ISO 9001:2008 / ATEX

ASSURIX Intrinsically Safe Power Supply NEX-112-..AC

Operating Manual and Control Drawing No. OM-NEX-01

CE 0158

UL LISTED

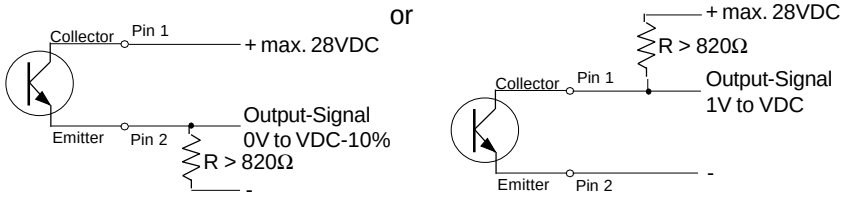
Ex

II (2) G [Ex ia] IIC Gb

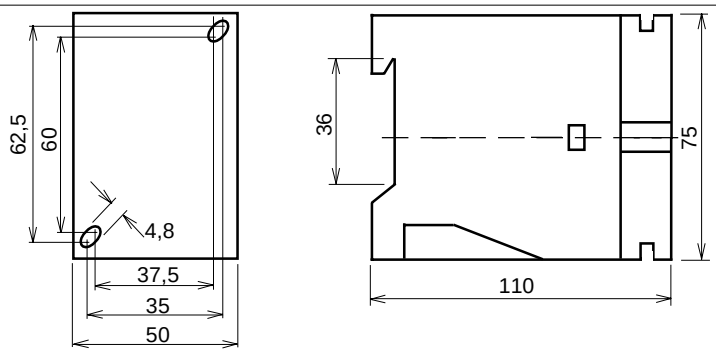
- Power Supply for 3-wire and NAMUR Ex ia Sensors.
  Process Control Equipment for Hazardous locations.
- Type of protection: Intrinsically Safe II (2) G [Ex ia] IIC Gb
- Listed by Underwriter's Laboratories Inc. Assigned Control No. 36HN
- Int. Safe Connections Cl.I, II,III Division 1, Applicable Gp.A-G
- ATEX: Certification of Conformity PTB 03 ATEX 2091
- with Relay or Electronic Output.
- also available with adjustable delay function.

Types / Specifications	NEX-112-R-...VAC	NEX-112-E-...VAC	NEX-112-RZ-...VAC	NEX-112-EZ-...VAC
Supply Voltage NEX-112-.-24VAC NEX-112-.-115VAC NEX-112-.-230VAC	24VAC / 100mA (50-60Hz) (Um=250VAC) 115 VAC / 40mA (50-60Hz) (Um=250VAC) 230 VAC / 20mA (50-60Hz) (Um=250VAC)			
Connections	1 proximity-switch or 1 light barrier or 1 NAMUR-sensor			
Intrinsically safe output voltage for 3-wire Sensors	12 VDC (Uo = 13.6 VDC)			
Intrinsically safe output voltage for NAMUR sensors	8.2 VDC (Uo = 13.6 VDC)			
Maximum output current	Io = 111mA			
Useful output current	30mA			
Maximum output power	Po = 785mW			
Max. capacitive load	Co = 150nF			
Max. inductive load	Lo = 1.2mH			
Switching frequency	5 Hz	1kHz	5Hz	10Hz
Time delay	–	--	0.1 to 10sec.	0.1 to 10sec.
Drop-in and Drop-out Delay			adjustable	adjustable
Output	Relay	Opto-Coupler	Relay	Opto-Coupler
Maximum AC load	250VAC/4A/100VA Cos φ >= 0,7	-- –	250VAC/4A/100VA Cos φ> = 0,7	-- –
Maximum DC load	30VDC/4A 100W	28VDC/50mA 1W	30VDC/4A 100W	28VDC/50mA 1W
Housing	Synthetic (Polycarbonate, Polystyrole)			
Enclosure rating	IP 20 at EN 60529			
Ambient temperature range	0°C < T_{amb} < 60°C			
Mean Time to Failure MTTF	226 Years (types NEX-112-EZ-...VAC)			
Mounting	On rail EN 50022 or with 2 screws			
Options (not UL LISTED)	with NPN input circuit, Type NEX-112-.-...**N** (without NAMUR input)			

Connection to the Optocoupler-Output: (Only for devices with Coupler-Output)



Dimensions:



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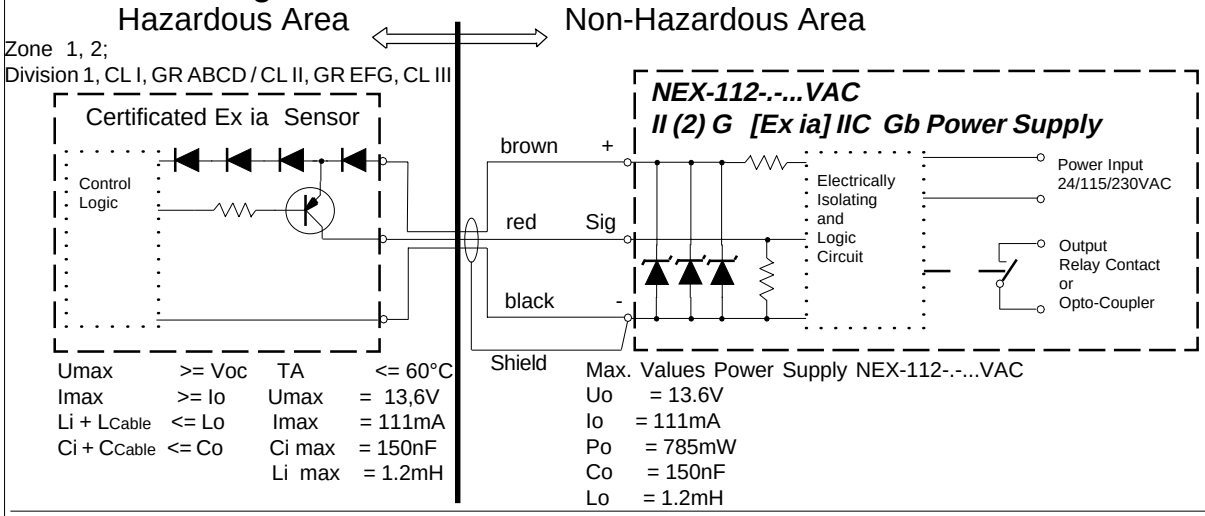
Control Drawing for Hazardous Areas:

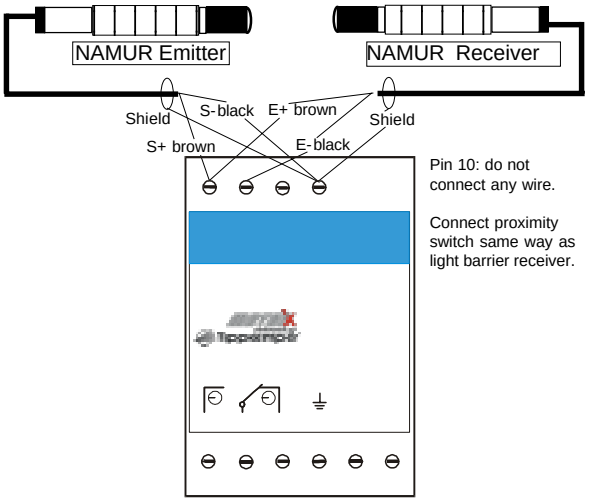


Umax	>= Voc	TA	<= 60°C
Imax	>= Io	Umax	= 13,6V
Li + LCable	<= Lo	Imax	= 111mA
Ci + CCable	<= Co	Ci max	= 150nF
		Li max	= 1.2mH

Max. Values Power Supply NEX-112-.-...VAC
Uo = 13.6V
Io = 111mA
Po = 785mW
Co = 150nF
Lo = 1.2mH

Connections:

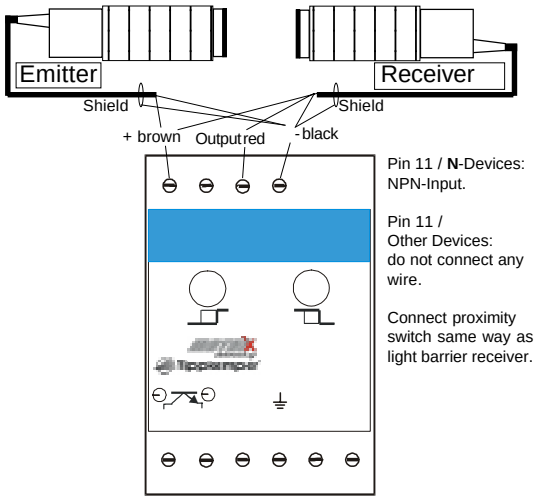
NAMUR-Sensors to NEX-112-R



Pin 10: do not connect any wire.

Connect proximity switch same way as light barrier receiver.

3-wire Sensors to NEX-112-EZ



Pin 11 / **N**-Devices: NPN-Input.

Pin 11 / Other Devices: do not connect any wire.

Connect proximity switch same way as light barrier receiver.

Operating Manual / EU - Declaration of Conformity:

Mounting prescriptions:

Installation prescriptions for Ex hazardous locations:

WARNING:

"To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing"

It is necessary to take into consideration the valid international and national rules and regulations (EN 60079-14). Do not exceed the maximum ratings. The power supply must be installed out of the explosion risk area. The power supply must only be used with the voltage shown on the identification label. The connection for the intrinsically safe circuit is marked in blue and must be connected outside of hazardous locations. The maximum allowed capacitance and inductivity of the connected cable must be observed.

Function:

The power supply NEX-112-.. will provide the power and signalling function for intrinsically safe sensors at protection level Ex ia. When the PNP-input is activated or I-NAMUR > 2mA, the red LED will light up and the output will be activated. When the inputs are passive the LED shows green. For the "Z"-versions the drop-in and drop-out time delays can be adjusted by 2 potentiometers. For the types NEX-112-..-N, the NAMUR input is replaced by an NPN input. (Attention: This versions are not UL listed!)

Maintenance:

The power supply does not require any special maintenance. Equipment must only be repaired or serviced by the manufacturer.

General notes:

We reserve the right to modify our equipment. Our equipment is designed in accordance with the RoHS directive. It neither emit or contain any damaging or siliconized substances and use a minimum of energy and resources. No longer usable or irreparable units must be disposed of in accordance with local waste disposal regulations.

Safety Instructions:

When installing and operating with the NEX-112 power supply, it is necessary to take into consideration the relevant EU/US and other national regulations and the relevant guidelines: EN 60079-14, single directive 1999/92/EG, UL508, UL913, Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, II, III Division 1, Hazardous (Classified) Locations..

EU-Declaration of Conformity / Approvals:

ATEX EC type of examination: PTB 03 ATEX 2091
UL-LISTED, ASSIGNED CONTROL No. 36HN / E210500
Standards met:
The devices are certificated in accordance with:
EN 60079-0:2009, EN 60079-11:2007
EN 61000-6-2:2001, EN 61000-6-3:2001
ATEX directive: 2014/34/EU
UL 508, UL 913
Machine directive: 2006/42/EC
RoHS directive: 2011/65/EU
EMC directive: 2014/30/EU

ATEX certification of quality type production of Ex devices according to the directive 2014/34/EU. EC-type certification No: BVS 15 ATEX ZQS / E118, CE 0158. The conformity of the devices with the EC/UL standards and directives and the EC/UL-type examination certificate and the observation of the Quality Safety System ISO 9001:2008 with the ATEX module "Production", declares:

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