ISO 9001:2015 / ATEX

Original Operating Manual:

ASSURIX intrinsically safe power supply NEX-112-24VDC

Operating Manual and Control Drawing No. NEX-112-DC

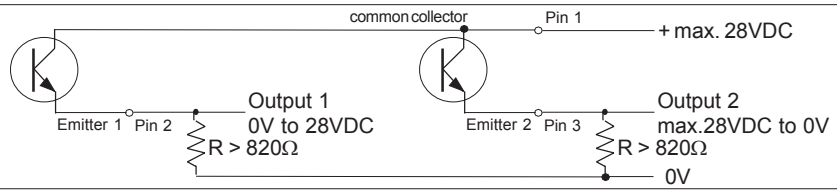
CE 1258

Ex II (1)G [Ex ia] IIC Ga
II (1)D [Ex ia] IIIC Da

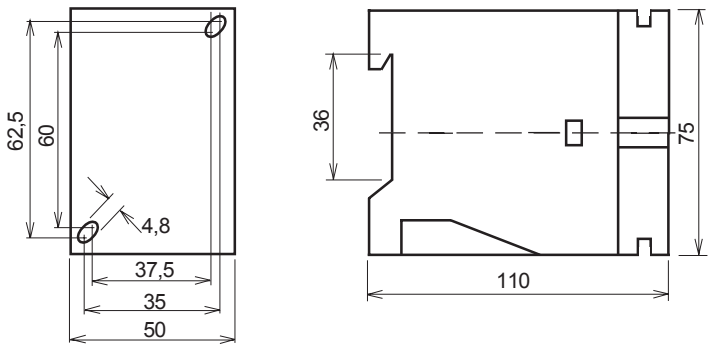
- 12V, intrinsically safe power supply and signal evaluation for sensors in Ex zones 0, 1, 2, 20, 21 and 22
- Type of protection: intrinsically safe
- ATEX EC-type examination certificate: PTB 03 ATEX 2206
- Also compatible with intrinsically of the ASSURIX series.
- With relay or electronic output
- Also available wih adjustable delay function.
- Direct replacement for the power supply type NX-112-.-24VDC

Technical Data \ Type	NEX-112-24VDC-R	NEX-112-24VDC-E	NEX-112-24VDC-RZ	NEX-112-24VDC-EZ
Type	Intrinsically safe equipment, set up outside the Ex zone			
Supply voltage	24VDC +-10%			
Max. current consumption	250mA			
Supported connections (certified intrinsically safe sensors)	1x proximity-switch or 1x light barrier or 1x NAMUR-sensor			
Power supply for senors	12 VDC, intrinsically safe			
Maximum supply voltage	Um = 30VDC			
Max. output voltage	Uo = 12.8VDC			
Max. output current	Io = 118mA			
Useful output current	22mA			
Max. output power	Po = 488mW			
max. capacitive load	Co = 280nF			
max. inductive load	Lo = 2mH			
Switching frequency Time delay	5 Hz –	1kHz –	5Hz 0.1 bis 10sec.	100Hz 0 bis 10sec.
Drop-in and Drop-out delay			adjustable	adjustable
Output	Relay	Opto-Coupler	Relay	Opto-Coupler
Max. load capacity of the AC output	250VAC/4A/100VA cos φ >= 0,7	– –	250VAC/4A/100VA cos φ >= 0,7	– –
Max. load capacit of the DC output	30VDC/4A 100W	28VDC/50mA 1W	30VDC/4A 100W	28VDC/50mA 1W
Housing	Plastic (Polycarbonat, Polystyrol)			
Enclosure rating	IP 20			
Ambient temperature range	0°C < T_{amb} < +60°C			
Mounting	On DIN rail EN 50022 or with 2 screws			
Display	Switching status: LED red + LED green / Output overloaded: LED red			
Options	- faster switching frequency, on request			

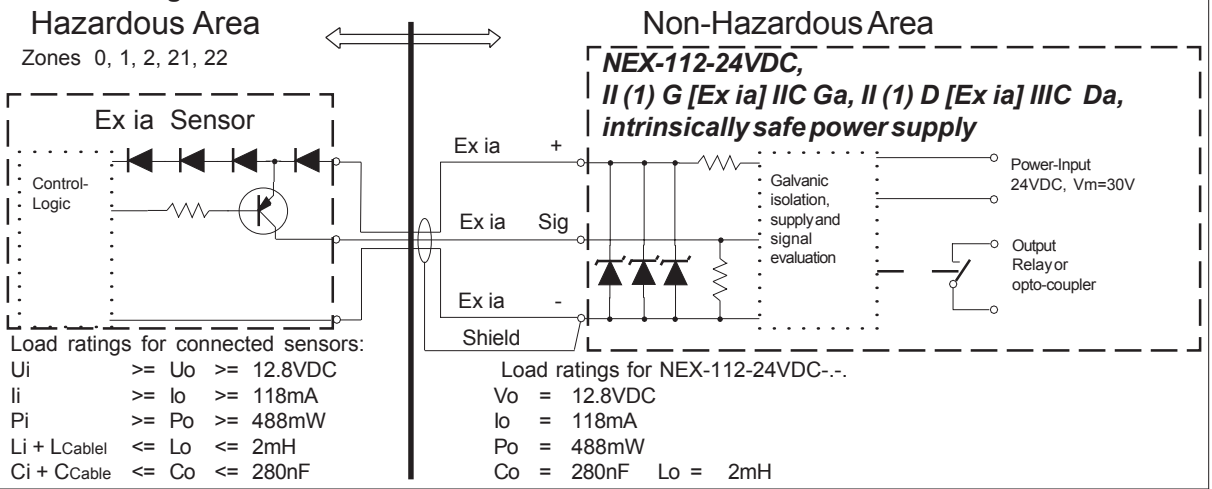
Optocoupler-Output wiring:
Output 2 inverse to Output 1
(only on devices with electronic output)



Dimensions:



Control Drawing for Hazardous Areas:



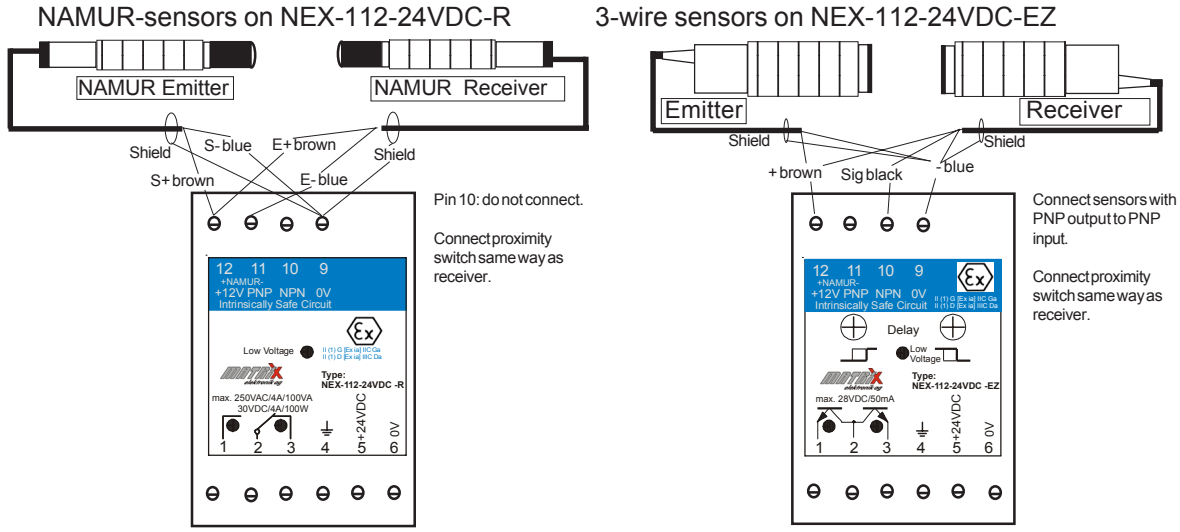
Load ratings for connected sensors:

Ui	>=	Uo	>=	12.8VDC
Ii	>=	Io	>=	118mA
Pi	>=	Po	>=	488mW
Li + L_{Cable}	<=	Lo	<=	2mH
Ci + C_{Cable}	<=	Co	<=	280nF

Load ratings for NEX-112-24VDC-.-.

Vo	=	12.8VDC		
Io	=	118mA		
Po	=	488mW		
Co	=	280nF	Lo =	2mH

Wiring of sensors:



ATEX Markings:	CE 1258 Type: NEX-112-24VDC-.	Manufacturer with address II (1)G [Ex ia] IIC Ga II (1)D [Ex ia] IIIC Da
	EC-type certification No.: PTB 03 ATEX 2206 T_{amb}: 0°C < T_{amb} < +60°C	Electrical data according to table D.O.M: Number 5 to 8 of serial number(Y/CW)

Operating-Manual / EC-declaration of conformity:

Ex installation prescriptions

It is mandatory to comply with the valid rules and installation regulations regarding explosion protection (EN 60079-14). The power supply unit must be mounted outside the Ex zone. The connection of the certified, intrinsically safe sensors must be carried out outside the Ex area. When selecting the cable, the maximum permissible capacitances and inductances must be observed.

Function

The power supply NEX-112-.. will provide the power and signaling function for intrinsically safe sensors at protection level Ex ia in Ex zones 0, 1, 2, 20, 21 and 22.

When the PNP or NPN input is activated or the current consumption of the connected NAMUR sensor becomes > 2mA, the relay energizes and the red LED lights up. When the PNP or NPN input is not activated or the current consumption of the connected NAMUR sensor is < 1mA, the relay de-energizes and the green LED lights up. For the Z-versions the on- and off-delay can be adjusted individually by means of 2 potentiometers. For high switching frequencies, select a device with an optoelectronic output, "E" types. If the intrinsically safe output circuit is overloaded, the "Low Voltage"-LED lights up.

Maintenance

No special maintenance is required. The equipment must only be repaired or serviced by the manufacturer.

General notes and disposal

We reserve the right to modify our products. Our products are designed in such a way, that they have the least possible adverse effect on the environment. It neither emits or contains 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 notice

When installing and operating the product, it is necessary to take into consideration all relevant international and other national regulations, especially those regarding safety and explosion protection: EN 60079-14, Directive 1999/92/EG.

EU-Declaration of conformity

ATEX EC-type examination cert. No.: PTB 03 ATEX 2206. The power supplies conform to the following directives: EN 60079-0:2009, EN 60079-11:2007, EN 61241-11:2006, EN 61000-6-2:2001, EN 61000-6-3:2001, ATEX directive: 2014/34/EU, Machine directive: 2006/42/EG, RoHS directive: 2011/65/EU, EMC directive: 2014/30/EU

ATEX certification type Production of Ex devices of directive 2014/34/EU. Certification No.: SEV 21 ATEX 4580, CE 1258, Eurofins. Mr. Pablo Ledergerber, Matrix Elektronik AG, is authorized to generation of documentation. The conformity of the devices with all used standards and directives and the EX-type examination certificate and the observation of the Quality Management System ISO 9001:2015, with the ATEX module "Production", declares:

Pablo Ledergerber, Matrix Elektronik AG

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