



Safety Barriers

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Single-Channel Safety Barriers	INTRINSPAK	9001	8
Dual-Channel Safety Barriers	INTRINSPAK	9002	10
Safety Barriers with Electronic Current Limitation	INTRINSPAK	9004	12

You will find further information on the Internet www.stahl.de[General Information](#)[Engineering](#)[Application Examples](#)[Accessories and Spare Parts](#)



10064E00

- > Complete product range for all standard applications
- > Flexible and space saving - single and dual channel versions on 12 mm only
- > Time-saving installation thanks to simultaneous
 - snapping onto the rail and
 - connecting to PE and earth
- > Reduced inventory due to uniform exchangeable fuse



WebCode 900XA

ATEX / IECEX						NEC 505						NEC 506						NEC 500																	
						Class I												Class I						Class II						Class III					
Zone	0	1	2	20	21	22	Zone	0	1	2	20	21	22	Division	1	2	1	2	1	2	1	2													
9001, 9002: Ex i interfaces	x	x	x	x	x	x	9001, 9002: Ex i interfaces							9001, 9002: Ex i interfaces	x	x	x	x	x	x	x	x													
9004: Ex i interfaces		x	x		x	x	9004: Ex i interfaces							9004: Ex i interfaces		x		x				x													
Installation in			x			x	Installation in			x			x	Installation in		x		x ¹⁾				x ¹⁾													

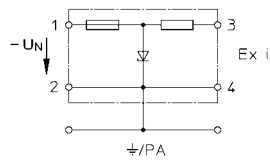
¹⁾ Restrictions see table explosion protection

Technical Data

Version	9001	9002	9004
Explosion protection Global (IECEX) Gas and dust	IECEX PTB 09.0001X Ex nA [ia Ga] IIC T4 Gc [Ex ia Da] IIIC	IECEX PTB 08.0057X Ex nA [ia Ga] IIC T4 Gc [Ex ia Da] IIIC	IECEX PTB 12.0003X Ex nA [ib Gb] IIC T4 Gc Ex nA [ib Gb] IIB T4 Gc [Ex ib Db] IIIC
Europe (ATEX) Gas and dust	PTB 01 ATEX 2088 X ⊕ II 3 (1) G Ex nA [ia Ga] I IC/IIB T4 Gc ⊕ II (1) D [Ex ia Da] IIIC	PTB 01 ATEX 2053 X ⊕ II 3 (1) G Ex nA [ia Ga] IIC/IIB T4 Gc ⊕ II (1) D [Ex ia Da] IIIC	PTB 02 ATEX 2008 ⊕ II (2) GD [EEx ib] IIB/IIC ⊕ II 3 G EEx nA II T4 (Installation in Zone 2)
Certifications and certificates Certificates	IECEX, ATEX, Canada (CSA), Kazakhstan (TR), Russia (TR), Serbia (SRPS), Ukraine (TR), Belarus (TR)	IECEX, ATEX, Brasil (INMETRO), Canada (CSA), Kazakhstan (TR), Korea (KCs), Russia (TR), Serbia (SRPS), Ukraine (TR), USA (FM, UL), Belarus (TR)	IECEX, ATEX, Canada (CSA), Kazakhstan (TR), Russia (TR), Serbia (SRPS), Ukraine (TR), Belarus (TR)
Further parameters Installation Further information	in Zone 2, Division 2 and in safe area see respective certificate and operating instructions		
Enclosure material	Polyamide 6 GF		
Degree of protection	according to IEC 60529 terminal enclosure: IP20 housing: IP40		
Connection type	4 cage terminals, each maximum 1.5 mm ² flexible / solid 2 PA-terminals, each maximum 4 mm ² flexible / solid		
Ambient temperature Ambient temperature Storage	-20 ... +60 °C -20 ... +75 °C		
Dimensions Weight	12 x 104 x 70 mm approx. 0.115 kg		

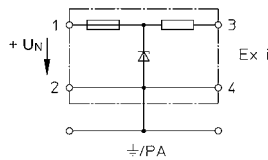
Selection Table								
U _N	R _{max}	Safety data			Schematic	Order number	Art. no.	PS
		U _o	I _o	P _o				
V	Ω	V	mA	mW				
Single-Channel Safety Barriers for Negative Polarity Series 9001/00								
6	32	8.6	390	839	Pic. A	9001/00-086-390-101	158434	20
24	375	28	85	595	Pic. A	9001/00-280-085-101	158344	20
	320	28	100	700	Pic. A	9001/00-280-100-101	158356 ◀	20
Single-Channel Safety Barriers for Positive Polarity Series 9001/01								
6	28	8.3	442	917.2	Pic. B	9001/01-083-442-101	158338	20
	218	8.6	50	107.5	Pic. B	9001/01-086-050-101	158379	20
	73	8.6	150	322.5	Pic. B	9001/01-086-150-101	158418 ◀	20
	32	8.6	390	839	Pic. B	9001/01-086-390-101	158439	20
8	106	12.6	150	473	Pic. B	9001/01-126-150-101	158502	20
12	135	15.8	150	593	Pic. B	9001/01-158-150-101	158535 ◀	20
	57	15.8	390	1541	Pic. E	9001/01-158-390-101	158509	20
	262	16.8	75	315	Pic. B	9001/01-168-075-101	158568	20
16	241	19.9	100	498	Pic. B	9001/01-199-100-101	158632 ◀	20
	168	19.9	150	746.3	Pic. B	9001/01-199-150-101	158638	20
	71	19.9	390	1940	Pic. E	9001/01-199-390-101	158519 ◀	20
20 ... 35	506	25.2	57	359.1	Pic. C	9001/01-252-057-141	158689	20
	506	25.2	60	378	Pic. D	9001/01-252-060-141	158693 ◀	20
	268	25.2	100	630	Pic. M	9001/01-252-100-141	158697 ◀	20
24	666	28	50	350	Pic. B	9001/01-280-050-101	158665	20
	375	28	85	595	Pic. B	9001/01-280-085-101	158351 ◀	20
	320	28	100	700	Pic. B	9001/01-280-100-101	158365 ◀	20
	294	28	110	770	Pic. B	9001/01-280-110-101	158380 ◀	20
	198	28	165	1155	Pic. B	9001/01-280-165-101	158392 ◀	20
	128	28	280	1960	Pic. E	9001/01-280-280-101	158722	20
Single-Channel Safety Barriers for Alternating Polarity Series 9001/02								
0.7	134	1.6	15	6	Pic. F	9001/02-016-015-101	158669	20
	43	1.6	50	20	Pic. F	9001/02-016-050-101	158673	20
	21	1.6	150	60	Pic. F	9001/02-016-150-101	158681	20
	20.1	1.6	150	60	Pic. F	9001/02-016-150-111	158685 ◀	20
6	355	9.3	30	69.8	Pic. F	9001/02-093-030-101	158743 ◀	20
	80	9.3	150	348.8	Pic. F	9001/02-093-150-101	158753	20
	36	9.3	390	906.8	Pic. F	9001/02-093-390-101	158755 ◀	20
Single-Channel Diode Return Barriers for Positive Polarity Series 9001/03								
16	--	19.9	0	0	Pic. G	9001/03-199-000-101	158475	20
24	--	28	0	0	Pic. G	9001/03-280-000-101	158486	20
Single-Channel Safety Barriers for Transmitter Series 9001/51								
20 ... 35	--	28	110	770	Pic. K	9001/51-280-110-141	158530 ◀	20
	--	28	91	637	Pic. L	9001/51-280-091-141	158524 ◀	20

Schematic for Single-Channel Safety Barriers Series 9001



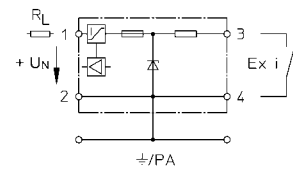
Picture A

09405E00



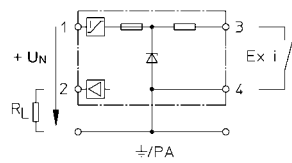
Picture B

09406E00



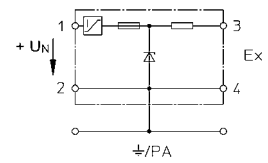
Picture C

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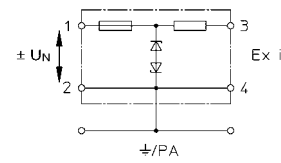
Picture D

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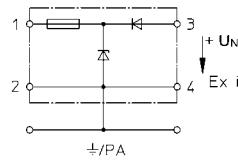
Picture E

09409E00



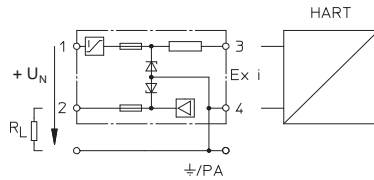
Picture F

09410E00



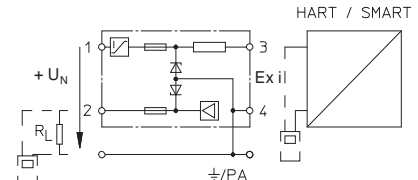
Picture G

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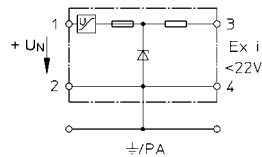
Picture K

09415E00



Picture L

09416E00



Picture M

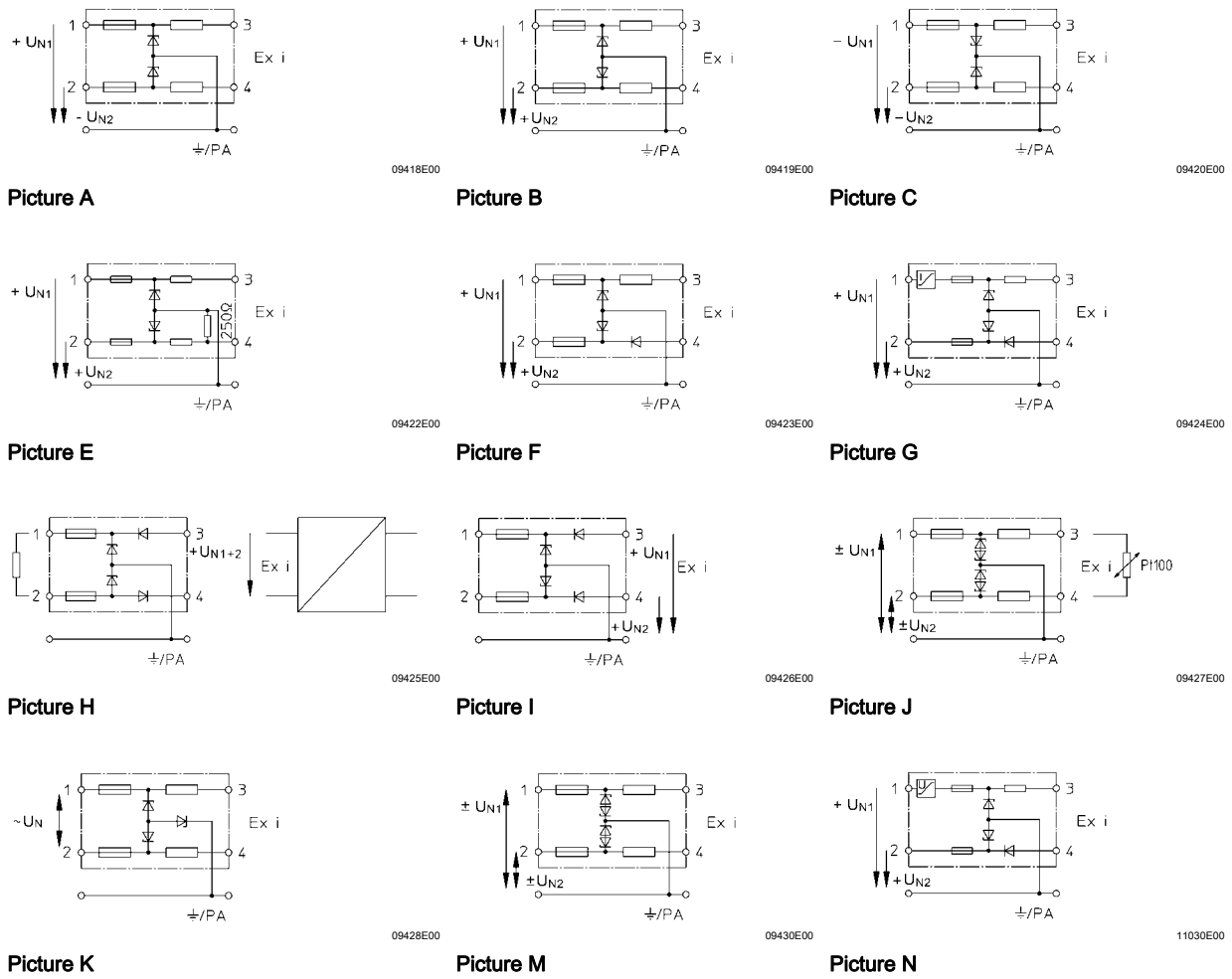
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Selection Table

Channel	U _N V	R _{min} Ω	R _{max} Ω	Safety data			Schematic	Order number	Art. no.	PS
				U _o V	I _o mA	P _o mW				
Dual-Channel Safety Barriers Polarity: - / - Series 9002/00										
1	22.5	321	358	26	87	540	Pic. C	9002/00-260-138-001	158867	20
2	17.5	416	463	20	51	245				
1+2	--	--	--	26	138	785				
Dual-Channel Safety Barriers Polarity: + / - Series 9002/10										
1	6	490	543	9.33	20	50	Pic. A	9002/10-187-020-001	158937 ◀	20
2	6	490	543	9.33	20	50				
1+2	--	--	--	18.7	20	90				
1	6	42	49	9.33	270	630	Pic. A	9002/10-187-270-001	158933 ◀	20
2	6	42	49	9.33	270	630				
1+2	--	--	--	18.7	270	1260				

Selection Table										
Channel	U _N V	R _{min} Ω	R _{max} Ω	Safety data			Schematic	Order number	Art. no.	PS
				U _o V	I _o mA	P _o mW				
Dual-Channel Safety Barriers Polarity: + / + Series 9002/11										
1	16	1423	1576	19.9	15	75	Pic. B	9002/11-199-030-001	158929 ◀	20
2	16	1423	1576	19.9	15	75				
1+2	--	--	--	19.9	30	150				
1	22.5	321	358	26	87	540	Pic. B	9002/11-260-138-001	158870	20
2	17.5	416	463	20	51	245				
1+2	--	--	--	26	138	785				
1	25	321	358	28	93	650	Pic. B	9002/11-280-186-001	158848 ◀	20
2	25	321	358	28	93	650				
1+2	--	--	--	28	186	1300				
Dual-Channel Safety Barriers Safety Barrier Polarity: + / Signal Barrier Polarity: + Series 9002/13										
1	16	95	108	19.9	222	1100	Pic. F	9002/13-199-225-001	158921 ◀	20
2	16	--	--	19.9	3	15				
1+2	--	--	--	19.9	225	1120				
1	20 - 35	216	243	25.2	118	740	Pic. N	9002/13-252-121-041	158830 ◀	20
2	22	--	--	25.2	0	20				
1+2	--	--	--	25.2	121	760				
1	24	321	358	28	90	630	Pic. F	9002/13-280-093-001	158852 ◀	20
2	24	--	--	28	3	21				
1+2	--	--	--	28	93	651				
1	20 - 35	292	327	28	97	679	Pic. G	9002/13-280-100-041	158818	20
2	26	--	--	28	0	21				
1+2	--	--	--	28	100	700				
1	24	269	290	28	107	749	Pic. F	9002/13-280-110-001	158857 ◀	20
2	24	--	--	28	3	21				
1+2	--	--	--	28	110	770				
Dual-Channel Safety Barriers Polarity: ~ / ~ Series 9002/22										
1	0.7	19.9	20.1	1.6	150	60	Pic. J	9002/22-032-300-111	158954 ◀	20
2	0.7	19.9	20.1	1.6	150	60				
1+2	1.4	--	--	3.2	300	120				
1	9	158	177	12	80	240	Pic. M	9002/22-240-160-001	158948	20
2	9	158	177	12	80	240				
1+2	18	--	--	24	160	480				
Dual-Channel Safety Barriers Signal Barrier Polarity: + / Signal Barrier Polarity: + Series 9002/33										
1	25.5	0	0	28	0	0	Pic. I	9002/33-280-000-001	158913	20
2	25.5	--	--	28	0	0				
1+2	--	--	--	28	0	0				
Dual-Channel Safety Barriers Star Barrier / Star Barrier Series 9002/77										
1		492	545	9.3	20	50	Pic. K	9002/77-093-040-001	158905 ◀	20
2		492	545	9.3	20	50				
1+2	6	--	--	9.3	40	90				
1		71	82.1	9.3	150	350	Pic. K	9002/77-093-300-001	158897 ◀	20
2		71	82.1	9.3	150	350				
1+2	6	--	--	9.3	300	700				
1		111	126	15	150	560	Pic. K	9002/77-150-300-001	158889 ◀	20
2		111	126	15	150	560				
1+2	12	--	--	15	300	1130				
1		657	730	28	47	330	Pic. K	9002/77-280-094-001	158877	20
2		657	730	28	47	330				
1+2	24	--	--	28	94	660				

Schematic for Dual-Channel Safety Barriers Series 9002



Selection Table

U_N	R_{max}	Safety data			Schematic	Order number	Art. no.	PS
		U_o	I_o	P_o				
V	Ω	V	mA	mW				
Single-Channel Safety Barriers with Electronic Current Limitation for Positive Polarity Series 9004/01								
12	30	16.8	50	840	Pic. A	9004/01-168-050-001	159060	20
24	56	28	45	1260	Pic. A	9004/01-280-045-001	159082	20
26	73	31.5	25	787.5	Pic. A	9004/01-315-025-001	159086	20
Single-Channel Safety Barriers with Electronic Current Limitation for Positive Polarity with Voltage Limitation Series 9004/51								
23 ... 27	--	20.6	50	1030	Pic. B	9004/51-206-050-001	159090	20

Schematic Single-Channel Safety Barriers with Electronic Current Limitation, Polarity +

