

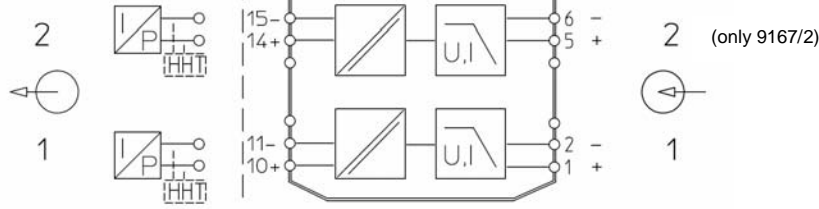
The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration.

Weitergabe sowie Vervielfältigung dieses Dokuments, Verwertung und Mitteilung seines Inhalts sind verboten, soweit nicht ausdrücklich gestattet. Zuwiderhandlungen verpflichten zu Schadensersatz. Alle Rechte für den Fall der Patent-, Gebrauchsmuster- oder Geschmackschutzregistrierung vorbehalten.

Type 9167/\*\*-11-00

Hazardous area

Safe area



Hazardous area: Class I, II, III; Div. 1; Group A-G; Hazardous Locations  
 Safe area: Non-hazardous Locations

The Isolating Repeater Loop Powered Type 9167 is an associated apparatus and provides intrinsically safe connections for one (or two) field devices located in Class I, II, III, Division 1, Group A-G, hazardous locations according to NEC Article 504 as listed below.

Isolating Repeater Loop Powered Type 9167/ab-11-00

a = numeral 1 or 2 for number of channels  
 b = numeral 1, 3 or 4 for output signal

Entity parameters for wiring configurations are as follows:

	V <sub>OC</sub>	I <sub>SC</sub>	P <sub>O</sub>	L <sub>o</sub> CL.I, Div.1, A,B	L <sub>o</sub> CL.I, Div.1, C-G	C <sub>o</sub> CL.I, Div.1,A,B	C <sub>o</sub> CL.I, Div.1, C-G
Type 9167/*1-11-00	15.7 V	60 mA	233 mW	10 mH	40 mH	487 nF	2950 nF
Type 9167/*3-11-00	25 V	99 mA	613 mW	2.5 mH	11 mH	110 nF	840 nF
Type 9167/*4-11-00	18.8 V	107 mA	503 mW	3 mH	12 mH	266 nF	1620 nF

Notes:

- Intrinsically safe apparatus may be Simple Apparatus in accordance with Article 504 of the National Electrical Code, ANSI/NFPA 70 (for example: switches, thermocouples, LEDs, RTDs) a third-party certified or Entity device connected in accordance with the manufacturer's installation instructions.
- For Entity concept use the appropriate parameters to ensure the following:  

$$V_t \text{ or } V_{OC} \leq V_{max} \quad C_a \geq C_i + C_{Cable}$$

$$I_t \text{ or } I_{SC} \leq I_{max} \quad L_a \geq L_i + L_{Cable}$$
- Capacitance and inductance of the field wiring from the intrinsically safe equipment to the associated apparatus shall be calculated and must be included in the system calculations as shown above. Cable capacitance (C<sub>c</sub>) plus intrinsically safe equipment capacitance (C<sub>i</sub>) must be less than the marked capacitance (C<sub>a</sub> or C<sub>o</sub>) shown on any associated apparatus used. The same applies for inductance (L<sub>c</sub>, L<sub>i</sub> and L<sub>a</sub> or L<sub>o</sub>, respectively). Where the cable capacitance and inductance per foot are not known, the following values shall be used: C<sub>c</sub>=60pF/ft., L<sub>c</sub>=0.2μH/ft.
- Electrical apparatus connected to an intrinsically safe system should not use or generate voltages > 250 V (U<sub>max</sub>).
- Intrinsically safe circuits must be installed, wired and separated in accordance with Article 504.20 of the National Electrical Code (ANSI/NFPA 70)
- Where multiple circuits extend from the same piece of associated apparatus, they must be installed in separate cables or in one cable having suitable insulation. Refer to Article 504 of the National Electrical Code and Instrument Society of America Recommended Practice ISA RP12.6 for installing intrinsically safe equipment.
- Associated Apparatus must be installed in an enclosure suitable for the application in accordance with the National Electrical Code, ANSI/NFPA 70.
- Use an UL or NRTL listed Dust-ignition proof enclosure appropriate for environmental protection in Class II, Division 1, Groups E,F and G; and Class III, hazardous (classified) locations.
- The isolators have not been evaluated for use in electrical combination with other associated apparatus.
- These modules are to be mounted on DIN rail, DIN rail with pac-Bus (type 9194) or pac-Carrier (type 9195). The field wiring in any case is connected to the IS pac device terminals.
- Ambient temperature: -20 °C ... +70 °C (any mounting position)

**WARNING:** To prevent ignition of flammable or combustible atmospheres disconnect power before servicing

F 4830 503

			2007	Date	Name	Certification drawing Isolating Repeater Loop Powered Type 9167  <b>91 676 01 31 3</b>	Scale
			Drawn by	18.04.	Einsiedler		none
			Checked	18.04.	Kaiser		Sheet 1 of 1
					<b>STAHL</b>		Agency UL
Index	Date	Name				Rep. f.	Rep. t. A4