cover includes recessed, retained, combination head (Straight blade, Phillips and Torx drive) M4 or M6 stainless steel Type 316 screws
- Retained, continuous, high-temperature silicon gasket within a labyrinth seal between cover and body
- Durable and reusable, internal M4 or M6 stainless steel inserts for DIN- and Panel-mounting
- Covered mounting screw provisions outside of gasketed area, sized M4 (#8) or M6 (1/4-in.)
- Mounting location dimensions are molded into the back side of the enclosure
- Panel mounting screws included, M4 or M6

SPECIFICATIONS

- Compression-molded fiberglass with added agents to address static charge build-up
- High-impact strength as well as high temperature-rated
- Increased Safety: Ex e applications
- Optional panels are pre-plated steel, 1,5 mm thick; or 2,0 mm composite

FINISH

- Molded material has a smooth, low-gloss, black finish
- Cover screws are matte stainless steel finish

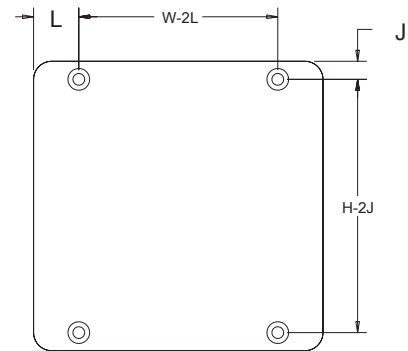
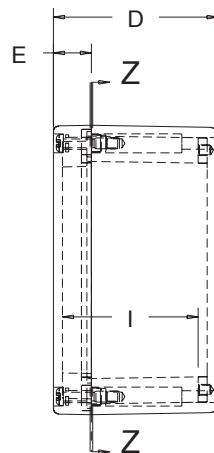
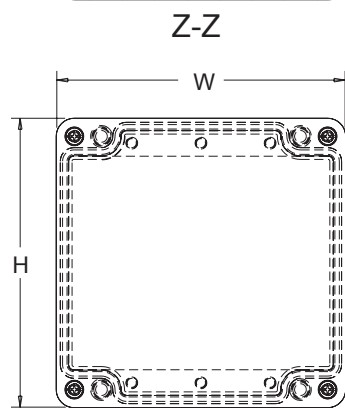
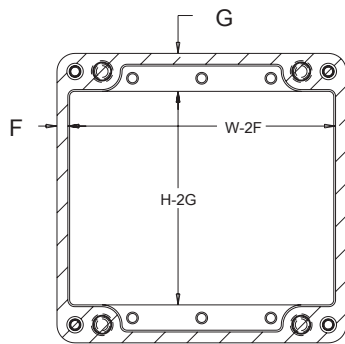
* with properly evaluated assemblies using terminal blocks and/or approved Class I, Division 1 or 2 (no arcs, sparks or hot surfaces) devices installed within the enclosure in accordance with NEC/CEC requirements (reference NEC 2011 Article 501.10(B)(4) and NEC 2011 Handbook).

Note: this is not an Explosionproof enclosure.

Product specific accessories, please find at the end of subsection.
 For other general accessories, please refer to the chapter "Accessories"

STANDARD PRODUCT

| Item number | HxWxD [in./mm] | F [in./mm] | G [in./mm] | E [in./mm] | I [in./mm] | J [in./mm] | Mounting Screw Size [in./mm] | Panel | Panel Material | Panel Size [in./mm] |
|--------------|---|------------|------------|------------|-------------|------------|------------------------------|----------|----------------|--|
| EXE807555 | 3.15 x 2.95 x 2.17 80 x 75 x 55 | .17 4 | .57 15 | .59 15 | 1.65 42 | .23 6 | #8 4 | A8075P | Composite | 2.72 x 2.52 x .08 69 x 64 x 2 |
| EXE1107555 | 4.33 x 2.95 x 2.17 110 x 75 x 55 | .17 4 | .57 15 | .59 15 | 1.65 42 | .24 6 | #8 4 | A11075P | Composite | 3.90 x 2.52 x .08 99 x 64 x 2 |
| EXE1607555 | 6.30 x 2.95 x 2.17 160 x 75 x 55 | .17 4 | .57 15 | .59 15 | 1.65 42 | .24 6 | #8 4 | A16075P | Composite | 5.87 x 2.52 x .08 149 x 64 x 2 |
| EXE1907555 | 7.48 x 2.95 x 2.17 190 x 75 x 55 | .17 4 | .57 15 | .59 15 | 1.65 42 | .23 6 | #8 4 | A19075P | Composite | 7.05 x 2.52 x .08 179 x 64 x 2 |
| EXE807575 | 3.15 x 2.95 x 2.95 80 x 75 x 75 | .16 4 | .56 14 | .59 15 | 2.44 62 | .23 6 | #8 4 | A8075P | Composite | 2.72 x 2.52 x .08 69 x 64 x 2 |
| EXE1107575 | 4.33 x 2.95 x 2.95 110 x 75 x 75 | .16 4 | .56 14 | .59 15 | 2.44 62 | .24 6 | #8 4 | A11075P | Composite | 3.90 x 2.52 x .08 99 x 64 x 2 |
| EXE1607575 | 6.30 x 2.95 x 2.95 160 x 75 x 75 | .16 4 | .56 14 | .59 15 | 2.44 62 | .24 6 | #8 4 | A16075P | Composite | 5.87 x 2.52 x .08 149 x 64 x 2 |
| EXE1907575 | 7.48 x 2.95 x 2.95 190 x 75 x 75 | .16 4 | .56 14 | .59 15 | 2.44 62 | .24 6 | #8 4 | A19075P | Composite | 7.05 x 2.52 x .08 179 x 64 x 2 |
| EXE12212090 | 4.80 x 4.72 x 3.54 122 x 120 x 90 | .17 4 | .75 19 | .98 25 | 2.91 74 | .32 8 | 1/4 6 | A122120P | Plated Steel | 4.25 x 4.21 x .06 108 x 107 x 1.5 |
| EXE22012090 | 8.66 x 4.72 x 3.54 220 x 120 x 90 | .17 4 | .75 19 | .98 25 | 2.95 75 | .32 8 | 1/4 6 | A220120P | Plated Steel | 8.11 x 4.21 x .06 206 x 107 x 1.5 |
| EXE16016090 | 6.30 x 6.30 x 3.54 160 x 160 x 90 | .23 5.9 | .79 20 | .83 21 | 2.95 75 | .39 10 | 1/4 6 | A160160P | Plated Steel | 5.63 x 5.70 x .06 143 x 144 x 1.5 |
| EXE26016090 | 10.24 x 6.30 x 3.54 260 x 160 x 90 | .23 5.9 | .79 20 | .83 21 | 2.95 75 | .39 10 | 1/4 6 | A260160P | Plated Steel | 9.61 x 5.70 x .06 244 x 144 x 1.5 |
| EXE36016090 | 14.17 x 6.30 x 3.54 360 x 160 x 90 | .23 5.9 | .79 20 | .83 21 | 2.95 75 | .39 10 | 1/4 6 | A360160P | Plated Steel | 13.54 x 5.70 x .06 344 x 144 x 1.5 |
| EXE56016090 | 22.05 x 6.30 x 3.54 560 x 160 x 90 | .21 5 | .77 20 | .83 21 | 2.95 75 | .39 10 | 1/4 6 | A560160P | Plated Steel | 21.38 x 5.70 x .06 543 x 144 x 2.5 |
| EXE255250120 | 10.04 x 9.84 x 4.72 255 x 250 x 120 | .22 6 | .79 20 | .98 25 | 4.09 104 | .39 10 | 1/4 6 | A255250P | Plated Steel | 9.45 x 9.17 x .06 240 x 233 x 1.5 |
| EXE400250120 | 15.75 x 9.84 x 4.72 400 x 250 x 120 | .22 6 | .79 20 | .98 25 | 4.09 104 | .39 10 | 1/4 6 | A400250P | Plated Steel | 15.12 x 9.17 x .06 384 x 233 x 1.5 |
| EXE400405120 | 15.75 x 15.94 x 4.72 400 x 405 x 120 | .23 6 | .79 20 | .98 25 | 4.09 104 | .39 10 | 1/4 6 | A400405P | Plated Steel | 15.16 x 15.35 x .06 385 x 390 x 1.5 |
| EXE400405165 | 15.75 x 15.94 x 6.50 400 x 405 x 165 | .20 5 | .76 19 | .98 25 | 5.87 149 | .39 10 | 1/4 6 | A400405P | Plated Steel | 15.16 x 15.35 x .06 385 x 390 x 1.5 |



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ZONEX ATEX- AND IECEX-CERTIFIED, TYPE 4X, HINGED COVER



ZONEX enclosures are designed and certified to meet ATEX Directive 94/9/EC as well as IECEx standards for increased safety in housing electrical components in Zone 1 and Zone 2 applications.

Pentair ATEX Ex e enclosures are not intended for use in explosion-proof or flame-proof applications.

INDUSTRY STANDARDS

ATEX Directive 94/9/EC

Sira 09ATEX3224U
Ex e IIC Gb
Ex tb IIIC Db IP 66
EN60079-0:2009
EN60079-7:2007
EN61241-0:2006
EN61241-1:2004

IECEX

IECEX SIR 09.0099U
Ex e IIC Gb
Ex tb IIIC Db IP 66
IEC 60079-0:2007-2010
IEC 60079-7:2006-2007
IEC 61241-0:2004
IEC 61241-1:2004

Type 4, 4X, 12; File No. E61997
cUL C22.2 No. 94 Listed; Type 4, 4X, 12; File No. E61997

NEMA/EEMAC Type 4, 4X, 12
IEC 60529, IP66



NEMA 4X enclosure (as a component) is suitable and complies with NEC Class I, Division 2, Groups A, B, C, D assemblies*
NEMA 4X enclosure (as a component) is suitable and complies with NEC Class I, Division 2, Groups A, B, C, D assemblies*

APPLICATION

ZONEX enclosures deliver a robust solution for termination and junction enclosure applications in potentially hazardous locations, including:

- Petroleum and chemical processing
- Water treatment processing
- Pharmaceutical processing
- Grain processing

* with properly evaluated assemblies using terminal blocks and/or approved Class I, Division 1 or 2 (no arcs, sparks or hot surfaces) devices installed within the enclosure in accordance with NEC/CEC requirements (reference NEC 2011 Article 501.10(B)(4) and NEC 2011 Handbook).

Note: this is not an Explosionproof enclosure.

SCOPE OF DELIVERY

- Enclosure
- Gland plate (assembled)
- Mounting plate (assembled)
- Assembly kit
- Installation instruction
- ATEX declaration of conformity

FEATURES

- 210 degree opening door that is easily removal by pulling clip style hinge pins
- Fabricated and formed M5 threads for gland plate screws provide quick and easy installation

SPECIFICATIONS

- 10 mm brass internal/external bonding provision
- Type 316L stainless steel quarter-turn latch with double bit 3 mm insert
- Large 2,5 mm thick, flat gasketed gland plate(s)
- Continuous seal gasket on door and gland plate(s)
- Mounting panel and hardware for bonding provisions included
- Operating temperature range: -40 °C to +70 °C standard polyurethane gasket; -55 °C to +180 °C optional silicone gasket
- 320 grain brushed finish
- Fabricated from Type 316L stainless steel
- 2,5 mm thick individual welded-on top and bottom wall-mounting brackets

OPTIONS FOR MODIFICATION

Pentair excels at modifying and customizing products to your specifications. Pentair offers a ZONEX-specific modification program with ATEX certification. Contact your local sales office or distributor for complete information.

- Material changes: Type 304 stainless steel, painted mild steel or aluminum
- Gasket changes: high-temperature silicone gasket; operating temperature range: -55 °C to +180 °C
- Side-mount brackets available
- Holes and cutouts
- Paint
- Ground bars
- Terminal block installation and marking
- Tagging (terminals, nameplates)
- Accessory installations: drain/breathers and stopping plugs

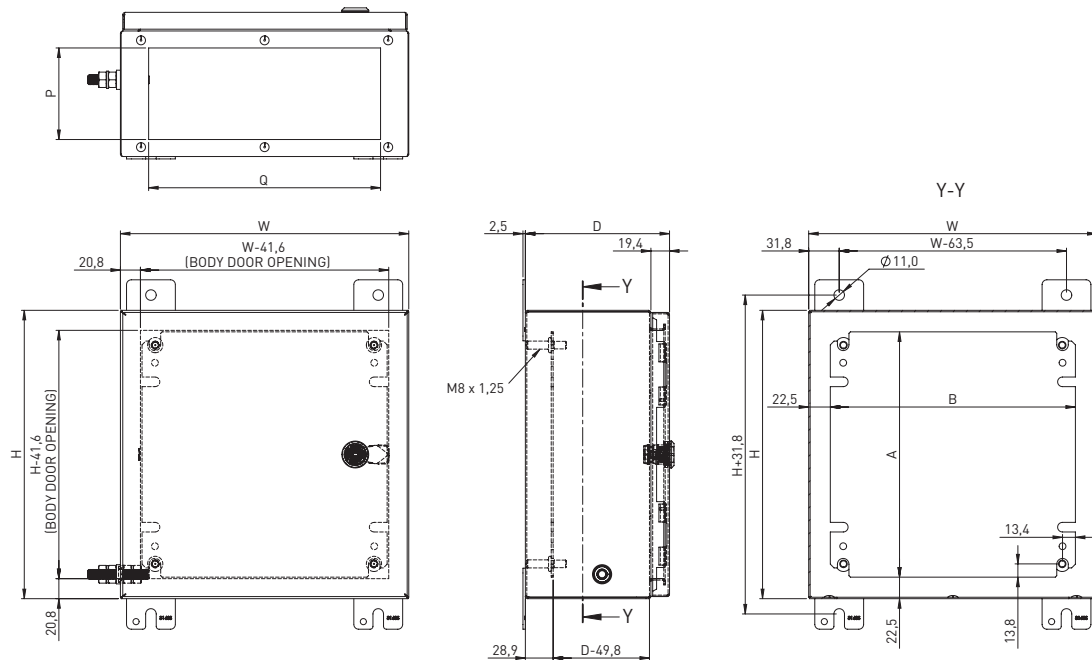
For product specific accessories, please go to the end of each subsection.
For other general accessories, please refer to the chapter "Accessories".

NOTES

Intrinsically safe terminal blocks can be installed in populated non-standard enclosures.
 IECEx populated enclosures require IECEx-certified components specifically listed in certification (See IECEx SIR 09.0100 for more details).

| Item number | Description | H [mm] | W [mm] | D [mm] | Q [mm] | P [mm] | No. of Latches |
|-------------|--|--------|--------|--------|--------|--------|----------------|
| 15411282 | EXE300300150SS61E Zonex EX e StSt316L IP66 door | 300 | 300 | 150 | 236.5 | 73.5 | 1 |
| 15411283 | EXE300300210SS61E Zonex EX e StSt316L IP66 door | 300 | 300 | 210 | 236.5 | 133.5 | 1 |
| 15411284 | EXE400300150SS61E Zonex EX e StSt316L IP66 door | 400 | 300 | 150 | 236.5 | 73.5 | 1 |
| 15411285 | EXE400300210SS61E Zonex EX e StSt316L IP66 door | 400 | 300 | 210 | 236.5 | 133.5 | 1 |
| 15411286 | EXE400400150SS61E Zonex EX e StSt316L IP66 door | 400 | 400 | 150 | 336.5 | 73.5 | 1 |
| 15411287 | EXE400400210SS61E Zonex EX e StSt316L IP66 door | 400 | 400 | 210 | 336.5 | 133.5 | 1 |
| 15411288 | EXE500400150SS61E Zonex EX e StSt316L IP66 door | 500 | 400 | 150 | 336.5 | 73.5 | 1 |
| 15411289 | EXE500400210SS61E Zonex EX e StSt316L IP66 door | 500 | 400 | 210 | 336.5 | 133.5 | 1 |
| 15411290 | EXE500500210SS61E Zonex EX e StSt316L IP66 door | 500 | 500 | 210 | 436.5 | 133.5 | 1 |
| 15411291 | EXE600500210SS61E Zonex EX e StSt316L IP66 door | 600 | 500 | 210 | 436.5 | 133.5 | 2 |
| 15411292 | EXE600600210SS61E Zonex EX e StSt316L IP66 door | 600 | 600 | 210 | 536.5 | 133.5 | 2 |
| 15411293 | EXE600600300SS61E Zonex EX e StSt316L IP66 door | 600 | 600 | 300 | 536.5 | 223.5 | 2 |
| 15411294 | EXE750500210SS61E Zonex EX e StSt316L IP66 door | 750 | 500 | 210 | 436.5 | 133.5 | 2 |
| 15411295 | EXE750600210SS61E Zonex EX e StSt316L IP66 door | 750 | 600 | 210 | 536.5 | 133.5 | 2 |
| 15411296 | EXE750750300SS61E Zonex EX e StSt316L IP66 door | 750 | 750 | 300 | 686.5 | 223.5 | 2 |
| 15411297 | EXE900600210SS61E Zonex EX e StSt316L IP66 door | 900 | 600 | 210 | 536.5 | 133.5 | 2 |
| 15411262 | EXE300300150SS61HE Zonex EX e StSt316L IP66 door | 300 | 300 | 150 | 236.5 | 73.5 | 1 |
| 15411263 | EXE300300210SS61HE Zonex EX e StSt316L IP66 door | 300 | 300 | 210 | 236.5 | 133.5 | 1 |
| 15411264 | EXE400300150SS61HE Zonex EX e StSt316L IP66 door | 400 | 300 | 150 | 236.5 | 73.5 | 1 |
| 15411265 | EXE400300210SS61HE Zonex EX e StSt316L IP66 door | 400 | 300 | 210 | 236.5 | 133.5 | 1 |
| 15411266 | EXE400400150SS61HE Zonex EX e StSt316L IP66 door | 400 | 400 | 150 | 336.5 | 73.5 | 1 |
| 15411267 | EXE400400210SS61HE Zonex EX e StSt316L IP66 door | 400 | 400 | 210 | 336.5 | 133.5 | 1 |
| 15411268 | EXE500400150SS61HE Zonex EX e StSt316L IP66 door | 500 | 400 | 150 | 336.5 | 73.5 | 1 |
| 15411269 | EXE500400210SS61HE Zonex EX e StSt316L IP66 door | 500 | 400 | 210 | 336.5 | 133.5 | 1 |
| 15411270 | EXE500500210SS61HE Zonex EX e StSt316L IP66 door | 500 | 500 | 210 | 436.5 | 133.5 | 1 |
| 15411271 | EXE600500210SS61HE Zonex EX e StSt316L IP66 door | 600 | 500 | 210 | 436.5 | 133.5 | 2 |
| 15411272 | EXE600600210SS61HE Zonex EX e StSt316L IP66 door | 600 | 600 | 210 | 536.5 | 133.5 | 2 |
| 15411273 | EXE600600300SS61HE Zonex EX e StSt316L IP66 door | 600 | 600 | 300 | 536.5 | 223.5 | 2 |
| 15411274 | EXE750500210SS61HE Zonex EX e StSt316L IP66 door | 750 | 500 | 210 | 436.5 | 133.5 | 2 |
| 15411275 | EXE750600210SS61HE Zonex EX e StSt316L IP66 door | 750 | 600 | 210 | 536.5 | 133.5 | 2 |
| 15411276 | EXE750750300SS61HE Zonex EX e StSt316L IP66 door | 750 | 750 | 300 | 686.5 | 223.5 | 2 |
| 15411277 | EXE900600210SS61HE Zonex EX e StSt316L IP66 door | 900 | 600 | 210 | 536.5 | 133.5 | 2 |

* HE - enclosure with horizontal mounting brackets



ZONEX ATEX- AND IECEX-CERTIFIED, TYPE 4X, SCREW COVER



ZONEX enclosures are designed and certified to meet ATEX directive 94/9/EC as well as IECEX standards for increased safety in housing electrical components in Zone 1 and Zone 2 applications.

Pentair's ATEX Ex e enclosures are not intended for use in explosion-proof or flame-proof applications.

INDUSTRY STANDARDS

ATEX Directive 94/9/EC

Sira 09ATEX3224U
Ex e IIC Gb
Ex tb IIIC Db IP 66
EN60079-0:2009
EN60079-7:2007
EN61241-0:2006
EN61241-1:2004

IECEX

IECEX SIR 09.0099U
Ex e IIC Gb
Ex tb IIIC Db IP 66
IEC 60079-0:2007-2010
IEC 60079-7:2006-2007
IEC 61241-0:2004
IEC 61241-1:2004

Type 4, 4X, 12; File No. E61997
cUL C22.2 No. 94 Listed; Type 4, 4X, 12; File No. E61997

NEMA/EEMAC Type 4, 4X, 12
IEC 60529, IP66



NEMA 4X enclosure (as a component) is suitable and complies with NEC Class I, Division 2, Groups A, B, C, D assemblies*

APPLICATION

ZONEX enclosures deliver a robust solution for termination and junction enclosure applications in potentially hazardous locations, including:

- Petroleum and chemical processing
- Water treatment processing
- Pharmaceutical processing
- Grain processing

SCOPE OF DELIVERY

- Enclosure
- Cover
- Mounting plate (assembled)
- Assembly kit
- Installation instruction
- ATEX declaration of conformity

* with properly evaluated assemblies using terminal blocks and/or approved Class I, Division 1 or 2 (no arcs, sparks or hot surfaces) devices installed within the enclosure in accordance with NEC/CEC requirements (reference NEC 2011 Article 501.10(B)(4) and NEC 2011 Handbook).
Note: this is not an Explosionproof enclosure.

For product specific accessories, please go to the end of each subsection.
For other general accessories, please refer to the chapter "Accessories".

FEATURES

- Full width welded on top and bottom wall mounting brackets for easy installation

SPECIFICATIONS

- 6 mm brass internal/external bonding provision
- One piece continuous gasket on door
- Type 316L stainless steel cover screws
- Mounting panel and hardware for bonding provisions included
- Operating temperature range: -40 °C to +70 °C standard polyurethane gasket; -55 °C to +180 °C optional silicone gasket
- Internal weldstuds for panel or DIN rail mounting brackets
- 320 grain brushed finish
- Fabricated from Type 316L stainless steel

OPTIONS FOR MODIFICATION

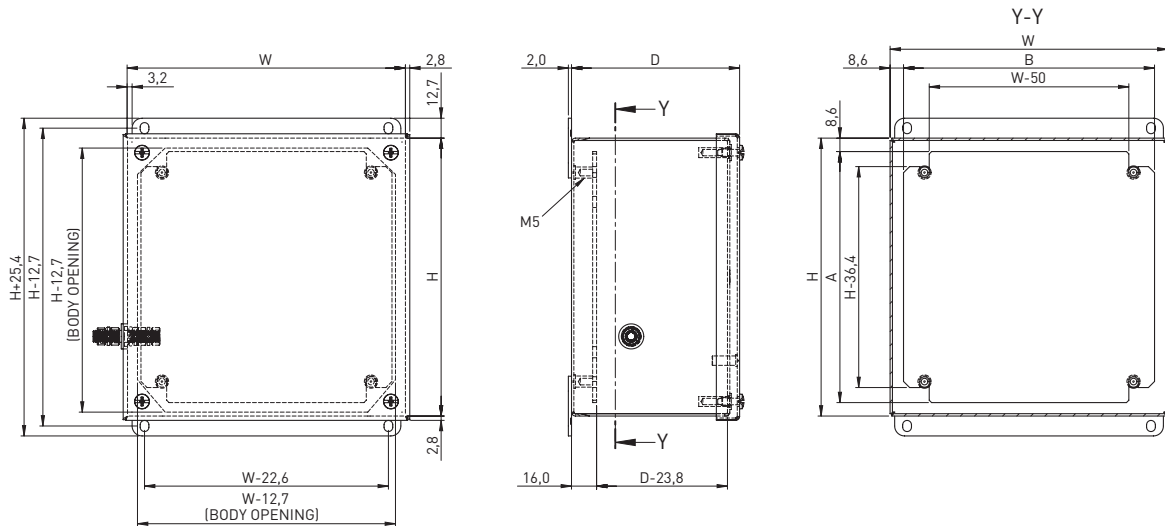
Hoffman excels at modifying and customizing products to your specifications. Hoffman offers a ZONEX-specific modification program with ATEX certification. Contact your local Hoffman sales office or distributor for complete information.

- Material changes: type 304 stainless steel, painted mild steel or aluminum
- Gasket changes: high-temperature silicone gasket; operating temperature range: -55 °C to +180 °C
- Holes and cutouts
- Paint
- Terminal block installation and marking
- Tagging (terminals, nameplates)
- Accessory installations: drain/breathers and stopping plugs

NOTES

Intrinsically safe terminal blocks can be installed in populated non-standard enclosures.
 IECEx populated enclosures require IECEx-certified components specifically listed in certification (See IECEx SIR 09.0100 for more details).

| Item Number | Description | H [mm] | W [mm] | D [mm] |
|-------------|---|--------|--------|--------|
| 15411298 | EXE10210276SS6E Zonex EX e StSt316L IP66 screw cover | 102 | 102 | 76 |
| 15411278 | EXE152152102SS6E Zonex EX e StSt316L IP66 screw cover | 152 | 152 | 102 |
| 15411279 | EXE178178102SS6E Zonex EX e StSt316L IP66 screw cover | 178 | 178 | 102 |
| 15411280 | EXE216146127SS6E Zonex EX e StSt316L IP66 screw cover | 216 | 146 | 127 |
| 15411281 | EXE254254127SS6E Zonex EX e StSt316L IP66 screw cover | 254 | 254 | 127 |



SELECTION OF ZONEX ENCLOSURES

BY TERMINAL BLOCK COUNT & POWER

DETERMINE THE CORRECT SIZE ZONEX ENCLOSURE FOR POPULATED TERMINAL BLOCK:

N by **MAXIMUM TERMINAL BLOCK COUNT** (known wire size/ match terminal block size)

1. Refer to **Power and Terminal Block Matrix** appropriate for selected model (screw-/hinge-cover)
2. Find a terminal block quantity less than or equal to required in the shaded areas associated with your chosen terminal block manufacturer
3. Select enclosure size
4. Use calculating power and amperage formula to verify conformance to standard
5. If maximum power is exceeded by terminal block count and amperage, select an enclosure with higher power and re-calculate

P by **MAXIMUM POWER** (watts)

1. Refer to **Power and Terminal Block Matrix** appropriate for selected model (screw-/hinge-cover)
2. Find maximum power required in shaded areas associated with your chosen terminal block manufacturer
3. If terminal block quantity for maximum power is insufficient, continue down and across rows until requirement is met; this provides the smallest enclosure to meet maximum power and amperage needs
4. Use calculating power and amperage formula to verify conformance to standard
5. If maximum power is exceeded by terminal block count and amperage, select an enclosure with higher power and re-calculate

SPECIFYING ENCLOSURES WITH TERMINAL BLOCK POPULATION

- ATEX- and IECEx-certified terminal blocks from Phoenix and Weidmuller are referenced in tables
- Any ATEX or IECEx hazardous location certified terminal block may be selected and installed in ATEX-certified applications
- Only the table referenced terminal blocks may be specified for IECEx populations and certification
- Combinations of different terminal block sizes and quantities may be selected for population
- All terminal block installation applications need to use the CALCULATING POWER and AMPERAGE formula and associated tables on page 10 to verify compliance with final intended amperage of application and power rating of selected enclosure

R **CALCULATING POWER AND AMPERAGE**

using combined terminal resistance factor (see page 10)
Calculation of power/amperage/number of terminal blocks in accordance with EN 600079-7:2007, ANEX E, E.2

$$P = N \times R \times I^2 \text{ or } I = \sqrt{P/(N \times R)} \text{ or } N = P/(R \times I^2)$$

Where: **P** is the total dissipated power (watts)

N is the total number of terminals

I is the current (amps)

R is the sum of terminal resistance (R_t) and wire resistance (R_w)

Terminal Wire Size, Voltage and Resistance (R_t) Data

| Manufacturer Model | Phoenix | | | | Weidmuller (SAK/WDU) | | | |
|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | UK1.5 | UK3 | UK5 | UK10 | 2.5 | 4 | 6 | 10 |
| Terminal Wire Size Range (mm ²) | 0.14 to 1.5 | 0.2 to 2.5 | 0.2 to 4.0 | 0.5 to 10.0 | 0.5 to 2.5 | 0.5 to 4.0 | 0.5 to 6.0 | 1.5 to 10.0 |
| Terminal Voltage (Volts) | 550 | 550 | 690 | 600 | 550 | 550 | 550 | 550 |
| Terminal Resistance R _t (Ohm) | 4.17 x10 ⁻⁰⁴ | 5.00 x10 ⁻⁰⁴ | 3.75 x10 ⁻⁰⁴ | 1.23 x10 ⁻⁰⁴ | 3.89 x10 ⁻⁰⁴ | 4.23 x10 ⁻⁰⁴ | 3.93 x10 ⁻⁰⁴ | 1.34 x10 ⁻⁰⁴ |

POWER & TERMINAL BLOCK QUANTITY MATRIX

SCREW-COVER ZONEX (STANDARD SIZES)

| N MAXIMUM TERMINAL BLOCKS Quantity Offerings per Enclosure | | | | | | | | | P MAXIMUM POWER Dissipation (Watts) | | | | | |
|--|-----|-----|------|----------------------|----|----|----|--------------|---|--------------------|------------------------|-------|-------|------------------|
| Phoenix | | | | Weidmuller (SAK/WDU) | | | | DIN Rail Qty | T6 at Tamp = +40 C | T5 at Tamp = +55 C | Actual Dimensions (mm) | | | Catalog Number |
| UK1.5 | UK3 | UK5 | UK10 | 2.5 | 4 | 6 | 10 | | | | Height | Width | Depth | |
| 9 | 7 | 6 | 4 | 6 | 6 | 5 | 4 | 1 | 3.8 W | 3.8 W | 102 | 102 | 76 | EXE10210276SS6E |
| 21 | 17 | 14 | 9 | 15 | 14 | 11 | 9 | 1 | 6.9 W | 6.9 W | 152 | 152 | 102 | EXE152152102SS6E |
| 27 | 22 | 18 | 11 | 19 | 17 | 14 | 11 | 1 | 6.9 W | 6.9 W | 178 | 178 | 102 | EXE178178102SS6E |
| 36 | 29 | 25 | 15 | 25 | 23 | 19 | 15 | 1 | 9.6 W | 9.6 W | 216 | 146 | 127 | EXE216146127SS6E |
| 45 | 37 | 32 | 19 | 32 | 29 | 24 | 19 | 1 | 9.6 W | 9.6 W | 254 | 254 | 127 | EXE254254127SS6E |
| 90 | 74 | 64 | 38 | 64 | 58 | 48 | 38 | 2 | | | | | | |

POWER & TERMINAL BLOCK QUANTITY MATRIX
HINGE-COVER ZONEX (STANDARD SIZES)

| N MAXIMUM TERMINAL BLOCKS Quantity Offerings per Enclosure | | | | | | | | | P MAXIMUM POWER Dissipation (Watts) | | | | | | |
|---|-----|-----|------|----------------------|-----|-----|-----|--------------|--|-----------------------|------------------------|-------|-------|---|---|
| Phoenix | | | | Weidmuller (SAK/WDU) | | | | DIN Rail Qty | T6 at Tamp = +40 C | T5 at Tamp = +55 C | Actual Dimensions (mm) | | | Catalog Number | |
| UK1.5 | UK3 | UK5 | UK10 | 2.5 | 4 | 6 | 10 | | | | Height | Width | Depth | | |
| 41 | 33 | 28 | 17 | 29 | 26 | 21 | 17 | 1 | 16.5 W | 16.5 W | 300 | 300 | 150 | EXE300300150SS61E EXE300300150SS61HE | |
| 82 | 66 | 56 | 34 | 57 | 52 | 43 | 34 | 2 | | | | | 210 | EXE300300210SS61E EXE300300210SS61HE | |
| 123 | 99 | 84 | 51 | 86 | 78 | 64 | 51 | 3 | | | | | | | |
| 65 | 53 | 44 | 27 | 46 | 42 | 34 | 27 | 1 | 18.5 W | 18.5 W | 400 | 300 | 150 | EXE400300150SS61E EXE400300150SS61HE | |
| 130 | 106 | 88 | 54 | 92 | 84 | 68 | 54 | 2 | | | | | 210 | EXE400300210SS61E EXE400300210SS61HE | |
| 195 | 159 | 132 | 81 | 138 | 126 | 102 | 82 | 3 | | | | | | | |
| 65 | 53 | 44 | 27 | 46 | 42 | 34 | 27 | 1 | 18.5 W | 18.5 W | 400 | 400 | 150 | EXE400400150SS61E EXE400400150SS61HE | |
| 130 | 106 | 88 | 60 | 92 | 84 | 68 | 54 | 2 | | | | | 210 | EXE400400210SS61E EXE400400210SS61HE | |
| 195 | 158 | 133 | 81 | 138 | 126 | 102 | 81 | 3 | | | | | | | |
| 90 | 72 | 61 | 37 | 63 | 58 | 47 | 38 | 1 | 23.5 W | 23.5 W | 500 | 400 | 150 | EXE500400150SS61E EXE500400150SS61HE | |
| 180 | 144 | 122 | 74 | 126 | 116 | 94 | 76 | 2 | | | | | 210 | EXE500400210SS61E EXE500400210SS61HE | |
| 270 | 216 | 183 | 111 | 189 | 174 | 141 | 114 | 3 | | | | | | | |
| 90 | 72 | 61 | 37 | 63 | 58 | 47 | 38 | 1 | 25.5 W | 25.5 W | 500 | 500 | 210 | EXE500500210SS61E EXE500500210SS61HE | |
| 180 | 144 | 122 | 74 | 126 | 116 | 94 | 76 | 2 | | | | | | | |
| 270 | 216 | 183 | 111 | 189 | 174 | 141 | 114 | 3 | | | | | | | |
| 360 | 288 | 244 | 148 | 252 | 232 | 188 | 152 | 4 | 28 W | 28 W | 600 | 500 | 210 | EXE600500210SS61E EXE600500210SS61HE | |
| 111 | 90 | 75 | 46 | 78 | 72 | 58 | 47 | 1 | | | | | | | |
| 222 | 180 | 150 | 92 | 156 | 144 | 116 | 94 | 2 | | | | | | | |
| 333 | 270 | 225 | 138 | 234 | 216 | 174 | 141 | 3 | 28 W | 28 W | 600 | 600 | 210 | EXE600600210SS61E EXE600600210SS61HE | |
| 444 | 360 | 300 | 184 | 312 | 288 | 232 | 188 | 4 | | | | | 300 | EXE600600300SS61E EXE600600300SS61HE | |
| 111 | 90 | 75 | 46 | 78 | 72 | 58 | 47 | 1 | | | | | | | |
| 222 | 180 | 150 | 92 | 156 | 144 | 116 | 94 | 2 | 28 W | 28 W | 750 | 500 | 210 | EXE750500210SS61E EXE750500210SS61HE | |
| 333 | 270 | 225 | 138 | 234 | 216 | 174 | 141 | 3 | | | | | | | |
| 444 | 360 | 300 | 184 | 312 | 288 | 232 | 188 | 4 | | | | | | | |
| 555 | 450 | 375 | 230 | 390 | 360 | 290 | 235 | 5 | 33 W | 33 W | 750 | 600 | 210 | EXE750600210SS61E EXE750600210SS61HE | |
| 150 | 121 | 102 | 62 | 105 | 97 | 79 | 63 | 1 | | | | | 750 | 300 | EXE750750300SS61E EXE750750300SS61HE |
| 300 | 242 | 204 | 124 | 210 | 194 | 158 | 126 | 2 | | | | | | | |
| 450 | 363 | 306 | 186 | 315 | 291 | 237 | 189 | 3 | 33 W | 33 W | 900 | 600 | 210 | EXE900600210SS61E EXE900600210SS61HE | |
| 600 | 484 | 408 | 248 | 420 | 388 | 316 | 252 | 4 | | | | | | | |
| 750 | 605 | 510 | 310 | 525 | 485 | 395 | 315 | 5 | | | | | | | |
| 150 | 121 | 102 | 62 | 105 | 97 | 79 | 63 | 1 | 33 W | 33 W | 900 | 600 | 210 | EXE900600210SS61E EXE900600210SS61HE | |
| 300 | 242 | 204 | 124 | 210 | 194 | 158 | 126 | 2 | | | | | | | |
| 450 | 363 | 306 | 186 | 315 | 291 | 237 | 189 | 3 | | | | | | | |
| 600 | 484 | 408 | 248 | 420 | 388 | 316 | 252 | 4 | | | | | | | |
| 750 | 605 | 510 | 310 | 525 | 485 | 395 | 315 | 5 | | | | | | | |
| 186 | 150 | 126 | 77 | 130 | 120 | 98 | 78 | 1 | | | | | | | |
| 372 | 300 | 252 | 154 | 260 | 240 | 196 | 156 | 2 | | | | | | | |
| 558 | 450 | 378 | 231 | 390 | 360 | 294 | 234 | 3 | | | | | | | |
| 744 | 600 | 504 | 308 | 520 | 480 | 392 | 312 | 4 | | | | | | | |
| 930 | 750 | 630 | 385 | 650 | 600 | 490 | 390 | 5 | | | | | | | |

Color shaded areas are maximum physical quantity of terminal blocks that will fit enclosure, not necessarily the allowable quantity. Actual allowable quantity is determined by amperage and power allowed through provided mathematical formula.

* Maximum dissipated power based on screw type terminal blocks. Weidmuller 2.5 and smaller wire size limited to 15 amperes.

R COMBINED TERMINAL RESISTANCE FACTOR

This factor is used to determine the number of terminals that can be accommodated within the enclosure without exceeding the enclosure maximum wattage rating. The combined terminal resistance factor (R) is the sum of the individual terminal resistances (Rt) and the resistance of the cable core equal in length to the enclosure maximum diagonal (Rw). The core resistance has been defined in the standard BS EN 60228.

- Wattage to be Dissipated (P) = N x R x I²
- Total Number of Terminals (N)
- Combined Terminal Resistance Factor (R) = (Rt + Rw) the sum of terminal resistance [Rt] and wire resistance [Rw]
- Maximum Current (amps) used in the application = (I)

EXAMPLE:

A customer wants to determine the number of WDU 2.5 terminals that could be used in an EXE300300150SS61E enclosure rated at 17.5 watts (P) and at 10 amps (I).

Solving for N in the above formula $N = P / (R \times I^2)$:

$N = 16.5 / (0.00345 \times 10^2)$

$N = 47$

The maximum physical number of WDU 2.5 terminals that can be installed on a single rail is 29 and a total of 3 rails can be installed in the enclosure, therefore two rows of 23 terminal blocks could be accommodated in the enclosure.

**COMBINED TERMINAL RESISTANCE FACTOR MATRIX
ZONEX ENCLOSURES (Standard Sizes)**

| | Power ratings (Watts) | COMBINED TERMINAL RESISTANCE FACTOR | | | | | | | |
|---|-----------------------|-------------------------------------|---------|---------|---------|----------------------|---------|---------|---------|
| | | Phoenix | | | | Weidmuller (SAK/WDU) | | | |
| | | UK1.5 | UK3 | UK5 | UK10 | 2.5 | 4 | 6 | 10 |
| EXE10210276SS6E | 3.8 W | 0.00238 | 0.00171 | 0.00112 | 0.00042 | 0.00159 | 0.00117 | 0.00089 | 0.00043 |
| EXE152152102SS6E | 6.9 W | 0.00330 | 0.00227 | 0.00147 | 0.00056 | 0.00215 | 0.00152 | 0.00113 | 0.00057 |
| EXE178178102SS6E | 6.9 W | 0.00370 | 0.00251 | 0.00163 | 0.00062 | 0.00240 | 0.00167 | 0.00123 | 0.00063 |
| EXE216146127SS6E | 9.6 W | 0.00393 | 0.00265 | 0.00171 | 0.00065 | 0.00254 | 0.00176 | 0.00129 | 0.00066 |
| EXE254254127SS6E | 9.6 W | 0.00503 | 0.00332 | 0.00213 | 0.00082 | 0.00321 | 0.00218 | 0.00157 | 0.00083 |
| EXE300300150SS61E EXE300300150SS61HE | 16.5 W | 0.00559 | 0.00360 | 0.00231 | 0.00090 | 0.00345 | 0.00217 | 0.00156 | 0.00096 |
| EXE300300210SS61E EXE300300210SS61HE | 16.5 W | 0.00586 | 0.00376 | 0.00242 | 0.00094 | 0.00361 | 0.00227 | 0.00163 | 0.00100 |
| EXE400300150SS61E EXE400300150SS61HE | 18.5 W | 0.00642 | 0.00410 | 0.00262 | 0.00102 | 0.00395 | 0.00248 | 0.00177 | 0.00108 |
| EXE400300210SS61E EXE400300210SS61HE | 18.5 W | 0.00665 | 0.00424 | 0.00271 | 0.00106 | 0.00409 | 0.00257 | 0.00183 | 0.00111 |
| EXE400400150SS61E EXE400400150SS61HE | 18.5 W | 0.00714 | 0.00454 | 0.00290 | 0.00113 | 0.00439 | 0.00275 | 0.00195 | 0.00119 |
| EXE400400210SS61E EXE400400210SS61HE | 18.5 W | 0.00735 | 0.00466 | 0.00298 | 0.00116 | 0.00451 | 0.00283 | 0.00200 | 0.00122 |
| EXE500400150SS61E EXE500400150SS61HE | 23.5 W | 0.00798 | 0.00504 | 0.00321 | 0.00126 | 0.00489 | 0.00306 | 0.00216 | 0.00131 |
| EXE500400210SS61E EXE500400210SS61HE | 23.5 W | 0.00816 | 0.00515 | 0.00328 | 0.00128 | 0.00500 | 0.00313 | 0.00221 | 0.00134 |
| EXE500500210SS61E EXE500500210SS61HE | 25.5 W | 0.00889 | 0.00559 | 0.00355 | 0.00139 | 0.00544 | 0.00341 | 0.00239 | 0.00145 |
| EXE600500210SS61E EXE600500210SS61HE | 28 W | 0.00971 | 0.00608 | 0.00386 | 0.00152 | 0.00593 | 0.00372 | 0.00259 | 0.00157 |
| EXE600600210SS61E EXE600600210SS61HE | 28 W | 0.01046 | 0.00653 | 0.00414 | 0.00163 | 0.00638 | 0.00400 | 0.00278 | 0.00169 |
| EXE600600300SS61E EXE600600300SS61HE | 28 W | 0.01076 | 0.00671 | 0.00425 | 0.00167 | 0.00656 | 0.00411 | 0.00286 | 0.00173 |
| EXE750500210SS61E EXE750500210SS61HE | 28 W | 0.01105 | 0.00688 | 0.00436 | 0.00172 | 0.00673 | 0.00422 | 0.00293 | 0.00178 |
| EXE750600210SS61E EXE750600210SS61HE | 33 W | 0.01172 | 0.00728 | 0.00461 | 0.00182 | 0.00713 | 0.00447 | 0.00309 | 0.00187 |
| EXE750750300SS61E EXE750750300SS61HE | 33 W | 0.01309 | 0.00810 | 0.00513 | 0.00202 | 0.00795 | 0.00498 | 0.00344 | 0.00208 |
| EXE900600210SS61E EXE900600210SS61HE | 33 W | 0.01308 | 0.00810 | 0.00512 | 0.00202 | 0.00795 | 0.00498 | 0.00344 | 0.00208 |

INTEGRATOR PARTNER PROGRAM

In response to the increasing demand for integration of increased safety ATEX/IECEX approved enclosures, Hoffman has developed a certified integrator program that allows approved integration companies to provide value-added enclosure solutions on behalf of the Hoffman brand.

The Integrator Partner Program will:

- Allow enclosures to be populated with terminal blocks
- Modify enclosures with holes, cutouts and customer tags
- Provides ATEX/IECEX certificate for the assembly

The Integrator Partner Program makes full use of Hoffman's industry-leading network of authorized distributors and their broad stock of enclosures to provide fast and efficient delivery.

