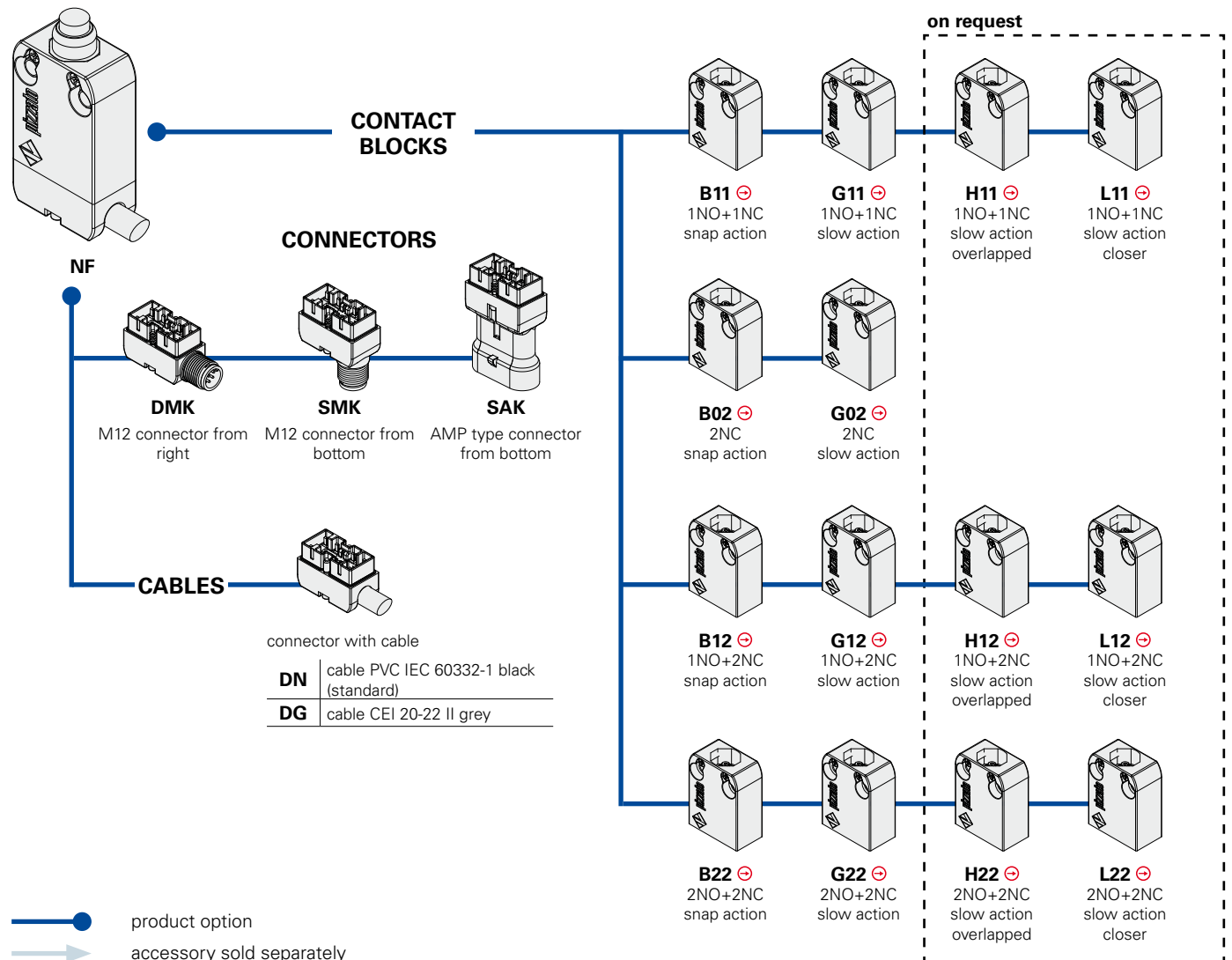
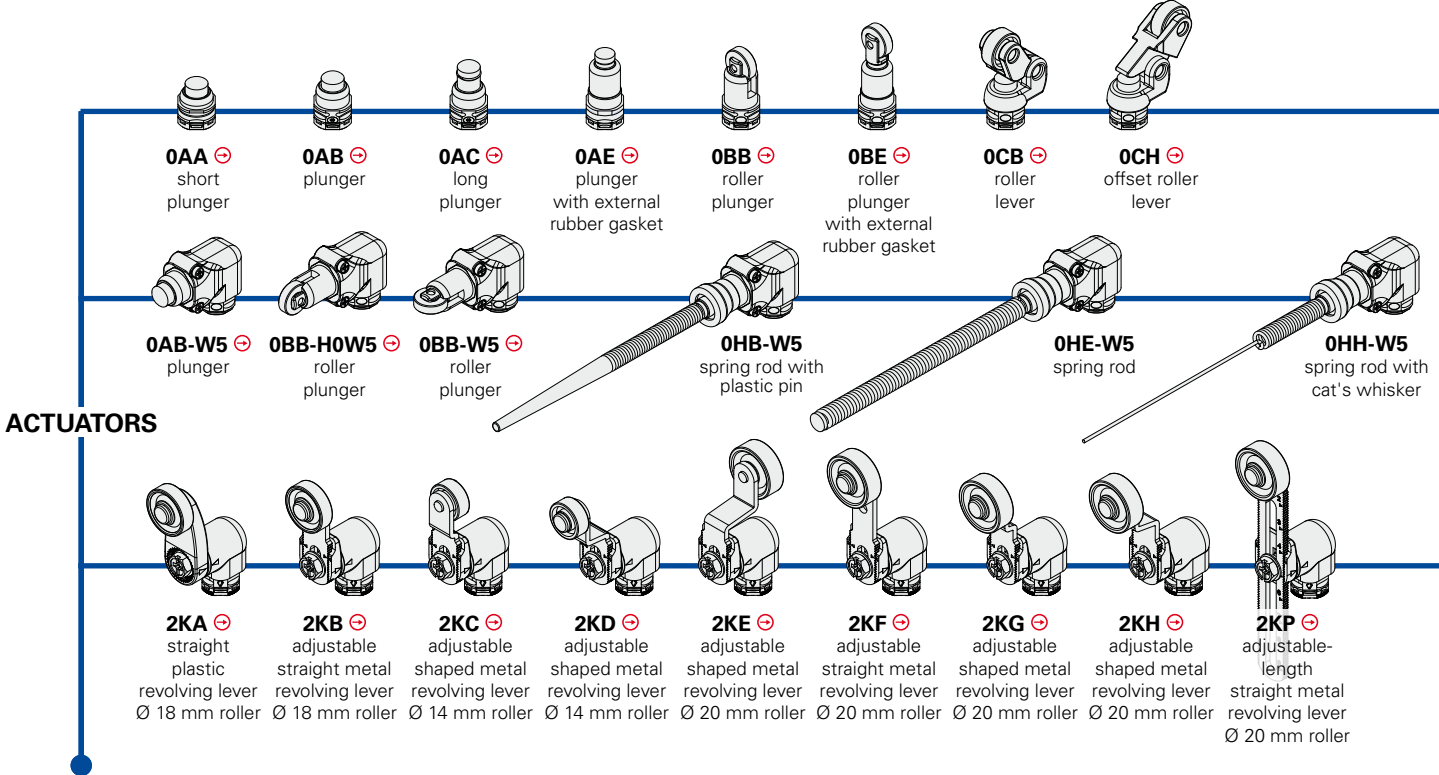
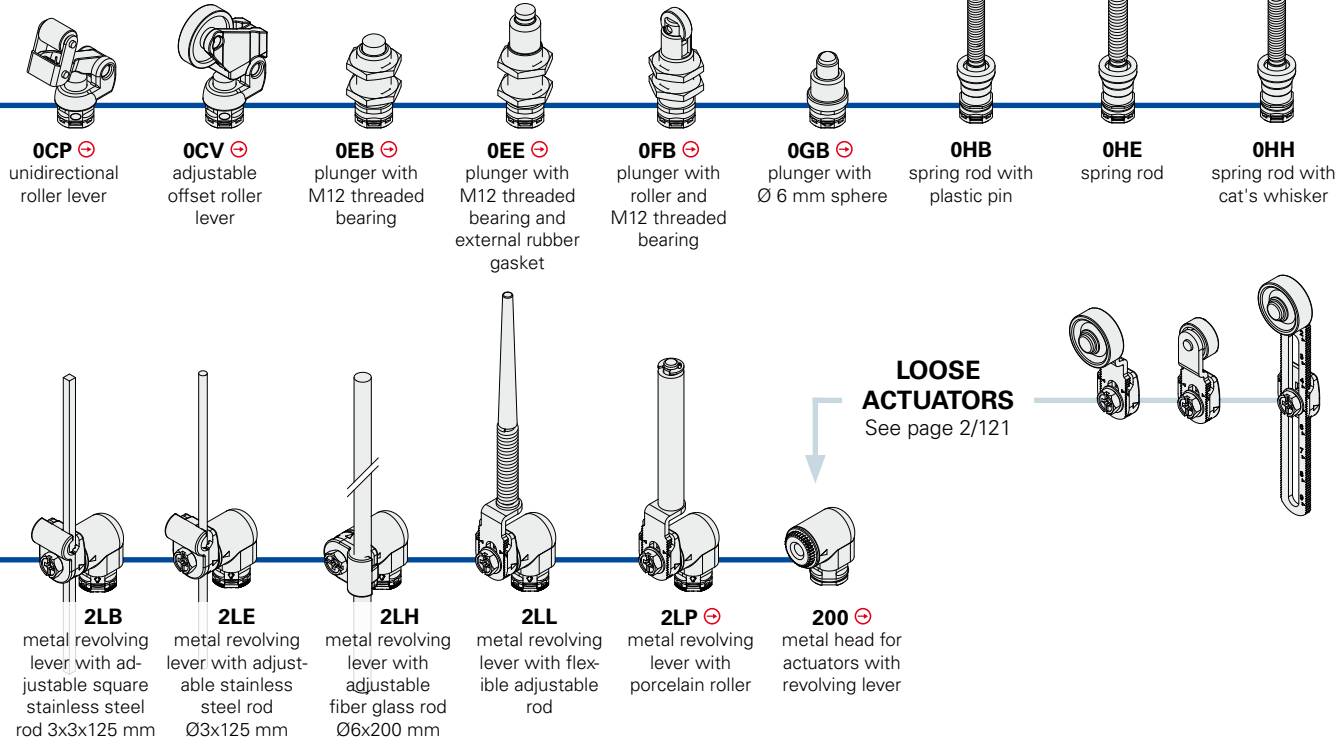


Selection diagram for articles NF series sold assembled



● product option
 → accessory sold separately



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	
NF B110AB-DN2		GR7T6W5	
Housing		Transmission block	
NF polymer, 20 mm holes interaxes		without transmission block	
Contact blocks		W5 90° transmission block	
B11 1NO+1NC, snap action		Utilization temperatures	
B02 2NC, snap action		-25 °C ... +80 °C (standard)	
B12 1NO+2NC, snap action		T6 -40 °C ... +80 °C	
B22 2NO+2NC, snap action		Roller	
G11 1NO+1NC, slow action		with standard roller	
G02 2NC, slow action		R7 with Ø 18 mm plastic roller	
G12 1NO+2NC, slow action		R18 with Ø 14 mm plastic roller	
G22 2NO+2NC, slow action		R19 with Ø 22 mm plastic roller	
H11 1NO+1NC, slow action overlapped		R22 with Ø 20 mm plastic roller	
H12 1NO+2NC, slow action overlapped		R23 with Ø 14 mm stainless steel roller	
H22 2NO+2NC, slow action overlapped		R24 with Ø 20 mm stainless steel roller	
L11 1NO+1NC, slow action closer		R25 with Ø 35 mm plastic roller	
L12 1NO+2NC, slow action closer		Contacts type	
L22 2NO+2NC, slow action closer		silver contacts (standard)	
Other contact blocks on requests.		G silver contacts gold plated 1 µm	
Actuation heads		Cable length	
0 without head		2 cable length 2 m (standard)	
2 head for revolving lever actuators		5 cable length 5 m	
Actuators		K with connector	
AA with short plunger		Other length on requests.	
AB with plunger		Type of cable	
...		N cable PVC IEC 60332-1 black (standard)	
Connection output direction		G cable CEI 20-22 II grey	
D cable or connector from right		M M12 connector	
S connector from bottom		A super seal 1,5 AMP connector	
		Check modularity with table on page 2/114.	



Main data

- Polymer housing, cable output from right or from bottom
- 2 integrated cable types available
- Versions with M12 connector from right or from bottom
- Connector AMP version
- Protection degree IP67 and IP69K
- 14 contact blocks available
- 37 actuators available

Markings and quality marks:



Approval IMQ: CA02.03746
 Approval UL: E131787
 Approval GOST: POCC IT.AB24.B04512

Technical data

Housing

Made of glass-reinforced polymer, self-extinguishing, shock-proof thermoplastic resin with double insulation □

Version with cable integrated, standard length 2 m. Other lengths on request.

Versions with 4 or 8 poles M12 integrated connector

Protection degree:

IP67 according to EN 60529
 IP69K according to DIN 40050

(Protect the cables from direct high-pressure and high-temperature jets)

Saline smoke resistance:

≥ 300 hours in NSS according to ISO 9227

General data

Utilization temperatures:

See table on page 2/114

Max actuation frequency:

3600 operations cycles/hour

Mechanical endurance:

20 million operations cycles¹

Assembling position:

any

Driving torque for installation:

see pages 7/1-7/12

(1) One operation cycle means two movements, one to close and one to open contacts, as foreseen by EN 60947-5-1 standard.

Electrical data

Rated impulse withstand voltage (U_{imp}): 4 kV

Conditional short circuit current: 1000 A according to EN 60947-5-1

Pollution degree:

3

In conformity with standards:

IEC 60947-5-1, EN 60947-5-1, IEC 60204-1, EN 60204-1, EN 1088, EN ISO 12100-1, EN ISO 12100-2, IEC 529, EN 60529, NFC 63-140, VDE 0660-200, VDE 0113.

In conformity with requirements requested by:

Low Voltage Directive 2006/95/EC, Machinery Directive 2006/42/EC and Electromagnetic Compatibility 2004/108/EC.

Positive contact opening in conformity with standards:

IEC 60947-5-1, EN 60947-5-1, VDE 0660-206.

⚠ Installation for persons protection applications:

Use only switches marked with the symbol ☺. The safety circuit must always be connected with the **contacts NC** (normally closed contacts: see "internal connections" on page 2/114) as stated in the **standard EN 60947-5-1, encl. K, par. 2**. The switch must be actuated with **at least up to the positive opening travel** indicated in the travel diagrams at page 7/10. The switch must be actuated **at least with the positive opening force**, shown in brackets, underneath each article, near the value of the min. force. All enforceable standards must be respected.

⚠ If not expressly indicated in this chapter, for the right installation and the correct utilization of all articles see requirements indicated from page 7/1 to page 7/12.

⚠ Attention: switch off the circuit voltage before disconnecting the connector from the switch. The connector is not suitable for sectioning of electrical loads. According to EN 60204-1, versions with 8 poles M12 and AMP connector can be used only in circuits PELV.

Data type approved by IMQ

Rated insulation voltage (U_i): 250 Vac
 Thermal current (I_{th}): 10 A (1-2 contacts) / 6 A (2-3 contacts) / 4 A (4 contacts or 4 poles M12 connector)
 Protection against short circuits (fuse): 10 A (1-2 contacts) / 6 A (2-3 contacts) / 4 A (4 contacts or 4 poles M12 connector) type gG
 Rated impulse withstand voltage (U_{imp}): 4 kV
 Protection degree: IP67
 MA terminals (seamed clamps)
 Pollution degree: 3
 Utilization category: AC15 / DC13 (with connector)
 Operation voltage (U_e): 250 Vac (50 Hz) / 24 Vdc (with connector)
 Operation current (I_e): 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 block 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 conformity with standards: EN 60947-1, EN 60947-5-1+ A1:2009, fundamental requirements of the Low Voltage Directive 2006/95/CE.

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

Data type 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.)

Data of the housing type 1, 4X "indoor use only," 12
 Data of the housing with 1-2-contact versions with N-type cable type 1, 4X "indoor use only"

In conformity with standard: UL 508

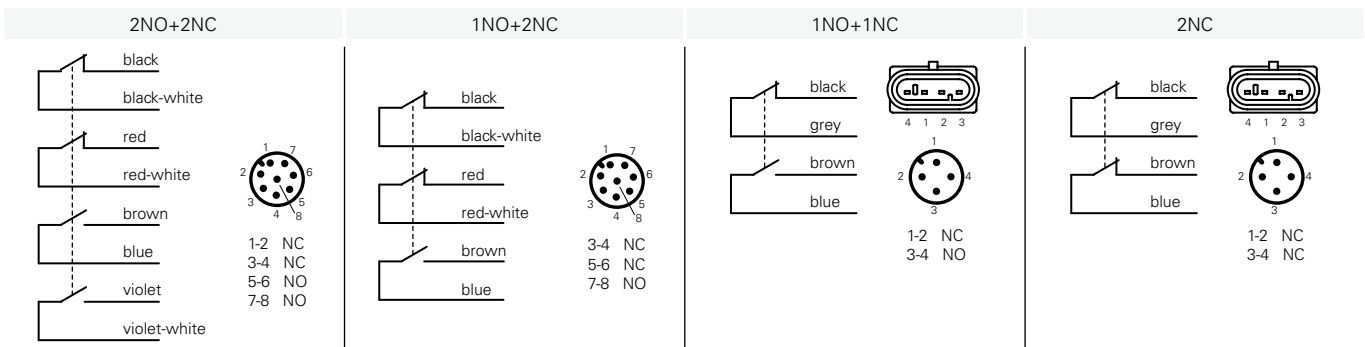
Please contact our technical service for the list of approved products.



Utilization temperatures and electrical data

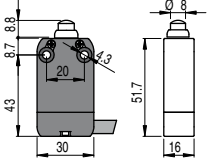
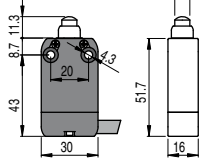
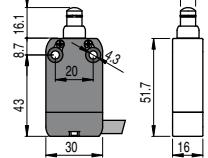
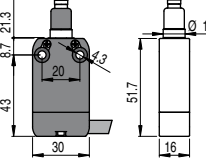
		output with cable				output with connector M12		Output with AMP connector	
		2 contacts versions		3 contacts versions	4 contacts versions	2 contacts versions	3/4 contacts versions	2 contacts versions	
		Cable type N 4x0,75 mm ² ,	Cable type G 4x0,75 mm ² ,	Cable type N 6x0,5 mm ²	Cable type N 8x0,34 mm ²	4 poles M12 connector	8 poles M12 connector	AMP super seal 1,5 connector	
		Sheath PVC H05VV-F, Not flame-spreading IEC 60332-1-2 IEC 60332-1-3	Sheath PVC S05VV-F, Not flame-spreading IEC 60332-1-2 IEC 60332-1-3 IEC 60332-3 CEI 20-22 II	Sheath PVC H05VV-F, Not flame-spreading IEC 60332-1-2 IEC 60332-1-3	Sheath PVC H05VV-F, Not flame-spreading IEC 60332-1-2 IEC 60332-1-3				
		Min. bend radius: 72 mm	Min. bend radius: 72 mm	Min. bend radius 108 mm	Min. bend radius: 94 mm				
		Copper class 5 IEC 60228	Copper class 5 IEC 60228	Copper class 5 IEC 60228	Copper class 5 IEC 60228				
Utilization temperatures Standard	Fixed laying cable	-25°C ... +70°C	-25°C ... +70°C	-25°C ... +80°C	-25°C ... +80°C				
	Flexible laying cable	+5°C ... +70°C	+5°C ... +70°C	-5°C ... +80°C	-5°C ... +80°C		-25°C ... +80°C		
	Dynamic laying cable	/	/	/	/				
	Fixed laying cable	/	/	/	/				
	Flexible laying cable	/	/	/	/		-40°C ... +80°C		
	Dynamic laying cable	/	/	/	/				
Electrical data	Thermal current I _{th}	10 A	10 A	6 A	3 A	4 A	2 A	10 A	
	Rated insulation Voltage U _i	250 Vac	250 Vac	250 Vac	250 Vac	250 Vac 300 Vdc	30 Vac 36 Vdc	250 Vac 300 Vdc	
	Protection against short circuits (fuse)	10 A 500 V type gG	10 A 500 V type gG	6 A 500 V type gG	3 A 500 V type gG	4 A 500 V type gG	2 A 500V type gG	10 A 500 V type gG	
	Utilization categories DC13	24 V	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
		250 V	0,3 A	0,3 A	0,3 A	0,3 A	0,3 A	/	0,3 A
	Utilization categories AC15	24 V	4 A	4 A	4 A	3 A	4 A	2 A	4 A
		120 V	4 A	4 A	4 A	3 A	4 A	/	4 A
		250 V	4 A	4 A	4 A	3 A	4 A	/	4 A
Approvals	CE cULus IMQ	CE	CE cULus IMQ	CE cULus IMQ	CE cULus IMQ	CE cULus IMQ	CE cULus	CE cULus	

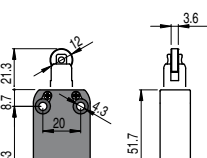
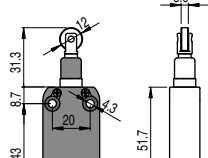
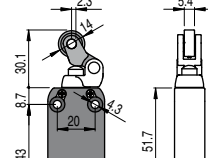
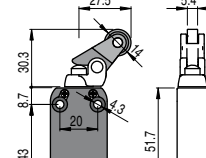
Internal connections



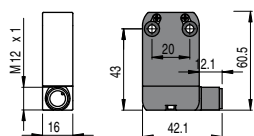
Contacts type:

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

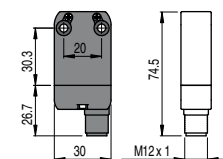
						With external rubber gasket		
Contact blocks								
B11	R NF B110AA-DN2	➔ 1NO+1NC	R NF B110AB-DN2	➔ 1NO+1NC	R NF B110AC-DN2	➔ 1NO+1NC	R NF B110AE-DN2	➔ 1NO+1NC
B02	R NF B020AA-DN2	➔ 2NC	R NF B020AB-DN2	➔ 2NC	R NF B020AC-DN2	➔ 2NC	R NF B020AE-DN2	➔ 2NC
B12	R NF B120AA-DN2	➔ 1NO+2NC	R NF B120AB-DN2	➔ 1NO+2NC	R NF B120AC-DN2	➔ 1NO+2NC	R NF B120AE-DN2	➔ 1NO+2NC
B22	R NF B220AA-DN2	➔ 2NO+2NC	R NF B220AB-DN2	➔ 2NO+2NC	R NF B220AC-DN2	➔ 2NO+2NC	R NF B220AE-DN2	➔ 2NO+2NC
G11	L NF G110AA-DN2	➔ 1NO+1NC	L NF G110AB-DN2	➔ 1NO+1NC	L NF G110AC-DN2	➔ 1NO+1NC	L NF G110AE-DN2	➔ 1NO+1NC
G02	L NF G020AA-DN2	➔ 2NC	L NF G020AB-DN2	➔ 2NC	L NF G020AC-DN2	➔ 2NC	L NF G020AE-DN2	➔ 2NC
G12	L NF G120AA-DN2	➔ 1NO+2NC	L NF G120AB-DN2	➔ 1NO+2NC	L NF G120AC-DN2	➔ 1NO+2NC	L NF G120AE-DN2	➔ 1NO+2NC
G22	L NF G220AA-DN2	➔ 2NO+2NC	L NF G220AB-DN2	➔ 2NO+2NC	L NF G220AC-DN2	➔ 2NO+2NC	L NF G220AE-DN2	➔ 2NO+2NC
Max speed	page 7/9 - type 4		page 7/9 - type 4		page 7/9 - type 4		page 7/9 - type 4	
Min. force	7 N (25 N ➔)		7 N (25 N ➔)		7 N (25 N ➔)		7 N (25 N ➔)	
Travel diagrams	page 7/10 - group 1		page 7/10 - group 1		page 7/10 - group 1		page 7/10 - group 1	

		With external rubber gasket		With stainless steel roller on request		With stainless steel roller on request		
Contact blocks								
B11	R NF B110BB-DN2	➔ 1NO+1NC	R NF B110BE-DN2	➔ 1NO+1NC	R NF B110CB-DN2	➔ 1NO+1NC	R NF B110CH-DN2	➔ 1NO+1NC
B02	R NF B020BB-DN2	➔ 2NC	R NF B020BE-DN2	➔ 2NC	R NF B020CB-DN2	➔ 2NC	R NF B020CH-DN2	➔ 2NC
B12	R NF B120BB-DN2	➔ 1NO+2NC	R NF B120BE-DN2	➔ 1NO+2NC	R NF B120CB-DN2	➔ 1NO+2NC	R NF B120CH-DN2	➔ 1NO+2NC
B22	R NF B220BB-DN2	➔ 2NO+2NC	R NF B220BE-DN2	➔ 2NO+2NC	R NF B220CB-DN2	➔ 2NO+2NC	R NF B220CH-DN2	➔ 2NO+2NC
G11	L NF G110BB-DN2	➔ 1NO+1NC	L NF G110BE-DN2	➔ 1NO+1NC	L NF G110CB-DN2	➔ 1NO+1NC	L NF G110CH-DN2	➔ 1NO+1NC
G02	L NF G020BB-DN2	➔ 2NC	L NF G020BE-DN2	➔ 2NC	L NF G020CB-DN2	➔ 2NC	L NF G020CH-DN2	➔ 2NC
G12	L NF G120BB-DN2	➔ 1NO+2NC	L NF G120BE-DN2	➔ 1NO+2NC	L NF G120CB-DN2	➔ 1NO+2NC	L NF G120CH-DN2	➔ 1NO+2NC
G22	L NF G220BB-DN2	➔ 2NO+2NC	L NF G220BE-DN2	➔ 2NO+2NC	L NF G220CB-DN2	➔ 2NO+2NC	L NF G220CH-DN2	➔ 2NO+2NC
Max speed	page 7/9 - type 2		page 7/9 - type 5		page 7/9 - type 3		page 7/9 - type 3	
Min. force	7 N (25 N ➔)		7 N (25 N ➔)		5 N (25 N ➔)		5 N (25 N ➔)	
Travel diagrams	page 7/10 - group 1		page 7/10 - group 1		page 7/10 - group 2		page 7/10 - group 2	

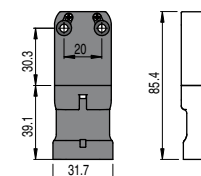
M12 connector output from right



M12 connector output from bottom



AMP superseal 1,5 connector



In order to buy a product with M12 connector output from right substitute on above mentioned codes DN2 with DMK. Example: NF B110AA-DN2 → NF B110AA-DMK

In order to buy a product with M12 connector output from bottom substitute on above mentioned codes DN2 with SMK. Example: NF B110AA-DN2 → NF B110AA-SMK

In order to buy a product with AMP type connector output substitute on above mentioned codes DN2 with SAK. Example: NF B110AA-DN2 → NF B110AA-SAK

All measures in the drawings are in mm

Contacts type:	No switching		Switching		Fixed only by threaded head		Fixed only by threaded head With external rubber gasket	
R = snap action L = slow action								
Contact blocks								
B11 R	NF B110CP-DN2	⊕ 1NO+1NC	NF B110CV-DN2	⊕ 1NO+1NC	NF B110EB-DN2	⊕ 1NO+1NC	NF B110EE-DN2	⊕ 1NO+1NC
B02 R	NF B020CP-DN2	⊕ 2NC	NF B020CV-DN2	⊕ 2NC	NF B020EB-DN2	⊕ 2NC	NF B020EE-DN2	⊕ 2NC
B12 R	NF B120CP-DN2	⊕ 1NO+2NC	NF B120CV-DN2	⊕ 1NO+2NC	NF B120EB-DN2	⊕ 1NO+2NC	NF B120EE-DN2	⊕ 1NO+2NC
B22 R	NF B220CP-DN2	⊕ 2NO+2NC	NF B220CV-DN2	⊕ 2NO+2NC	NF B220EB-DN2	⊕ 2NO+2NC	NF B220EE-DN2	⊕ 2NO+2NC
G11 L	NF G110CP-DN2	⊕ 1NO+1NC	NF G110CV-DN2	⊕ 1NO+1NC	NF G110EB-DN2	⊕ 1NO+1NC	NF G110EE-DN2	⊕ 1NO+1NC
G02 L	NF G020CP-DN2	⊕ 2NC	NF G020CV-DN2	⊕ 2NC	NF G020EB-DN2	⊕ 2NC	NF G020EE-DN2	⊕ 2NC
G12 L	NF G120CP-DN2	⊕ 1NO+2NC	NF G120CV-DN2	⊕ 1NO+2NC	NF G120EB-DN2	⊕ 1NO+2NC	NF G120EE-DN2	⊕ 1NO+2NC
G22 L	NF G220CP-DN2	⊕ 2NO+2NC	NF G220CV-DN2	⊕ 2NO+2NC	NF G220EB-DN2	⊕ 2NO+2NC	NF G220EE-DN2	⊕ 2NO+2NC
Max speed	page 7/9 - type 3		page 7/9 - type 3		page 7/9 - type 4		page 7/9 - type 4	
Min. force	3 N (25 N ⊕)		3 N (25 N ⊕)		7 N (25 N ⊕)		7 N (25 N ⊕)	
Travel diagrams	page 7/10 - group 6		page 7/10 - group 3		page 7/10 - group 1		page 7/10 - group 1	

Contact blocks	Fixed only by threaded head		Plunger with Ø 6 mm sphere		With external rubber gasket		With external rubber gasket	
B11 R	NF B110FB-DN2	⊕ 1NO+1NC	NF B110GB-DN2	⊕ 1NO+1NC	NF B110HB-DN2	1NO+1NC	NF B110HE-DN2	1NO+1NC
B02 R	NF B020FB-DN2	⊕ 2NC	NF B020GB-DN2	⊕ 2NC	NF B020HB-DN2	2NC	NF B020HE-DN2	2NC
B12 R	NF B120FB-DN2	⊕ 1NO+2NC	NF B120GB-DN2	⊕ 1NO+2NC	NF B120HB-DN2	1NO+2NC	NF B120HE-DN2	1NO+2NC
B22 R	NF B220FB-DN2	⊕ 2NO+2NC	NF B220GB-DN2	⊕ 2NO+2NC	NF B220HB-DN2	2NO+2NC	NF B220HE-DN2	2NO+2NC
G11 L	NF G110FB-DN2	⊕ 1NO+1NC	NF G110GB-DN2	⊕ 1NO+1NC	NF G020HB-DN2	2NC	NF G020HE-DN2	2NC
G02 L	NF G020FB-DN2	⊕ 2NC	NF G020GB-DN2	⊕ 2NC				
G12 L	NF G120FB-DN2	⊕ 1NO+2NC	NF G120GB-DN2	⊕ 1NO+2NC				
G22 L	NF G220FB-DN2	⊕ 2NO+2NC	NF G220GB-DN2	⊕ 2NO+2NC				
Max speed	page 7/9 - type 2		page 7/9 - type 2		1 m/s		1 m/s	
Min. force	7 N (25 N ⊕)		7 N (25 N ⊕)		0,03 Nm		0,07 Nm	
Travel diagrams	page 7/10 - group 1		page 7/10 - group 1		page 7/10 - group 4		page 7/10 - group 4	

Accessories

Article VN DT1F **Description** Spacers for NA-NF series

By interposing spacers between the switches, it is possible to join two or more prewired switches, preventing them from moving one against the other.

10 pcs packs

Article VF CA...M **Description** Female wired connectors

General data:

- Self locking ring nut
- High flexibility wire suitable for dynamic laying applications (copper class 6)
- Gold plated contact (resistance < 5 mΩ)
- Connector body in polyurethane

See page 6/2

Items with code on the **green** background are available in stock

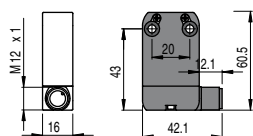
Contacts type:

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

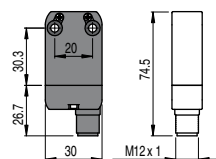
	With external rubber gasket		With stainless steel roller on request		With stainless steel roller on request		With stainless steel roller on request	
Contact blocks								
B11	R	NF B110HH-DN2 1NO+1NC	NF B112KA-DN2	⊕ 1NO+1NC	NF B112KB-DN2	⊕ 1NO+1NC	NF B112KC-DN2	⊕ 1NO+1NC
B02	R	NF B020HH-DN2 2NC	NF B022KA-DN2	⊕ 2NC	NF B022KB-DN2	⊕ 2NC	NF B022KC-DN2	⊕ 2NC
B12	R	NF B120HH-DN2 1NO+2NC	NF B122KA-DN2	⊕ 1NO+2NC	NF B122KB-DN2	⊕ 1NO+2NC	NF B122KC-DN2	⊕ 1NO+2NC
B22	R	NF B220HH-DN2 2NO+2NC	NF B222KA-DN2	⊕ 2NO+2NC	NF B222KB-DN2	⊕ 2NO+2NC	NF B222KC-DN2	⊕ 2NO+2NC
G11	L		NF G112KA-DN2	⊕ 1NO+1NC	NF G112KB-DN2	⊕ 1NO+1NC	NF G112KC-DN2	⊕ 1NO+1NC
G02	L	NF G020HH-DN2 2NC	NF G022KA-DN2	⊕ 2NC	NF G022KB-DN2	⊕ 2NC	NF G022KC-DN2	⊕ 2NC
G12	L		NF G122KA-DN2	⊕ 1NO+2NC	NF G122KB-DN2	⊕ 1NO+2NC	NF G122KC-DN2	⊕ 1NO+2NC
G22	L		NF G222KA-DN2	⊕ 2NO+2NC	NF G222KB-DN2	⊕ 2NO+2NC	NF G222KC-DN2	⊕ 2NO+2NC
Max speed	1 m/s		page 7/9 - type 1		page 7/9 - type 1		page 7/9 - type 1	
Min. force	0,03 Nm		0,07 Nm (0,25 Nm ⊕)		0,07 Nm (0,25 Nm ⊕)		0,07 Nm (0,25 Nm ⊕)	
Travel diagrams	page 7/10 - group 4		page 7/10 - group 5		page 7/10 - group 5		page 7/10 - group 5	

	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 blocks								
B11	R	NF B112KD-DN2 ⊕ 1NO+1NC	NF B112KE-DN2	⊕ 1NO+1NC	NF B112KF-DN2	⊕ 1NO+1NC	NF B112KG-DN2	⊕ 1NO+1NC
B02	R	NF B022KD-DN2 ⊕ 2NC	NF B022KE-DN2	⊕ 2NC	NF B022KF-DN2	⊕ 2NC	NF B022KG-DN2	⊕ 2NC
B12	R	NF B122KD-DN2 ⊕ 1NO+2NC	NF B122KE-DN2	⊕ 1NO+2NC	NF B122KF-DN2	⊕ 1NO+2NC	NF B122KG-DN2	⊕ 1NO+2NC
B22	R	NF B222KD-DN2 ⊕ 2NO+2NC	NF B222KE-DN2	⊕ 2NO+2NC	NF B222KF-DN2	⊕ 2NO+2NC	NF B222KG-DN2	⊕ 2NO+2NC
G11	L	NF G112KD-DN2 ⊕ 1NO+1NC	NF G112KE-DN2	⊕ 1NO+1NC	NF G112KF-DN2	⊕ 1NO+1NC	NF G112KG-DN2	⊕ 1NO+1NC
G02	L	NF G022KD-DN2 ⊕ 2NC	NF G022KE-DN2	⊕ 2NC	NF G022KF-DN2	⊕ 2NC	NF G022KG-DN2	⊕ 2NC
G12	L	NF G122KD-DN2 ⊕ 1NO+2NC	NF G122KE-DN2	⊕ 1NO+2NC	NF G122KF-DN2	⊕ 1NO+2NC	NF G122KG-DN2	⊕ 1NO+2NC
G22	L	NF G222KD-DN2 ⊕ 2NO+2NC	NF G222KE-DN2	⊕ 2NO+2NC	NF G222KF-DN2	⊕ 2NO+2NC	NF G222KG-DN2	⊕ 2NO+2NC
Max speed	page 7/9 - type 1		page 7/9 - type 1		page 7/9 - type 1		page 7/9 - type 1	
Min. force	0,07 Nm (0,25 Nm ⊕)		0,07 Nm (0,25 Nm ⊕)		0,07 Nm (0,25 Nm ⊕)		0,07 Nm (0,25 Nm ⊕)	
Travel diagrams	page 7/10 - group 5		page 7/10 - group 5		page 7/10 - group 5		page 7/10 - group 5	

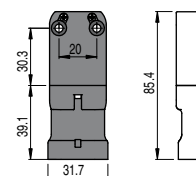
M12 connector output from right



M12 connector output from bottom



AMP superseal 1,5 connector



In order to buy a product with M12 connector output from right substitute in above mentioned codes DN2 with DMK. Example:
NF B110AA-DN2 → NF B110AA-DMK

In order to buy a product with M12 connector output from bottom substitute in above mentioned codes DN2 with SMK. Example:
NF B110AA-DN2 → NF B110AA-SMK

In order to buy a product with AMP type connector output substitute in above mentioned codes DN2 with SAK. Example:
NF B110AA-DN2 → NF B110AA-SAK

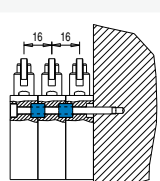


Contacts type:	With stainless steel roller on request		With stainless steel roller on request		Stainless steel 3x3 mm square rod		Ø 3 mm stainless steel round rod				
R = snap action L = slow action											
Contact blocks											
B11	R	NF B112KH-DN2	⊕	1NO+1NC	NF B112KP-DN2	⊕	1NO+1NC	NF B112LB-DN2	1NO+1NC	NF B112LE-DN2	1NO+1NC
B02	R	NF B022KH-DN2	⊕	2NC	NF B022KP-DN2	⊕	2NC	NF B022LB-DN2	2NC	NF B022LE-DN2	2NC
B12	R	NF B122KH-DN2	⊕	1NO+2NC	NF B122KP-DN2	⊕	1NO+2NC	NF B122LB-DN2	1NO+2NC	NF B122LE-DN2	1NO+2NC
B22	R	NF B222KH-DN2	⊕	2NO+2NC	NF B222KP-DN2	⊕	2NO+2NC	NF B222LB-DN2	2NO+2NC	NF B222LE-DN2	2NO+2NC
G11	L	NF G112KH-DN2	⊕	1NO+1NC	NF G112KP-DN2	⊕	1NO+1NC	NF G112LB-DN2	1NO+1NC	NF G112LE-DN2	1NO+1NC
G02	L	NF G022KH-DN2	⊕	2NC	NF G022KP-DN2	⊕	2NC	NF G022LB-DN2	2NC	NF G022LE-DN2	2NC
G12	L	NF G122KH-DN2	⊕	1NO+2NC	NF G122KP-DN2	⊕	1NO+2NC	NF G122LB-DN2	1NO+2NC	NF G122LE-DN2	1NO+2NC
G22	L	NF G222KH-DN2	⊕	2NO+2NC	NF G222KP-DN2	⊕	2NO+2NC	NF G222LB-DN2	2NO+2NC	NF G222LE-DN2	2NO+2NC
Max speed	page 7/9 - type 1		page 7/9 - type 1		1,5 m/s		1,5 m/s				
Min. force	0,07 Nm (0,25 Nm ⊕)		0,07 Nm (0,25 Nm ⊕)		0,07 Nm		0,07 Nm				
Travel diagrams	page 7/10 - group 5		page 7/10 - group 5		page 7/10 - group 5		page 7/10 - group 5				


Contacts blocks	Fiber glass rod		Fiber glass rod		Porcelain roller		
B11	R	NF B112LH-DN2	1NO+1NC	NF B112LL-DN2	1NO+1NC	NF B112LP-DN2E24	⊕ 1NO+1NC
B02	R	NF B022LH-DN2	2NC	NF B022LL-DN2	2NC	NF B022LP-DN2E24	⊕ 2NC
B12	R	NF B122LH-DN2	1NO+2NC	NF B122LL-DN2	1NO+2NC	NF B122LP-DN2E24	⊕ 1NO+2NC
B22	R	NF B222LH-DN2	2NO+2NC	NF B222LL-DN2	2NO+2NC	NF B222LP-DN2E24	⊕ 2NO+2NC
G11	L	NF G112LH-DN2	1NO+1NC	NF G112LL-DN2	1NO+1NC	NF G112LP-DN2E24	⊕ 1NO+1NC
G02	L	NF G022LH-DN2	2NC	NF G022LL-DN2	2NC	NF G022LP-DN2E24	⊕ 2NC
G12	L	NF G122LH-DN2	1NO+2NC	NF G122LL-DN2	1NO+2NC	NF G122LP-DN2E24	⊕ 1NO+2NC
G22	L	NF G222LH-DN2	2NO+2NC	NF G222LL-DN2	2NO+2NC	NF G222LP-DN2E24	⊕ 2NO+2NC
Max speed	1,5 m/s		1,5 m/s		0,5 m/s		
Min. force	0,07 Nm		0,07 Nm		0,04 Nm		
Travel diagrams	page 7/10 - group 5		page 7/10 - group 5		page 7/10 - group 5		

Accessories

Article	Description
VN DT1F	Spacers for NA-NF series By interposing spacers between the switches, it is possible to join two or more prewired switches, preventing them from moving one against the other. 10 pcs packs



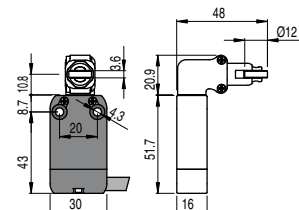
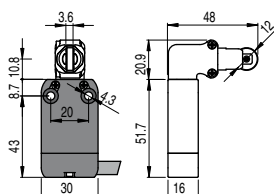
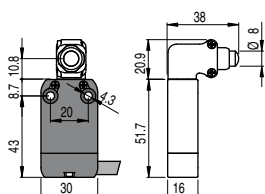
Article	Description
VF CA***M	Female wired connectors General data: - Self locking ring nut - High flexibility wire suitable for dynamic laying applications (copper class 6) - Gold plated contact (resistance < 5 mΩ) - Connector body in polyurethane See page 6/2



Items with code on the green background are available in stock

Contacts type:

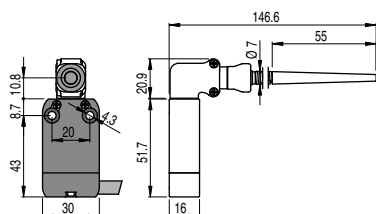
- R** = snap action
- L** = slow action



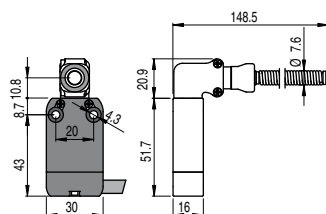
Contact blocks

B11	R	NF B110AB-DN2W5	⊕ 1NO+1NC	NF B110BB-DN2H0W5	⊕ 1NO+1NC	NF B110BB-DN2W5	⊕ 1NO+1NC
B02	R	NF B020AB-DN2W5	⊕ 2NC	NF B020BB-DN2H0W5	⊕ 2NC	NF B020BB-DN2W5	⊕ 2NC
B12	R	NF B120AB-DN2W5	⊕ 1NO+2NC	NF B120BB-DN2H0W5	⊕ 1NO+2NC	NF B120BB-DN2W5	⊕ 1NO+2NC
B22	R	NF B220AB-DN2W5	⊕ 2NO+2NC	NF B220BB-DN2H0W5	⊕ 2NO+2NC	NF B220BB-DN2W5	⊕ 2NO+2NC
G11	L	NF G110AB-DN2W5	⊕ 1NO+1NC	NF G110BB-DN2H0W5	⊕ 1NO+1NC	NF G110BB-DN2W5	⊕ 1NO+1NC
G02	L	NF G020AB-DN2W5	⊕ 2NC	NF G020BB-DN2H0W5	⊕ 2NC	NF G020BB-DN2W5	⊕ 2NC
G12	L	NF G120AB-DN2W5	⊕ 1NO+2NC	NF G120BB-DN2H0W5	⊕ 1NO+2NC	NF G120BB-DN2W5	⊕ 1NO+2NC
G22	L	NF G220AB-DN2W5	⊕ 2NO+2NC	NF G220BB-DN2H0W5	⊕ 2NO+2NC	NF G220BB-DN2W5	⊕ 2NO+2NC
Max speed		page 7/9 - type 4		page 7/9 - type 2		page 7/9 - type 2	
Min. force		9,5 N (25 N ⊕)		9,5 N (25 N ⊕)		9,5 N (25 N ⊕)	
Travel diagrams		page 7/10 - group 1		page 7/10 - group 1		page 7/10 - group 1	

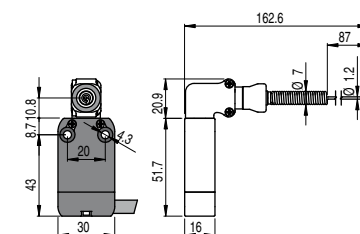
With external rubber gasket



With external rubber gasket



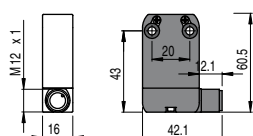
With external rubber gasket



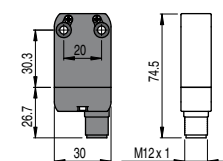
Contact blocks

B11	R	NF B110HB-DN2W5	1NO+1NC	NF B110HE-DN2W5	1NO+1NC	NF B110HH-DN2W5	1NO+1NC
B02	R	NF B020HB-DN2W5	2NC	NF B020HE-DN2W5	2NC	NF B020HH-DN2W5	2NC
B12	R	NF B120HB-DN2W5	1NO+2NC	NF B120HE-DN2W5	1NO+2NC	NF B120HH-DN2W5	1NO+2NC
B22	R	NF B220HB-DN2W5	2NO+2NC	NF B220HE-DN2W5	2NO+2NC	NF B220HH-DN2W5	2NO+2NC
G11	L						
G02	L	NF G020HB-DN2W5	2NC	NF G020HE-DN2W5	2NC	NF G020HH-DN2W5	2NC
G12	L						
G22	L						
Max speed		1 m/s		1 m/s		1 m/s	
Min. force		0,08 Nm		0,12 Nm		0,08 Nm	
Travel diagrams		page 7/10 - group 4		page 7/10 - group 4		page 7/10 - group 4	

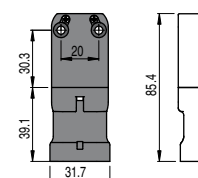
M12 connector output from right



M12 connector output from bottom



AMP superseal 1,5 connector



In order to buy a product with M12 connector output from right substitute on above mentioned codes DN2 with DMK. Example:
NF B110AA-DN2 → NF B110AA-DMK

In order to buy a product with M12 connector output from bottom substitute on above mentioned codes DN2 with SMK. Example:
NF B110AA-DN2 → NF B110AA-SMK

In order to buy a product AMP connector output substitute on above mentioned codes DN2 with SAK. Example:
NF B110AA-DN2 → NF B110AA-SAK

