



- > Intrinsically safe output [Ex ib] IIC/IIB
- > Stable output voltage
- > Galvanic isolation between output and power supply
- > Power supply 24 V AC / DC or 85 ... 230 V AC
- > Compact design

A3

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07673E00



Basic function: The power supplies are used for the intrinsically safe operation of field devices e.g. 3- or 4-wire transmitters, solenoid valves, light barriers, controllers and more.

Zone	ATEX / IECEx					
	0	1	2	20	21	22
Ex i interface		x	x		x	x
Installation in			x ¹⁾			x ¹⁾

¹⁾ Restrictions see table explosion protection

WebCode 9143A

Selection Table

Version	Auxiliary power	Ex i output		Order number
		Nominal voltage U_N	Max. nominal current I_N	
Ex i power supply Series 9143	24 V AC / DC	4.0 ... 5.6 V	160 mA	9143 / 10-065-200-10s
		8.8 ... 9.1 V	200 mA	9143 / 10-099-220-10s
		8.7 ... 9.5 V	200 mA	9143 / 10-104-220-10s
		9.4 ... 10.4 V	180 mA	9143 / 10-114-200-10s
		9.5 ... 11.8 V	130 mA	9143 / 10-124-150-10s
		12.5 ... 14.7 V	140 mA	9143 / 10-156-160-10s
		14.6 ... 17.6 V	35 mA	9143 / 10-187-050-10s
		18.9 ... 23.0 V	40 mA	9143 / 10-244-060-10s
	115 / 230 V AC	14.6 ... 17.6 V	35 mA	9143 / 10-187-050-20s
		12.5 ... 14.7 V	140 mA	9143 / 10-156-160-20s
		9.5 ... 11.8 V	130 mA	9143 / 10-124-150-20s
		9.4 ... 10.4 V	180 mA	9143 / 10-114-200-20s
		8.7 ... 9.5 V	200 mA	9143 / 10-104-220-20s
		4.0 ... 5.6 V	160 mA	9143 / 10-065-200-20s
		18.9 ... 23.0 V	40 mA	9143 / 10-244-060-20s
		Note		The order code above is with screw type removable terminals.

Explosion Protection

Global (IECEX)		
Version	9143/10-...-...-10. 24 V AC / DC	9143/10-...-...-20. 115 / 230 V AC
Gas, dust and mining	IECEX BVS 12.0009X Ex nA [ib Gb] IIC/IIB T4 Gc [Ex ib Db] IIIC [Ex ib Mb] I	IECEX BVS 12.0009X [Ex ib Gb] IIC/IIB [Ex ib Db] IIIC [Ex ib Mb] I

Europe (ATEX)		
Version	9143/10-...-...-10. 24 V AC / DC	9143/10-...-...-20. 115 / 230 V AC
Gas, dust and mining	BVS 05 ATEX E 152X ⊕ II 3 (2) G Ex nA [ib Gb] IIC/IIB T4 Gc ⊕ II (2) D [Ex ib Db] IIIC ⊕ I (M2) [Ex ib Mb] I	BVS 05 ATEX E 152X ⊕ II (2) G [Ex ib Gb] IIC/IIB ⊕ II (2) D [Ex ib Db] IIIC ⊕ I (M2) [Ex ib Mb] I

Certifications and certificates	
Certificates	IECEX, ATEX, Brazil (INMETRO), India (PESO), Canada (CSA), Kazakhstan (TR), Korea (KCs), Russia (TR), Serbia (SRPS), Belarus (TR)
Ship approval	DNV

Safety data				
Version	9143/10-065-200-.0.	9143/10-099-220-.0.	9143/10-104-220-.0.	9143/10-114-200-.0.
Max. voltage U _o	6.5 V	9.9 V	10.4 V	11.4 V
Max. current I _o	200 mA	220 mA	220 mA	200 mA
Max. power P _o	1.3 W	2.178 W	2.288 W	2.28 W
Max. connectable capacitance C _o				
IIC	25 µF	3 µF	2.4 µF	1.64 µF
IIB	570 µF	20.2 µF	16.8 µF	11.2 µF
Max. connectable inductance L _o				
IIC	0.82 mH	0.30 mH	0.24 mH	0.16 mH
IIB	3.71 mH	1.7 mH	1.5 mH	1.4 mH
Internal capacitance C _i	negligible			
Internal inductance L _i	negligible			
Insulation voltage U _m	253 V AC			
Further information and combination of values, see certification.				
Version	9143/10-124-150-.0.	9143/10-156-160-.0.	9143/10-187-050-.0.	9143/10-244-060-.0.
Max. voltage U _o	12.4 V	15.6 V	18.7 V	24.4 V
Max. current I _o	150 mA	160 mA	50 mA	60 mA
Max. power P _o	1.86 W	2.496 W	0.935 W	1.464 W
Max. connectable capacitance C _o				
IIC	1.24 µF	--	0.27 µF	--
IIB	7.9 µF	3.03 µF	1.64 µF	0,88 µF
Max. connectable inductance L _o				
IIC	0.17 mH	--	0.06 mH	--
IIB	2.08 mH	0.351 mH	15.5 mH	534 µH
Internal capacitance C _i	negligible			
Internal inductance L _i	negligible			
Insulation voltage U _m	253 V AC V			
Further information and combination of values, see certification.				

Further parameters		
Version	9143/10-...-...-10. 24 V AC / DC	9143/10-...-...-20. 115 / 230 V AC
Installation	in Zone 2, 22 and in the safe area	in Zone 22 and in the safe area
Further information	see respective certificate and operating instructions	see respective certificate and operating instructions

Technical Data

Electrical data

Version	9143/10-...-...-10. 24 V AC / DC		9143/10-...-...-20. 115 / 230 V AC	
Auxiliary power				
Rated voltage U_N	24 V AC / DC		115 / 230 V AC	
Voltage range	AC: 20 ... 28 V DC: 18 ... 35 V		85 ... 230 V AC	
Frequency range	AC: 48 ... 62 Hz DC: - -		48 ... 62 Hz	
Reverse polarity protection	AC: - - DC: yes		- -	
Indication	LED green		LED green	
Power consumption				
Version	9143/10-065-200-0.	9143/10-099-220-0.	9143/10-104-220-0.	9143/10-114-200-0.
24 V DC	2.6 W	5.0 W	5.0 W	4.6 W
115 V AC	2.3 VA	- -	4.0 VA	3.7 VA
230 V AC	3.3 VA	- -	4.6 VA	4.5 VA
Note	Power dissipation determined for nominal current condition.			
Version	9143/10-124-150-0.	9143/10-156-160-0.	9143/10-187-050-0.	9143/10-244-060-0.
24 V DC	3.3 W	4.0 W	2.0 W	2.8 W
115 V AC	2.8 VA	4.0 VA	2.0 VA	2.6 VA
230 V AC	3.5 VA	4.9 VA	3.2 VA	3.8 VA
Note	Power dissipation determined for nominal current condition.			
Current limitation	If the max. nominal current is reached the output voltage is set to 0 V.			
Galvanic separation				
Test voltage	under regulations EN 60079-11			
Output to power supply	1.5 kV AC			
Electromagnetic compatibility	Tested under the following standards and regulations: EN 61326-1 Use in industrial environment; NAMUR NE 21			

Ambient conditions

Ambient temperature	
Single device	-20 ... +70 °C
Group assembly	-20 ... +60 °C
	The installation conditions affect the ambient temperature. Observe the "Cabinet installation guide".
Storage temperature	-40 ... +80 °C
Relative humidity (no condensation)	< 85 % at $T_a > 40$ °C

Mechanical data

Connection	Connection single-wire	
	- rigid	0.2 ... 2.5 mm ²
	- flexible	0.2 ... 2.5 mm ²
	- flexible, end covering sleeves (without / with plastic sleeving)	0.25 ... 2.5 mm ²
	Connection two wires	
	- rigid	0.2 ... 1 mm ²
	- flexible	0.2 ... 1.5 mm ²
	- flexible, end covering sleeves	0.25 ... 1 mm ²
Weight	approx. 170 g	
Mounting type	on DIN rail (NS35/15, NS35/7.5)	
Mounting orientation	horizontal or vertical	
Enclosure	IP30	
Terminals	IP20	
Enclosure material	PA 6.6	
Fire resistance (UL-94)	V0	

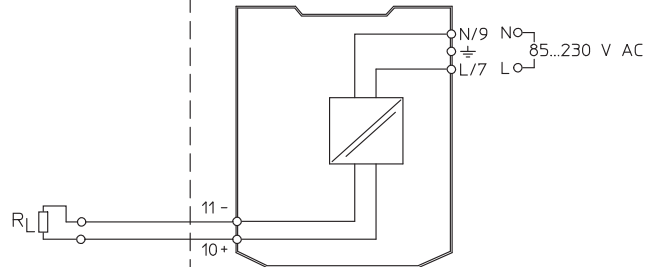
Electrical connection

Connection diagram

85 ... 230 V
Typ 9143/...-...-20.

Hazardous area
Zone 1

Safe area



Field device

ISpac Isolator

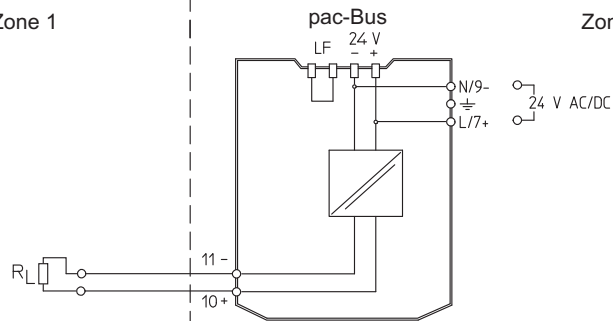
Control system

10597E01

24 V AC / DC
Typ 9143/...-...-10.

Hazardous area
Zone 1

Safe area
Zone 2



Field device

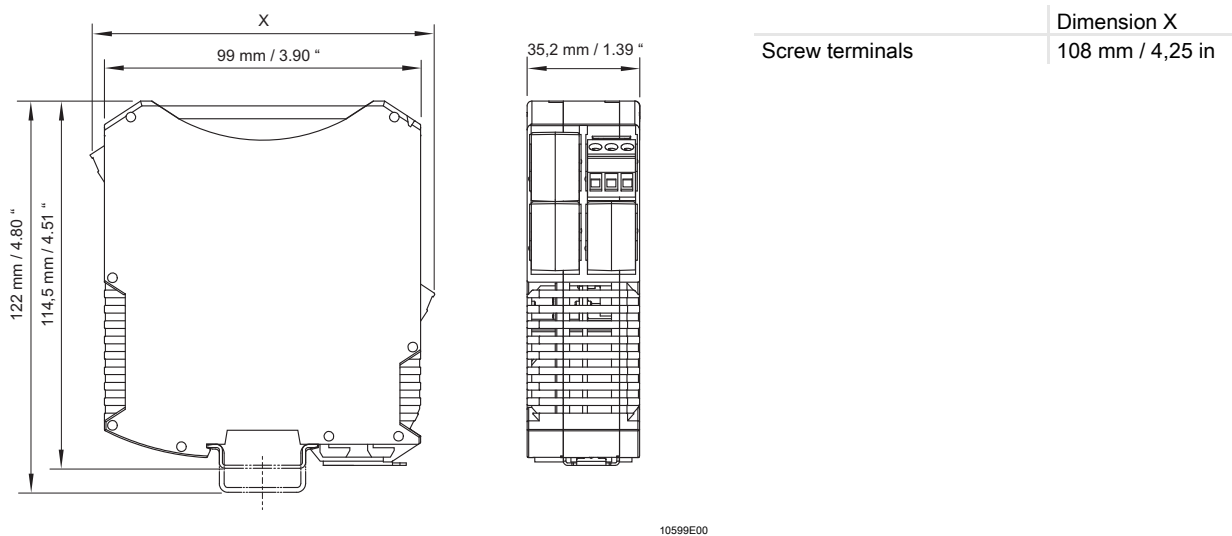
ISpac Isolator

Control system

10598E01

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Dimensional Drawing (All Dimensions in mm / inches) - Subject to Alterations



10599E00

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