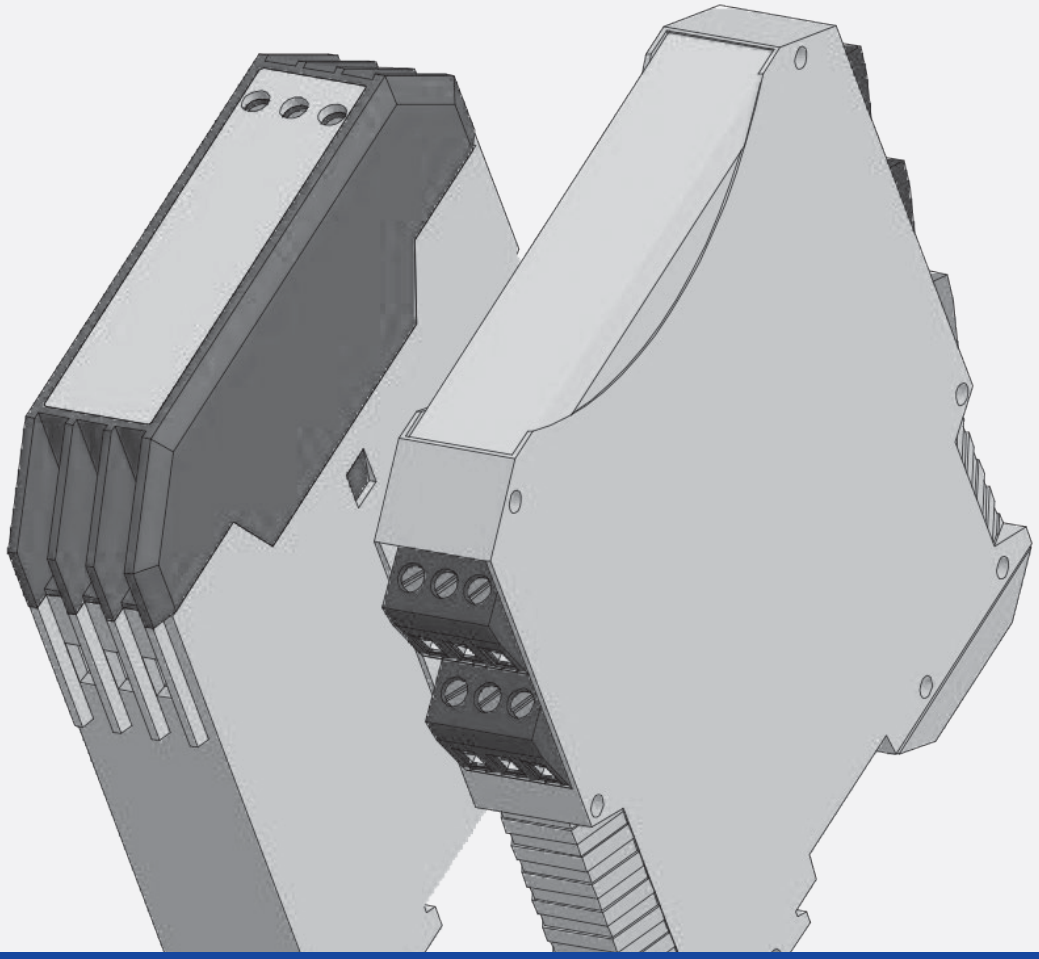

ISOLATING SWITCHING AMPLIFIERS
POWER SUPPLIES

RECHNER
SENSORS

Edition May 2020
With publication of this catalogue all former printed catalogues about RECHNER isolating switching amplifiers and power supplies are invalid.

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POWER SUPPLIES EG-...-130 & EG-RCL-...
ISOLATING SWITCHING AMPLIFIERS N-132-...

PRUDUCT OVERVIEW

Series	EG-130	EG-RCL	N-132		
					
Certificate					
		Intertek	Ex	SIL 2 according to IEC 61508	
Operating voltage					
	115 / 230 V AC	100 / 240 V AC	120...230 V AC	18...31,2 V DC	18...31,2 V DC
Input					
Actuating signal	PNP / NPN	PNP / NPN	NAMUR	NAMUR	0/4...20 mA
Number of inputs	max. 3	max. 2	2	2	2
Output					
Output function	Relay	Relay	Relay	Transistor	0/4...20 mA
Number of outputs	max. 3	max. 2	2	2	2
Options					
Timer Time delay	✓	✓			
Min. Max.	✓	✓			
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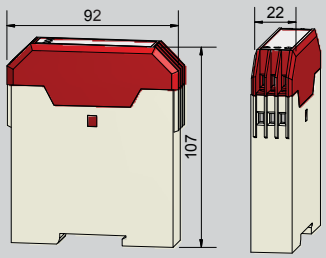
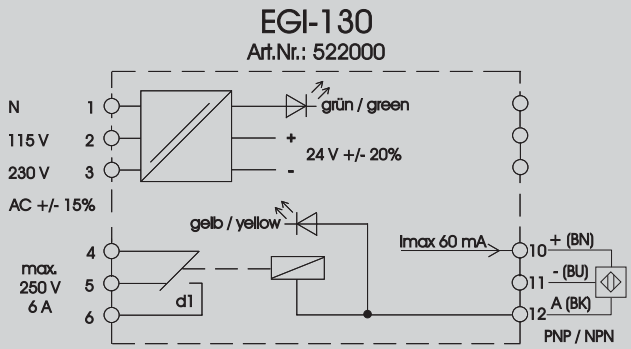
Power Supply
Series 130 - Relay Output

- To connect one 2, 3 or 4-wire sensor with NPN or PNP transistor output. When connecting an antivalent sensor (4-wire) the NO or NC output can be connected.
- With one output relay (1 x change over)

Technical data	
Operating voltage (U_B)	115 / 230 V AC ± 15 % 40...60 Hz
No-load current (I_o)	Typ. 20 mA
Output function	1 x potential-free change-over contact
Contact rating each relay max.	250 V AC / 6A
Type	**EGI-130**
Art.-No.	**522 000**
Actuating voltage (U_S)	24 V DC ± 20 %
Actuating current max. (I_S)	60 mA
Residual ripple acc. to DIN 41 755 max.	2 %
Actuating signal	PNP or NPN
Permitted ambient temperature	-25...+80 °C
Display	LED green and yellow
Degree of protection IEC 60529	Housing: IP 30 Connections: IP 20
Norm	EN 60 947-5-2
Connection	Screw terminals





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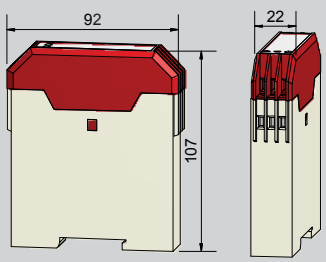
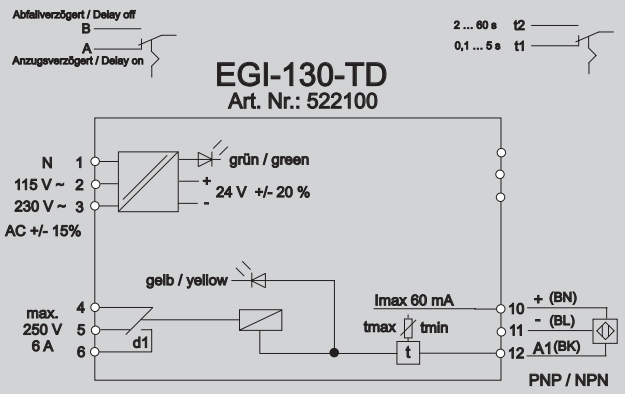
Power Supply
Series 130 - Relay Output With Time Delay

- To connect one 2, 3 or 4-wire sensor with NPN or PNP transistor output. When connecting an antivalent sensor (4-wire) the NO or NC output can be connected.
- With one output relay (1 x changeover)
- This control unit provides an energising or de-energising delay, which is programmable by a switch:
  A = energising delay, B = de-energising delay
  Two delay ranges, t1 = 0.1...5 sec. and t2 = 2...60 sec., can be set by means of a switch. The selected delay is adjusted with a potentiometer.

Technical data	
Operating voltage (U_B)	115 / 230 V AC ± 15 % 40...60 Hz
No-load current (I_o)	Typ. 20 mA
Output function	1 x potential-free change-over contact
Contact rating each relay max.	250 V AC / 6 A
Type	**EGI-130-TD**
Art.-No.	**522 100**
Actuating voltage (U_S)	24 V DC ± 20 %
Actuating current max. (I_S)	60 mA
Residual ripple acc. to DIN 41 755 max.	2 %
Actuating signal	PNP or NPN
Permitted ambient temperature	-25...+80 °C
Display	LED green and yellow
Version adjustable for time	Energising and de-energising delay t_1 = 0,1...5 s/ t_2= 2...60 s
Degree of protection IEC 60529	Housing: IP 30 Connections: IP 20
Norm	EN 60 947-5-2
Connection	Screw terminals





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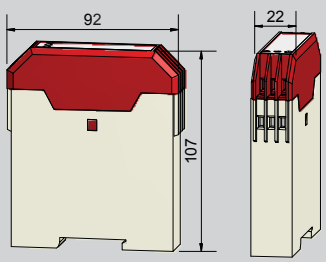
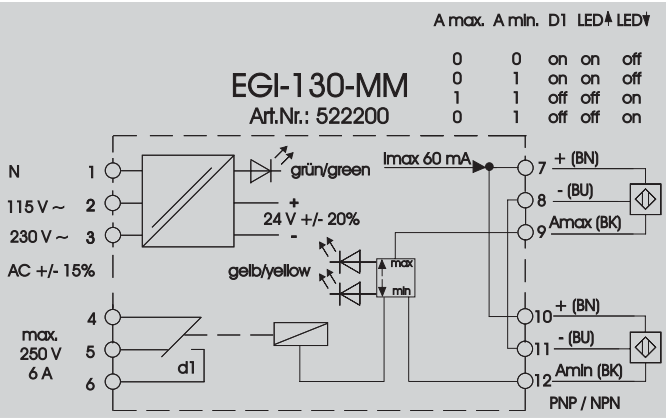
Power Supply
Series 130 - Relay Output- MIN / MAX-Control

- To connect two 2 or 3-wire sensors in NO-function with NPN or PNP transistor output. When connecting antivalent sensors only the NO-output can be connected.
- Integrated MIN / MAX-Control
- With one output relay (1 x changeover)

Technical data	
Operating voltage (U_B)	115 / 230 V AC ± 15 % 40...60 Hz
No-load current (I_o)	Typ. 20 mA
Output function	1 x potential-free change-over contact
Contact rating each relay max.	250 V AC / 6 A
Type	**EGI-130-MM**
Art.-No.	**522 200**
Actuating voltage (U_S)	24 V DC ± 20 %
Actuating current max. (I_S)	60 mA
Residual ripple acc. to DIN 41 755 max.	2 %
Actuating signal	PNP or NPN
Permitted ambient temperature	-25...+80 °C
Display	LED green and yellow
Version	Min. / max.-Control
Degree of protection IEC 60529	Housing: IP 30 Connections: IP 20
Norm	EN 60 947-5-2
Connection	Screw terminals





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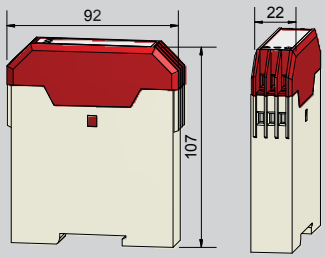
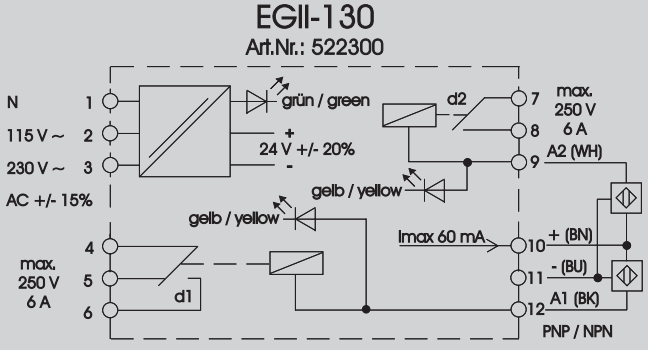
Power Supply
Series 130 - Relay Output

- To connect two 2, 3 or 4-wire sensors with NPN or PNP transistor output (not from our series SW-600). When connecting one antivalent sensor (4-wire) both outputs, NO and NC, can be connected. When connecting two antivalent sensors only one output of each can be connected.
- With two output relays
- (1 x changeover and 1 x normally open)

Technical data	
Operating voltage (U_B)	115 / 230 V AC ± 15 % 40...60 Hz
No-load current (I_o)	Typ. 40 mA
Output function	1 x potential-free change-over contact / 1 x potential-free NO
Contact rating each relay max.	250 V AC / 6 A
Type	**EGII-130**
Art.-No.	**522 300**
Actuating voltage (U_S)	24 V DC ± 20 %
Actuating current max. (I_S)	60 mA
Residual ripple acc. to DIN 41 755 max.	2 %
Actuating signal	PNP or NPN
Permitted ambient temperature	-25...+80 °C
Display	LED green and yellow
Degree of protection IEC 60529	Housing: IP 30 Connections: IP 20
Norm	EN 60 947-5-2
Connection	Screw terminals





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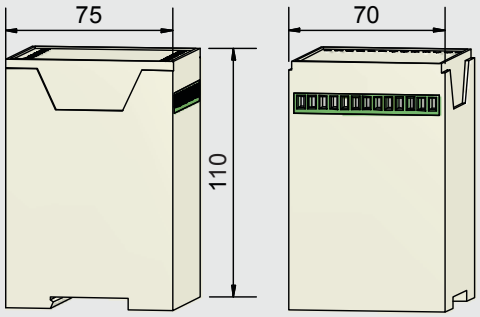
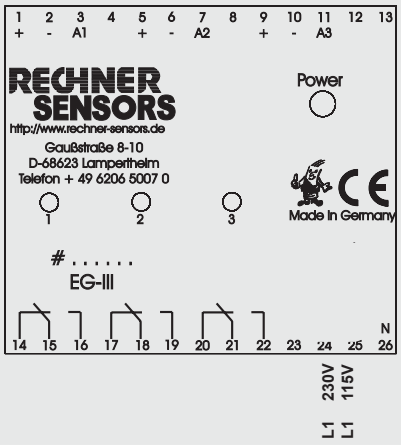
Power Supply
Series 130 - Relay Output

- To connect three 2, 3 or 4-wire sensors with NPN or PNP transistor output. When connecting an antivalent sensor (4-wire) the NO or NC output can be connected
- With three output relays (3 x changeover)

Technical data	
Operating voltage (U_B)	115 / 230 V AC ± 15 % 40 ... 60 Hz
No-load current (I_o)	Typ. 40 mA
Output function	3 x potential-free change-over contact
Contact rating each relay max.	250 V AC / 6 A
Type	**EGIII-130**
Art.-No.	**NA 0002**
Steuerspannung (U_S)	24 V DC ± 20 %
Actuating current max. (I_S)	100 mA
Residual ripple acc. to DIN 41 755 max.	2 %
Actuating signal	PNP or NPN
Permitted ambient temperature	-25...+70 °C
Display	LED green and yellow
Degree of protection IEC 60529	Housing: IP 30 Connections: IP 20
Norm	EN 60 947-5-2
Connection	Screw terminals





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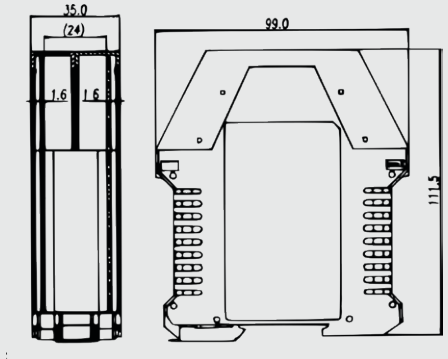
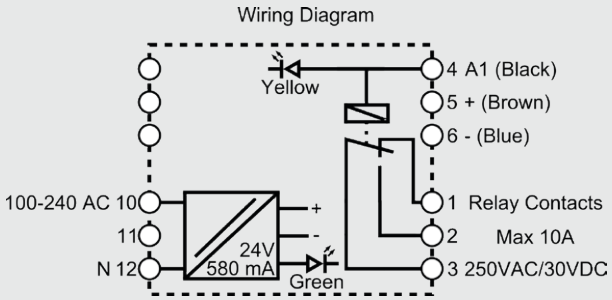
Power Supply
Series RLC - Relay Output

- To connect one 2, 3 or 4-wire sensor with NPN or PNP transistor output. When connecting an antivalent sensor (4-wire) the NO or NC output can be connected.
- With one output relay (SPDT) (1 x change over)

Technical data	
Operating voltage (U_B)	100 / 240 V AC 50 / 60 Hz
No-load current (I_o)	Typ. < 50 mA
Output function	1 x potential-free change-over contact (SPDT)
Contact rating each relay max.	250 V AC / 30 V DC 10A
Type	**EGI-RLC**
Art.-No.	**NA 7001**
Actuating voltage (U_S)	24 V DC
Actuating current max. (I_S)	580 mA
Residual ripple max.	2 %
Actuating signal	PNP or NPN
Permitted ambient temperature	-25...+40 °C
Display	LED green and yellow
Degree of protection IEC 60529	Housing: IP 30 Connections: IP 20
Connection	Screw terminals

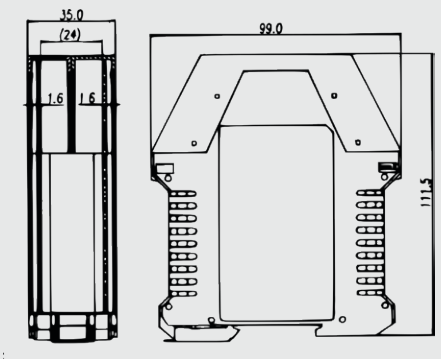


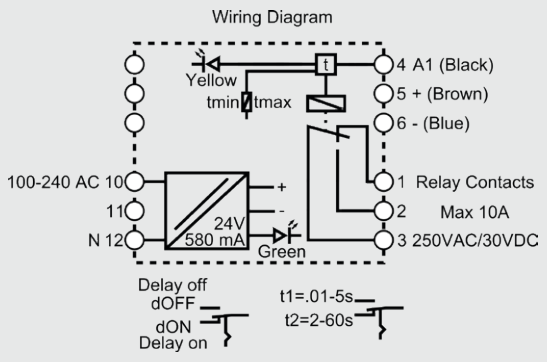


Power Supply
Series RLC - Relay Output With Time Delay

- To connect one 2, 3 or 4-wire sensor with NPN or PNP transistor output. When connecting an antivalent sensor (4-wire) the NO or NC output can be connected.
- With one output relay (SPDT) (1 x changeover)
- This control unit provides an energising or de-energising delay, which is programmable by a switch:
  A = energising delay, B = de-energising delay

Technical data	
Operating voltage (U_B)	100 / 240 V AC 50 / 60 Hz
No-load current (I_o)	Typ. < 50 mA
Output function	1 x potential-free change-over contact (SPDT) with adjustable ON delay or OFF delay (0.1 to 60 seconds)
Contact rating each relay max.	250 V AC / 30 V DC 10A
Type	**EGI-RLC-TD**
Art.-No.	**NA 7002**
Actuating voltage (U_S)	24 V DC
Actuating current max. (I_S)	580 mA
Residual ripple max.	2 %
Actuating signal	PNP or NPN
Permitted ambient temperature	-25...+40 °C
Display	LED green and yellow
Degree of protection IEC 60529	Housing: IP 30 Connections: IP 20
Connection	Screw terminals





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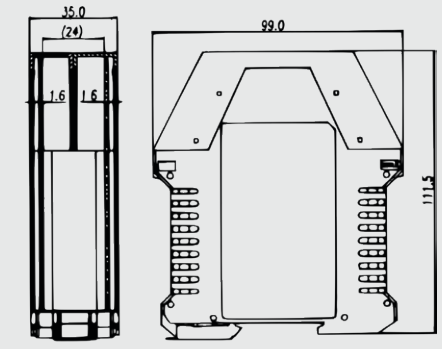
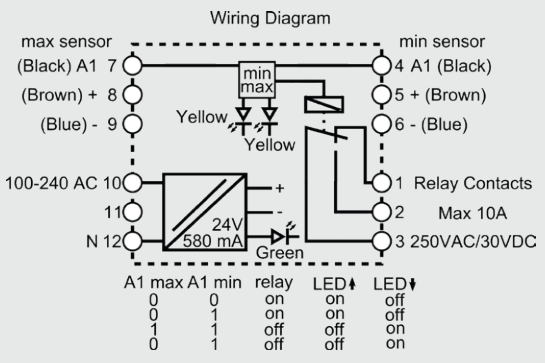
Power Supply
Series RLC - Relay Output- MIN / MAX-Control

- To connect two 2 or 3-wire sensors in NO-function with NPN or PNP transistor output. When connecting antivalent sensors only the NO-output can be connected.
- Integrated MIN / MAX-Control
- With one output relay (SPDT) (1 x changeover)

Technical data	
Operating voltage (U_B)	100 / 240 V AC 50 / 60 Hz
No-load current (I_o)	Typ. < 50 mA
Output function	1 x potential-free change-over contact (SPDT) with MIN / MAX logic
Contact rating each relay max.	250 V AC / 30 V DC 10A
Type	**EGI-RLC-MM**
Art.-No.	**NA 7003**
Actuating voltage (U_S)	24 V DC
Actuating current max. (I_S)	580 mA
Residual ripple max.	2 %
Actuating signal	PNP or NPN
Permitted ambient temperature	-25...+40 °C
Display	LED green and yellow
Degree of protection IEC 60529	Housing: IP 30 Connections: IP 20
Connection	Screw terminals





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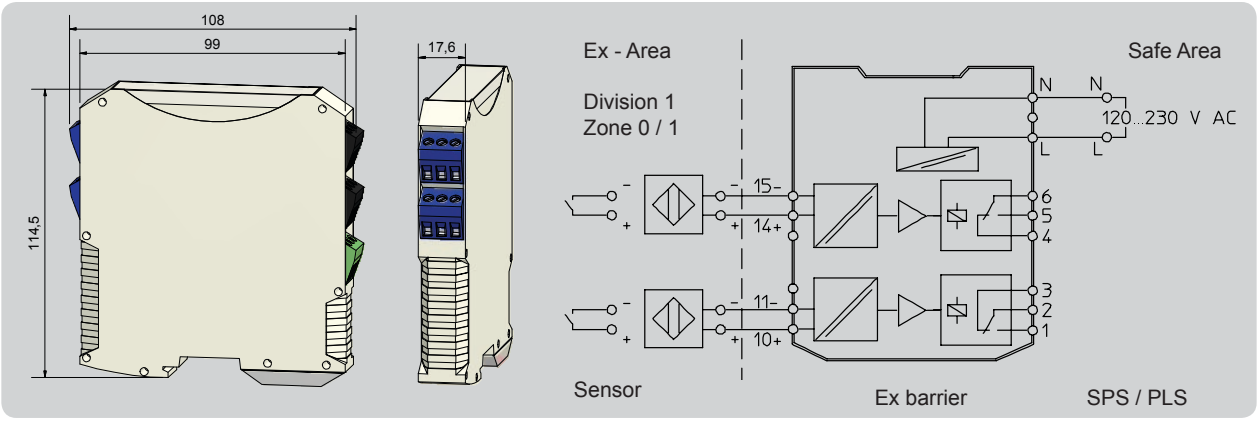
Isolating Switching Amplifier - ATEX
N-132/2-01 120...230 V AC

- To connect **two NAMUR-Sensors** or potential-free mechanical contacts, which are mounted in the zones 0, 1, 2 (Gas) or 20, 21, 22 (dust)
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or shortcircuit via LED display
- For applications up to SIL 2 according to IEC 61508

BVS 09 ATEX E 087X	IECEx BVS 10.0088X
II (1)G [Ex ia Ga] IIC	[Ex ia Ga] IIC
II (1)D [Ex iaDa] IIIC	[Ex ia Da] IIIC

Technical data	
Operating voltage (U_B)	120...230 V AC
Output function	2 x change-over contact potential-free
Contact rating each relay AC max.	250 V AC / 4 A
Contact rating each relay DC max.	250 V DC / 2 A
Type	**N-132/2-01**
Art.-No.	**N 00015**
Output voltage max. (U_o)	9.6 V DC
Output current max. (I_o)	20 mA
Outer inductance max. (L_o)	[Ex ia] IIC 90 mH / IIB 340 mH
Outer capacitance max. (C_o)	[Ex ia] IIC 3.6 µF / IIB 26 µF
Actuating signal	NAMUR EN 60547-5-6
Permitted ambient temperature	-20...+70 °C
Display	Red / yellow and green
Degree of protection IC 60529	Housing: IP 30 Terminals: IP 20
Norm	EN 60947-5-6
Safety integrity level (IEC 61508)	SIL 2
Connection	Screw terminals



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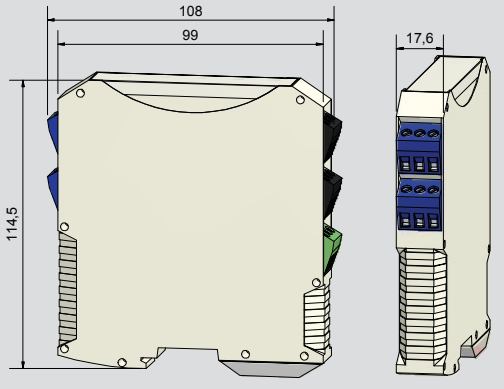
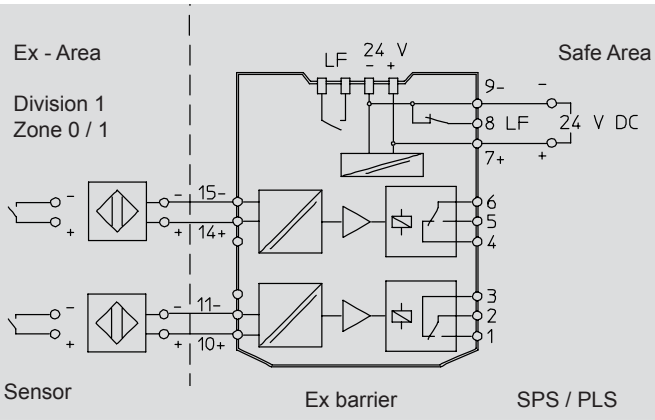
Isolating Switching Amplifier - ATEX
N-132/2-10 24 V DC

- To connect **two NAMUR-Sensors** or potential-free mechanical contacts which are mounted in the zones 0, 1, 2 (Gas) or 20, 21, 22 (dust)
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or shortcircuit via relay contact
- For applications up to SIL 2 according to IEC 61508

BVS 09 ATEX E 087X	IECEx BVS 10.0088X
II (1)G [Ex ia Ga] IIC	[Ex ia Ga] IIC
II (1)D [Ex iaDa] IIIC	[Ex ia Da] IIIC

Technical data	
Operating voltage (U_B)	18...31.2 V DC
Output function	2 x change-over contact potential-free
Contact rating each relay AC max.	250 V AC / 4 A
Contact rating each relay DC max.	250 V DC / 2 A
Type	**N-132/2-10**
Art.-No.	**N 00017**
Output voltage max. (U_o)	9.6 V DC
Output current max. (I_o)	20 mA
Outer inductance max. (L_o)	[Ex ia] IIC 90 mH / IIB 340 mH
Outer capacitance max. (C_o)	[Ex ia] IIC 3.6 µF / IIB 26 µF
Actuating signal	NAMUR EN 60547-5-6
Permitted ambient temperature	-20...+70 °C
Display	Red / yellow and green
Degree of protection IEC 60529	Housing: IP 30 Terminals: IP 20
Norm	EN 60947-5-6
Safety integrity level (IEC 61508)	SIL 2
Connection	Screw terminals





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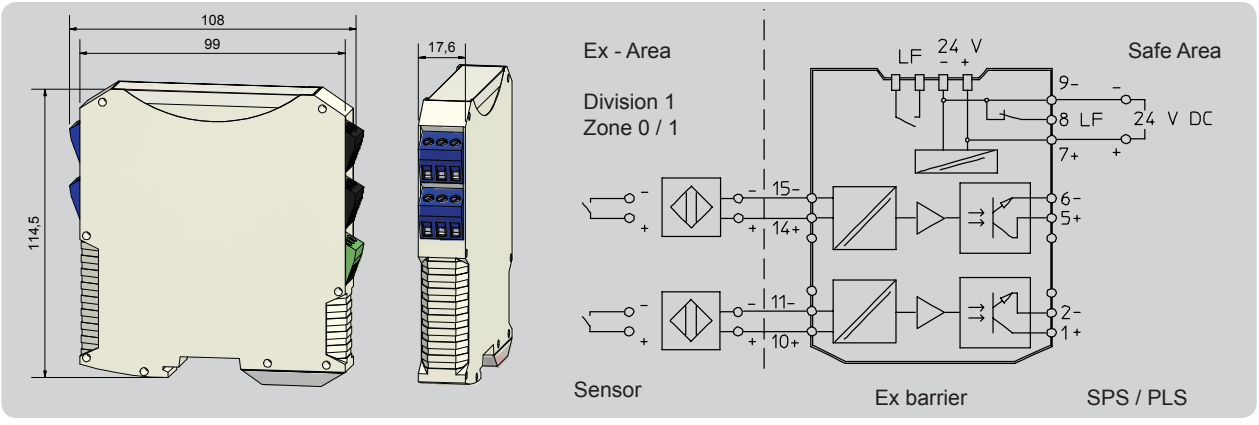
Isolating Switching Amplifier - ATEX
N-132/2-E-10 24 V DC

- To connect **two NAMUR-Sensors** or potential-free mechanical contacts which are mounted in the zones 0, 1, 2 (Gas) or 20, 21, 22 (dust)
- Amplifier for use in areas with the risk of gas explosion, zone 2
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or short-circuit via relay contact

DMT 09 ATEX E 087X	IECEx BVS 10.0088X
Ex II (1) G [Ex ia] IIC	Ex nAc nCc [ia] IIC T4
Ex II (1) D [Ex ia] IIIC	[Ex ia] IIIC

Technical data	
Operating voltage (U_B)	18...31.2 V DC
Output function	2 x transistor output / open collector
Contact rating each DC output max.	35 V DC / 50 mA
Type	**N-132/2-E-10**
Art.-No.	**N 00018**
Output voltage max. (U_o)	9.6 V DC
Output current max. (I_o)	20 mA
Outer inductance max. (L_o)	[Ex ia] IIC 90 mH / IIB 340 mH
Outer capacitance max. (C_o)	[Ex ia] IIC 3.6 µF / IIB 26 µF
Actuating signal	NAMUR EN 60547-5-6
Permitted ambient temperature	-20...+70 °C
Display	Red / yellow and green
Degree of protection IC 60529	Housing: IP 30 Terminals: IP 20
Norm	EN 60947-5-6
Connection	Screw terminals



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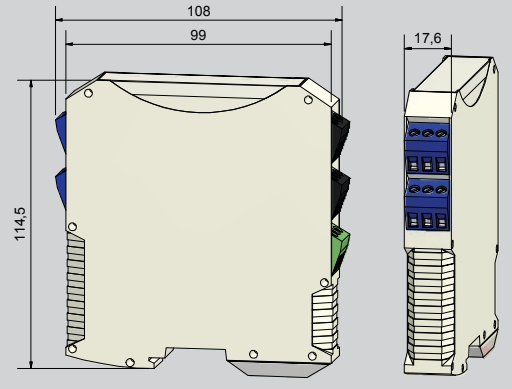
Transmitter Power Supply - ATEX
N-132/2/4-20-IL - Analogue Output 4...20 mA

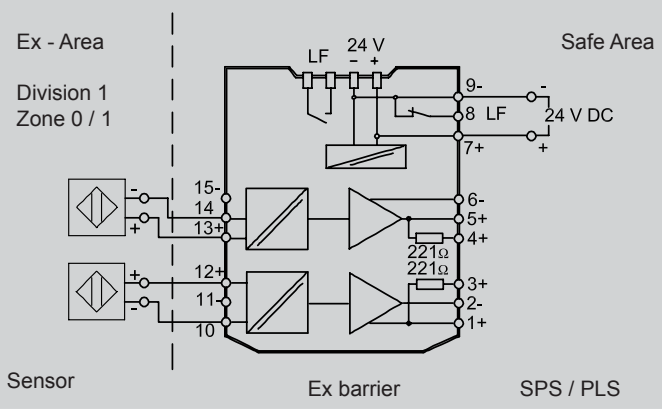
- For connection of 2 ATEX certified 2-wire analogue sensors e. g. our KAS-40...IL with 4...20 mA output signal
- Transmitter for use in areas with the risk of gas explosion, zone 2
- Galvanic isolation between input, output and power supply
- Compact design - only 17.6 mm width
- Removable screw terminals
- Indication sensor wire-break or shortcircuit via relay contact

DMT 09 ATEX E 129X	IECEx BVS 10.0087X
Ⓔx II 3(1)G Ex nA nC [ia Ga] IIC T4 Gc	Ex nA nC [ia Ga] IIC T4 Gc
Ⓔx II (1)D [Ex ia Da] IIIC	[Ex ia Da] IIIC

CE · RoHS Compliant · Ex · FM APPROVED BARRIER Analogue · Ex NEPSI

Technical data		
Type		**N-132/2/4-20-IL**
Art. No.		**N 00023**
Safety Data (CENELEC)	Max. voltage U_0	27 V
	Max. current I_0	88 mA
	Max. power P_0	576 mW
	Internal capacitance C_i and inductance L_i	Negligible
	Max. connectable capacitance C_0 IIB / IIIC	705 nF
	Max. connectable inductance L_0 IIB / IIIC	17 mH
	Max. connectable capacitance C_0 IIC	90 nF
	Max. connectable inductance L_0 IIC	2,3 mH
	Insulation voltage U_m	253 V
Power supply	Nominal voltage U_N	24 V DC
	Voltage range	18...31.2 V DC
Ex i Input	Transmitter supply voltage	16 V
	Input signal	0/4...20 mA
Output	Resistance range (load)	0 ... 600 Ω (terminal 1+ / 2- bzw. 5+ / 6-) 0 ... 379 Ω (terminal 3+ / 2- bzw. 4+ / 6-)
	Output range	0/4...20 mA
Ambient conditions	Ambient temperature	-20...+70 °C
	Storage temperature	-40....+80 °C
	Relative humidity (no condensation)	< 95 %
LED-Display		Red / yellow and green
Degree of protection IEC 60529		Housing: IP30 Terminals: IP20
Norm		EN 60947-5-6
Connection		Screw terminals





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