

SA
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Namur solenoid valve

**Control for process
and fluid systems**



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SOLENOID VALVES

For PNEUMATIC ACTUATOR

Solenoid Valves

Port Size NAMUR, 1/8", 1/4", 3/8", 1/2", 3/4", 1"
Manual Control
Máx. Pressure: Up to 12 Kg/cm²
Body Material: Anodized Aluminium



NAMUR
3/2, 5/2, 5/3



3/2
NC
NO



5/2
SINGLE ACTING
DOUBLE ACTING



5/3
C
P
R

CONNECTOR:
IP 65; IP 67; with LED, DIODE, VARISTOR....

COIL



INTRINSECALLY SAFETY

II 2G EEx ia IIC T₄...T₆

ZONES 1,2

EXPLOSION PROOF

II 2G/D EEx m IIC T₄...T₅

ZONES 1,2,21 - 22

SPECIFIC For CLASS 3
(Dust; Gas)

II 3G/D EEx nA II T₅

ZONES 2,22



LOW CONSUMPTION

0,7 W (Eex ia..)

ATEX

DIRECTIVE 94/9/CE

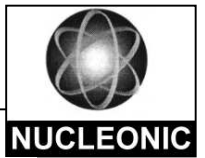
Classification by Temperature	
Class	Max Surface Temp.
T1	450 ° C
T2	300 ° C
T3	200 ° C
T4	135 ° C
T5	100 ° C
T6	85 ° C

Class (Group II)	Protection Level	Zone		explosive atmosphere
		Gas	Dust	
1	Very High	0	20	High Probability, constant, long time or often exposure
2	Hight	1	21	Probably
3	Normal	2	22	Low Probability, unfrecuent and short time exposed.

G	Explosive atmosphere by means of gas, mist or vapour
D	Explosive atmosphere by means dust presence

EVPN - 14

NAMUR SOLENOID VALVE



SPECIFICATION



EVPN-14-5-1B-C-AC110

MODEL

1B: SINGLE Solenoid
2B: DOUBLE Solenoid

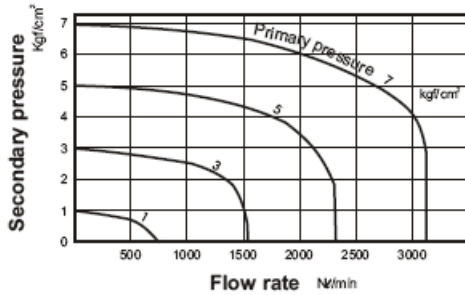
Blank: Normal
C: Closed Center
P: Pressure Center
R: Exhaust Center

VOLTAGE
AC220V(50/60)Hz
AC110V(50/60)Hz
DC24V

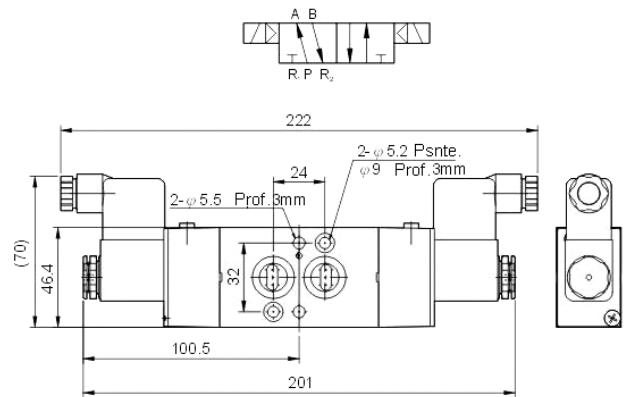
5: 5 WAY

MODEL	EVPN-14-5-1B/2B	EVPN-14-5-2B-C.P.R
BORE No.	8 A	
Nº OF PORT	5	
Nº OF POSITION	2	3
PORT SIZE	G 1/4"	
MEDIUM	AIRE	
OPERATING PRESSURE	2-8 Kg/cm ²	3-8 Kg/cm ²
PROOF PRESSURE	10 Kg/cm ²	
DN	6 mm	5 mm
RESPONSE TIME	30 ms	
AMBIENT TEMPERATURE	5-50 °C (No freezing))	
VOLTAGE	AC110V, 220V(50/60)Hz, DC24V	
POWER CONSUMPTION	AC=6/4.9VA DC=2.5W	
WEIGHT	222 g	313 g
		421 g

FLOW FEATURES:

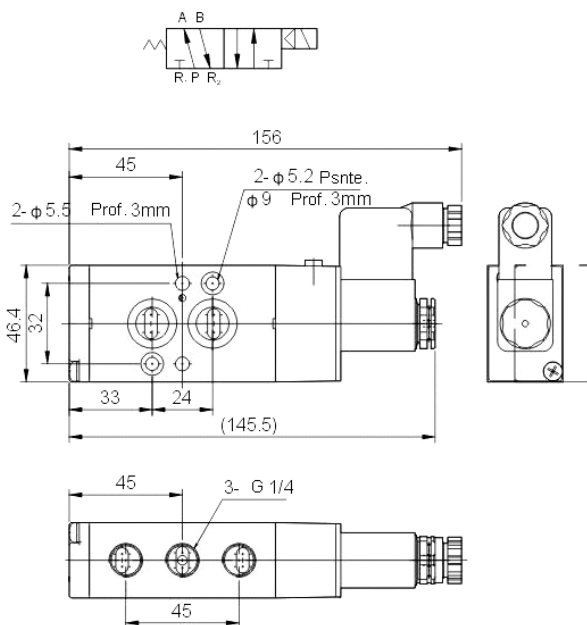


EVPN-14-5-2B



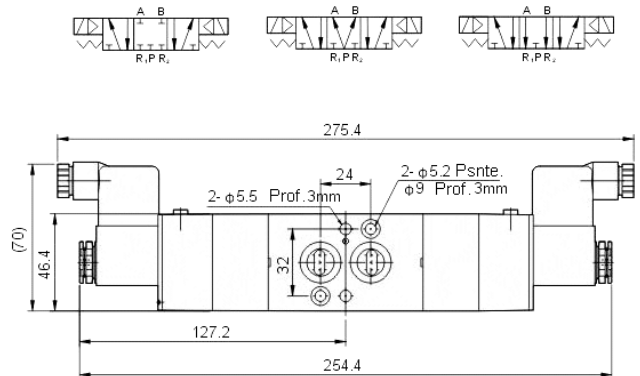
DIMENSION:

EVPN-14-5-1B



EVPN-14-5-2B-C.P.R

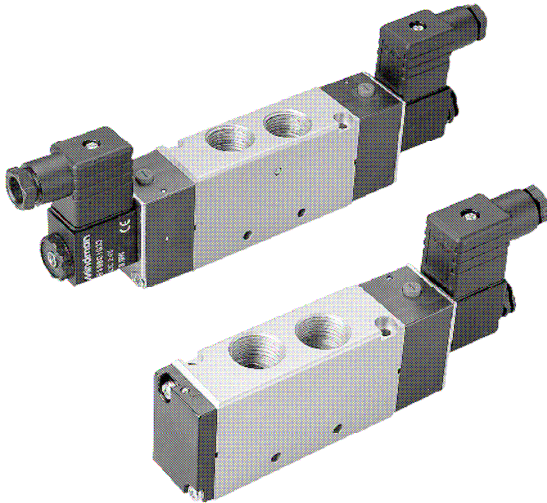
EVPN-14-5-2B-C EVPN-14-5-2B-P EVPN-14-5-2B-R



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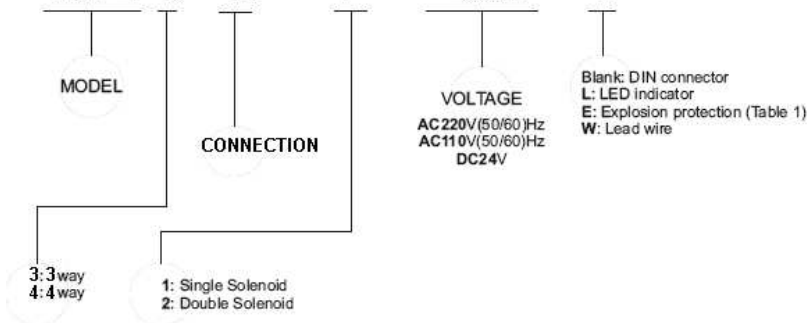
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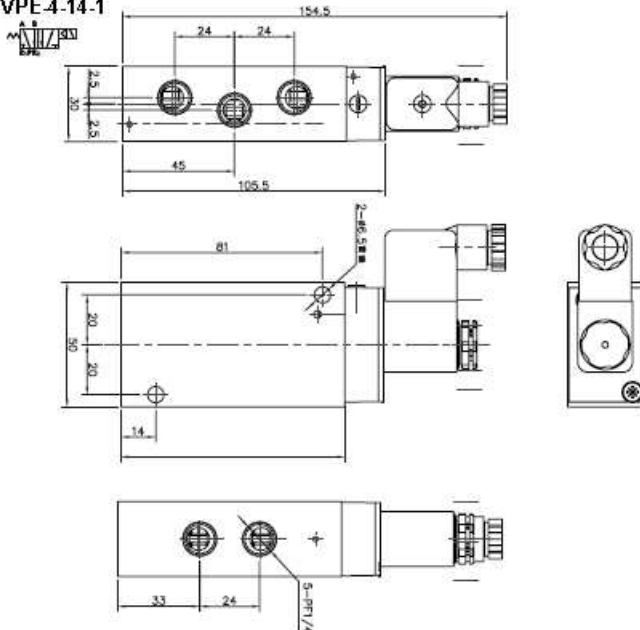
SPECIFICATION

Model	EVPE-3-14-1	EVPE-4-14-1	EVPE-4-14-2
Bore No.	8A		
Port size	BSP 1/4		
No. of port	3	5	
No. of position	2		3
Medium	Air		
Operating pressure range	2~12 kgf/cm ²		
Proof pressure	15 kgf/cm ²		
Effective orifice	41 mm ²		
Response time	50 ms		
Ambient temperature	- 5~ + 50°C (No freezing)		
Voltage	AC110V, AC220V (50/60)Hz, DC24V		
Power consumption	AC=6/4.9VA, DC=2.5W		
Available voltage range	±10%		
Insulation class	F class		
Weight	453g	554g	

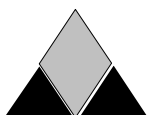
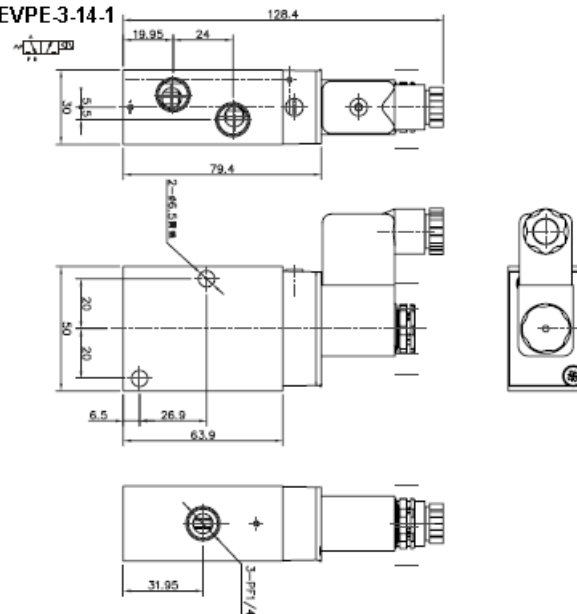
EVPE - 3 - 14 - 1 - DC24 - L



EVPE-4-14-1



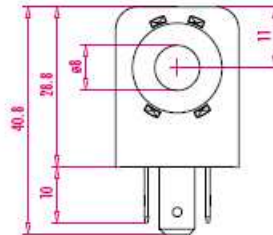
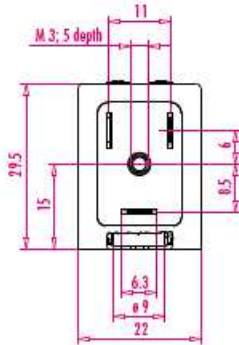
EVPE-3-14-1





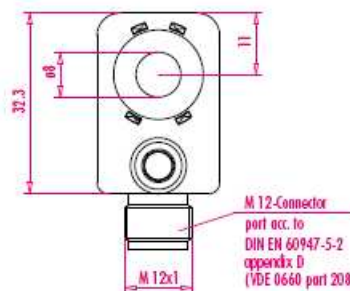
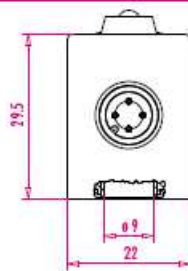
Solenoid Coil

Width: 22 mm
 Connection Type: Industry Form
 Moulding Material: Thermoplastic



Solenoid Coil

Width: 22 mm
 Connection Type: M 12 Metal Thread
 Moulding Material: Thermoset Resin



General Data

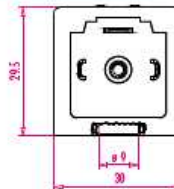
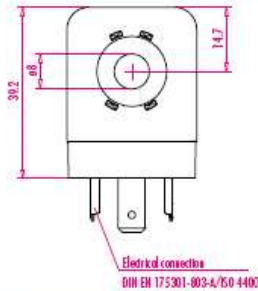
Voltage tolerance	-10% ... +10%
Ambient temperature	-20°C ... +50°C
Relative duty cycle	100%
Insulation class of insulating materials according to DIN VDE 0580	F
Degree of protection with M12 thread	IP 65 / IP 67*
Imprint (customer imprint - special version)	Nass Magnet





Solenoid Coil System 8 ATEX

Width: 30 mm
 EEx 2G EEx ia II CT_ / IEC Ex ia II CT_
 Intrinsic Safety
 Connection Type: DIN EN 175301-803-A/ ISO 4400



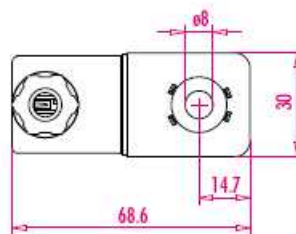
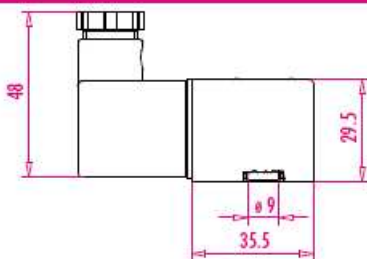
EC-Type Examination Certificate	
PTB 02 ATEX 2154	

General Data	
Relative duty cycle	100%
Insulation class of insulating materials according to DIN VDE 0580	F
Degree of protection with connector according to EN 60529	IP 65
Moulding material	Thermoset Resin



Solenoid Coil System 8 ATEX incl. Connector

Width: 30 mm
 Ex II 3G EEx nA II T5 / Ex II 3D IP65 T95 °C
 Connection Type: Connector according to
 DIN EN 175301-803-A and ISO 4400



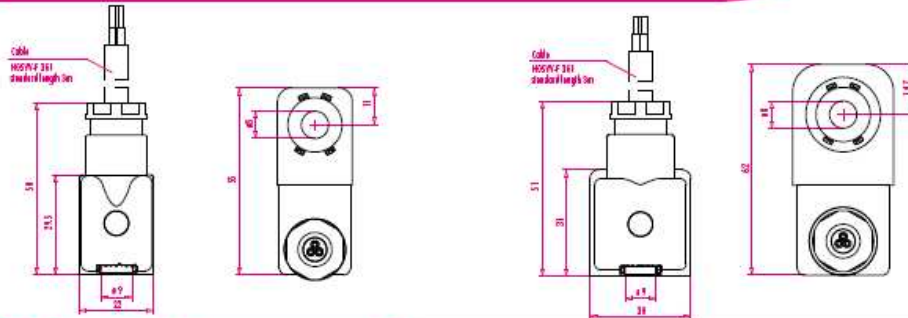
General Data	
Voltage tolerance	-10% ... +10%
Ambient temperature	-20°C ... +50°C
Relative duty cycle	100%
Insulation class of insulating materials according to DIN VDE 0580	F
Degree of protection with connector acc. to EN 60529	IP 65
Moulding material	Thermoplastic





Solenoid Coil System 8 ATEX

Widths: 22 mm and 30 mm
 Ex II 2G EEx m II T₁ / IEC Ex m II T₁
 Ex II 2D IP65 T₁ °C / IP65 DIP A21 T₁ °C
 Protection by Encapsulation
 Connection Type:
 Cable H05VV-F 3G1



EC-Type Examination Certificate			
Width 22mm:	PTB 00 ATEX 2001X IECEX PTB 05.0006X	Width 30mm:	PTB 03 ATEX 2018X IECEX PTB 04.0002X

General Data	
Voltage tolerance	-10% ... +10%
Ambient temperature	-20°C ... +50°C
Relative duty cycle	100%
Insulation class of insulating materials according to DIN VDE 0580	F
Degree of protection with connector according to EN 60529	IP 65
Moulding material	Thermoplastic
Cable length (other cable lengths on request)	3 m

System 8 ATEX, EEx m / EEx ma

The mentioned performance data and steady-state over-temperatures are valid for the indicated standard voltages. Other voltages are available on request. The perfect function of these solenoid coils and the respective components shown in this catalogue will be guaranteed for a winding at operating temperature (max. ambient temperature and max. voltage tolerance). The steady-state over-temperature is reached with lower parts of the valve in plastic and coils moulded with thermoplastic. Manifold on request.

These solenoid coils have been approved according to EN 50028 or DIN VDE 0170/0171, Part 9 respectively and IEC 600 79-18 by the Federal Physico-Technical Institute (PTB) in compliance with Directive 94/9/EC. Explosion protection is only realized by using the pertinent components described in the present catalogue - max. operating pressure for armature assembly / valve system 12 bar in standard. For more detailed technical descriptions please refer to DIN VDE 0580.

System 8 ATEX, EEx ia

The mentioned performance data and steady-state over-temperatures are valid for the indicated standard voltages. The perfect function of these solenoid coils and the respective components shown in this catalogue will be guaranteed for a winding at operating temperature (max. ambient temperature and max. voltage tolerance). The steady-state over-temperature is reached with lower parts of the valve in plastic and coils moulded with thermoplastic. The solenoid coil is appropriate for single mounting and alignment on manifolds.

These solenoid coils have been approved according to EN 50020 or DIN VDE 0170/0171, Part 5 respectively by the Federal Physico-Technical Institute (PTB) in compliance with Directive 94/9/EC (ATEX 100a). Explosion protection is only realized by using the pertinent components described in the present catalogue - max. operating pressure for armature assembly / valve system 12 bar in standard. For more detailed technical descriptions please refer to DIN VDE 0580.

System 8 ATEX, EEx n

The mentioned performance data and steady-state over-temperatures are valid for the indicated standard voltages. Other voltages are available on request. The perfect function of these solenoid coils and the respective components shown in this catalogue will be guaranteed for a winding at operating temperature (max. ambient temperature and max. voltage tolerance). The steady-state over-temperature is reached with lower parts of the valve in plastic and coils moulded with thermoplastic.

The solenoid coil is appropriate for single mounting and alignment in blocks. These solenoid coils have been approved at Nass Magnet GmbH according to Directive 94/9/EC. Explosion protection is only realized by using the pertinent components described in the present catalogue - max. operating pressure for armature assembly / valve system 12 bar in standard. For more detailed technical descriptions please refer to DIN VDE 0580.

*Other solenoid models are available on request





(1) EC-TYPE-EXAMINATION CERTIFICATE (Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - Directive 94/9/EC

(3) EC-type-examination Certificate Number:

PTB 02 ATEX 2154



(4) Equipment: Valve solenoid, type 1259..

(5) Manufacturer: Nass Magnet GmbH

(6) Address: Eckenerstraße 4-6, 30179 Hannover, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 03-22254.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014:1997 + A1 + A2

EN 50020:1994

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

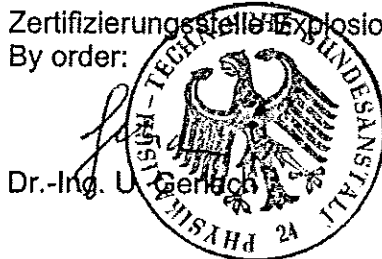
II 2 G EEx ia IIC T6 oder T4

Zertifizierungsstelle für Explosionsschutz

Braunschweig, April 01, 2003

By order:

Dr.-Ing. U. Gerlach



(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 2154

(15) Description of equipment

The valve solenoids are intended for installation and operation in hazardous areas. The coil is encapsulated in epoxy resin moulding compound. Diodes connected in parallel to the winding limit the breaking overvoltage. With use of a plug connector in accordance with DIN the degree of protection IP 65 will be met.

Electrical data

Supply

for connection to intrinsically safe circuits of category Ia

Maximum values:

$$U_i \leq 28 \text{ V}$$

$$I_i \leq 115 \text{ mA}$$

$$P_i \leq 1,6 \text{ W}$$

The effective inductance and capacitance of the solenoid are negligibly low

$$L_i \approx 0$$

$$C_i \approx 0$$

With type 1259.., for temperature class T6, the ambient temperature shall not exceed the range from $-40 \text{ }^\circ\text{C}$ up to $+50 \text{ }^\circ\text{C}$. The maximum permissible medium temperature is $70 \text{ }^\circ\text{C}$.

With type 1259.., for temperature class T4, the ambient temperature shall not exceed the range from $-40 \text{ }^\circ\text{C}$ up to $+85 \text{ }^\circ\text{C}$. The maximum permissible medium temperature is $80 \text{ }^\circ\text{C}$.

(16) Test report PTB Ex 02-22254

(17) Special conditions for safe use

not applicable

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz

By order:

Dr.-Ing. J.U.



Braunschweig, April 01, 2003

sheet 2/2

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.



BARCELONA

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**Control for process
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