

# Isolator Barriers

Ex i power supply

Ex i field circuit ISpac

9143/10-156-160-10s Art. No. 159797



- For the intrinsically safe supply of power to three- or four-conductor transmitters, solenoid valves, light barriers and controllers
- Stable, adjustable output voltage
- Extensive portfolio with either DC or AC auxiliary power

MY R. STAHL 9143A



The 9143 series compact I.S. power supply is used for the intrinsically safe supply of power to field devices, e.g. three- or four-conductor transmitters, solenoid valves, light barriers and controllers. It delivers stable, adjustable output voltage via intrinsically safe outputs.

## Technical Data

### Explosion Protection

Application range (zones)	2
Ex interface zone	1, 2, 21, 22
IECEX gas certificate	IECEX BVS 12.0009 X
IECEX gas explosion protection	Ex nA [ib Gb] IIC/IIB T4 Gc
IECEX dust certificate	IECEX BVS 12.0009 X
IECEX dust explosion protection	[Ex ib Db] IIIC
IECEX firedamp certificate	IECEX BVS 12.0009 X
IECEX firedamp protection	[Ex ib Mb] I
ATEX gas certificate	BVS 05 ATEX E 152 X
ATEX gas explosion protection	⊕ II 3 (2) G Ex nA [ib Gb] IIC/IIB T4 Gc
ATEX dust certificate	BVS 05 ATEX E 152 X
ATEX dust explosion protection	⊕ II (2) D [Ex ib Db] IIIC
ATEX firedamp certificate	BVS 05 ATEX E 152 X
ATEX firedamp protection	⊕ I (M2) [Ex ib Mb] I
cCSAus certificate	1570027
Marking cCSAus	Class I, Zone 2, AEx Ex/nA [ib Gb] IIB 1 Gc Class I, Zone 1, Ex nA [ib Gb] Group IIB T4 Gc See doc. 91 436 01 32 2
Certificates	Canada / USA (CSA), Korea (KGS)
Ship approval	CCS, EU RO MR (DNV)
Declaration of conformity	ATEX (EUK)
Installation	In Zone 2 and safe areas
Further information	see respective certificate and operating instructions

### Safety Data

Max. voltage $U_o/V_{oc}$	15.6 V
Max. current $I_o/I_{sc}$	160 mA
Max. power $P_o$	2.496 W

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## Safety Data

Max. permissible external capacitance $C_o/C_a$ for IIB	3.03 $\mu$ F
Max. permissible external inductance $L_o/L_a$ for IIB	0.351 mH
Max. permissible ext. capac. I	16.3 $\mu$ F
Max. permissible external inductance $L_o$ for I	18 mH
Internal capacitance	Negligible
Internal inductance	Negligible
Safety-related max. voltage	253 V
Intrinsically safe limiting values inductance $L_o$ /capacitance $C_o$	Jointly connectable inductance $L_o$ /capacitance $C_o$
IIC $L_o$ [mH] $C_o$ [ $\mu$ F]	
IIB $L_o$ [mH] $C_o$ [ $\mu$ F]	0.200 mH 1.800 $\mu$ F
I $L_o$ [mH] $C_o$ [ $\mu$ F]	0.200 mH 5.100 $\mu$ F

## Functional Safety

Further information	See test report
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## Electrical Data

Type of signal	Ex i power supply
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## Auxiliary Power

Auxiliary power	24 V AC / DC
Min. nominal DC voltage	18 V
Max. nominal DC voltage	35 V
Auxiliary power voltage range	20 ... 28 V AC, 18 ... 35 V DC
Auxiliary power frequency range AC	48 – 62 Hz
Auxiliary power consumption	4 W
Polarity reversal protection	Yes (DC)
Auxiliary power indication	Green LED

## Galvanic Isolation

Test voltage	Acc. to IEC EN 60079-11
Output to power supply	1.5 kV

## Output

Min. nominal voltage output	12.5 V
Max. nominal voltage output	14.7 V
Max. nominal current $I_n$ output	140 mA
Current limiting	If the max. nominal current is reached, the output voltage is linearly regulated down to 0 V.

## Ambient Conditions

Ambient temperature °C	-20 °C ... +65 °C (Single device) -20 °C ... +60 °C (Group assembly)
Ambient temperature °F	-4°F ... +158°F (Single device) -4°F ... +140°F (Group assembly)

Note	The installation conditions affect the ambient temperature. Observe the "Cabinet installation guide"
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## Ambient Conditions

Storage temperature °C	-40 °C ... +80 °C
Storage temperature °F	-40°F ... +176°F
Max. relative humidity	< 85% at Ta > 40 °C
Use at the height of	< 2000 m
Electromagnetic compatibility	Tested to the following standards and regulations: EN 61326-1 For use in industrial areas; NAMUR NE 21

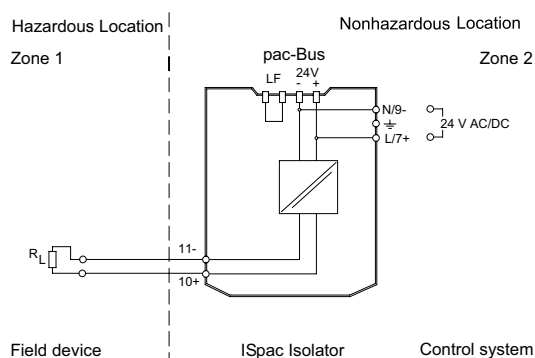
## Mechanical Data

Degree of protection (IP)	IP30
Degree of protection (IP) terminals	IP20
Fire resistance (UL 94)	V0
Enclosure material	PA 6.6
Min. rigid conductor cross section	0.2 mm <sup>2</sup>
Max. rigid conductor cross section	2.5 mm <sup>2</sup>
Min. flexible conductor cross section	0.2 mm <sup>2</sup>
Max. flexible conductor cross section	2.5 mm <sup>2</sup>
Width	35.2 mm
Width, inches	1.39 in
Height	114.5 mm
Height in inches	4.51 in
Length	108 mm
Length in inches	4.25 in
Weight	190 g
Weight	0.42 lb

## Mounting / Installation

Mounting type	DIN rail (NS35/15, NS35/7.5)
Grid dimension	35.2 mm
Mounting orientation	Horizontal Vertical
Connection type	Screw terminal
Connection cross-section AWG	24 ... 14

## Technical Drawings – Subject to Alterations



Connection diagram 9143/.....-10.

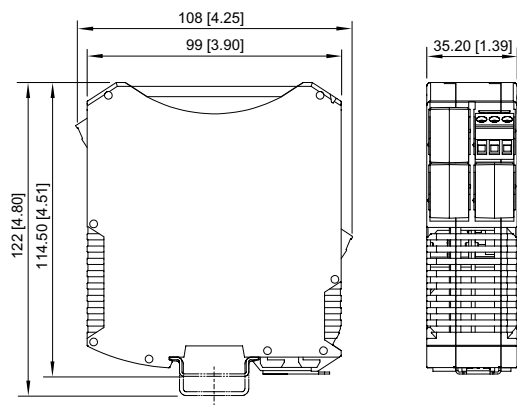
## Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations

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ISpac Series 9185, 9192 with screw terminal

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