

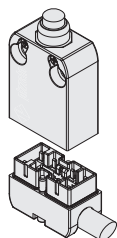
## Description



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 features make these series unique in the current European panorama, ideal for easily providing our customers with customised switches.

## Switches with connectors



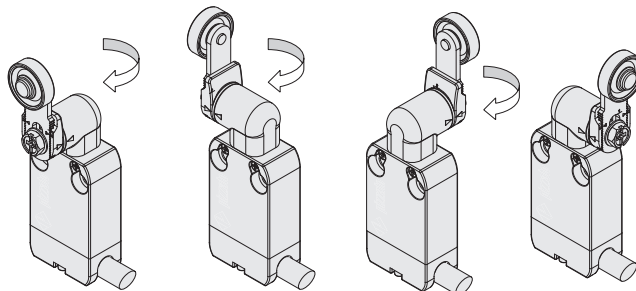
The new fundamental feature of this series of pre-wired switches is that the switch body and the wired connector are separated.

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.

## Head with variable orientation

All heads can be turned in 90° 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.



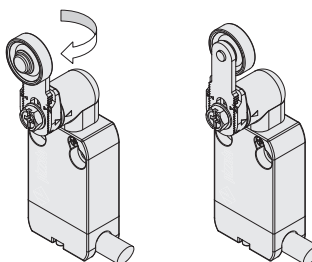
## Protection degrees IP67 and IP69K

**IP69K**  
**IP67**

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°C).

## Reversible levers



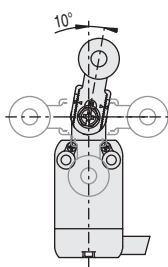
For switches with swivelling lever, the lever can be fastened on straight or reverse side maintaining the positive coupling.

In this way two different working planes of the lever are possible.

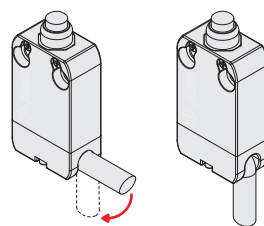
## Adjustable levers

For switches with swivelling lever, the lever can be adjusted in 10° steps over the entire 360° 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.



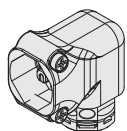
## Orientable cable outputs



The connector with cable is provided with a cavity to allow cable bending up to 90°.

In this way a flush wall mounting is also possible as well as an easier adjustment of the cable to the supporting flange.

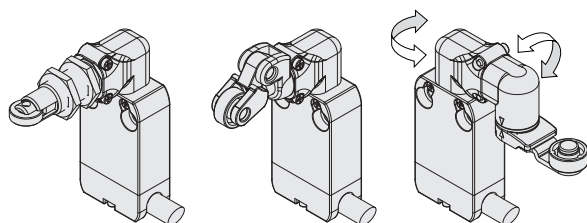
## 90° redirection for actuators



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.

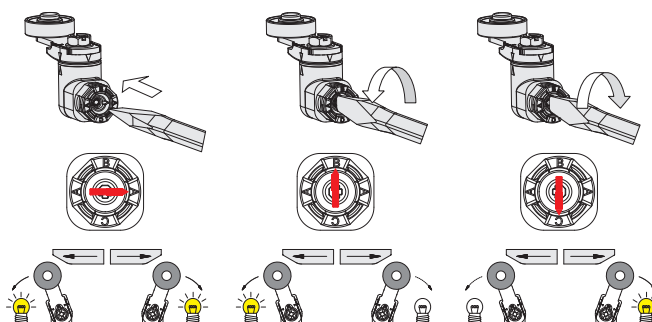
The redirection piece can also be used in case of heads for swivelling levers. Although technically possible, the use of multiple transmissions in series is not recommended.



## Unidirectional heads

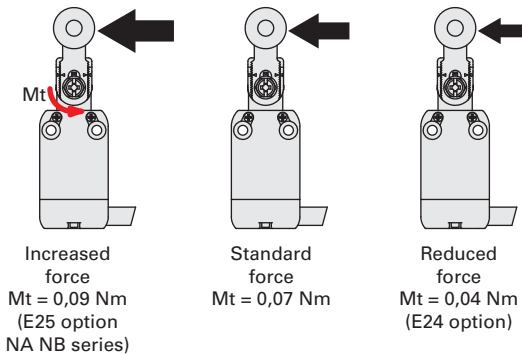
All switches with swivelling lever are supplied with a selector for choosing the lever operating direction.

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.

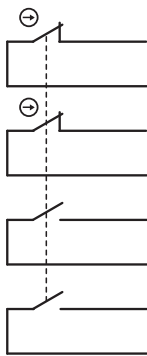


### Increased or reduced actuating force

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.



### 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).

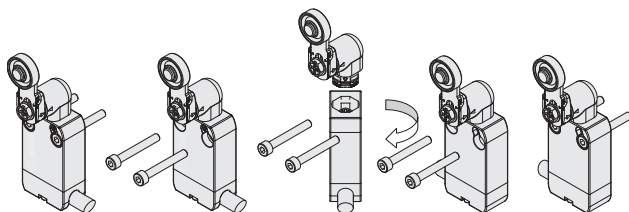
The allowed standard combinations are: 1NO+1NC, 2NC, 1NO+2NC, 2NO+2NC. Other combinations available on request.

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.

### 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

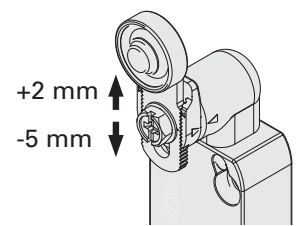
**-40°C**

These devices are also available in a special version suitable for an ambient operating temperature range from -40°C up to +80°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.



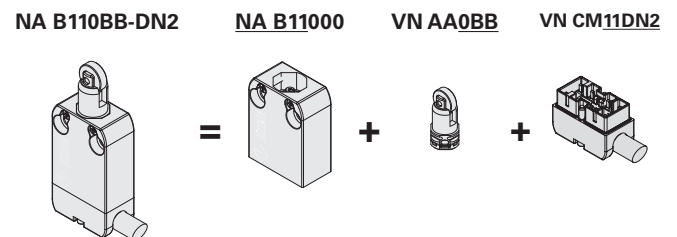
In other cases, small finishing adjustments are required due to the application. Nearly all swivelling levers for switches of the NA, NB and NF series can be adjusted in 1 mm steps along the switch length.

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.

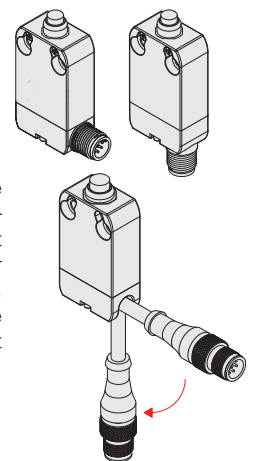
### Switch components available separately

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.



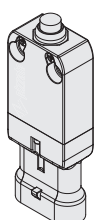
### M12 connectors

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°, allowing installation on walls.

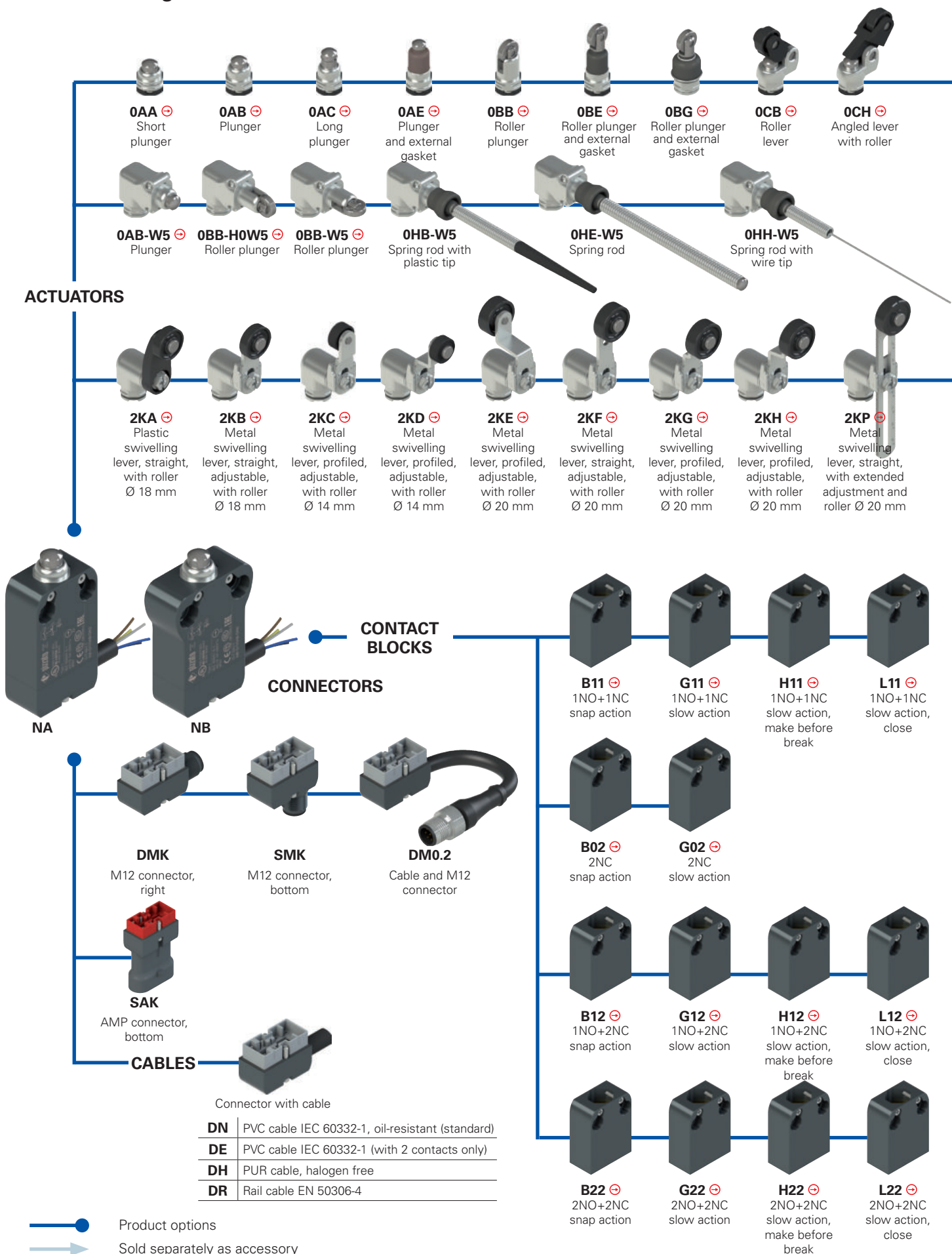


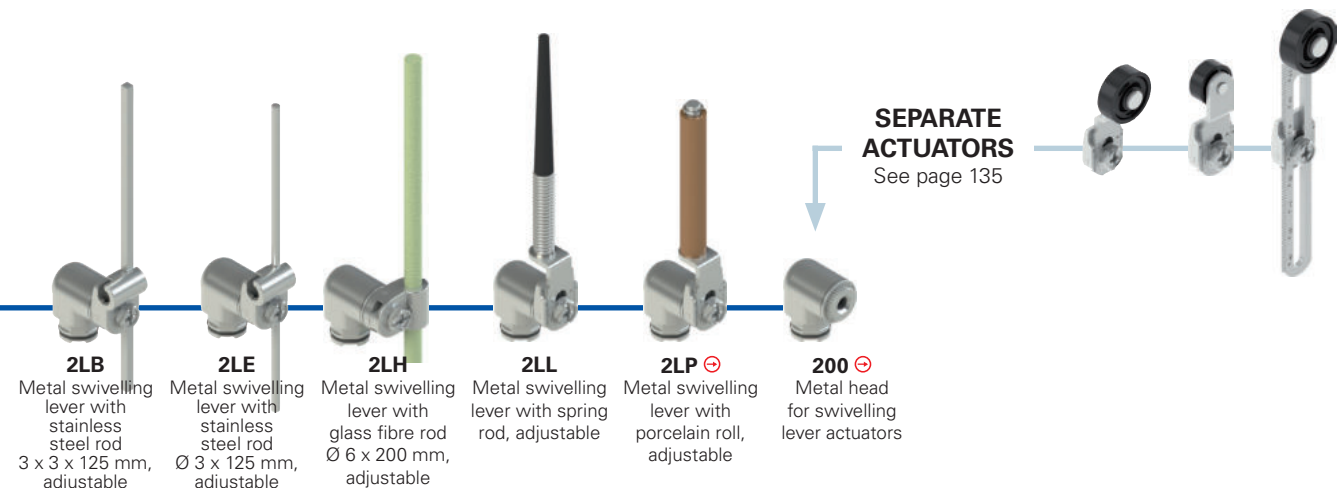
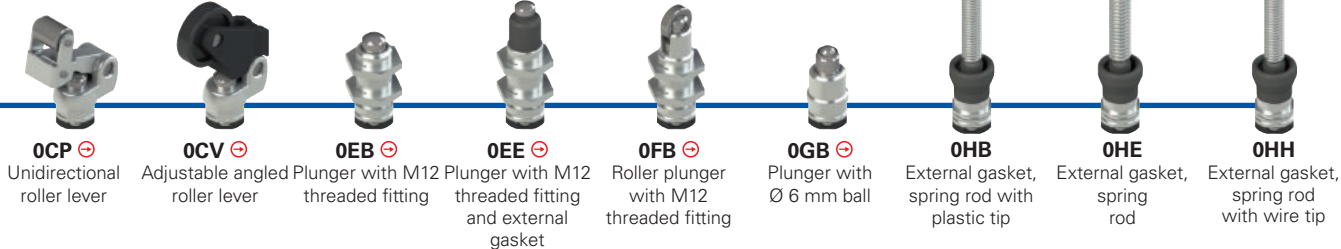
### AMP connectors

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





**SEPARATE ACTUATORS**  
See page 135



**Code structure**

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

article options  
**NA B110AB-DN2 GR7T6W5**

Housing	
<b>NA</b>	metal, hole spacing 20 mm (standard)
<b>NB</b>	metal, hole spacing 25 mm

Contact block	
<b>B11</b>	1NO+1NC, snap action (standard)
<b>B02</b>	2NC, snap action (standard)
<b>B12</b>	1NO+2NC, snap action (standard)
<b>B22</b>	2NO+2NC, snap action (standard)
<b>BA1</b>	1NO+1NC, snap action, change-over (available with M connector only)
<b>G11</b>	1NO+1NC, slow action (standard)
<b>G02</b>	2NC, slow action (standard)
<b>G12</b>	1NO+2NC, slow action (standard)
<b>G22</b>	2NO+2NC, slow action
<b>H11</b>	1NO+1NC, slow action, make before break
<b>H12</b>	1NO+2NC, slow action, make before break
<b>H22</b>	2NO+2NC, slow action, make before break
<b>L11</b>	1NO+1NC, slow action, close
<b>L12</b>	1NO+2NC, slow action, close
<b>L22</b>	2NO+2NC, slow action, close

Other contact blocks on request.

Actuator heads	
<b>0</b>	without head
<b>2</b>	head for swivelling lever actuators

Actuators	
<b>00</b>	without actuator
<b>AA</b>	short plunger
<b>AB</b>	plunger
...	.....

Output direction	
<b>D</b>	cable or connector, right
<b>S</b>	connector, bottom

Redirection	
	without redirection
<b>W5</b>	90° redirection

Ambient temperature	
	-25 °C ... +80 °C
<b>T6</b>	-40 °C ... +80 °C

Rollers	
	standard roller
<b>R30</b>	stainless steel Ø 10.6 mm
<b>R29</b>	stainless steel Ø 13 mm
<b>R18</b>	technopolymer, Ø 14 mm
<b>R23</b>	stainless steel Ø 14 mm
<b>R7</b>	technopolymer, Ø 18 mm
<b>R22</b>	technopolymer, Ø 20 mm
<b>R24</b>	stainless steel Ø 20 mm
<b>R19</b>	technopolymer, Ø 22 mm
<b>R25</b>	technopolymer, Ø 35 mm

Contact type	
	silver contacts (standard)
<b>G</b>	silver contacts, 1 µm gold coating

Connection type	
<b>0.2</b>	cable, length: 0.2 m with M12 connector (available for DM0.2 versions only)
<b>2</b>	cable, length: 2 m (standard)
<b>5</b>	cable, length 5 m (other cable lengths available on request)
<b>K</b>	integrated connector

Cable or connector type	
<b>N</b>	PVC cable IEC 60332-1, oil-resistant (standard)
<b>E</b>	PVC cable IEC 60332-1 (with 2 contacts only)
<b>H</b>	PUR cable, halogen free
<b>R</b>	Rail cable EN 50306-4
<b>M</b>	M12 connector
<b>A</b>	AMP Superseal 1.5 connector





### 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  $\ominus$
- Versions with AMP connector
- 14 contact blocks available
- 36 actuators available

### Quality marks:



IMQ approval:	CA02.04562
UL approval:	E131787
CCC approval:	2013010305653520
EAC approval:	RU C-IT.A.135.B.00454

### Technical data

#### Housing

Metal housing, baked with UV resistant powder coating.

Versions with integrated cable, standard length 2 m, other lengths 0.5 ... 10 m on request.

Versions with integrated M12 connector.

Versions with 0.2 m cable length and M12 connector, other lengths 0.1 ... 3 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:

≥ 300 hours in NSS acc. to ISO 9227

#### General data

Ambient temperature for switches without cable: -25°C ... + 80°C (standard)

-40°C ... + 80°C (T6 option)

Ambient temperature for switches with cable:

See table on page 118

Max. actuation frequency:

3600 operating cycles/hour

Mechanical endurance:

20 million operating cycles

Mounting position:

any

Safety parameter  $B_{10D}$ :

40,000,000 for NC contacts

Mechanical interlock, not coded:

type 1 acc. to EN ISO 14119

Vibration resistance

5 ... 150 Hz (7.9 m/s<sup>2</sup>)

(0BB, 2KB, 2KC, 2KD actuators):

acc. to EN 61373 cl. 9

Tightening torques for installation:

see page 231

#### Electrical data

Rated impulse withstand voltage ( $U_{imp}$ ):

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, EN 50581, 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,

RoHS Directive 2011/65/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  $\ominus$  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-trying 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 232. 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 223 to 236.

⚠ 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 SELV circuits.

### Features approved by IMQ

Rated insulation voltage ( $U_i$ ):	250 Vac
Conventional free air thermal current ( $I_n$ ):	10 A (1-2 contacts) / 6 A (2-3 contacts) / 4 A (4 contacts or 5-pole M12 connector)
Protection against short circuits (fuse):	10 A (1-2 contacts) / 6 A (2-3 contacts) / 4 A (4 contacts or 5-pole M12 connector) type gG
Rated impulse withstand voltage ( $U_{imp}$ ):	4 kV
Protection degree of the housing:	IP67
MA terminals (crimped terminals)	3
Pollution degree:	3
Utilization category:	AC15 / DC13 (with connector)
Operating voltage ( $U_o$ ):	250 Vac (50 Hz) / 24 Vdc (with connector)
Operating current ( $I_o$ ):	3 A / 2 A (with connector)

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, fundamental requirements of the Low Voltage Directive 2014/35/EU.

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

### Features approved by UL

Electrical Ratings:	R300 pilot duty (28 VA, 125 250 Vdc) B300 pilot duty (360 VA, 120 240 Vac) (1 cont.) B300 pilot duty (360 VA, 120 240 Vac) (2 - 3 cont. without connector) C300 pilot duty (180 VA, 120 240 Vac) (2 - 3 cont. with connector) C300 pilot duty (180 VA, 120 240 Vac) (4 cont.)
Environmental Ratings:	Types 1, 4X, 6, 12, 13 Types 1, 4X "indoor use only" (1 - 2 cont. with "E" type cable)
Screws torque of the detachable connector housing nominal are	0.3 ÷ 0.6 Nm.

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



### Ambient temperatures for switches with cable and electrical data

Cable features	Connection type	Output with cable								Output with M12 connector		Output with AMP connector
	Contact blocks	2 contacts				3 contacts		4 contacts		2 contacts	3 or 4 contacts	2 contacts
	Cable or connector type	E	N	H	R	N	H	N	R	M12 connector, 5-pole	M12 connector, 8-pole	AMP Super-seal 1.5 connector
Conductors	5x0.75 mm <sup>2</sup>	5x0.75 mm <sup>2</sup>	5x0.75 mm <sup>2</sup>	5x0.5mm <sup>2</sup>	7x0.5 mm <sup>2</sup>	7x0.5 mm <sup>2</sup>	9x0.34 mm <sup>2</sup>	9x0.5 mm <sup>2</sup>	5x0.25 mm <sup>2</sup>	8x0.25 mm <sup>2</sup>		
Application field	General	General	General, mobile installation	Rail	General	General, mobile installation	General	Rail	General	General	General	
In compliance with standards	H05VV-F	H05VV5-F	05EQ-H	EN50306-4 IE-300V 960.5 mm <sup>2</sup> MM-90 EN 50306-4 EN 43545	03VV-F	03E7Q-H	03VV-F	EN50306-4 IE-300V 960.5 mm <sup>2</sup> MM-90 EN 50306-4 EN 43545	03VV-H	03VW-H	/	
Sheath	PVC	PVC OIL RESISTANT	PUR HALOGEN FREE	/	PVC OIL RESISTANT	PUR HALOGEN FREE	PVC OIL RESISTANT	/	PVC OIL RESISTANT	PVC OIL RESISTANT	/	
Self-extinguishing	IEC 60332-1-2	IEC 60332-1-2 UL 758:FT1 CEI 20-22 II	IEC 60332-1-2 UL 758:FT1	IEC 60332-1 EN 50305 EN 50306-1	IEC 60332-1-2 UL 758:FT1 CEI 20-22 II	IEC 60332-1-2 UL 758:FT1	IEC 60332-1-2 UL 758:FT1 CEI 20-22 II	IEC 60332-1 EN 50305 EN 50306-1	IEC 60332-1-2 UL 758:FT1	IEC 60332-1-2 CEI 20-22 II UL 758:FT1	/	
Oil resistant	/	UL 758 CSA 22.2 N°210	UL 758 CSA 22.2 N°210	/	UL 758 CSA 22.2 N°210	UL 758 CSA 22.2 N°210	UL 758 CSA 22.2 N°210	/	UL 758 CSA 22.2 N°210	UL 758 CSA 22.2 N°210	/	
Max. speed	/	/	300 m/min	/	/	300 m/min	/	/	50 m/min	50 m/min	/	
Max. acceleration	/	/	30 m/s <sup>2</sup>	/	/	30 m/s <sup>2</sup>	/	/	5 m/s <sup>2</sup>	5 m/s <sup>2</sup>	/	
Minimum bending radius	80 mm	80 mm	80 mm	60 mm	108 mm	80 mm	108 mm	65 mm	75 mm	90 mm	/	
Outer diameter	8 mm	8 mm	8 mm	6 mm	7 mm	7 mm	7 mm	6.5 mm	6 mm	6 mm	/	
End stripped	80 mm	80 mm	80 mm	80 mm	80 mm	80 mm	80 mm	80 mm	/	/	/	
Copper conductors IEC 60228	Class 5	Class 5	Class 6	Class 5	Class 5	Class 6	Class 5	Class 5	Class 6	Class 6	/	
Engraving	Standard	6268	6280	Standard	6274	6282	6278	Standard	6267	6275	/	

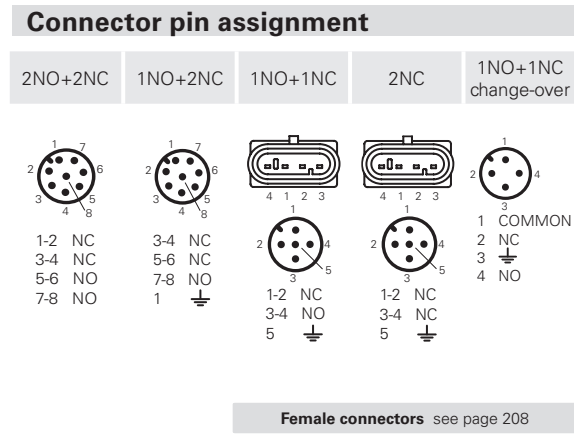
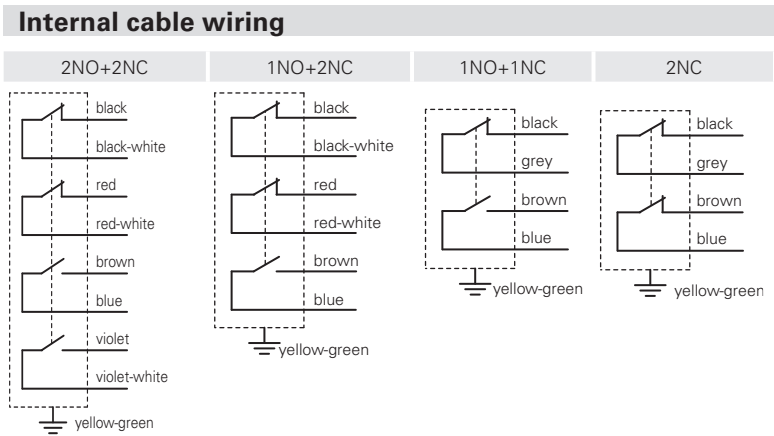
Ambient temperature with cable extended (T <sub>0</sub> )	Cable, fixed installation	-15°C +60°C	-25°C +80°C	-25°C +80°C	-25°C +80°C	-25°C +80°C	-25°C +80°C	-25°C +80°C	-25°C +80°C	-25°C +80°C	-25°C +80°C	/
	Cable, flexible installation	+5°C +60°C	-5°C +80°C	-25°C +80°C	-25°C +80°C	-5°C +80°C	-25°C +80°C	-5°C +80°C	-25°C +80°C	-15°C +80°C	-15°C +80°C	/
	Cable, mobile installation	/	/	-25°C +80°C	/	/	-25°C +80°C	/	/	-15°C +80°C	-15°C +80°C	/
	Cable, fixed installation	/	/	-40°C +80°C	-40°C +80°C	/	-40°C +80°C	/	-40°C +80°C	/	/	/
	Cable, flexible installation	/	/	-40°C +80°C	-40°C +80°C	/	-40°C +80°C	/	-40°C +80°C	/	/	/
	Cable, mobile installation	/	/	-40°C +80°C	/	/	-40°C +80°C	/	/	/	/	/

Electrical data	Thermal current I <sub>th</sub>	10 A	10 A	10 A	6 A	6 A	6 A	3 A	4 A	4 A	2 A	10 A
	Rated insulation voltage U <sub>i</sub>	250 Vac	250 Vac	250 Vac	250 Vac	250 Vac	250 Vac	250 Vac	250 Vac	250 Vac	30 Vac 300 Vdc	30 Vac
	Protection against short circuits (fuse)	10 A 500 V type gG	10 A 500 V type gG	10 A 500 V type gG	6 A 500 V type gG	6 A 500 V type gG	6 A 500 V type gG	3 A 500 V type gG	4 A 500 V type gG	4 A 500 V type gG	2 A 500V type gG	10 A 500 V type gG
	Utilization category DC13	24 V	2 A	2 A	2 A	2 A	2 A	2 A	2 A	2 A	2 A	2 A
		125 V	0.4 A	0.4 A	0.4 A	0.4 A	0.4 A	0.4 A	0.4 A	0.4 A	/	/
		250 V	0.3 A	0.3 A	0.3 A	0.3 A	0.3 A	0.3 A	0.3 A	0.3 A	/	/
Utilization category AC15	24 V	4 A	4 A	4 A	4 A	4 A	4 A	3 A	4 A	4 A	2 A	4 A
	120 V	4 A	4 A	4 A	4 A	4 A	4 A	3 A	4 A	4 A	/	/
	250 V	4 A	4 A	4 A	4 A	4 A	4 A	3 A	4 A	4 A	/	/

Approvals	CE cULus IMQ EAC CCC	CE cULus IMQ EAC CCC	CE cULus IMQ EAC CCC	CE IMQ EAC CCC	CE cULus IMQ EAC CCC	CE cULus IMQ EAC CCC	CE cULus IMQ EAC CCC	CE cULus IMQ EAC CCC	CE IMQ EAC CCC	CE cULus IMQ EAC CCC	CE cULus EAC	CE cULus EAC
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Contact type:

- R** = snap action
- L** = slow action

Contact block

				External gasket
B11 <b>R</b>	NA B110AA-DN2 (⊕) 1NO+1NC	NA B110AB-DN2 (⊕) 1NO+1NC	NA B110AC-DN2 (⊕) 1NO+1NC	NA B110AE-DN2 (⊕) 1NO+1NC
B02 <b>R</b>	NA B020AA-DN2 (⊕) 2NC	NA B020AB-DN2 (⊕) 2NC	NA B020AC-DN2 (⊕) 2NC	NA B020AE-DN2 (⊕) 2NC
B12 <b>R</b>	NA B120AA-DN2 (⊕) 1NO+2NC	NA B120AB-DN2 (⊕) 1NO+2NC	NA B120AC-DN2 (⊕) 1NO+2NC	NA B120AE-DN2 (⊕) 1NO+2NC
B22 <b>R</b>	NA B220AA-DN2 (⊕) 2NO+2NC	NA B220AB-DN2 (⊕) 2NO+2NC	NA B220AC-DN2 (⊕) 2NO+2NC	NA B220AE-DN2 (⊕) 2NO+2NC
G11 <b>L</b>	NA G110AA-DN2 (⊕) 1NO+1NC	NA G110AB-DN2 (⊕) 1NO+1NC	NA G110AC-DN2 (⊕) 1NO+1NC	NA G110AE-DN2 (⊕) 1NO+1NC
G02 <b>L</b>	NA G020AA-DN2 (⊕) 2NC	NA G020AB-DN2 (⊕) 2NC	NA G020AC-DN2 (⊕) 2NC	NA G020AE-DN2 (⊕) 2NC
G12 <b>L</b>	NA G120AA-DN2 (⊕) 1NO+2NC	NA G120AB-DN2 (⊕) 1NO+2NC	NA G120AC-DN2 (⊕) 1NO+2NC	NA G120AE-DN2 (⊕) 1NO+2NC
G22 <b>L</b>	NA G220AA-DN2 (⊕) 2NO+2NC	NA G220AB-DN2 (⊕) 2NO+2NC	NA G220AC-DN2 (⊕) 2NO+2NC	NA G220AE-DN2 (⊕) 2NO+2NC
Max. speed	page 231 - type 4	page 231 - type 4	page 231 - type 4	page 231 - type 4
Actuating force	7 N (25 N ⊕)	7 N (25 N ⊕)	7 N (25 N ⊕)	7 N (25 N ⊕)
Travel diagrams	page 232 - group 1	page 232 - group 1	page 232 - group 1	page 232 - group 1

Contact type:

- R** = snap action
- L** = slow action

Contact block

		External gasket	External gasket	With stainless steel roller on request
B11 <b>R</b>	NA B110BB-DN2 (⊕) 1NO+1NC	NA B110BE-DN2 (⊕) 1NO+1NC	NA B110BG-DN2 (⊕) 1NO+1NC	NA B110CB-DN2 (⊕) 1NO+1NC
B02 <b>R</b>	NA B020BB-DN2 (⊕) 2NC	NA B020BE-DN2 (⊕) 2NC	NA B020BG-DN2 (⊕) 2NC	NA B020CB-DN2 (⊕) 2NC
B12 <b>R</b>	NA B120BB-DN2 (⊕) 1NO+2NC	NA B120BE-DN2 (⊕) 1NO+2NC	NA B120BG-DN2 (⊕) 1NO+2NC	NA B120CB-DN2 (⊕) 1NO+2NC
B22 <b>R</b>	NA B220BB-DN2 (⊕) 2NO+2NC	NA B220BE-DN2 (⊕) 2NO+2NC	NA B220BG-DN2 (⊕) 2NO+2NC	NA B220CB-DN2 (⊕) 2NO+2NC
G11 <b>L</b>	NA G110BB-DN2 (⊕) 1NO+1NC	NA G110BE-DN2 (⊕) 1NO+1NC	NA G110BG-DN2 (⊕) 1NO+1NC	NA G110CB-DN2 (⊕) 1NO+1NC
G02 <b>L</b>	NA G020BB-DN2 (⊕) 2NC	NA G020BE-DN2 (⊕) 2NC	NA G020BG-DN2 (⊕) 2NC	NA G020CB-DN2 (⊕) 2NC
G12 <b>L</b>	NA G120BB-DN2 (⊕) 1NO+2NC	NA G120BE-DN2 (⊕) 1NO+2NC	NA G120BG-DN2 (⊕) 1NO+2NC	NA G120CB-DN2 (⊕) 1NO+2NC
G22 <b>L</b>	NA G220BB-DN2 (⊕) 2NO+2NC	NA G220BE-DN2 (⊕) 2NO+2NC	NA G220BG-DN2 (⊕) 2NO+2NC	NA G220CB-DN2 (⊕) 2NO+2NC
Max. speed	page 231 - type 2	page 231 - type 5	page 231 - type 5	page 231 - type 3
Actuating force	7 N (25 N ⊕)	7 N (25 N ⊕)	7 N (25 N ⊕)	5 N (25 N ⊕)
Travel diagrams	page 232 - group 1	page 232 - group 1	page 232 - group 1	page 232 - group 2

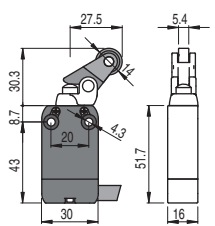
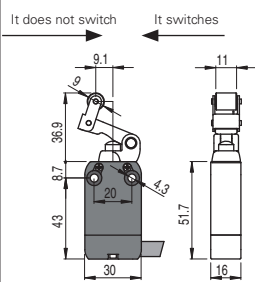
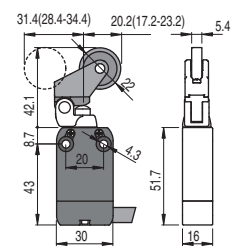
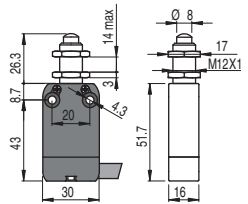
<p><b>NB series housing</b></p>	<p><b>M12 connector, right</b></p>	<p><b>M12 connector, bottom</b></p>	<p><b>AMP Superseal 1.5 connector</b></p>
<p><b>To order a product of the NB series,</b> replace NA with NB in the codes shown above. Example:  <b>NA B110AA-DN2 → NB B110AA-DN2</b></p>	<p><b>To order a product with M12 right connector,</b> replace DN2 with DMK in the codes shown above. Example:  <b>NA B110AA-DN2 → NA B110AA-DMK</b></p>	<p><b>To order a product with M12 bottom connector,</b> replace DN2 with SMK in the codes shown above. Example:  <b>NA B110AA-DN2 → NA B110AA-SMK</b></p>	<p><b>To order a product with AMP connector,</b> replace DN2 with SAK in the codes shown above. Example:  <b>NA B110AA-DN2 → NA B110AA-SAK</b></p>

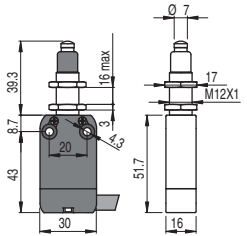
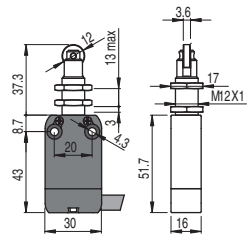
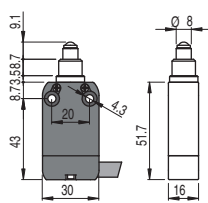
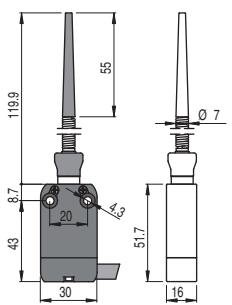
All values in the drawings are in mm

Accessories See page 207

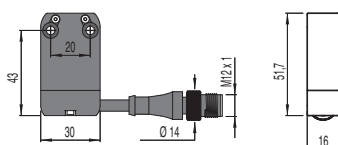
→ The 2D and 3D files are available at [www.pizzato.com](http://www.pizzato.com)



Contact type:	With stainless steel roller on request	Unidirectional operation	Secured only by means of threaded head	
<b>R</b> = snap action <b>L</b> = slow action				
Contact block				
B11 <b>R</b>	NA B110CH-DN2  1NO+1NC	NA B110CP-DN2  1NO+1NC	NA B110CV-DN2  1NO+1NC	NA B110EB-DN2  1NO+1NC
B02 <b>R</b>	NA B020CH-DN2  2NC	NA B020CP-DN2  2NC	NA B020CV-DN2  2NC	NA B020EB-DN2  2NC
B12 <b>R</b>	NA B120CH-DN2  1NO+2NC	NA B120CP-DN2  1NO+2NC	NA B120CV-DN2  1NO+2NC	NA B120EB-DN2  1NO+2NC
B22 <b>R</b>	NA B220CH-DN2  2NO+2NC	NA B220CP-DN2  2NO+2NC	NA B220CV-DN2  2NO+2NC	NA B220EB-DN2  2NO+2NC
G11 <b>L</b>	NA G110CH-DN2  1NO+1NC	NA G110CP-DN2  1NO+1NC	NA G110CV-DN2  1NO+1NC	NA G110EB-DN2  1NO+1NC
G02 <b>L</b>	NA G020CH-DN2  2NC	NA G020CP-DN2  2NC	NA G020CV-DN2  2NC	NA G020EB-DN2  2NC
G12 <b>L</b>	NA G120CH-DN2  1NO+2NC	NA G120CP-DN2  1NO+2NC	NA G120CV-DN2  1NO+2NC	NA G120EB-DN2  1NO+2NC
G22 <b>L</b>	NA G220CH-DN2  2NO+2NC	NA G220CP-DN2  2NO+2NC	NA G220CV-DN2  2NO+2NC	NA G220EB-DN2  2NO+2NC
Max. speed	page 231 - type 3	page 231 - type 3	page 231 - type 3	page 231 - type 4
Actuating force	5 N (25 N )	3 N (25 N )	3 N (25 N )	7 N (25 N )
Travel diagrams	page 232 - group 2	page 232 - group 6	page 232 - group 3	page 232 - group 1

Contact type:	Secured only by means of threaded head External gasket	Secured only by means of threaded head	Plunger with Ø 6 mm ball	External gasket
<b>R</b> = snap action <b>L</b> = slow action				
Contact block				
B11 <b>R</b>	NA B110EE-DN2  1NO+1NC	NA B110FB-DN2  1NO+1NC	NA B110GB-DN2  1NO+1NC	NA B110HB-DN2 1NO+1NC
B02 <b>R</b>	NA B020EE-DN2  2NC	NA B020FB-DN2  2NC	NA B020GB-DN2  2NC	NA B020HB-DN2 2NC
B12 <b>R</b>	NA B120EE-DN2  1NO+2NC	NA B120FB-DN2  1NO+2NC	NA B120GB-DN2  1NO+2NC	NA B120HB-DN2 1NO+2NC
B22 <b>R</b>	NA B220EE-DN2  2NO+2NC	NA B220FB-DN2  2NO+2NC	NA B220GB-DN2  2NO+2NC	NA B220HB-DN2 2NO+2NC
G11 <b>L</b>	NA G110EE-DN2  1NO+1NC	NA G110FB-DN2  1NO+1NC	NA G110GB-DN2  1NO+1NC	/
G02 <b>L</b>	NA G020EE-DN2  2NC	NA G020FB-DN2  2NC	NA G020GB-DN2  2NC	NA G020HB-DN2 2NC
G12 <b>L</b>	NA G120EE-DN2  1NO+2NC	NA G120FB-DN2  1NO+2NC	NA G120GB-DN2  1NO+2NC	/
G22 <b>L</b>	NA G220EE-DN2  2NO+2NC	NA G220FB-DN2  2NO+2NC	NA G220GB-DN2  2NO+2NC	/
Max. speed	page 231 - type 4	page 231 - type 2	page 231 - type 2	1 m/s
Actuating force	7 N (25 N )	7 N (25 N )	7 N (25 N )	0.03 Nm
Travel diagrams	page 232 - group 1	page 232 - group 1	page 232 - group 1	page 232 - group 4

Cable and M12 connector



**To order a product with cable and M12 connector:**  
 replace DN2 with DM0.2 in the codes shown above. Example:  
 NA B110AA-DN2 → NA B110AA-DM0.2



Contact type:  
**R** = snap action  
**L** = slow action

	External gasket		External gasket		With stainless steel roller on request		With stainless steel roller on request	
Contact block								
B11	<b>R</b>	NA B110HE-DN2 1NO+1NC	NA B110HH-DN2 1NO+1NC	NA B112KA-DN2 <b>R</b> 1NO+1NC	NA B112KB-DN2 <b>R</b> 1NO+1NC			
B02	<b>R</b>	NA B020HE-DN2 2NC	NA B020HH-DN2 2NC	NA B022KA-DN2 <b>R</b> 2NC	NA B022KB-DN2 <b>R</b> 2NC			
B12	<b>R</b>	NA B120HE-DN2 1NO+2NC	NA B120HH-DN2 1NO+2NC	NA B122KA-DN2 <b>R</b> 1NO+2NC	NA B122KB-DN2 <b>R</b> 1NO+2NC			
B22	<b>R</b>	NA B220HE-DN2 2NO+2NC	NA B220HH-DN2 2NO+2NC	NA B222KA-DN2 <b>R</b> 2NO+2NC	NA B222KB-DN2 <b>R</b> 2NO+2NC			
G11	<b>L</b>	/	/	NA G112KA-DN2 <b>R</b> 1NO+1NC	NA G112KB-DN2 <b>R</b> 1NO+1NC			
G02	<b>L</b>	NA G020HE-DN2 2NC	NA G020HH-DN2 2NC	NA G022KA-DN2 <b>R</b> 2NC	NA G022KB-DN2 <b>R</b> 2NC			
G12	<b>L</b>	/	/	NA G122KA-DN2 <b>R</b> 1NO+2NC	NA G122KB-DN2 <b>R</b> 1NO+2NC			
G22	<b>L</b>	/	/	NA G222KA-DN2 <b>R</b> 2NO+2NC	NA G222KB-DN2 <b>R</b> 2NO+2NC			
Max. speed	1 m/s		1 m/s		page 231 - type 1		page 231 - type 1	
Actuating force	0.07 Nm		0.03 Nm		0.07 Nm (0.25 Nm <b>R</b> )		0.07 Nm (0.25 Nm <b>R</b> )	
Travel diagrams	page 232 - group 4		page 232 - group 4		page 232 - group 5		page 232 - group 5	

Contact type:  
**R** = snap action  
**L** = slow action

	With stainless steel roller on request		With stainless steel roller on request		With stainless steel roller on request		With stainless steel roller on request	
Contact block								
B11	<b>R</b>	NA B112KC-DN2 <b>R</b> 1NO+1NC	NA B112KD-DN2 <b>R</b> 1NO+1NC	NA B112KE-DN2 <b>R</b> 1NO+1NC	NA B112KF-DN2 <b>R</b> 1NO+1NC			
B02	<b>R</b>	NA B022KC-DN2 <b>R</b> 2NC	NA B022KD-DN2 <b>R</b> 2NC	NA B022KE-DN2 <b>R</b> 2NC	NA B022KF-DN2 <b>R</b> 2NC			
B12	<b>R</b>	NA B122KC-DN2 <b>R</b> 1NO+2NC	NA B122KD-DN2 <b>R</b> 1NO+2NC	NA B122KE-DN2 <b>R</b> 1NO+2NC	NA B122KF-DN2 <b>R</b> 1NO+2NC			
B22	<b>R</b>	NA B222KC-DN2 <b>R</b> 2NO+2NC	NA B222KD-DN2 <b>R</b> 2NO+2NC	NA B222KE-DN2 <b>R</b> 2NO+2NC	NA B222KF-DN2 <b>R</b> 2NO+2NC			
G11	<b>L</b>	NA G112KC-DN2 <b>R</b> 1NO+1NC	NA G112KD-DN2 <b>R</b> 1NO+1NC	NA G112KE-DN2 <b>R</b> 1NO+1NC	NA G112KF-DN2 <b>R</b> 1NO+1NC			
G02	<b>L</b>	NA G022KC-DN2 <b>R</b> 2NC	NA G022KD-DN2 <b>R</b> 2NC	NA G022KE-DN2 <b>R</b> 2NC	NA G022KF-DN2 <b>R</b> 2NC			
G12	<b>L</b>	NA G122KC-DN2 <b>R</b> 1NO+2NC	NA G122KD-DN2 <b>R</b> 1NO+2NC	NA G122KE-DN2 <b>R</b> 1NO+2NC	NA G122KF-DN2 <b>R</b> 1NO+2NC			
G22	<b>L</b>	NA G222KC-DN2 <b>R</b> 2NO+2NC	NA G222KD-DN2 <b>R</b> 2NO+2NC	NA G222KE-DN2 <b>R</b> 2NO+2NC	NA G222KF-DN2 <b>R</b> 2NO+2NC			
Max. speed	page 231 - type 1		page 231 - type 1		page 231 - type 1		page 231 - type 1	
Actuating force	0.07 Nm (0.25 Nm <b>R</b> )		0.07 Nm (0.25 Nm <b>R</b> )		0.07 Nm (0.25 Nm <b>R</b> )		0.07 Nm (0.25 Nm <b>R</b> )	
Travel diagrams	page 232 - group 5		page 232 - group 5		page 232 - group 5		page 232 - group 5	

NB series housing	M12 connector, right	M12 connector, bottom	AMP Superseal 1.5 connector
<b>To order a product of the NB series,</b> replace NA with NB in the codes shown above. Example: NA B110AA-DN2 → NB B110AA-DN2	<b>To order a product with M12 right connector,</b> replace DN2 with DMK in the codes shown above. Example: NA B110AA-DN2 → NA B110AA-DMK	<b>To order a product with M12 bottom connector,</b> replace DN2 with SMK in the codes shown above. Example: NA B110AA-DN2 → NA B110AA-SMK	<b>To order a product with AMP connector,</b> replace DN2 with SAK in the codes shown above. Example: NA B110AA-DN2 → NA B110AA-SAK

All values in the drawings are in mm

Accessories See page 207

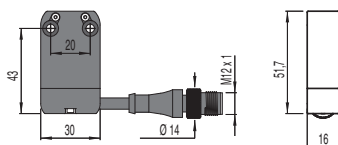
→ The 2D and 3D files are available at [www.pizzato.com](http://www.pizzato.com)



Contact type:	With stainless steel roller on request	With stainless steel roller on request	With stainless steel roller on request	Square rod, 3x3 mm, stainless steel
<b>R</b> = snap action <b>L</b> = slow action				
Contact block				
B11 <b>R</b>	NA B112KG-DN2 (⊕) 1NO+1NC	NA B112KH-DN2 (⊕) 1NO+1NC	NA B112KP-DN2 (⊕) 1NO+1NC	NA B112LB-DN2 1NO+1NC
B02 <b>R</b>	NA B022KG-DN2 (⊕) 2NC	NA B022KH-DN2 (⊕) 2NC	NA B022KP-DN2 (⊕) 2NC	NA B022LB-DN2 2NC
B12 <b>R</b>	NA B122KG-DN2 (⊕) 1NO+2NC	NA B122KH-DN2 (⊕) 1NO+2NC	NA B122KP-DN2 (⊕) 1NO+2NC	NA B122LB-DN2 1NO+2NC
B22 <b>R</b>	NA B222KG-DN2 (⊕) 2NO+2NC	NA B222KH-DN2 (⊕) 2NO+2NC	NA B222KP-DN2 (⊕) 2NO+2NC	NA B222LB-DN2 2NO+2NC
G11 <b>L</b>	NA G112KG-DN2 (⊕) 1NO+1NC	NA G112KH-DN2 (⊕) 1NO+1NC	NA G112KP-DN2 (⊕) 1NO+1NC	NA G112LB-DN2 1NO+1NC
G02 <b>L</b>	NA G022KG-DN2 (⊕) 2NC	NA G022KH-DN2 (⊕) 2NC	NA G022KP-DN2 (⊕) 2NC	NA G022LB-DN2 2NC
G12 <b>L</b>	NA G122KG-DN2 (⊕) 1NO+2NC	NA G122KH-DN2 (⊕) 1NO+2NC	NA G122KP-DN2 (⊕) 1NO+2NC	NA G122LB-DN2 1NO+2NC
G22 <b>L</b>	NA G222KG-DN2 (⊕) 2NO+2NC	NA G222KH-DN2 (⊕) 2NO+2NC	NA G222KP-DN2 (⊕) 2NO+2NC	NA G222LB-DN2 2NO+2NC
Max. speed	page 231 - type 1	page 231 - type 1	page 231 - type 1	1.5 m/s
Actuating force	0.07 Nm (0.25 Nm ⊕)	0.07 Nm (0.25 Nm ⊕)	0.07 Nm (0.25 Nm ⊕)	0.07 Nm
Travel diagrams	page 232 - group 5	page 232 - group 5	page 232 - group 5	page 232 - group 5

Contact type:	Round rod, Ø 3 mm, stainless steel	Glass fibre rod		Porcelain roller
<b>R</b> = snap action <b>L</b> = slow action				
Contact block				
B11 <b>R</b>	NA B112LE-DN2 1NO+1NC	NA B112LH-DN2 1NO+1NC	NA B112LL-DN2 1NO+1NC	NA B112LP-DN2E24 (⊕) 1NO+1NC
B02 <b>R</b>	NA B022LE-DN2 2NC	NA B022LH-DN2 2NC	NA B022LL-DN2 2NC	NA B022LP-DN2E24 (⊕) 2NC
B12 <b>R</b>	NA B122LE-DN2 1NO+2NC	NA B122LH-DN2 1NO+2NC	NA B122LL-DN2 1NO+2NC	NA B122LP-DN2E24 (⊕) 1NO+2NC
B22 <b>R</b>	NA B222LE-DN2 2NO+2NC	NA B222LH-DN2 2NO+2NC	NA B222LL-DN2 2NO+2NC	NA B222LP-DN2E24 (⊕) 2NO+2NC
G11 <b>L</b>	NA G112LE-DN2 1NO+1NC	NA G112LH-DN2 1NO+1NC	NA G112LL-DN2 1NO+1NC	NA G112LP-DN2E24 (⊕) 1NO+1NC
G02 <b>L</b>	NA G022LE-DN2 2NC	NA G022LH-DN2 2NC	NA G022LL-DN2 2NC	NA G022LP-DN2E24 (⊕) 2NC
G12 <b>L</b>	NA G122LE-DN2 1NO+2NC	NA G122LH-DN2 1NO+2NC	NA G122LL-DN2 1NO+2NC	NA G122LP-DN2E24 (⊕) 1NO+2NC
G22 <b>L</b>	NA G222LE-DN2 2NO+2NC	NA G222LH-DN2 2NO+2NC	NA G222LL-DN2 2NO+2NC	NA G222LP-DN2E24 (⊕) 2NO+2NC
Max. speed	1.5 m/s	1.5 m/s	1.5 m/s	0.5 m/s
Actuating force	0.07 Nm	0.07 Nm	0.07 Nm	0.04 Nm
Travel diagrams	page 232 - group 5	page 232 - group 5	page 232 - group 5	page 232 - group 5

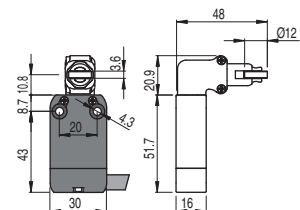
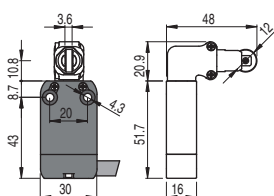
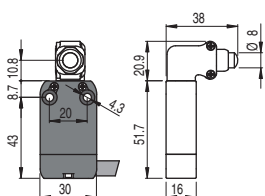
**Cable and M12 connector**



**To order a product with cable and M12 connector:**  
 replace DN2 with DM0.2 in the codes shown above. Example:  
 NA B110AA-DN2 → NA B110AA-DM0.2

Contact type:

- R** = snap action
- L** = slow action

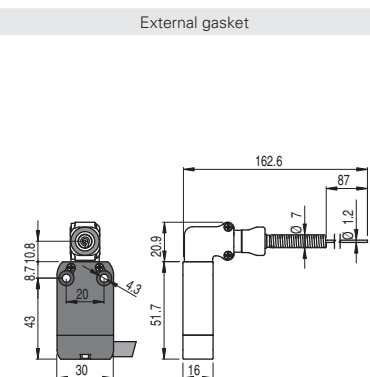
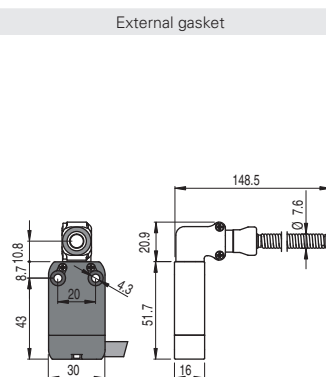
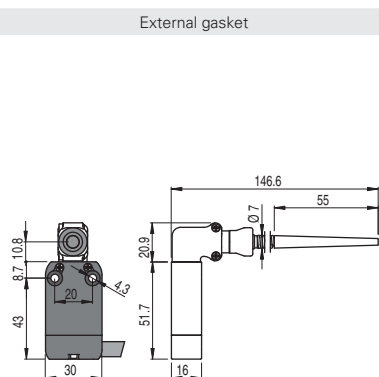


Contact block

B11	<b>R</b>	NA B110AB-DN2W5	⊕	1NO+1NC	NA B110BB-DN2H0W5	⊕	1NO+1NC	NA B110BB-DN2W5	⊕	1NO+1NC
B02	<b>R</b>	NA B020AB-DN2W5	⊕	2NC	NA B020BB-DN2H0W5	⊕	2NC	NA B020BB-DN2W5	⊕	2NC
B12	<b>R</b>	NA B120AB-DN2W5	⊕	1NO+2NC	NA B120BB-DN2H0W5	⊕	1NO+2NC	NA B120BB-DN2W5	⊕	1NO+2NC
B22	<b>R</b>	NA B220AB-DN2W5	⊕	2NO+2NC	NA B220BB-DN2H0W5	⊕	2NO+2NC	NA B220BB-DN2W5	⊕	2NO+2NC
G11	<b>L</b>	NA G110AB-DN2W5	⊕	1NO+1NC	NA G110BB-DN2H0W5	⊕	1NO+1NC	NA G110BB-DN2W5	⊕	1NO+1NC
G02	<b>L</b>	NA G020AB-DN2W5	⊕	2NC	NA G020BB-DN2H0W5	⊕	2NC	NA G020BB-DN2W5	⊕	2NC
G12	<b>L</b>	NA G120AB-DN2W5	⊕	1NO+2NC	NA G120BB-DN2H0W5	⊕	1NO+2NC	NA G120BB-DN2W5	⊕	1NO+2NC
G22	<b>L</b>	NA G220AB-DN2W5	⊕	2NO+2NC	NA G220BB-DN2H0W5	⊕	2NO+2NC	NA G220BB-DN2W5	⊕	2NO+2NC
Max. speed		page 231 - type 4			page 231 - type 2			page 231 - type 2		
Actuating force		9.5 N (25 N ⊕)			9.5 N (25 N ⊕)			9.5 N (25 N ⊕)		
Travel diagrams		page 232 - group 1			page 232 - group 1			page 232 - group 1		

Contact type:

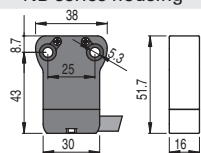
- R** = snap action
- L** = slow action



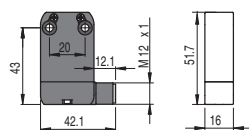
Contact block

B11	<b>R</b>	NA B110HB-DN2W5		1NO+1NC	NA B110HE-DN2W5		1NO+1NC	NA B110HH-DN2W5		1NO+1NC
B02	<b>R</b>	NA B020HB-DN2W5		2NC	NA B020HE-DN2W5		2NC	NA B020HH-DN2W5		2NC
B12	<b>R</b>	NA B120HB-DN2W5		1NO+2NC	NA B120HE-DN2W5		1NO+2NC	NA B120HH-DN2W5		1NO+2NC
B22	<b>R</b>	NA B220HB-DN2W5		2NO+2NC	NA B220HE-DN2W5		2NO+2NC	NA B220HH-DN2W5		2NO+2NC
G11	<b>L</b>	/		/	/		/	/		/
G02	<b>L</b>	NA G020HB-DN2W5		2NC	NA G020HE-DN2W5		2NC	NA G020HH-DN2W5		2NC
G12	<b>L</b>	/		/	/		/	/		/
G22	<b>L</b>	/		/	/		/	/		/
Max. speed		1 m/s			1 m/s			1 m/s		
Actuating force		0.08 Nm			0.12 Nm			0.08 Nm		
Travel diagrams		page 232 - group 4			page 232 - group 4			page 232 - group 4		

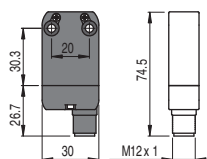
NB series housing



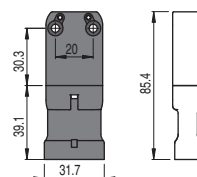
M12 connector, right



M12 connector, bottom



AMP Superseal 1.5 connector



To order a product of the NB series, replace NA with NB in the codes shown above. Example:  
NA B110AA-DN2 → NB B110AA-DN2

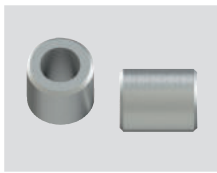
To order a product with M12 right connector, replace DN2 with DMK in the codes shown above. Example:  
NA B110AA-DN2 → NA B110AA-DMK

To order a product with M12 bottom connector, replace DN2 with SMK in the codes shown above. Example:  
NA B110AA-DN2 → NA B110AA-SMK

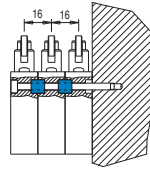
To order a product with AMP connector, replace DN2 with SAK in the codes shown above. Example:  
NA B110AA-DN2 → NA B110AA-SAK

**Accessories** Packs of **10 pcs.**

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, preventing them from slipping.


**M12 female connectors with cable** For details see page 208

**Technical data:**

- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228 - mobile installation
- Gold-plated contacts
- 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	
<b>4</b>	4 poles
<b>5</b>	5 poles
<b>8</b>	8 poles
<b>12</b>	12 poles

Cable sheath	
<b>P</b>	PVC (standard)
<b>U</b>	PUR

Connector type	
<b>D</b>	straight (standard)
<b>G</b>	angled

Connection type	
<b>M</b>	M12x1

Cable length (L)		No. of poles			
		4	5	8	12
<b>1</b>	1 metre				
<b>2</b>	2 metres				
<b>3</b>	3 metres (standard)	•	•		
<b>4</b>	4 metres				
<b>5</b>	5 metres (standard)	•	•	•	•
...					
<b>0</b>	10 metres (standard)	•	•	•	•

Other lengths on request

**Stock items**

- VF CA4PD3M
- VF CA4PD5M
- VF CA4PD0M
- VF CA5PD3M
- VF CA5PD5M
- VF CA5PD0M
- VF CA8PD5M
- VF CA8PD0M
- VF CA12PD5M
- VF CA12PD0M

**Attention!** For items not in stock the minimum order quantity is 100 pcs.

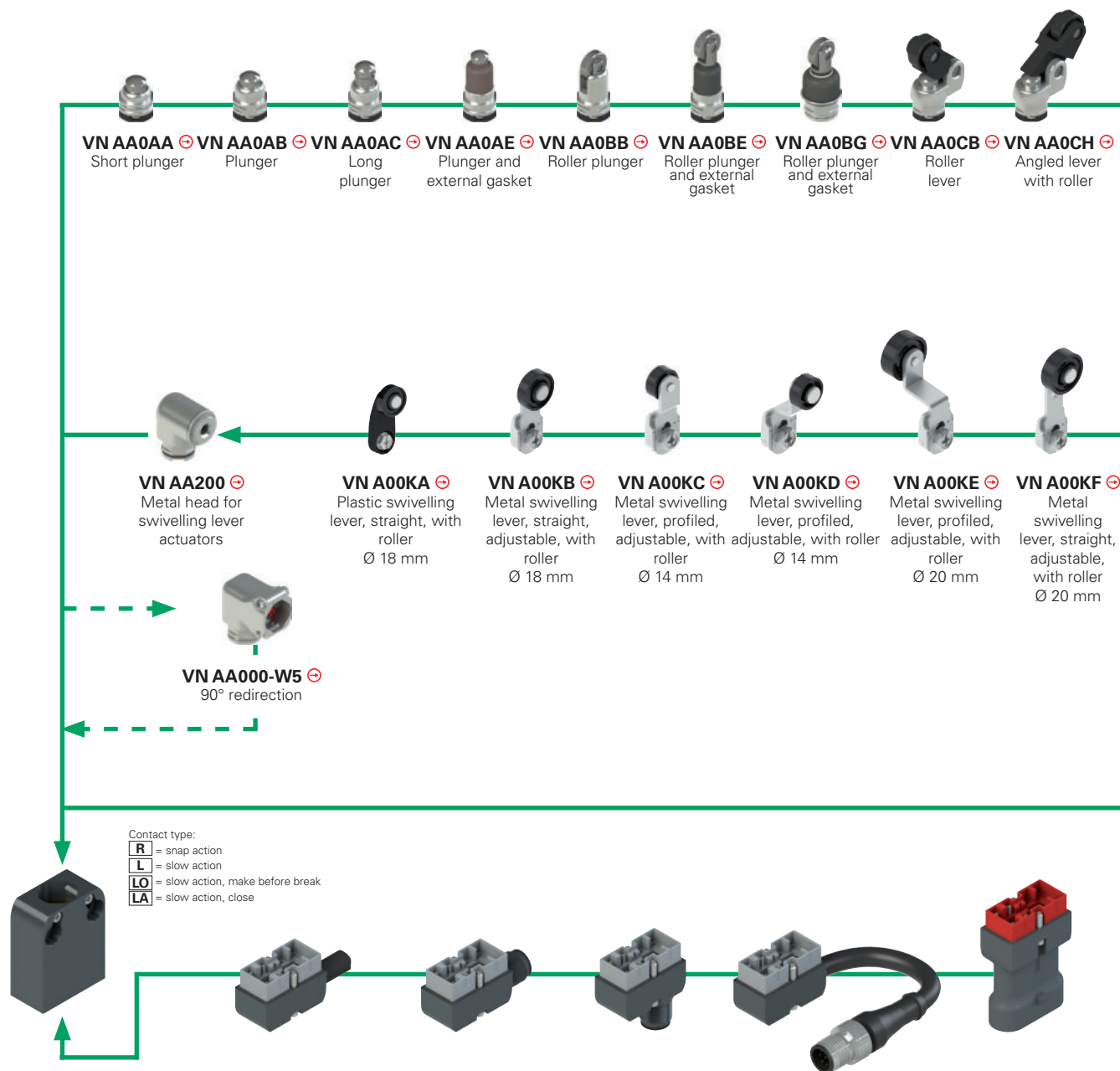
**Field wireable M12 female connectors**

**General data**

Technopolymer connector body  
 Gold-plated contacts  
 Screw terminals for cable screw fittings  
 Max. operating voltages 250 Vac/dc (4 and 5-pole)  
 30 Vac/dc (8-pole)  
 Maximum current 4 A  
 Protection degree IP67 acc. to EN 60529  
 Ambient temperature -25°C ... +85°C  
 Wire cross-section 0.25 mm<sup>2</sup> (24 AWG) ... 0.5 mm<sup>2</sup> (20 AWG)

Article	Description	no. of poles
VF CBMP4DM04	Field wireable M12 female connector, straight, for Ø 4 ... 6.5 mm multipolar cables	4
VF CBMP5DM04	Field wireable M12 female connector, straight, for Ø 4 ... 6.5 mm multipolar cables	5
VF CBMP8DM04	Field wireable M12 female connector, straight, for Ø 4 ... 7 mm multipolar cables	8

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



METAL housing, NA hole spacing 20 mm
NA B11000 ⊕ 1NO+1NC <b>R</b>
NA G11000 ⊕ 1NO+1NC <b>L</b>
NA L11000 ⊕ 1NO+1NC <b>LA</b>
NA H11000 ⊕ 1NO+1NC <b>LO</b>
NA B02000 ⊕ 2NC <b>R</b>
NA G02000 ⊕ 2NC <b>L</b>
NA B20000 ⊕ 2NO <b>R</b>
NA G20000 ⊕ 2NO <b>L</b>
NA B12000 ⊕ 1NO+2NC <b>R</b>
NA G12000 ⊕ 1NO+2NC <b>L</b>
NA L12000 ⊕ 1NO+2NC <b>LA</b>
NA H12000 ⊕ 1NO+2NC <b>LO</b>
NA B22000 ⊕ 2NO+2NC <b>R</b>
NA G22000 ⊕ 2NO+2NC <b>L</b>
NA L22000 ⊕ 2NO+2NC <b>LA</b>
NA H22000 ⊕ 2NO+2NC <b>LO</b>

Metal connector with cable	Cable length (m)
VN CM11DN2	2
VN CM11DN5	5
VN CM02DN2	2
VN CM02DN5	5
VN CM20DN2	2
VN CM20DN5	5
VN CM12DN2	2
VN CM12DN5	5
VN CM22DN2	2
VN CM22DN5	5

M12 metal connector, right
VN CM11DMK
VN CM02DMK
VN CM20DMK
VN CM12DMK
VN CM22DMK

M12 metal connector, bottom
VN CM11SMK
VN CM02SMK
VN CM20SMK
VN CM12SMK
VN CM22SMK

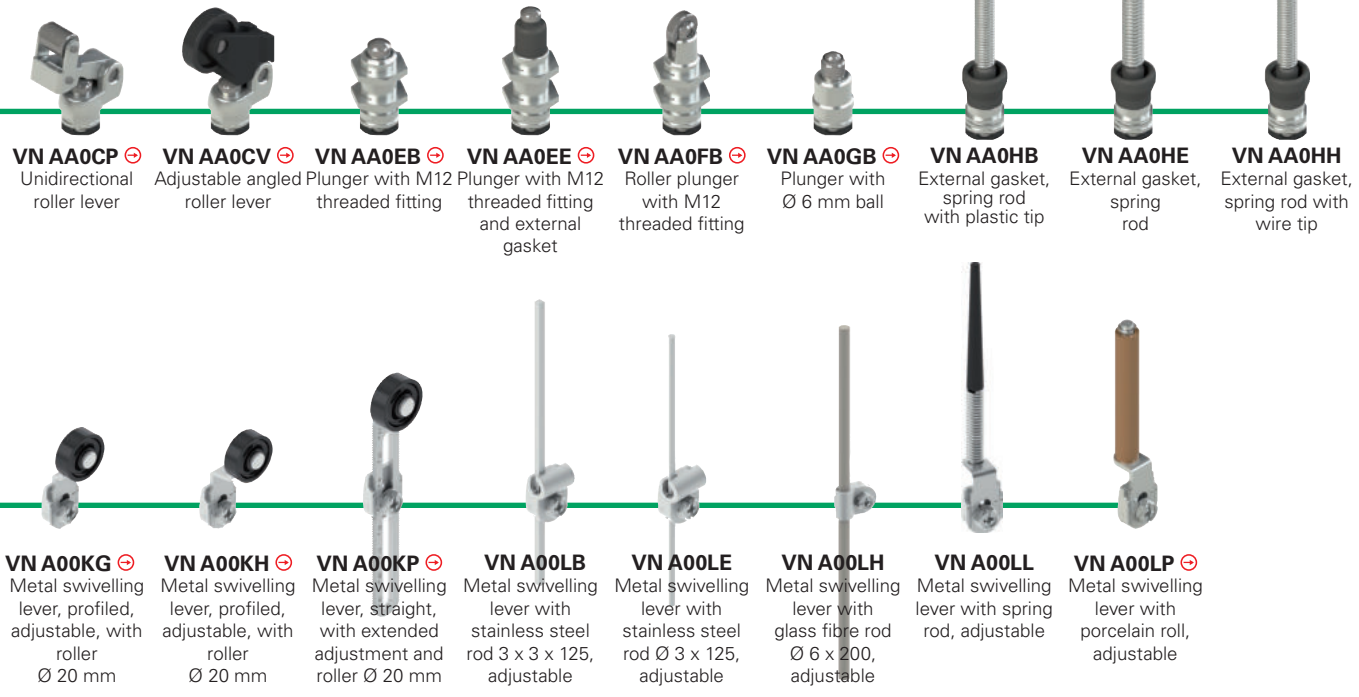
Metal connector with cable and M12 connector	Cable length (m)
VN CM11DM0.2	0.2
VN CM02DM0.2	0.2
VN CM20DM0.2	0.2
VN CM12DM0.2	0.2
VN CM22DM0.2	0.2

AMP technopolymer connector, bottom
VN CM11SAK
VN CM02SAK
VN CM20SAK

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

⚠ It is not allowed to install VN CM\*\*\*\*\* connectors on technopolymer housings

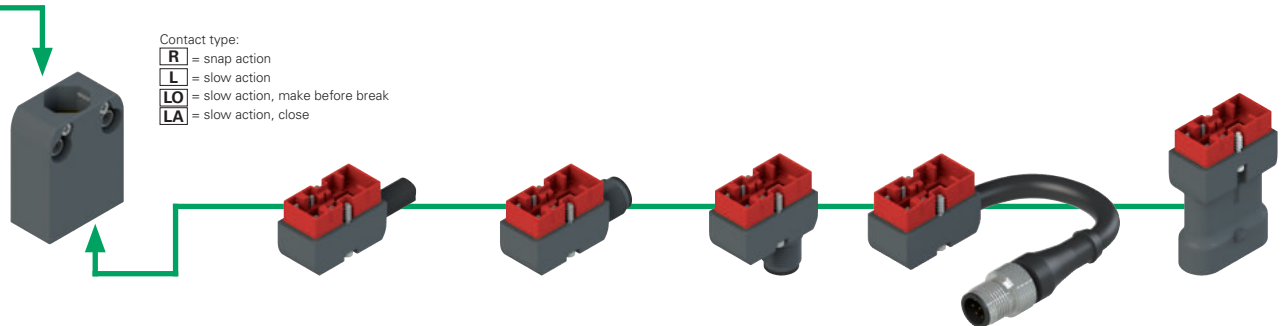




**VN AA0CP** ⊕ Unidirectional roller lever  
**VN AA0CV** ⊕ Adjustable angled roller lever  
**VN AA0EB** ⊕ Plunger with M12 threaded fitting  
**VN AA0EE** ⊕ Plunger with M12 threaded fitting and external gasket  
**VN AA0FB** ⊕ Roller plunger with M12 threaded fitting  
**VN AA0GB** ⊕ Plunger with Ø 6 mm ball  
**VN AA0HB** External gasket, spring rod with plastic tip  
**VN AA0HE** External gasket, spring rod  
**VN AA0HH** External gasket, spring rod with wire tip

**VN A00KG** ⊕ Metal swivelling lever, profiled, adjustable, with roller Ø 20 mm  
**VN A00KH** ⊕ Metal swivelling lever, profiled, adjustable, with roller Ø 20 mm  
**VN A00KP** ⊕ Metal swivelling lever, straight, with extended adjustment and roller Ø 20 mm  
**VN A00LB** Metal swivelling lever with stainless steel rod 3 x 3 x 125, adjustable  
**VN A00LE** Metal swivelling lever with stainless steel rod Ø 3 x 125, adjustable  
**VN A00LH** Metal swivelling lever with glass fibre rod Ø 6 x 200, adjustable  
**VN A00LL** Metal swivelling lever with spring rod, adjustable  
**VN A00LP** ⊕ Metal swivelling lever with porcelain roll, adjustable

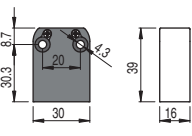
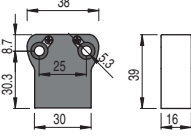
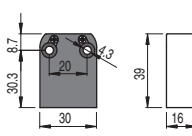
Contact type:  
**R** = snap action  
**L** = slow action  
**LO** = slow action, make before break  
**LA** = slow action, close



NFTECHNOPOLYMER housing, 20 mm hole spacing	Technopolymer connector with cable	Cable length (m)	M12 technopolymer connector, right	M12 technopolymer connector, bottom	Technopolymer connector with cable and M12 connector	Cable length (m)	AMP technopolymer connector, bottom
NF B11000 ⊕ 1NO+1NC <b>R</b>	VN CP11DN2	2	VN CP11DMK	VN CP11SMK	VN CP11DM0.2	0.2	VN CP11SAK
NF G11000 ⊕ 1NO+1NC <b>L</b>	VN CP11DN5	5					
NF L11000 ⊕ 1NO+1NC <b>LA</b>	VN CP02DN2	2	VN CP02DMK	VN CP02SMK	VN CP02DM0.2	0.2	VN CP02SAK
NF H11000 ⊕ 1NO+1NC <b>LO</b>	VN CP02DN5	5					
NF B02000 ⊕ 2NC <b>R</b>	VN CP20DN2	2	VN CP20DMK	VN CP20SMK	VN CP20DM0.2	0.2	VN CP20SAK
NF G02000 ⊕ 2NC <b>L</b>	VN CP20DN5	5					
NF B20000 ⊕ 2NO <b>R</b>	VN CP12DN2	2	VN CP12DMK	VN CP12SMK	VN CP12DM0.2	0.2	
NF G20000 ⊕ 2NO <b>L</b>	VN CP12DN5	5					
NF B22000 ⊕ 2NO+2NC <b>R</b>	VN CP22DN2	2	VN CP22DMK	VN CP22SMK	VN CP22DM0.2	0.2	
NF G22000 ⊕ 2NO+2NC <b>L</b>	VN CP22DN5	5					
NF L22000 ⊕ 2NO+2NC <b>LA</b>							
NF H22000 ⊕ 2NO+2NC <b>LO</b>							

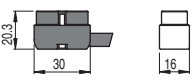
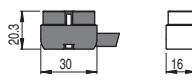
⚠ It is not allowed to install VN CP\*\*\*\*\* connectors on metal housings

## Housings

NA metal housings		NB metal housings		Contact type: <b>R</b> = snap action <b>L</b> = slow action <b>LO</b> = slow action, make before break <b>LA</b> = slow action, close	NF technopolymer housings	
						
NA B11000 ⊕ 1NO+1NC <b>R</b>	NB B11000 ⊕ 1NO+1NC <b>R</b>	NF B11000 ⊕ 1NO+1NC <b>R</b>				
NA G11000 ⊕ 1NO+1NC <b>L</b>	NB G11000 ⊕ 1NO+1NC <b>L</b>	NF G11000 ⊕ 1NO+1NC <b>L</b>				
NA L11000 ⊕ 1NO+1NC <b>LA</b>	NB L11000 ⊕ 1NO+1NC <b>LA</b>	NF L11000 ⊕ 1NO+1NC <b>LA</b>				
NA H11000 ⊕ 1NO+1NC <b>LO</b>	NB H11000 ⊕ 1NO+1NC <b>LO</b>	NF H11000 ⊕ 1NO+1NC <b>LO</b>				
NA B12000 ⊕ 1NO+2NC <b>R</b>	NB B12000 ⊕ 1NO+2NC <b>R</b>	NF B12000 ⊕ 1NO+2NC <b>R</b>				
NA G12000 ⊕ 1NO+2NC <b>L</b>	NB G12000 ⊕ 1NO+2NC <b>L</b>	NF G12000 ⊕ 1NO+2NC <b>L</b>				
NA L12000 ⊕ 1NO+2NC <b>LA</b>	NB L12000 ⊕ 1NO+2NC <b>LA</b>	NF L12000 ⊕ 1NO+2NC <b>LA</b>				
NA H12000 ⊕ 1NO+2NC <b>LO</b>	NB H12000 ⊕ 1NO+2NC <b>LO</b>	NF H12000 ⊕ 1NO+2NC <b>LO</b>				
NA B22000 ⊕ 2NO+2NC <b>R</b>	NB B22000 ⊕ 2NO+2NC <b>R</b>	NF B22000 ⊕ 2NO+2NC <b>R</b>				
NA G22000 ⊕ 2NO+2NC <b>L</b>	NB G22000 ⊕ 2NO+2NC <b>L</b>	NF G22000 ⊕ 2NO+2NC <b>L</b>				
NA L22000 ⊕ 2NO+2NC <b>LA</b>	NB L22000 ⊕ 2NO+2NC <b>LA</b>	NF L22000 ⊕ 2NO+2NC <b>LA</b>				
NA H22000 ⊕ 2NO+2NC <b>LO</b>	NB H22000 ⊕ 2NO+2NC <b>LO</b>	NF H22000 ⊕ 2NO+2NC <b>LO</b>				

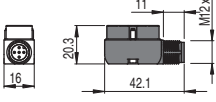
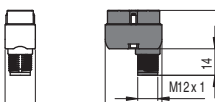
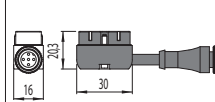
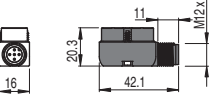
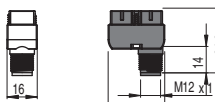

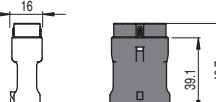




## Connectors with cable

metal connectors for NA and NB housings			Other cable lengths on request	technopolymer connectors for NF housings		
	Cable length (m)	Cable type N = PVC H = PUR HALOGEN FREE			Cable length (m)	Cable type N = PVC H = PUR HALOGEN FREE
VN CM11DN2 1NO+1NC	2	N	VN CP11DN2 1NO+1NC	2	N	
VN CM11DN5 1NO+1NC	5		VN CP11DN5 1NO+1NC	5		
VN CM12DN2 1NO+2NC	2		VN CP12DN2 1NO+2NC	2		
VN CM12DN5 1NO+2NC	5		VN CP12DN5 1NO+2NC	5		
VN CM22DN2 2NO+2NC	2		VN CP22DN2 2NO+2NC	2		
VN CM22DN5 2NO+2NC	5		VN CP22DN5 2NO+2NC	5		
VN CM11DH2 1NO+1NC	2	H	VN CP11DH2 1NO+1NC	2	H	
VN CM11DH5 1NO+1NC	5		VN CP11DH5 1NO+1NC	5		
VN CM12DH2 1NO+2NC	2		VN CP12DH2 1NO+2NC	2		
VN CM12DH5 1NO+2NC	5		VN CP12DH5 1NO+2NC	5		
VN CM22DH2 1NO+2NC	2		VN CP22DH2 1NO+2NC	2		
VN CM22DH5 1NO+2NC	5		VN CP22DH5 1NO+2NC	5		

## 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.**

metal connectors for NA and NB housings			technopolymer connectors for NF housings		
M12 connector, right	M12 connector, bottom	with cable and M12 connector	M12 connector, right	M12 connector, bottom	with cable and M12 connector
					
VN CM11DMK 1NO+1NC	VN CM11SMK 1NO+1NC	VN CM11DM0.2 1NO+1NC	VN CP11DMK 1NO+1NC	VN CP11SMK 1NO+1NC	VN CP11DM0.2 1NO+1NC
VN CM02DMK 2NC	VN CM02SMK 2NC	VN CM02DM0.2 2NC	VN CP02DMK 2NC	VN CP02SMK 2NC	VN CP02DM0.2 2NC
VN CM22DMK 2NO+2NC	VN CM22SMK 2NO+2NC	VN CM22DM0.2 2NO+2NC	VN CP22DMK 2NO+2NC	VN CP22SMK 2NO+2NC	VN CP22DM0.2 2NO+2NC
technopolymer connectors for NA and NB housings			technopolymer connectors for NF housings		
AMP superseal 1.5			AMP superseal 1.5	with cable and M12 connector	
					
VN CM11SAK 1NO+1NC			VN CP11SAK 1NO+1NC	VN CP11DM0.2 1NO+1NC	
VN CM02SAK 2NC			VN CP02SAK 2NC	VN CP02DM0.2 2NC	
VN CM20SAK 2NO			VN CP20SAK 2NO	VN CP22DM0.2 2NO+2NC	

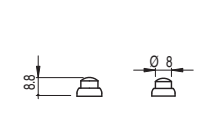
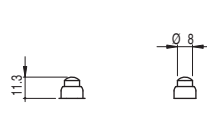
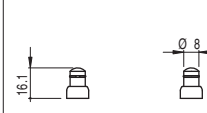
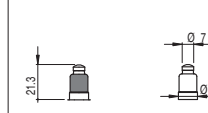
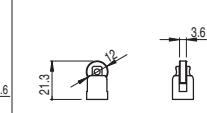
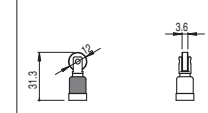
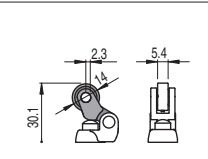
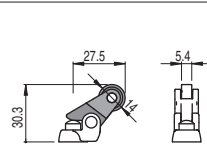
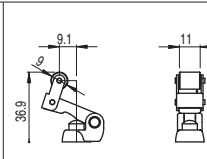
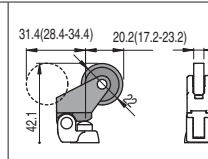
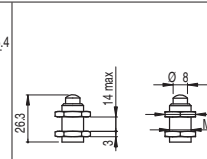
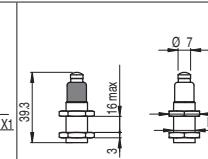
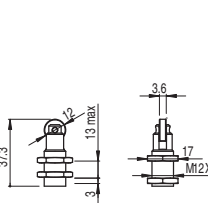
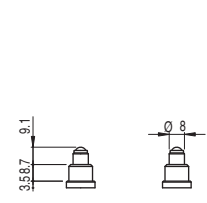
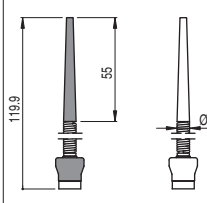
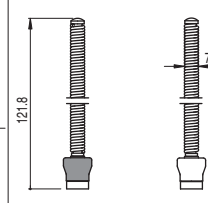
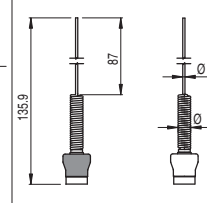
All values in the drawings are in mm

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→ The 2D and 3D files are available at [www.pizzato.com](http://www.pizzato.com)

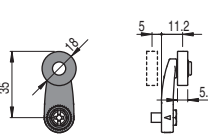
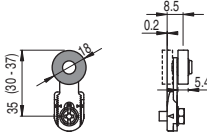
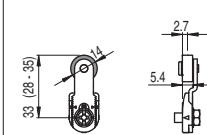
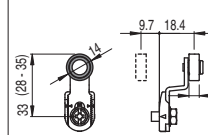
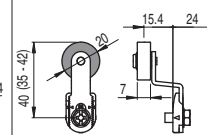
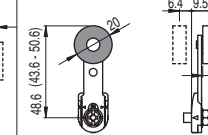
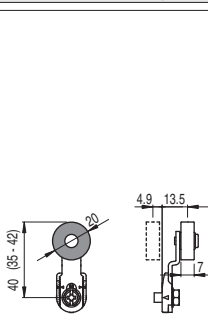
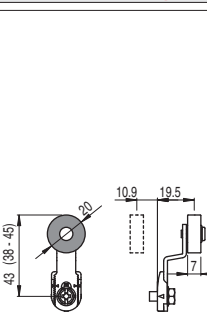
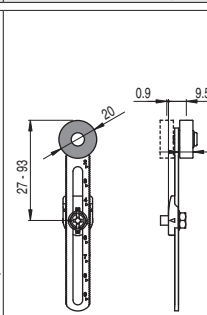
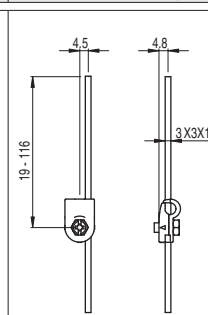
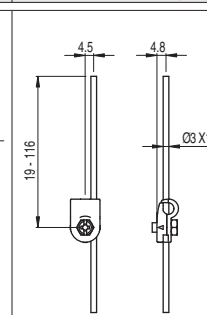
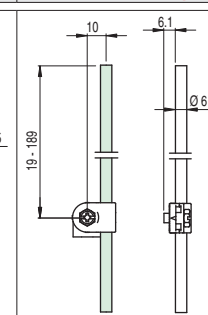
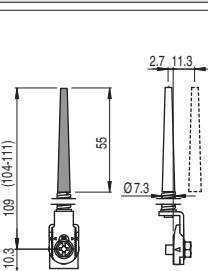
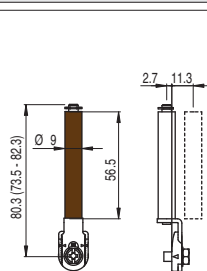
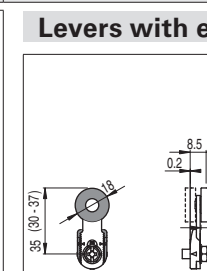
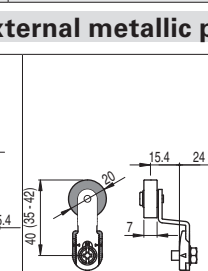
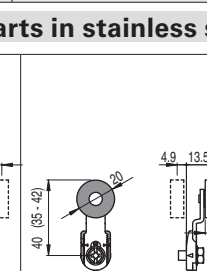
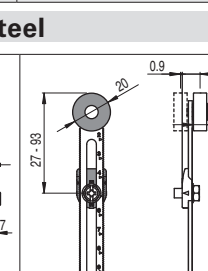


## Actuators

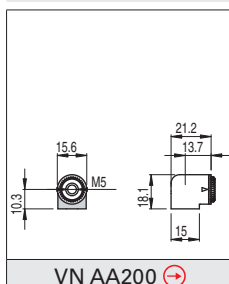
					
VN AA0AA (↻)	VN AA0AB (↻)	VN AA0AC (↻)	VN AA0AE (↻)	VN AA0BB (↻)	VN AA0BE (↻)
					
VN AA0CB (↻)	VN AA0CH (↻)	VN AA0CP (↻)	VN AA0CV (↻)	VN AA0EB (↻)	VN AA0EE (↻)
					
VN AA0FB (↻)	VN AA0GB (↻)	VN AA0HB	VN AA0HE	VN AA0HH	

## Levers

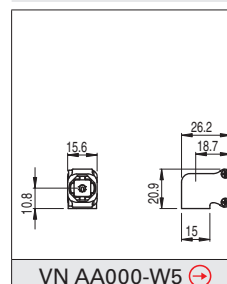
**ATTENTION:** These separate actuators can be used only with items of the NA, NB and NF series.

					
VN A00KA (↻)	VN A00KB (↻)	VN A00KC (↻)	VN A00KD (↻)	VN A00KE (↻)	VN A00KF (↻)
					
VN A00KG (↻)	VN A00KH (↻)	VN A00KP (↻)	VN A00LB	VN A00LE	VN A00LH
<b>Levers with external metallic parts in stainless steel</b>					
					
VN A00LL	VN A00LP (↻)	VN A00KB-V38 (↻)	VN A00KE-V38 (↻)	VN A00KG-V38 (↻)	VN A00KP-V38 (↻)

## Heads



## 90° redirection



All values in the drawings are in mm

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