



- Ex i resistance isolator 9180/.0 for Pt100 or 9180/.1 for Pt1000
- World's only two-channel device requiring just 8.8 mm of space per channel
- For two-, three- and four-conductor connection

07 b

MY R. STAHL 9180A



9180 series Ex i resistance isolators can be used for the intrinsically safe operation of Pt100 (9180/.0) or Pt1000 (9180/.1) resistance temperature detectors. The resistance measured at the input is transmitted to the output and can thereby be measured by an I/O card. The auxiliary power, output and intrinsically safe input are galvanically separated.

| | NEC® 500 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 | | |
| | Class I | | | | | |
| Zone | 0 | 1 | 2 | 20 | 21 | 22 |
| Ex interface | • | • | • | | | |
| Installation in | | | • | | | |

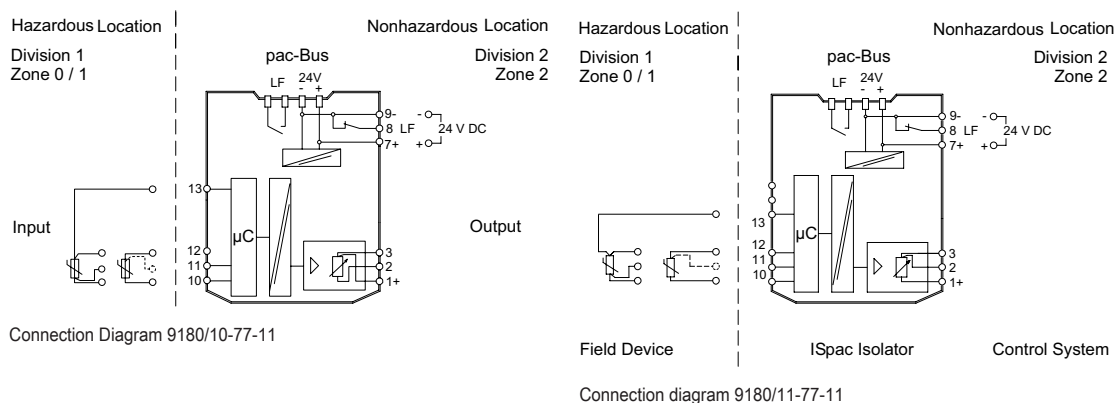
| | IECEX / ATEX | | | | | |
|-----------------|--------------|---|---|----|----|----|
| | 0 | 1 | 2 | 20 | 21 | 22 |
| Zone | | | | | | |
| Ex interface | • | • | • | • | • | • |
| Installation in | | | • | | | |

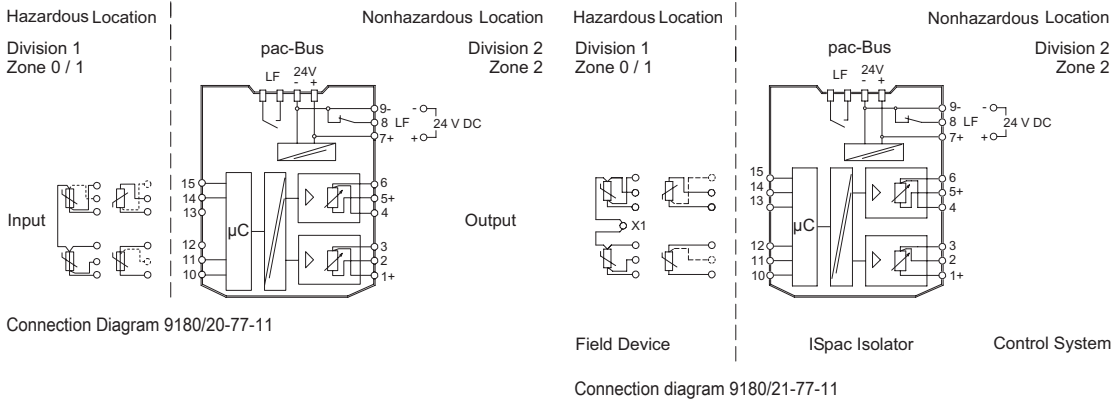
| Selection Table | | | | | | |
|--------------------|-------------------------|---|-----------------------|-----------------------|----------|--------|
| Number of channels | 1 | | | | | |
| Measuring range | Medium resolution input | Input for resistance temperature detector | Connection type | Product Type | Art. No. | Weight |
| 18 to 391 Ω | 0.01 Ω | Pt 100 | Screw terminal | 9180/10-77-11s | 160491 ▲ | 160 g |
| | | Pt 100 | Spring clamp terminal | 9180/10-77-11k | 160492 | 160 g |
| 180 to 3910 Ω | 0.1 Ω | Pt 1000 | Screw terminal | 9180/11-77-11s | 160499 | 160 g |
| Number of channels | 2 | | | | | |
| Measuring range | Medium resolution input | Input for resistance temperature detector | Connection type | Product Type | Art. No. | Weight |
| 18 to 391 Ω | 0.01 Ω | Pt 100 | Screw terminal | 9180/20-77-11s | 160494 ▲ | 180 g |
| | | Pt 100 | Spring clamp terminal | 9180/20-77-11k | 160495 | 180 g |
| 180 to 3910 Ω | 0.1 Ω | Pt 1000 | Screw terminal | 9180/21-77-11s | 160502 | 180 g |
| | | Pt 1000 | Spring clamp terminal | 9180/21-77-11k | 160503 | 180 g |

| Technical Data | |
|----------------------|---|
| Explosion Protection | |
| FMus certificate | FM16US0122X |
| cFM certificate | FM16CA0067X |
| Marking cFMus | Class I, Div. 2, Groups A,B,C,D; Class I, Zone 2, AEx/Ex nA nC Group IIC AIS Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 0, [AEx ia]/[Ex ia] IIC T4 at Ta = 70°C See Doc. 9180 6 031 001 1 |

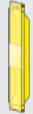
| Technical Data | |
|--|--|
| Explosion Protection | |
| IECEX gas explosion protection | Ex ec nC [ia Ga] IIC T4 Gc |
| IECEX dust explosion protection | [Ex ia Da] IIIC |
| Certificates | ATEX (BVS), Brazil (ULB), Canada (FM), China (NEPSI), IECEX (BVS), India (PESO), Korea (KTL), USA (FM) |
| Ship approval | CCS, EU RO MR (DNV) |
| Safety Data | |
| Max. voltage U_j/V_{oc} | 6.5 V |
| Max. current I_j/I_{sc} | 16.5 mA |
| Max. power P_o | 27 mW |
| Safety-related max. voltage | 253 V |
| Auxiliary Power | |
| Auxiliary power | 24 V DC |
| Input | |
| RTD input | 2-, 3- and 4-wire circuits |
| Line fault and loss of power signalization | Contact (30 V / 100 mA) closed to ground in case of fault pac-Bus, floating contact (30 V / 100 mA) |
| Output | |
| Output signal | Equal to input signal (resistance value) |
| Settling time output | < 10 ms |
| Response time output | < 1 s |
| Ambient Conditions | |
| Ambient temperature °F | -4°F ... +158°F (Single device) -4°F ... +140°F (Group assembly) |
| Ambient temperature °C | -20 °C ... +70 °C (Single device) -20 °C ... +60 °C (Group assembly) |
| Storage temperature °F | -40°F ... +176°F |
| Storage temperature °C | -40 °C ... +80 °C |
| Mounting / Installation | |
| Mounting type | DIN rail NS35/15, NS35/7.5 |

Technical Drawings – Subject to Alterations


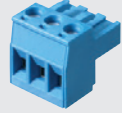










Accessories

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

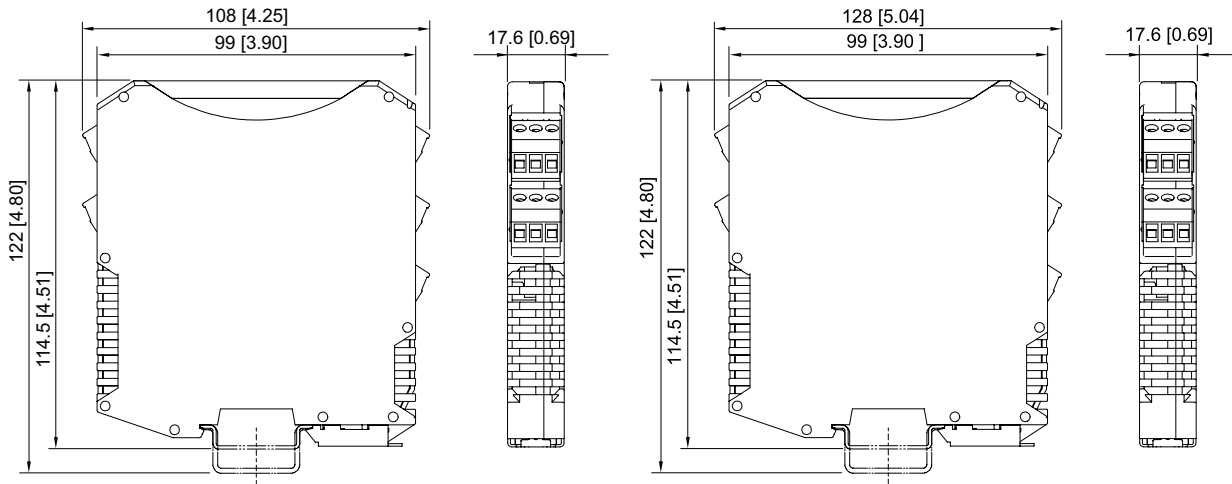
Spare Parts

| Figure | Description | Art. No. | Weight |
|---|--|----------|--------|
| Screw terminal | | | |
|  | 3-pole plug, screw connector thread: M3 stripping length: 7 mm color: black | 112816 | 4 g |
|  | 3-pole plug, screw connector thread: M3 stripping length: 7 mm color: blue | 112818 | 5 g |
|  | 3-pole plug, screw connector thread: M3 stripping length: 7 mm color: green | 112817 | 5 g |
| Screw terminal with test tap | | | |
|  | 3-pole plug with test tap, screw connector thread: M3 stripping length: 7 mm color: blue | 113004 | 1 g |
|  | 3-pole plug with test tap, screw connector thread: M3 stripping length: 7 mm color: black | 113005 | 1 g |
| Spring clamp terminal | | | |
|  | 3-pole plug with test tap, spring clamp connection stripping length: 10 mm color: green | 112825 | 5 g |

Spare Parts

| Figure | Description | Art. No. | Weight |
|---|---|----------|--------|
| Spring clamp terminal | | | |
|  | 3-pole plug with test tap, spring clamp connection stripping length: 10 mm color: black | 112824 | 5 g |
|  | 3-pole plug with test tap, spring clamp connection stripping length: 10 mm color: blue | 112826 | 5 g |

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



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, Fieldbus Power Supply Series 9412 with spring clamp terminal