# Terminal Boxes Ex e

## Series 8146/1 made of Moulded Material

- Wide range of Ex e terminal boxes in various sizes and heights
- Degree of protection IP66
- Customised equipping in accordance with customer specifications
- Enclosures with captive cover screws
- If required, flange on enclosure sides is possible

**WebCode 8146S**

R. STAHL Series 8146 terminal boxes, made of high-quality, glass fiber-reinforced polyester resin, are ideal for use in harsh operating conditions. With eight basic sizes in various heights, they are universally usable. If requested by the customer, they are equipped with series terminals up to 300 mm² and, as an option, a flange on several enclosure sides is possible.

| | NEC® 500 CEC Appendix J | | | | | |
|---|---|---|---|---|---|---|
| | Class I | | Class II | | Class III | |
| Division | 1 | 2 | 1 | 2 | 1 | 2 |
| Ex interface | | | | | | |
| Installation in | | • | • | • | | |

| | CEC Section 18 NEC® 505 | | | NEC® 506 | | |
|---|---|---|---|---|---|---|
| | Class I | | | | | |
| Zone | 0 | 1 | 2 | 20 | 21 | 22 |
| Ex interface | | | | | | |
| Installation in | | • | • | | | |

| | IECEx / ATEX | | | | | |
|---|---|---|---|---|---|---|
| Zone | 0 | 1 | 2 | 20 | 21 | 22 |
| Ex interface | | | | | | |
| Installation in | | • | • | | • | • |



**Selection Table**

| Product Description | Ex e terminal box | | | | | | |
|---|---|---|---|---|---|---|---|
| Figure | Terminal | Terminal rail | Type of grounding terminal 1 | Max. no. of terminals 10 mm² / AWG 8 | Product Type | Art. No. | Weight lb |
|  | 1 x Phoenix UT 2-conductor, 10 mm², grey | 35 x 133 mm (1x) | 1 x Phoenix UT USLKG 10 N, green-yellow | 10 | **8146/1051** | 278800 | 2.34 |
|  | 1 x Phoenix UT 2-conductor, 10 mm², grey | 35 x 189 mm (1x) | 1 x Phoenix UT USLKG 10 N, green-yellow | 13 | **8146/1061** | 278802 | 3.09 |
|  | 1 x Phoenix UT 2-conductor, 10 mm², grey | 35 x 301 mm (1x) | 1 x Phoenix UT USLKG 10 N, green-yellow | 24 | **8146/1073** | 278803 | 4.01 |
|  | 1 x Phoenix UT 2-conductor, 10 mm², grey | 35 x 301 mm (1x) | 1 x Phoenix UT USLKG 10 N, green-yellow | 26 | **8146/1083** | 278804 | 6.11 |

The enclosures are equipped with mounting rails, PE terminals and 1 terminal block of the specified type.

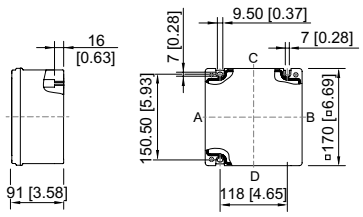
**Technical Data**

| Explosion Protection | |
|---|---|
| USA certificate UL | E177642V1S1 |
| CAN certificate UL | E177642V1S1 |
| USA marking UL | Class I, Div. 2, Groups A,B,C,D<br>Class I, Zone 1, AEx e IIC T6,T5,T4<br>Class II, Div. 2, Groups F,G<br>Class III |

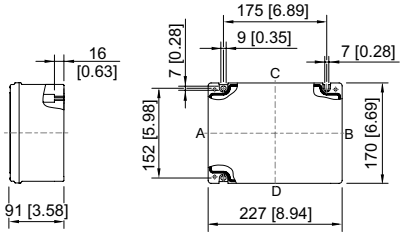
| Technical Data | |
|---|---|
| **Explosion Protection** | |
| CAN marking UL | Class I, Div. 2, Groups A,B,C,D<br>Class I, Zone 1, Ex e IIC T6,T5,T4<br>Class II, Div. 2, Groups F,G<br>Class III |
| IECEx gas explosion protection | Ex eb IIC T6/T5/T4 Gb |
| IECEx dust explosion protection | Ex tb IIIC T80 °C ... T95 °C ... T135 °C Db |
| Certificates | ATEX (PTB), Brazil (ULB), China (NEPSI), IECEx (PTB), India (PESO), Korea (KGS), Taiwan (ITRI) |
| Ship approval | BVIS |
| **Electrical Data** | |
| Rated operational voltage AC NEC, CEC | 600 V |
| Rated operational voltage AC IEC | 690 V |
| Current carrying capacity NEC, CEC | max. 65 A |
| Current carrying capacity IEC | max. 54 A |
| Notes | Rated operational voltage max. 1100 V AC/DC<br>(depending on terminal types and explosion-protected components used) |
| **Ambient Conditions** | |
| Ambient temperature °F | -58 °F ... +104 °F (T6) (T80 °C)<br>-58 °F ... +131 °F (T5) (T95 °C)<br>-58 °F ... +167 °F (T4) (T135 °C) |
| Ambient temperature °C | -50 °C ... +40 °C (T6) (T80 °C)<br>-50 °C ... +55 °C (T5) (T95 °C)<br>-50 °C ... +75 °C (T4) (T135 °C) |
| **Mechanical Data** | |
| Degree of protection (IP) | IP66 |
| Degree of protection note | according to IEC/EN 60529 |
| Enclosure material | Polyester resin, Glass fiber reinforced |
| Silicone-free | No |
| **Components** | |
| Notes | Please observe the information of the terminal manufacturer, e.g. the tightening torque |



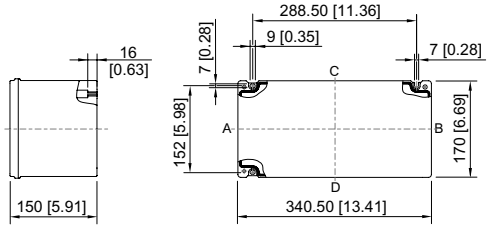
## Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



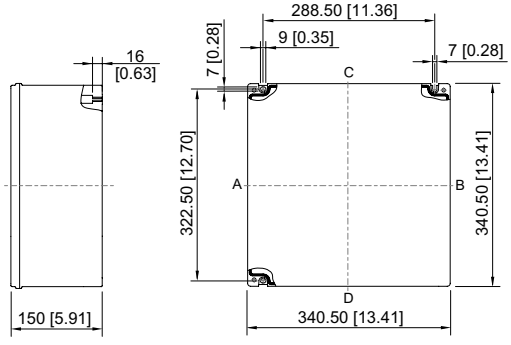

8146/.051




8146/.061




8146/.073

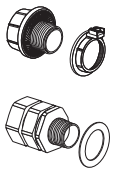
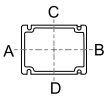
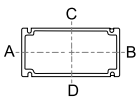
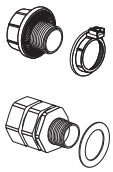
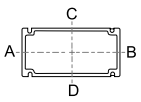
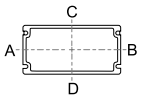
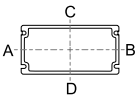
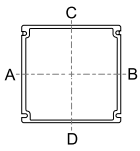
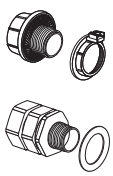
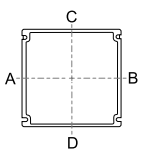
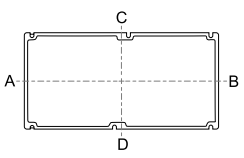
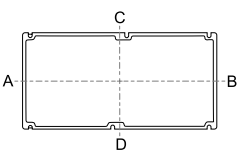



8146/.083

## Installation of 8166/11 Conduit Hubs or Cable Glands

Table for max. numbers of entry openings either installed with conduit hubs 8166/11 or cable glands.

**CAUTION:**
The max. possible number of entries which can be installed on the sides of the enclosures depends on the number of terminal columns installed.
With horizontally installed columns, there are no side entries possible or only limited, depending on enclosure size.
With vertically installed columns there are no bottom or top entries possible, or only limited, depending on enclosure size. For installation with metallic glands additional reinforcement / grounding measures should be considered. Please consult factory.

| Cable gland | Enclosure size | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | **8146/.031**   | | **8146/.041**   | | **8146/.051/.052**   | | | | **8146/.061/.062**   | | | | **8146/.071/.072**   | | | |
| | without flange | | without flange | | without flange | | with flange | | without flange | | with flange | | without flange | | with flange | |
| Size | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D |
| 1/2″ | 1 | 1 | 1 | 2 | 2 | 3 | - | 2 | 3 | 4 | 2 | 2 | 3 | 6 | 2 | 4 |
| 3/4″ | 1 | 1 | 1 | 2 | 1 | 2 | - | 2 | 2 | 3 | 2 | 2 | 2 | 5 | 2 | 4 |
| 1″ | - | 1 | 1 | 1 | 1 | 2 | - | 1 | 2 | 2 | 1 | 1 | 2 | 4 | 1 | 2 |
| 1-1/4″ | - | - | 1 | 1 | 1 | 1 | - | - | 1 | 2 | - | - | 1 | 3 | - | - |
| 1-1/2″ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2″ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2-1/2″ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 3″ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
|  | **8146/.073/.075**   | | | | **8146/S071**   | | | | **8146/.S73**   | | | | **8146/.081/.082**   | | | |
| | without flange | | without flange | | without flange | | with flange | | without flange | | with flange | | without flange | | with flange | |
| Size | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D |
| 1/2″ | 6 | 12 | 4 | 11 | 2 | 7 | - | 4 | 5 | 14 | - | 11 | 6 | 7 | 4 | 4 |
| 3/4″ | 5 | 9 | 4 | 9 | 1 | 6 | - | 4 | 3 | 12 | - | 9 | 5 | 6 | 4 | 4 |
| 1″ | 4 | 8 | 2 | 4 | 1 | 4 | - | 2 | 2 | 8 | - | 4 | 4 | 4 | 2 | 2 |
| 1-1/4″ | 2 | 5 | 1 | 4 | 1 | 4 | - | - | 1 | 5 | - | 4 | 3 | 4 | - | - |
| 1-1/2″ | 2 | 4 | 1 | 3 | - | - | - | - | 1 | 4 | - | 3 | - | - | - | - |
| 2″ | 1 | 3 | 1 | 2 | - | - | - | - | 1 | 3 | - | 2 | - | - | - | - |
| 2-1/2″ | 1 | 2 | 1 | 2 | - | - | - | - | - | 3 | - | 2 | - | - | - | - |
| 3″ | 1 | 2 | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - |
|  | **8146/.083/.085/.086**   | | | | **8146/.091/.092**   | | | | **8146/.093/.095**   | | | | | | | |
| | without flange | | without flange | | without flange | | with flange | | without flange | | with flange | | | | | |
| Size | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D | A/B | C/D | | | | |
| 1/2″ | 12 | 14 | 11 | 11 | 7 | 12 | 4 | 8 | 14 | 28 | 11 | 22 | | | | |
| 3/4″ | 9 | 12 | 9 | 9 | 6 | 10 | 4 | 8 | 12 | 19 | 9 | 18 | | | | |
| 1″ | 8 | 8 | 4 | 4 | 4 | 8 | 2 | 4 | 8 | 16 | 4 | 8 | | | | |
| 1-1/4″ | 5 | 5 | 4 | 4 | 4 | 7 | - | - | 5 | 11 | 4 | 8 | | | | |
| 1-1/2″ | 4 | 4 | 3 | 3 | - | - | - | - | 4 | 7 | 3 | 6 | | | | |
| 2″ | 3 | 3 | 2 | 2 | - | - | - | - | 3 | 6 | 2 | 4 | | | | |
| 2-1/2″ | 2 | 3 | 2 | 2 | - | - | - | - | 3 | 4 | 2 | 4 | | | | |
| 3″ | 2 | 2 | - | - | - | - | - | - | 2 | 4 | - | - | | | | |