## Description




#### Abstract

The result of the long-standing expertise of Pizzato Elettrica in the creation of position switches, the NA, NB, NF series achieve the highest standard of flexibility and depth of range present today on the pre-wired switches market. Configurable, adjustable, pivotable and, not least, customisable with special cables or custom wiring - these are features that today make these series unique in the European panorama, ideal for easily providing our customers with customised switches.


## Switches with connectors



The new fundamental feature of this series of prewired switches is that the switch body and the wired connector are separated.
Using the connector the end-user can replace a product on field without having to disconnect the complete wiring.
Moreover in this way it is easier to combine products with different cable types and lengths.

Protection degrees IP67 and IP69K
$D$ These devices are designed to be used in the toughest environmental conditions and they pass the IP67 immersion test acc. to EN 60529. They can therefore be used in all environments where maximum protection degree of the housing is required. Due to their special design, these devices are suitable for use in equipment subjected to cleaning with high pressure hot water jets. These devices meet the IP69K test requirements according to ISO 20653 (water jets with 100 bar and $80^{\circ} \mathrm{C}$ ).

## Adjustable levers

For switches with swivelling lever, the lever can be adjusted in $10^{\circ}$ steps over the entire $360^{\circ}$ range.
The positive movement transmission is always guaranteed thanks to the particular geometrical coupling between the lever and the revolving shaft as prescribed for safety applications by the German standard BG-GS-ET-15.


Positive opening contact blocks with 1,2,3 or 4 poles


These series of contact blocks are versatile and compact.
They have the same dimensions of the previous versions, but now it is possible to have up to 4 different contacts which are galvanically separated and provided with positive opening (NC contacts)
The allowed standard combinations are: $1 \mathrm{NO}+1 \mathrm{NC}$, $2 \mathrm{NC}, 1 \mathrm{NO}+2 \mathrm{NC}, 2 \mathrm{NO}+2 \mathrm{NC}$. Other combinations available on request.
The contact blocks have been designed so that they keep the same pin assignment on the connector independently of the action type (slow or snap action) and the number of contacts. In this way, the same cables with connector can be used for units with slow action and snap action as well.

## Head with variable orientation

All heads can be turned in $90^{\circ}$ steps. The new head for swivelling levers has been designed with compact dimensions so that it does not protrude over the switch profile. Therefore, it is also possible to install the switches on the wall.


Reversible levers


For switches with swivelling lever the lever can be fastened on straight or reverse side maintaining the positive coupling.
In this way two different working planes of the lever are possible.

## Orientable cable outputs



The connector with cable is provided with a cavity to allow cable bending up to $90^{\circ}$.
In this way a flush wall mounting is also possible as well as an easier adjustment of the cable to the supporting flange.

## Unidirectional heads

All switches with swivelling lever are supplied with a selector for choosing the lever operating direction.
The following operations are possible: right/left (standard factory setting), only from the right or only from the left. The operating direction can be selected by rotating the dedicated ring mounted on all heads of this kind.


## Increased or reduced actuating force

For actuators with swivelling lever, versions with increased or reduced actuating force are available upon request, in order to have a switch perfectly tailored for the application. For further information contact our technical department.


## $90^{\circ}$ redirection for actuators



This component highly extends the application possibilities of this product range.
All the actuators that can be attached directly to the body of the switch can also be fastened on this transmission, thus making feasible applications and positioning of the switch that were previously impossible. The redirection piece can also be used in case of heads for swivelling levers. Although possible, the use of multiple transmissions in series is not recommended.


## Reversible housing

Thanks to the shape of the fixing holes and of the switch body, as well as the possibility of rotating the head, make this switch perfectly symmetrical.
If a switch with cable output on the left (since the connector cannot be rotated) is required, it is possible to rotate the complete device by maintaining the final position of the actuator unchanged.


## Extended temperature range

$-40^{\circ} \mathrm{C}$
These devices are also available in a special version suitable for an ambient operating temperature range from $-40^{\circ} \mathrm{C}$ up to $+80^{\circ} \mathrm{C}$.
They can therefore be used for applications in cold stores, sterilisers and other equipment with low temperature environments. The special materials used to produce these versions retain their characteristics even under these conditions, thereby expanding the installation possibilities.

## Adjustable levers with anti-unscrewing washer

In some applications during the installation of the switches problems are encountered due to the variability of the fastenings and the folds of the structural work.
In other cases, small finishing adjustments are required due to the application. Nearly all swivel-

ling levers for switches of the NA, NB and NF series can be adjusted in 1 mm steps along the switch length.
This feature, combined with the additional possibility of the radial adjustment of the actuator, provides the installer with a never before achieved flexibility in the final adjustment of the product.
All this while maintaining the positive geometric locking between lever and swivel shaft as prescribed for safety applications.

## Switch components available separately

This product series has been provided with a modular design so that single parts can also be ordered separately. This is an asset both for distributors and for final customers of electrical material in the procurement of spare parts as well as for custom combinations.

NA B110BB-DN2 NA B11000 VN AAOBB VN CM11DN2


## M12 connectors

All contact configurations are available with M12 connector both with two contacts (with 5 -pin M12 connector) as well as 3 or 4 contacts (with 8 -pin M12 connector). With exit direction below or to the right, these make application in narrow spaces possible, as, with the simple rotation of the switch, the reversible housing also easily allows the exit direction to the left. The M12 connector is also available at the end of the cable, whose length can be tailored to the customer, and the cable can be bent at $90^{\circ}$, allowing installation on walls.


## AMP connectors

Furthermore, AMP connectors for 2-contact versions are available too. These connectors, specially developed for the automotive industry, are immune to vibration due to the quick coupling.


Selection diagram for item combinations of the NA-NB series



Connector with cable

| DN | PVC cable IEC 60332-1 (standard) |
| :--- | :--- |
| DG | PVC cable CEI 20-22 II |
| DH | PUR cable, halogen free |
| DR | Rail cable EN 50306-4 |

product options
Sold separately as accessory




## Main features

- Metal housing, right or bottom cable output
- Protection degrees IP67 and IP69K
- 4 types of integrated cable available
- Versions with M12 connector suitable for safety applications $\Theta$
- Versions with AMP connector
- 14 contact blocks available
- 36 actuators available

Quality marks:


## Technical data

Housing
Metal housing, baked with UV resistant powder coating.
Versions with integrated cable, standard length 2 m , other lengths $0.5 \ldots 10 \mathrm{~m}$ on request.
Versions with integrated M12 connector.
Versions with 0.2 m cable length and M12 connector, other lengths $0.1 \ldots 3 \mathrm{~m}$
available on request.
Protection degree:
IP67 acc. to EN 60529
IP69K acc. to ISO 20653
(Protect the cables from direct high-pressure and
high-temperature jets)
Corrosion resistance in saline mist:
$\geq 300$ hours in NSS acc. to ISO 9227

## General data

Ambient temperature for switches without cable: $-25^{\circ} \mathrm{C} \ldots+80^{\circ} \mathrm{C}$ (standard)
$-40^{\circ} \mathrm{C} \ldots+80^{\circ} \mathrm{C}$ (extended T6)
Ambient temperature for switches with cable:
Max. actuation frequency:
Mechanical endurance:
Mounting position:
Safety parameter $\mathrm{B}_{100}$ :
Mechanical interlock, not coded:
Vibration resistance
(0BB, 2KB, 2KC, 2KD actuators):
Tightening torques for installation:
See table on page 118
3600 operating cycles/hour
20 million operating cycles
any
40,000,000 for NC contacts
type 1 acc. to EN ISO 14119
$5 \ldots 150 \mathrm{~Hz}\left(7.9 \mathrm{~m} / \mathrm{s}^{2}\right)$
acc. to EN 61373 cl .9
see page 211-222

## Electrical data

Rated impulse withstand voltage ( $\mathrm{U}_{\mathrm{imp}}$ ): 4 kV
Conditional short circuit current: 1000 A acc. to EN 60947-5-1
Pollution degree: 3
In compliance with standards:
IEC 60947-5-1, EN 60947-5-1, IEC 60204-1, EN 60204-1, EN ISO 14119,
EN ISO 12100, IEC 60529, EN 60529, ISO 20653, UL 508, CSA 22.2 No. 14.

## Compliance with the requirements of:

Low Voltage Directive 2014/35/EU, EMC Directive 2014/30/EU.
Positive contact opening in conformity with standards:
IEC 60947-5-1, EN 60947-5-1.

## § Installation for safety applications:

Use only switches marked with the symbol $\Theta$ next to the product code. Always connect the safety circuit to the NC contacts (normally closed contacts: see "Internal cable wiring" on page 118) as required by EN ISO 14119, paragraph 5.4 for specific interlock applications and EN ISO 13849-2 tables D3 (well-tried components) and D. 8 (failure exclusions) for safety applications in general. Actuate the switch at least up to the positive opening travel shown in the travel diagrams on page 220. Actuate the switch at least with the positive opening force, reported in brackets below each article, next to the actuating force value.
§ If not expressly indicated in this chapter, for correct installation and utilization of all articles see the instructions given on pages 211 to 222.
§ Important: Switch off the circuit voltage before disconnecting the connector from the switch. The connector is not suitable for separation of electrical loads. According to EN 60204-1, versions with 8-pole M12 (2NO+2NC) and AMP connector can be used only in PELV circuits.

## Features approved by IMO

```
Rated insulation voltage (U)
Conventional free air thermal current 10 A (1-2 contacts) / 6 A (2-3 contacts) /
(\mp@subsup{|}{\mathrm{ th )}}{2}
Protection against short circuits
(fuse):
Rated impulse withstand voltage
(U imp):
Protection degree of the housing:
MA terminals (crimped terminals)
Pollution degree:
Utilization category:
Operating voltage ( U ):
Operating current (l ( )
Forms of the contact element: X,Y, X+Y, X+X,Y+Y,Y+Y+X,X+X+Y,X+X+Y+Y,Zb
Positive opening of contacts on contact blocks B01, B11, B02,B12,B21, B22,
G01, G11, G02,G12, G21, G22, L01, L11, L02, L12, L21, L22,H01,H11,H02,
H12,H21, H22
In compliance with standards: EN 60947-1, EN 60947-5-1 + A1:2009,
fundamental requirements of the Low Voltage Directive 2014/35/EU.
```


## Features approved by UL

Utilization categories R300 pilot duty (28 VA, 125-250 Vdc) B300 pilot duty (360 VA, 120-240 Vac) (1-2-3 cont.) C300 pilot duty ( 180 VA, 120-240 Vac) (4 cont.)

Housing features type 1, 4X "indoor use only", 12.
Housing features for the version with 1-2 contacts and type N cable Type 1, 4X "indoor use only"

In compliance with standard: UL 508, CSA 22.2 No. 14

Please contact our technical department for the list of approved products.

Ambient temperatures for switches with cable and electrical data

|  | Connection type | Output with cable |  |  |  |  |  |  |  | Output with M12 connector |  | Output with AMP connector |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Contact block | 2 contacts |  |  |  | 3 contacts |  | 4 contacts |  | 2 contacts | 3 or 4 contacts | 2 contacts |
| $$ | Cable or connector type | N | G | H | $R$ | N | H | N | $R$ | M12 connector, 5-pole | M12 connector, 8 -pole | AMP Superseal |
|  | Conductors | $5 \times 0.75 \mathrm{~mm}^{2}$ | $5 \times 0.75 \mathrm{~mm}^{2}$ | $5 \times 0.75 \mathrm{~mm}^{2}$ | $5 \times 0.5 \mathrm{~mm}^{2}$ | $7 \times 0.5 \mathrm{~mm}^{2}$ | $7 \times 0.5 \mathrm{~mm}^{2}$ | $9 \times 0.34 \mathrm{~mm}^{2}$ | $9 \times 0.5 \mathrm{~mm}^{2}$ | $5 \times 0.25 \mathrm{~mm}^{2}$ | $8 \times 0.25 \mathrm{~mm}^{2}$ | 1.5 connector |
|  | Application field | General | General | General, mobile installation | Rail | General | General, mobile installation | General | Rail | General | General | General |
|  | In compliance with standards | 05VV-F | 05VV-F | 05EO-H | $\begin{aligned} & \text { EN50306-4 } \\ & 15-300 \mathrm{~V} \\ & 5 \mathrm{GO}, 5 \mathrm{~mm} \\ & \mathrm{MM}-90 \\ & \text { EN } 503066 \\ & \text { EN } 45545 \end{aligned}$ | 03VV-F | 03E70-H | 03VV-F | EN50306-4 P-300VGG0.5 mm ${ }^{2}$ MM-90 EN 45545 | 03VV-H | 03VV-H | 1 |
|  | Sheath | PVC | PVC | PUR HALOGEN FREE | 1 | PVC | PUR HALOGEN FREE | PVC | 1 | PVC | PVC | 1 |
|  | Self-extinguishing | $\begin{aligned} & \text { IEC 60332-1-2 } \\ & \text { IEC 60332-1-3 } \end{aligned}$ | IEC 60332-1-2 <br> IEC 60332-1-3 <br> IEC 60332-3 <br> CEI 20-22 II | $\begin{aligned} & \text { IEC 60332-1-2 } \\ & \text { IEC 60332-1-3 } \end{aligned}$ | $\begin{aligned} & \text { IEC 60332-1 } \\ & \text { EN } 50305 \\ & \text { EN } 50306-1 \end{aligned}$ | $\begin{aligned} & \text { IEC 60332-1-2 } \\ & \text { IEC 60332-1-3 } \end{aligned}$ | $\begin{aligned} & \text { IEC 60332-1-2 } \\ & \text { IEC 60332-1-3 } \end{aligned}$ | $\begin{aligned} & \text { IEC 60332-1-2 } \\ & \text { IEC 60332-1-3 } \end{aligned}$ | $\begin{aligned} & \text { IEC 60332-1 } \\ & \text { EN 50305 } \\ & \text { EN } 50306-1 \end{aligned}$ | $\begin{aligned} & \text { IEC 60332-3 } \\ & \text { CEI 20-22 II } \end{aligned}$ | $\begin{aligned} & \text { IEC 60332-3 } \\ & \text { CEI 20-22 II } \end{aligned}$ | 1 |
|  | Oil resistant | 1 | 1 | UL 758 | 1 | 1 | UL 758 | 1 | 1 | ISO 6722-1 | ISO 6722-1 | 1 |
|  | Max. speed | 1 | 1 | $100 \mathrm{~m} / \mathrm{min}$ | 1 | 1 | $300 \mathrm{~m} / \mathrm{min}$ | 1 | 1 | $50 \mathrm{~m} / \mathrm{min}$ | $50 \mathrm{~m} / \mathrm{min}$ | 1 |
|  | Max. acceleration | 1 | 1 | $2 \mathrm{~m} / \mathrm{s}^{2}$ | 1 | 1 | $25 \mathrm{~m} / \mathrm{s}^{2}$ | 1 | 1 | $5 \mathrm{~m} / \mathrm{s}^{2}$ | $5 \mathrm{~m} / \mathrm{s}^{2}$ | 1 |
|  | Minimum bending radius | 80 mm | 80 mm | 80 mm | 60 mm | 108 mm | 108 mm | 94 mm | 65 mm | 75 mm | 90 mm | 1 |
|  | Outer diameter | 8 mm | 8 mm | 8 mm | 6 mm | 7 mm | 7 mm | 7 mm | 6.5 mm | 5 mm | 6 mm | 1 |
|  | End stripped | 80 mm | 80 mm | 80 mm | 80 mm | 80 mm | 80 mm | 80 mm | 80 mm | 1 | 1 | 1 |
|  | Copper conductors IEC 60228 | Class 5 | Class 5 | Class 6 | Class 5 | Class 5 | Class 6 | Class 5 | Class 5 | Class 6 | Class 6 | 1 |



## Internal cable wiring



Connector pin assignment

| $2 \mathrm{NO}+2 \mathrm{NC}$ | $1 \mathrm{NO}+2 \mathrm{NC}$ | $1 \mathrm{NO}+1 \mathrm{NC}$ | 2 NC | $1 \mathrm{NO}+1 \mathrm{NC}$ <br> change-over |
| :--- | :--- | :--- | :--- | :--- |



| Contact type: |
| :--- |
| $\mathbf{R}=$ snap action |
| $\mathbf{L}=$ slow action |



Secured only by means of threaded head
With external rubber gasket

Cable and M12 connector
All values in the drawings are in mm


[^0]|  | With external rubber gasket | With external rubber gasket | With stainless steel roller on request | With stainless steel roller on request |
| :---: | :---: | :---: | :---: | :---: |
| Contact type: $\begin{array}{\|l\|} \hline \mathbf{R} \\ \hline \mathbf{L} \\ \text { = snap action } \\ \text { = slow action } \end{array}$ |  |  |  |  |
| B11 R | NA B110HE-DN2 1NO+1NC | NA B110HH-DN2 1NO+1NC | NA B112KA-DN2 $\Theta 1$ NO+1NC | NA B112KB-DN2 $\quad$ 1NO+1NC |
| B02 R | NA B020HE-DN2 2NC | NA B020HH-DN2 2NC | NA B022KA-DN2 $\Theta 2 N C$ | NA B022KB-DN2 $\Theta 2 N C$ |
| B12 R | NA B120HE-DN2 1NO+2NC | NA B120HH-DN2 1NO+2NC | NA B122KA-DN2 $\Theta 1$ NO+2NC | NA B122KB-DN2 $\Theta 1 \mathrm{NO}+2 \mathrm{NC}$ |
| B22 $\mathbf{R}$ | NA B220HE-DN2 $2 \mathrm{NO}+2 \mathrm{NC}$ | NA B220HH-DN2 $2 \mathrm{NO}+2 \mathrm{NC}$ | NA B222KA-DN2 $\Theta 2 \mathrm{NO}+2 \mathrm{NC}$ | NA B222KB-DN2 $\Theta 2 \mathrm{NO}+2 \mathrm{NC}$ |
| G11 L |  |  | NA G112KA-DN2 $\Theta 1$ NO+1NC | NA G112KB-DN2 $\Theta 1$ NO+1NC |
| G02 L | NA G020HE-DN2 2NC | NA G020HH-DN2 2NC | NA G022KA-DN2 $\Theta$ 2NC | NA G022KB-DN2 $\Theta$ 2NC |
| G12 L |  |  | NA G122KA-DN2 $\Theta 1$ NO+2NC | NA G122KB-DN2 $\Theta 1$ NO+2NC |
| G22 L |  |  | NA G222KA-DN2 $\Theta 2 \mathrm{NO}+2 \mathrm{NC}$ | NA G222KB-DN2 $\Theta 2 \mathrm{NO}+2 \mathrm{NC}$ |
| Max. speed | $1 \mathrm{~m} / \mathrm{s}$ | $1 \mathrm{~m} / \mathrm{s}$ | page 219 - type 1 | page 219 - type 1 |
| Actuating force | 0.07 Nm | 0.03 Nm | $0.07 \mathrm{Nm}(0.25 \mathrm{Nm} \Theta)$ | 0.07 Nm (0.25 Nm $\Theta$ ) |
| Travel diagrams | page 220 - group 4 | page 220 - group 4 | page 220 - group 5 | page 220 - group 5 |





Cable and M12 connector
All values in the drawings are in mm

[^1]| Contact type: $\begin{array}{\|l\|l\|} \hline \mathbf{R} & \text { = snap action } \\ \mathbf{L} & \text { = slow action } \end{array}$ |  |  |  |
| :---: | :---: | :---: | :---: |
| Contact block |  |  |  |
| B11 B | NA B110AB-DN2W5 $\Theta$ 1NO+1NC | NA B110BB-DN2H0W5 $\odot 1$ 1NO+1NC | NA B110BB-DN2W5 $\Theta$ 1NO+1NC |
| B02 $\quad$ R | NA B020AB-DN2W5 $\Theta$ 2NC | NA B020BB-DN2HOW5 $\Theta$ 2NC | NA B020BB-DN2W5 $\Theta$ 2nc |
| B12 ${ }^{\text {B }}$ | NA B120AB-DN2W5 $\Theta 1$ NO+2NC | NA B120BB-DN2HOW 5 ¢ ${ }^{\text {1 }}$ O+2NC | NA B120BB-DN2W5 $\Theta$ 1NO+2NC |
| B22 B | NA B220AB-DN2W5 $\Theta 2 \mathrm{NO}+2 \mathrm{NC}$ | NA B220BB-DN2H0W5 $¢ 2$ 2NO+2NC | NA B220BB-DN2W5 $\Theta 2 \mathrm{NO}+2 \mathrm{NC}$ |
| G11 $\square$ | NA G110AB-DN2W5 $\Theta$ 1NO+1NC | NA G110BB-DN2H0W5 $\Theta$ 1 ${ }^{\text {NO}}+1$ 1NC | NA G110BB-DN2W5 $\Theta$ 1NO+1NC |
| G02 L | NA G020AB-DN2W5 $\Theta$ 2NC | NA G020BB-DN2HOW5 $\Theta$ 2NC | NA G020BB-DN2W5 $\Theta$ 2nc |
| G12 $\square$ | NA G120AB-DN2W5 $\Theta$ 1NO+2NC | NA G120BB-DN2HOW5 $¢$ 1 $\mathrm{NO}+2 \mathrm{NC}$ | NA G120BB-DN2W5 $\Theta$ 1NO+2NC |
| G22 $\square$ | NA G220AB-DN2W5 $\Theta 2 \mathrm{NO}+2 \mathrm{NC}$ | NA G220BB-DN2HOW5 $\Theta 2$ 2NO+2NC | NA G220BB-DN2W5 $\Theta$ 2NO+2NC |
| Max. speed | page 219 - type 4 | page 219 - type 2 | page 219 - type 2 |
| Actuating force | $9.5 \mathrm{~N}(25 \mathrm{~N} \oplus)$ | $9.5 \mathrm{~N}(25 \mathrm{~N} \oplus)$ | $9.5 \mathrm{~N}(25 \mathrm{~N} \Theta)$ |
| Travel diagrams | page 220 - group 1 | page 220 - group 1 | page 220 - group 1 |



## Accessories

| Article | Description |
| :--- | :--- |
| VN DT1F | Spacer for NA and NF series |
| VF D16B | Spacer for NB series |
| By installing spacers |  |
| between two switches, it is |  |
| possible to have 2 or more |  |
| pre-wired switches, preven- |  |
| ting them from slipping. |  |

M12 female connectors with cable

## Technical data:

- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228 - mobile installation
- Gold-plated contacts (resistance $<5 \mathrm{~m} \Omega$ )
- Self-locking ring nut
- High flexibility cable with PVC sheath suitable to be used in drag chains, acc. to IEC 60332-3 and CEI 20-22II. With polyurethane sheath on request.


## Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

## VF CA4PD3M

| No. of poles |  |
| :---: | :--- |
| $\mathbf{4}$ | 4 poles |
| $\mathbf{5}$ | 5 poles |
| $\mathbf{8}$ | 8 poles |
| $\mathbf{1 2}$ | 12 poles |

Cable sheath
P PVC (standard)
U PUR

## Connector type

D straight (standard)
G angled

Stock items
VF CA4PD3M
VF CA4PD5M
VF CA4PD0M
VF CA5PD3M
VF CA5PD5M
VF CA5PD0M
VF CA8PD5M
VF CA8PD0M
VF CA12PD5M
VF CA12PD0M

Attention! No stock items, minimum order quantity 100 pcs.

## Field wireable M12 female connectors



## General data

Technopolymer connector body
Gold-plated contacts
Screw terminals for cable screw fittings
Max. operating voltages $250 \mathrm{Vac} / \mathrm{dc}$ (4 and 5-pole)
$30 \mathrm{Vac} / \mathrm{dc}$ (8-pole)
Maximum current 4 A
Protection degree IP67 acc. to EN 60529
Ambient temperature $\quad-25^{\circ} \mathrm{C} \ldots+85^{\circ} \mathrm{C}$
Wire cross-section $\quad 0.25 \mathrm{~mm}^{2}$ (24 AWG) ... $0.5 \mathrm{~mm}^{2}$ (20 AWG)

| Article | Description | no. of poles |
| :---: | :--- | :--- | :--- | :--- | :--- |
| VF CBMP4DM04 | Field wireable M12 female connector, straight, for $\varnothing 4 \ldots 6.5 \mathrm{~mm}$ multipolar cables | 4 |
| VF CBMP5DM04 | Field wireable M12 female connector, straight, for $\varnothing 4 \ldots 6.5 \mathrm{~mm}$ multipolar cables | 5 |
| VF CBMP8DM04 | Field wireable M12 female connector, straight, for $\varnothing 4 \ldots 7 \mathrm{~mm}$ multipolar cables | 8 |

Selection diagram for item combinations of the NA - NB - NF series


## METAL housing,

 NA hole spacing 20 mmNA B11000 $\bigodot$ 1NO+1NC $\mathbf{R}$ NA G11000 $\odot 1$ NO+1NC $\square$ NA L11000 $\Theta 1$ NO +1 NC LA NA H11000 $\Theta 1$ NO +1 NC LO NA B02000 $\Theta 2$ 2NC $\quad \square$ NA G02000 $\Theta 2$ NC $\quad \square$ NA B20000 $\Theta 2$ 2NO $\quad \square$ NA G20000 $\oplus 2$ NO $\quad \mathrm{L}$ NA B12000 $\Theta 1$ NO +2 NC $-R$ NA G12000 $\odot 1 N O+2 N C L$ NA L12000 $\Theta 1$ NO +2 NC LA NA H12000 $\Theta 1$ NO +2 NC LO NA B22000 $\Theta 2 N \mathrm{O}+2 \mathrm{NC}[\mathbf{R}$ NA G22000 $\Theta 2 N O+2 N C L$ NA L22000 $\odot 2 N O+2 N C$ LA NA H22000 $\odot 2 N \mathrm{O}+2 \mathrm{NC}$ LO

To order a NB series housing, replace NA with NB in the codes shown above. Example:
NA B11000 $\rightarrow$ NB B11000



M12 or AMP connectors
\ Important: Always check that the applied electric load is within the voltage and current limits defined for the connectors. See tables on page 118 and 128.


| technopolymer connectors for NF housings |  |
| :---: | :---: |
| M12 connector, right | M12 connector, bottom |
| VN CP11DMK 1NO+1NC VN CP02DMK 2NC VN CP22DMK 2NO+2NC | VN CP11SMK 1NO+1NC VN CP02SMK 2NC VN CP22SMK 2NO+2NC |
| AMP superseal 1.5 | with cable and M12 connector |
| VN CP11SAK 1NO+1NC | VN CP11DM0.2 1NO+1NC |
| VN CP02SAK 2NC | VN CP02DM0.2 2 NC |
| VN CP20SAK 2NO | VN CP22DM0.2 $2 \mathrm{NO}+2 \mathrm{NC}$ |


| Actuators All values in the drawings are in mm |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\stackrel{m}{\square}$ | $\stackrel{\text { ¢ }}{+}$ | 合 |  |  |  |
| VN AAOAA $\Theta$ | VN AAOAB $\Theta$ | VN AAOAC $\Theta$ | VN AAOAE $\Theta$ | VN AAOBB $\Theta$ | VN AAOBE $\Theta$ |
|  |  |  |  |  |  |
| VN AAOCB $\odot$ | VN AAOCH $\Theta$ | VN AAOCP $\Theta$ | VN AAOCV $\Theta$ | VN AAOEB $\Theta$ | VN AAOEE $\Theta$ |
|  | 范 品 |  |  |  |  |
| VNAAOFB $\Theta$ | VN AAOGB $\Theta$ | VN AAOHB | VN AAOHE | VN AAOHH |  |

Levers All values in the drawings are in mm
ATTENTION：These separate actuators can be used only with items of the NA，NB and NF series．

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| VN A00KA $\Theta$ | VN A00KB $\Theta$ | VN A00KC $\Theta$ | VN A00KD $\Theta$ | VN A00KE $\Theta$ | VN A00KF $\Theta$ |
|  |  |  |  |  |  |
| VN A00KG $\Theta$ | VN A00KH $\Theta$ | VN A00KP $\Theta$ | VN A00LB | VN A00LE | VN A00LH |



Heads


$90^{\circ}$ redirection



[^0]:    To order a product with cable and M12 connector:
    replace DN2 with DM0. 2 in the codes shown above. Example
    NA B110AA-DN2 $\rightarrow$ NA B110AA-DM0. 2

[^1]:    To order a product with cable and M12 connector:
    replace DN2 with DM0. 2 in the codes shown above. Example
    NA B110AA-DN2 $\rightarrow$ NA B110AA-DM0. 2

