

NAEV30-DI2 or DI4

Digital signals (ON/OFF)

- 2 or 4 channels, intrinsic safety digital inputs:
Proximity detectors NAMUR, contacts...
- rail mount on hat profile 35 mm
- all connections by removable screw terminals
- ready made wiring system (see option leaflet)

ATEX 94/9/CE



SPECIFICATIONS

Digital inputs

Each of the 4 x I.S. inputs can be configured independently for a contact or a proximity detector NAMUR as per DIN 19234.
Excepted DI4C type dedicated to contacts only.

I.S. inputs

Proximity detector NAMUR as per DIN 19234 or free potential contacts, relays, pressure or temperature switches or push buttons in hazardous area.

Non I.S. recopy outputs

According to the type of sensor and the chosen logic: a green LED on the front panel, in standard output, a free-potential contact for each channel without common wire.

Optional open collector output on NAEV30-DI2.

Cut-off power : 230 VAC – 0.5 A – 120 VA

Collector cut-off power: 15V – 60 mA – 0.9 VA – 350 Hz

Selection of the sensor type

Inductive / capacitive I.S. certified NAMUR proximity detector or free-potential contacts.

Selection of the logic

By a mini-DIP choose of the active output in presence or lack of target (proximity detector) or when contact is NO (Normally Open) or NC (Normally Closed).

Fault detector

For all inputs configured as NAMUR, all models (excluding DI4C) give a fault detector – broken line or short-circuit. In faulty case, the green front LED switches off and the red LED corresponding to the defective channel switches on.

Other channels are not affected.

NAEV30 series

Other models enable the control of binary outputs (1, 2 or 4) and complete ON/OFF valve function (1 output + 2 inputs).

Power supply and connections

According to model: 230 VAC (A230) or 115 VAC (A115) +/-10% and 24 VDC +/-10% (C024) consumption 5 VA.

1 front panel yellow LED is "ON" when supply is active.

All connections by removable screw terminals.

Supply distribution by mean of a flat cable from one unit to the next one. This flat cable is in standard delivery.

Classification for explosive areas

NAEV30 is an intrinsic safety associated apparatus.

It must be installed in safe area and connected to materials

installed in zone 0, 1 or 2 - gas (G)

or in zone 20, 21 or 22 - dust (D).

Classification according to ATEX 94/9/CE:

III (M1)/(1) G/D [Ex ia] IIC

Safety parameters see EC-type certificate LCIE 00ATEX 6034X

Ambient operating temperature : -20°C to +60°C

Recommended operating temperature : -20°C to +50°C

Storage temperature : -40°C to +80°C

Dimensional and mechanical

Housing for symmetric DIN rail (hat profile 35 mm as per standard NFC63015 / EN50022) - Depth : 120 mm

Width on rail 29.5mm. Height: 90 mm – 145 mm overall including

space for cables. Minimal distance between rails: 180 mm

opposite mount.

Conditions of installation

- Mounting NAEV30 series on DIN rail must take in account thermal dissipation and risk of overheating generated by housings installed side by side. In case of a high concentration of NAEV30, we recommend to leave a free space of 10 mm between each group of 8 units (horizontal rail) and between each group of 4 units (vertical rail).

- Mounting in a cabinet: In this case, it is recommended to close the electrical cabinet and to ensure a circulation of fresh air even by mean of an air conditioner to keep the inside temperature at a level compatible with the recommended operating temperature among the units

References NAEV30 - (1) - (2) - (3) / (4)

X impossible

NAEV30- input function	(1) : Type	(2) : alimentation			(3) : sortie		(4) : option
		230Vac	115Vac	24Vdc	relay	collector	
2 NAMUR or contact	DI2N	A230	A115	C024	0	P	
4 NAMUR or contact	DI4N	A230	A115	C024	0	P	
4 contact	DI4C	A230	A115	C024	0		
2 NAMUR or contact input with 2 output relay per channel	DI4N	A230	A115	C024	0	P	SPD
Draining calories							HT

Example : NAEV30-DI4N-A230-0

Supply (2)

A230: 230 V 50 Hz

A115: 115 V 50 Hz

C024: 24VDC

Output (3)

P: Open collector output

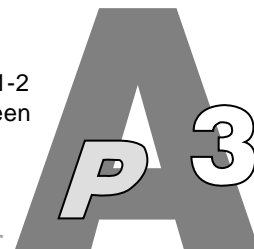
O: relay output



This material bears CE mark according to directive 89/336/CEE. It complies with standards EN 50081-2 and EN50082-2. Complementary tests based on other standards and physical requirements have been carried out on several products. For more information call our technical department.

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SELECTING the TYPE of DETECTOR and the LOGIC

To select the type of detector and the logic, remove the front panel.

NAEV30-DI2N or DI4N or DI4C

A mini-Dip enables the selection of the sensor for each channel (excepted for the **-DI4C** model, which has no sensor choice).

The fault detector function is activated:

- in the inductive / capacitive position
- deactivated in the contact position

CARE! Connecting a contact in explosive area when a proximity switch is configured on NAEV30-DI2N (or DI4N) will give permanent fault detection!

In the opposite using proximity switch in hazardous area when a simple contact is configured will inhibit the fault detection!

The logic to choose the relay active position is done channel per channel.

DI2N

LOGIQUE

RELAIS:

présence cible
contact fermé

B AV: inductif
A AR: contact
-capacitif

B
 A

ON : inductif
capacitif
OFF : contact

DETECTEUR

DI4N

← ON

A capteur
logique
B capteur
logique
C capteur
logique
D capteur
logique

Capteur
ON : NAMUR
OFF : contact

**Logique du relais
de sortie**
ON : normal
OFF : inverse

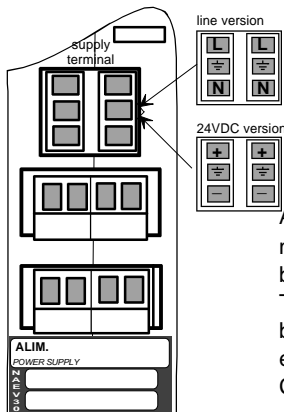
DI4C

CHOIX DE LA LOGIQUE PAR VOIE

A VOIE A
B VOIE B
C VOIE C
D VOIE D

RELAIS :

AV { Contact ouvert
Présence cible
AR { Contact fermé
Absence cible



Care POWER SUPPLY CONNECTION

Power distribution by mean of plug-in jumpers from one unit to its neighbour (AC or 24 VDC). All connectors are removable

All units are equipped with 2 terminal blocks to dispatch the auxiliary power supply: in orange colour for net supply (L $\overline{=}$ N) or in black colour for 24 VDC (+ $\overline{=}$ -).

One block for input and one block to make a bridge to the next unit by mean of a flat cable supplied in standard. To avoid electrical chocks, all these connectors must always be obturated. If only one of the 2 terminal blocks is used (without giving supply to the next unit), the second block must be filled by the 3-points empty cap delivered in standard.

Cable-layer should connect power supply wires and jumpers on both ends of the line of interfaces

This equipment has a 1-year warranty including parts and labour for all materials returned in our factory. Even when the warranty period is over, only A puissance 3 has the authority to modify and repair a certified electrical component or material for hazardous atmospheres of its own production and covered by a certificate of conformity or an EC-type examination certificate. Should this clause not adhered to, will A puissance 3 no longer be held liable for any non-conformity noticed a posteriori.

Models – Functions	Synoptic	Connection	
		on I.S. side	On safe side
<p>NAEV30-DI2N and NAEV30-DI2H</p> <p>2 inputs NAMUR or contact with hysteresis option (DI2H) or w/o (DI2N). Dedicated to contacts, valve position feedbacks, temperature or pressure switch, push buttons.</p> <p>Option P: safe side output with open collector</p> <p>Possibility to connect a common wire '+' for 2 channels (3 wires instead of 4).</p>		<p>NAEV30-DI2N</p>	<p>NAEV30-DI2N</p>
<p>NAEV30-DI4N : 4 inputs NAMUR or contact NAEV30-DI4C : 4 inputs contact</p> <p>Dedicated to contacts, valve position feedback, temperature or pressure switches, push buttons.</p> <p>Option P: safe side output with open collector (Excepted for -DI4C)</p> <p>Possibility to connect a common wire '+' for 4 channels (5 wires instead of 8). On NAEV30-DI4N/SPD, only A et C channels are connected, output relays are respectively a and b for channel A, c and d for channel C.</p>		<p>NAEV30-DI4N or DI4C</p>	<p>NAEV30-DI4N or -DI4C</p>

EXPLOSIVE ATMOSPHERES EXPLOSIONSGEFÄHRDETE BEREICHE
ATMOSPHERES EXPLOSIBLES
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