



- Binary input or output with two channels
- For separating intrinsically safe and non-intrinsically safe signal and control circuits
- For use up to SIL 2 (IEC/EN 61508)

A3

## MY R. STAHL 9172A



The Series 9172 relay module separates intrinsically safe and non-intrinsically safe binary signal and control circuits. To do this, it makes intrinsically safe binary inputs and outputs with two channels available. Depending on the version, the device has either an intrinsically safe control system or an intrinsically safe output contact, and can therefore be used as an output or input isolator.

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

|                 | NEC® 500<br>CE Code Appendix J |   |          |   |           |   |
|-----------------|--------------------------------|---|----------|---|-----------|---|
|                 | Class I                        |   | Class II |   | Class III |   |
| Division        | 1                              | 2 | 1        | 2 | 1         | 2 |
| Ex interface    | •                              | • | •        | • | •         | • |
| Installation in |                                | • |          |   |           |   |

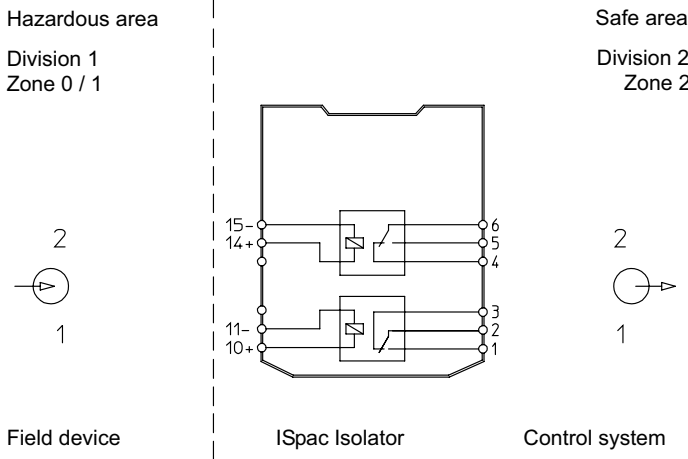
|                 | CE Code Section 18 |   |   |          |    |    |
|-----------------|--------------------|---|---|----------|----|----|
|                 | NEC® 505           |   |   | NEC® 506 |    |    |
| Zone            | Class I            |   |   |          |    |    |
| Zone            | 0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

| Selection Table        |                                   |                       |                |          |        |  |
|------------------------|-----------------------------------|-----------------------|----------------|----------|--------|--|
| Input signal           |                                   | Ex i                  |                |          |        |  |
| Switching signal input |                                   | 14 – 30 V             |                |          |        |  |
| Number of channels     | Output                            | Connection type       | Product Type   | Art. No. | Weight |  |
| 2                      | Change-over contact - Ex i        | Screw terminal        | 9172/22-11-00s | 169653   | 190 g  |  |
|                        | Change-over contact – power relay | Screw terminal        | 9172/20-11-00s | 160363   | 190 g  |  |
|                        |                                   | Spring clamp terminal | 9172/20-11-00k | 160364   | 190 g  |  |
| Input                  |                                   | Non-Ex i signal       |                |          |        |  |
| Switching signal input |                                   | 12 – 31.2 V           |                |          |        |  |
| Number of channels     | Output                            | Connection type       | Product Type   | Art. No. | Weight |  |
| 2                      | Change-over contact - Ex i        | Screw terminal        | 9172/21-11-00s | 160369   | 190 g  |  |
|                        |                                   | Spring clamp terminal | 9172/21-11-00k | 160370   | 190 g  |  |

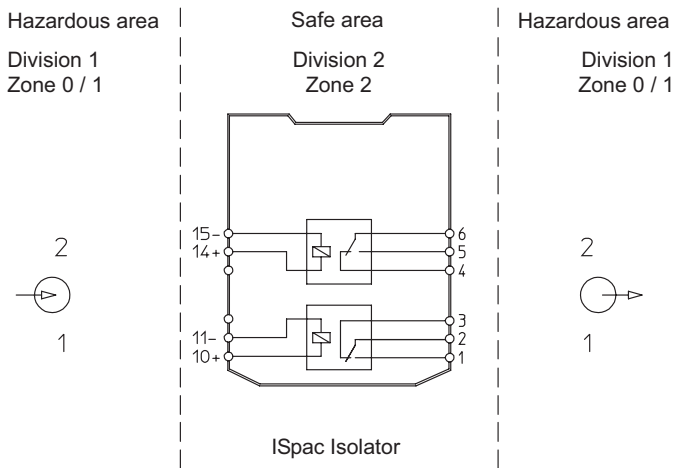
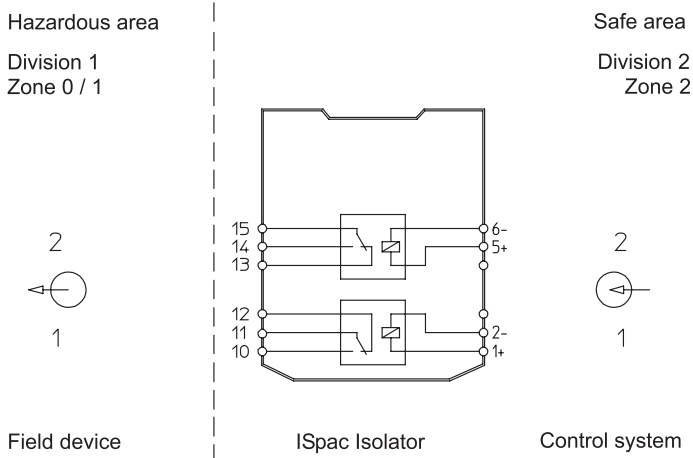
| Technical Data                  |  |  |
|---------------------------------|--|--|
| Variant                         | Input signal: Ex i   | Input signal: Non-Ex i signal  |
| Explosion Protection            |  |  |
| IECEX gas explosion protection  | Ex ec nC [ja Ga] IIC T4 Gc   | Ex ec nC [ja Ga] IIC T4 Gc   |
| IECEX dust explosion protection | [Ex ia Da] IIIC  | [Ex ia Da] IIIC  |
| ATEX gas explosion protection   | ⊕ II (1) G Ex ec nC [ja Ga] IIC T4 Gc  | ⊕ II 3 (1) G Ex ec nC [ja Ga] IIC T4 Gc  |
| ATEX dust explosion protection  | ⊕ II (1) D [Ex ia Da] IIIC   | ⊕ II (1) D [Ex ia Da] IIIC   |
| Certificates                    | ATEX (BVS), Canada (FM), China (NEPSI), IECEx (BVS), India (PESO), SIL (exida), USA (FM) | ATEX (BVS), Canada (FM), China (NEPSI), IECEx (BVS), India (PESO), SIL (exida), USA (FM) |
| Ship approval                   | CCS, EU RO MR (DNV)  | CCS, EU RO MR (DNV)  |

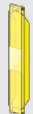
| Technical Data                 |   |   |
|--------------------------------|---|---|
| Variant                        | Input signal: Ex i  | Input signal: Non-Ex i signal   |
| <b>Explosion Protection</b>    |   |   |
| Declaration of Conformity      | ATEX (EUK), China (CCC)   | ATEX (EUK), China (CCC)   |
| Installation                   | In Zone 2, Division 2 and safe areas                                    | In Zone 2, Division 2 and safe areas                                    |
| Further information            | See relevant certificate and operating instructions                     | See relevant certificate and operating instructions                     |
| <b>Safety Data</b>             |   |   |
| Max. voltage $U_i$             | 30 V  |   |
| Max. current $I_i$             | 150 mA  |   |
| Max. power $P_i$               | 1.3 W   |   |
| Internal capacitance           | Negligible  |   |
| Internal inductance            | Negligible  |   |
| Safety-related max. voltage    | 253 V   | 253 V   |
| <b>Functional Safety</b>       |   |   |
| SIL                            | 2   | 2   |
| <b>Auxiliary Power</b>         |   |   |
| Auxiliary power                | without   | without   |
| Max. power dissipation         | 0.4 W   | 0.4 W   |
| <b>Ambient Conditions</b>      |   |   |
| Ambient temperature            | -20 °C ... +70 °C (Single device)<br>-20 °C ... +60 °C (Group assembly) | -20 °C ... +70 °C (Single device)<br>-20 °C ... +60 °C (Group assembly) |
| Storage temperature            | -40 °C ... +80 °C   | -40 °C ... +80 °C   |
| <b>Mounting / Installation</b> |   |   |
| Mounting type                  | DIN rail NS35/15, NS35/7.5  | DIN rail NS35/15, NS35/7.5  |

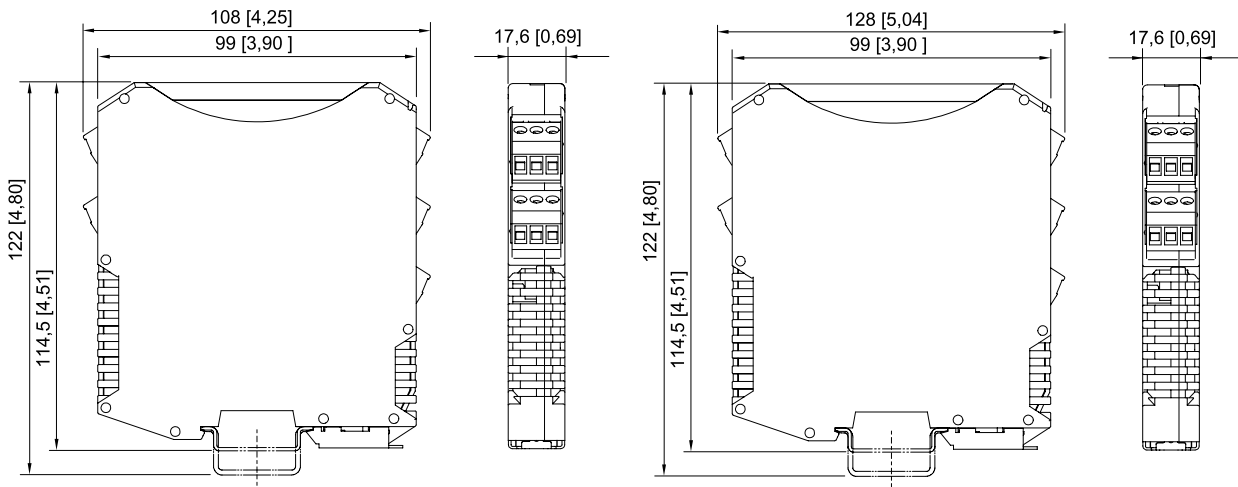
**Technical Drawings – Subject to Alterations**



Connection diagram 9172/20-11-00



| Accessories   |  |                    |
|---|--|--------------------|
| Figure  | Description  | Art. No.    Weight |
| Transparent cover   |  |                    |
|  | For 91xx ISpac modules<br>Yellow, transparent<br>Clear identification of the device for SIL applications.<br>(Packaging unit: 10 pieces) | 200914    20 g     |



ISpac Series 9143, 9146, 9147, 9160, 9162, 9163, 9165, 9167, 9170, 9172, 9175, 9176, 9180, 9182, 9193, ISbus Series 9412 with screw terminal

ISpac Series 9146, 9147, 9160, 9162, 9163, 9165, 9167, 9170, 9172, 9175, 9176, 9180, 9182, 9193, ISbus Series 9412 with spring clamp terminal