



Hand in hand for tomorrow



Product data sheet

Inductive proximity switches NI

Reliable. Non-contact. Easy assembly.

NI inductive proximity switches

Inductive proximity switches are used to scan the current status of automation components. The NI proximity switches are available with a 30 cm molded cable or with a direct connection.

Field of application

Sensors are used for monitoring gripping and rotary modules, as well as linear modules, and robot accessories. Inductive SCHUNK sensors detect metals without contact, and are resistant to vibration, dust, and water. The sensors are suitable for connection to a digital input module. For connection with a digital input module (utilization categorie DC-12).

Advantages – Your benefits

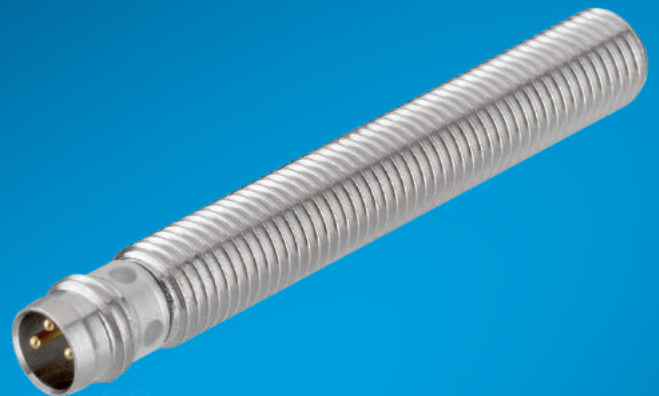
Mounting with brackets for easy and fast assembly

Version with LED display for control of the switching position directly at the sensor

Version with standard plug connector for fast and easy exchangeability of the extension cable

Very flexible cable in PUR version for a long service life

Proximity switches for flush mounting for minimal interfering contours in the application



Options and special information

High protection class: IP67 when plugged in, for use in clean or dusty environments or in case of contact with water. Operability in case of contact with other media (coolant, acids, bases, etc.) is often given, however cannot be guaranteed by SCHUNK.

Power supply: 10 – 30 V DC at < 15% residual ripple

Type of switching: PNP

Warranty: 24 months

Application example



Handling and rotary unit for components with sensor monitoring on the gripping module

① IN sensors

② Universal rotary actuator SRM

③ 2-finger parallel gripper PGN-plus-P

④ KST cable connector

SCHUNK offers more ...

The following components make the product even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



2-finger parallel gripper



Rotary unit

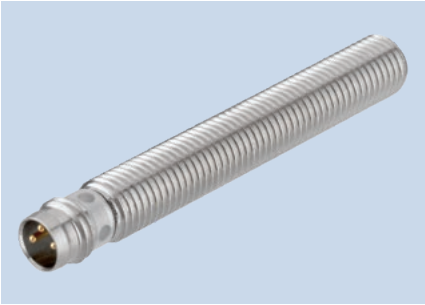


Sensor cables



Sensor distributor

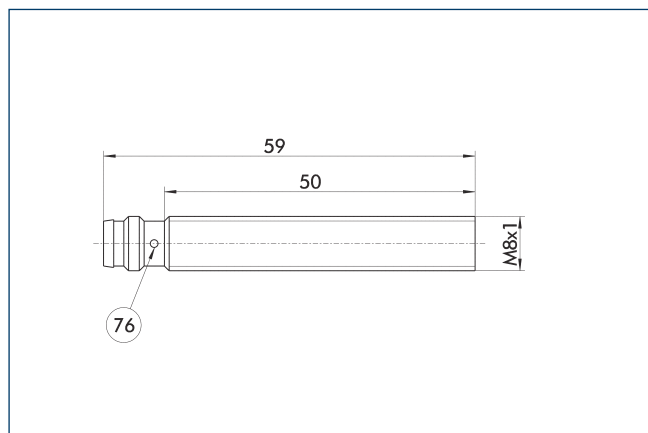
① For more information on these products can be found on the following product pages or at schunk.com.



Technical data

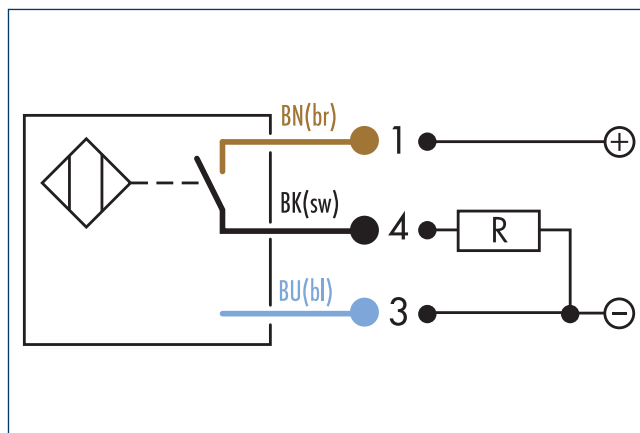
Description		NI 30-KT
ID		0313429
Operating principle		
Switching function		Closer
Type of switching		PNP
Switching distance	[mm]	1.5
Switching hysteresis from the nominal switching distance		< 15%
Max. switching frequency	[Hz]	5000
Linearity error		
Min./max. ambient temperature	[°C]	-25/70
Tightness IP (sensor, connected)		65
Type of voltage		DC
Nominal voltage	[V]	24
Min. voltage	[V]	10
Max. voltage	[V]	30
Max. switching current	[A]	0.3
Cable connector/cable end		M8

NI 30

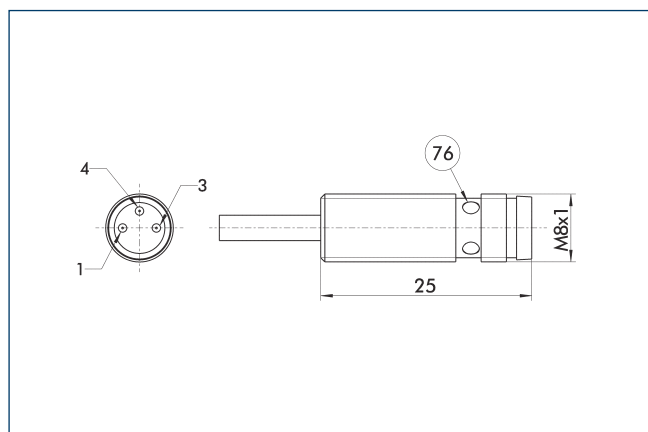


76 LED

Wiring diagram closer PNP



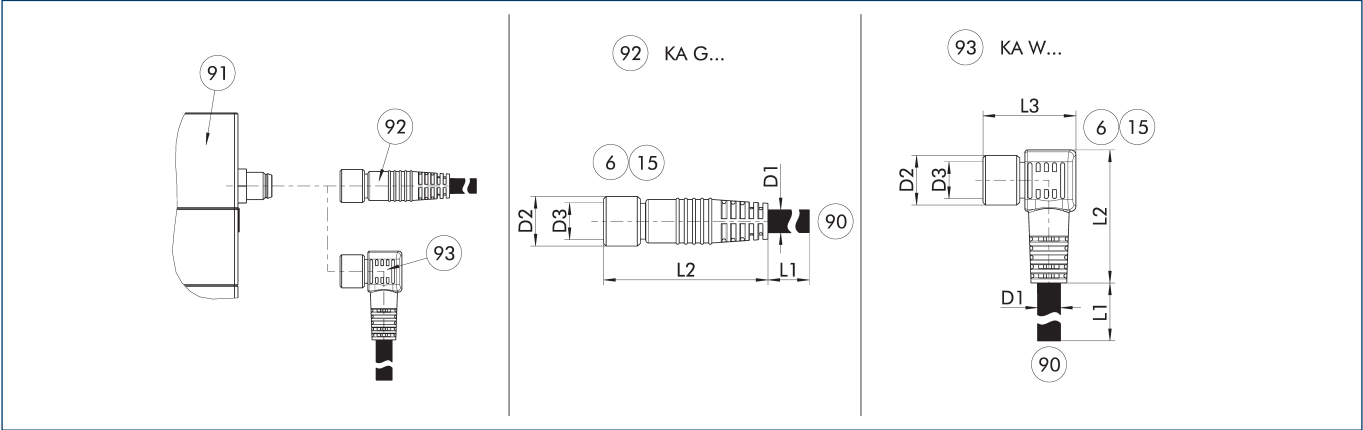
M8 connector



76 LED

The plug has no coupling ring. The cable extension or the sensor distributor has to be equipped with a coupling ring.

Voltage supply/signals connection cable



- KA G...

KA W...
- Connection cable with straight socket

Connection cable with angular socket
- 6

15

90
- Connection module side

Socket

SAC connection cable with open wire strands
- 91

92

93
- Connection plug component

Cable with straight female connector

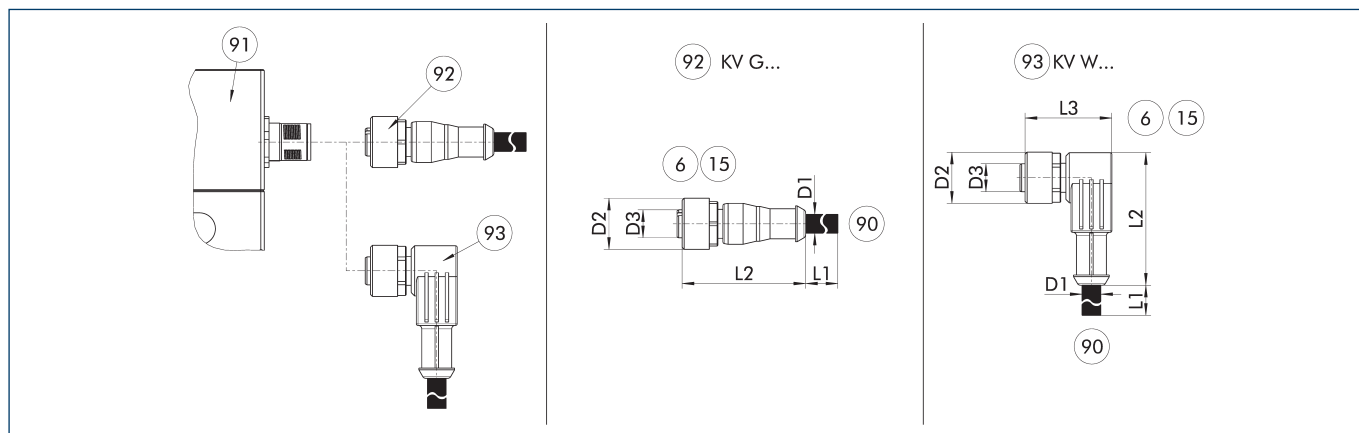
Cable with angled female connector

The connection cable is ideal for connecting the corresponding components to the controller or the power supply unit. The connection cable has an M8 socket on one side and an open wire strand on the other side for individual connections. The connection cables are suitable for use both in the cable track as well as in torsion applications.

Description	ID	L1	D1	D3	Often combined
		[m]	[mm]		
Connection cables					
KA BG08-L 3P-0300-PNP	0301622	3	4.5		●
KA BG08-L 3P-0500-PNP	0301623	5	4.5	M8	
KA BW08-L 3P-0300-PNP	0301594	3	4.5		
KA BW08-L 3P-0500-PNP	0301502	5	4.5	M8	

ⓘ Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

IO-Link cable extension



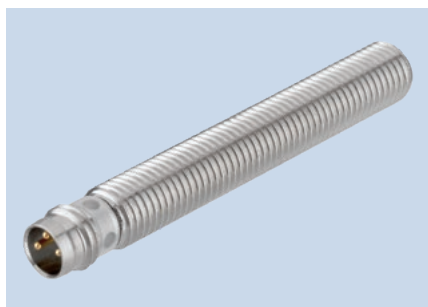
The cable extensions are ideal for connecting the relevant components to the control system, or for use as extension cables. The cable extensions have a 4-pin M8 socket with a straight or angled design on the module side and a 4-pin M8 connector with a straight design on the other side. The cable extensions are suitable for use in the cable track and in torsion applications.

- ⑥ Connection module side
- ⑮ Socket
- ⑨ Cable end with straight connector

- ⑨ Connection plug component
- ⑨ Cable with straight female connector
- ⑨ Cable with angled female connector

Description	ID	L1 [m]	D1 [mm]	Often combined
Cable extension				
KV BW08-SG08 3P-0030-PNP	0301495	0.3	1.25	
KV BW08-SG08 3P-0100-PNP	0301496	1	1.25	
KV BW08-SG08 3P-0200-PNP	0301497	2	1.25	●

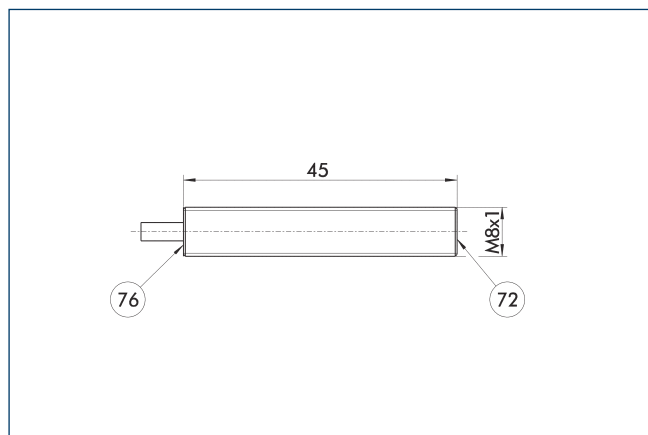
① Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.



Technical data

Description		NI 32
ID		0313425
Operating principle		
Switching function		Closer
Type of switching		PNP
Switching distance	[mm]	1.5
Switching hysteresis from the nominal switching distance		< 15%
Max. switching frequency	[Hz]	3000
Linearity error		
Min./max. ambient temperature	[°C]	-25/70
Tightness IP (sensor, connected)		65
Type of voltage		DC
Nominal voltage	[V]	24
Min. voltage	[V]	10
Max. voltage	[V]	30
Max. switching current	[A]	0.2
Cable diameter D	[mm]	3.5
Min. bending radius (dynamic)	[mm]	35
Min. bending radius (static)	[mm]	17.5
Cable length L	[cm]	30
Cable connector/cable end		M8

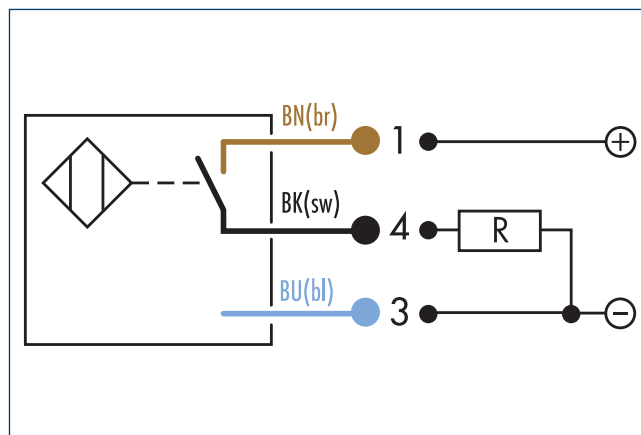
NI 32



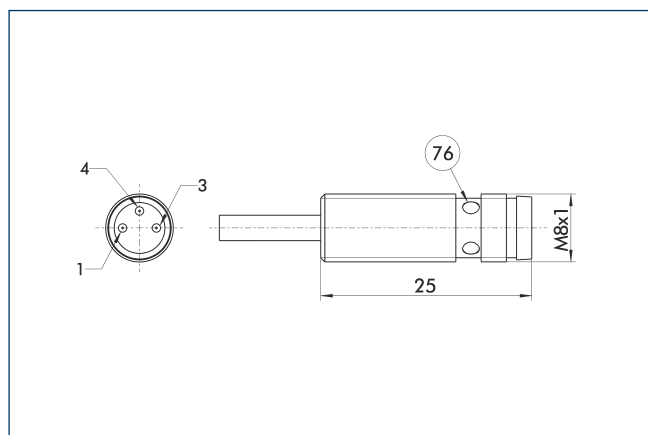
72 Active sensor surface

76 LED

Wiring diagram closer PNP



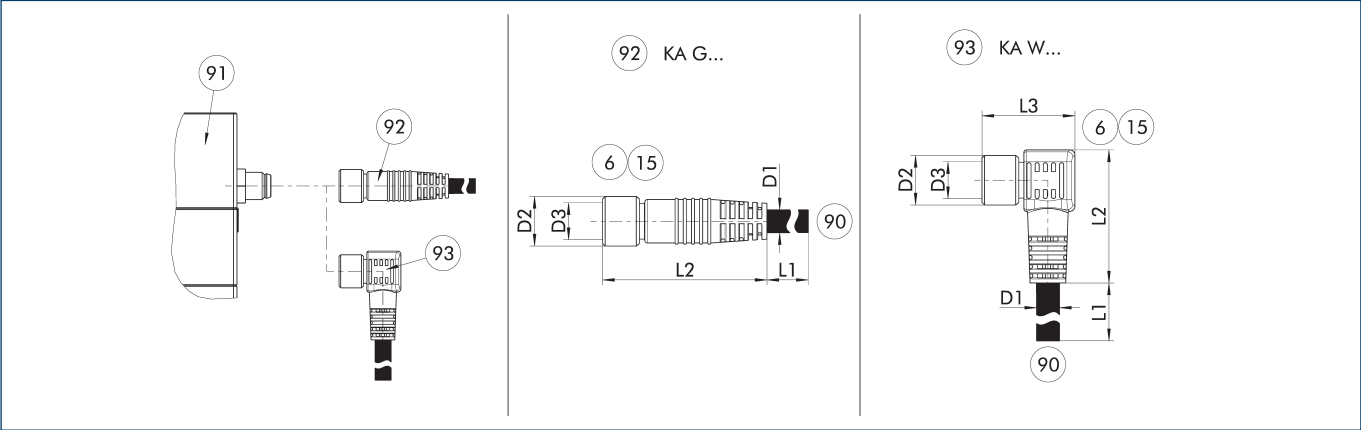
M8 connector



76 LED

The plug has no coupling ring. The cable extension or the sensor distributor has to be equipped with a coupling ring.

Voltage supply/signals connection cable



- KA G...

KA W...
- Connection cable with straight socket

Connection cable with angular socket
- 6

15

90
- Connection module side

Socket

SAC connection cable with open wire strands
- 91

92

93
- Connection plug component

Cable with straight female connector

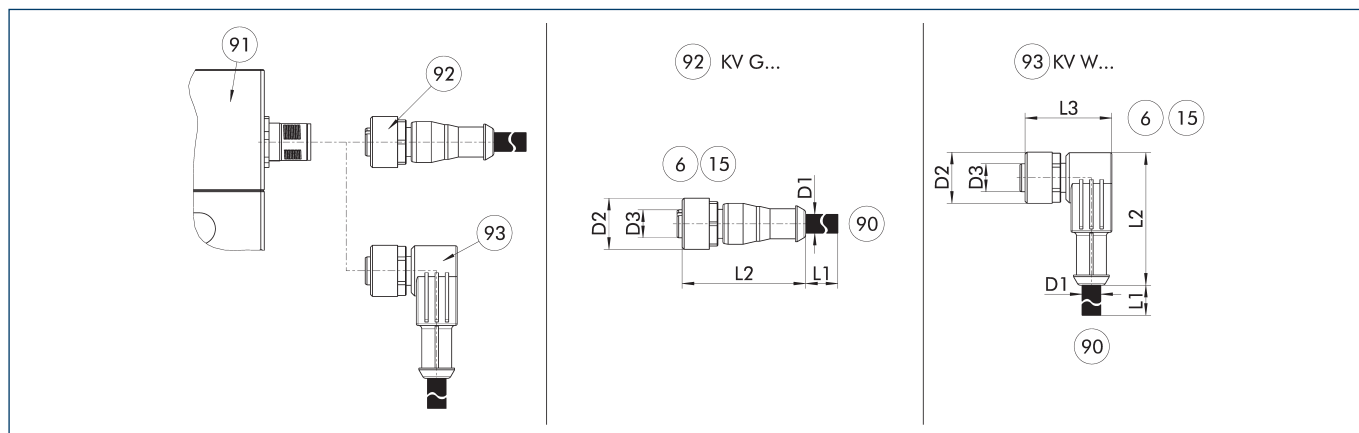
Cable with angled female connector

The connection cable is ideal for connecting the corresponding components to the controller or the power supply unit. The connection cable has an M8 socket on one side and an open wire strand on the other side for individual connections. The connection cables are suitable for use both in the cable track as well as in torsion applications.

Description	ID	L1	D1	D3	Often combined
		[m]	[mm]		
Connection cables					
KA BG08-L 3P-0300-PNP	0301622	3	4.5		●
KA BW08-L 3P-0300-PNP	0301594	3	4.5		
KA BW08-L 3P-0500-PNP	0301502	5	4.5	M8	

ⓘ Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

IO-Link cable extension



The cable extensions are ideal for connecting the relevant components to the control system, or for use as extension cables. The cable extensions have a 4-pin M8 socket with a straight or angled design on the module side and a 4-pin M8 connector with a straight design on the other side. The cable extensions are suitable for use in the cable track and in torsion applications.

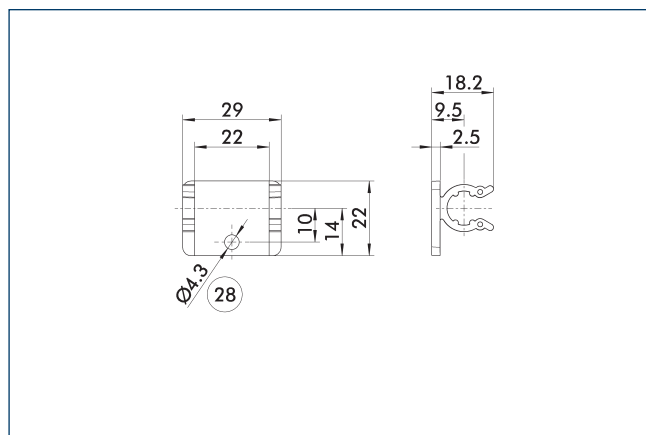
- ⑥ Connection module side
- ⑮ Socket
- ⑨ Cable end with straight connector

- ⑨ Connection plug component
- ⑨ Cable with straight female connector
- ⑨ Cable with angled female connector

Description	ID	L1 [m]	D1 [mm]	Often combined
Cable extension				
KV BW08-SG08 3P-0030-PNP	0301495	0.3	1.25	
KV BW08-SG08 3P-0100-PNP	0301496	1	1.25	
KV BW08-SG08 3P-0200-PNP	0301497	2	1.25	●

① Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

Clip for connector/socket M8



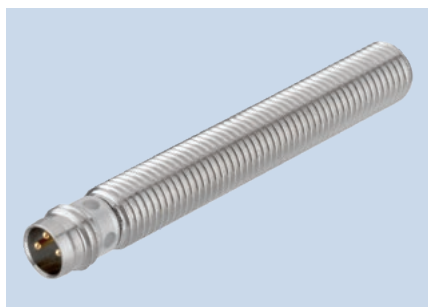
② Through-hole

The CLI clip is used for fastening and strain relief for the plug connectors.

Description	ID
Clip for connector/socket	
CLI-M8	0301463

NI 40

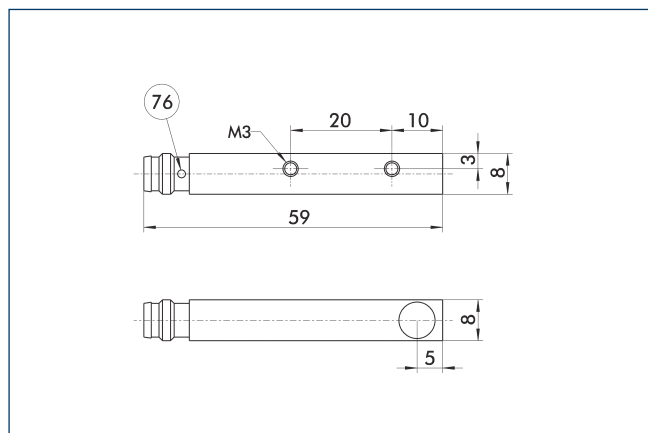
Inductive proximity switches



Technical data

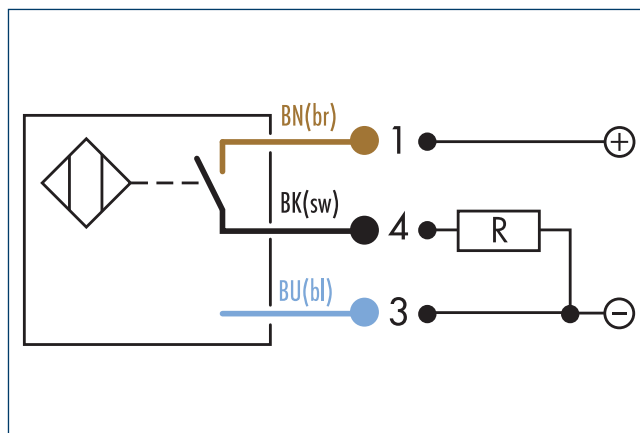
Description		NI 40-S
ID		1305945
Operating principle		
Switching function		Closer
Type of switching		PNP
Switching distance	[mm]["]	1.5
Switching hysteresis from the nominal switching distance		< 20%
Max. switching frequency	[Hz][1/min]	1000
Linearity error		
Min./max. ambient temperature	[°C]	-25/70
Tightness IP (sensor, connected)		67
Type of voltage		DC
Nominal voltage	[V]	24
Min. voltage	[V]	10
Max. voltage	[V]	30
Max. switching current	[A]	0.2
Cable connector/cable end		M8

NI 40

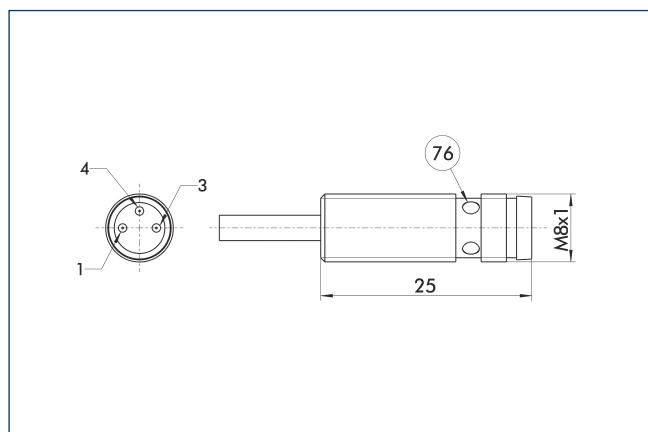


76 LED

Wiring diagram closer PNP



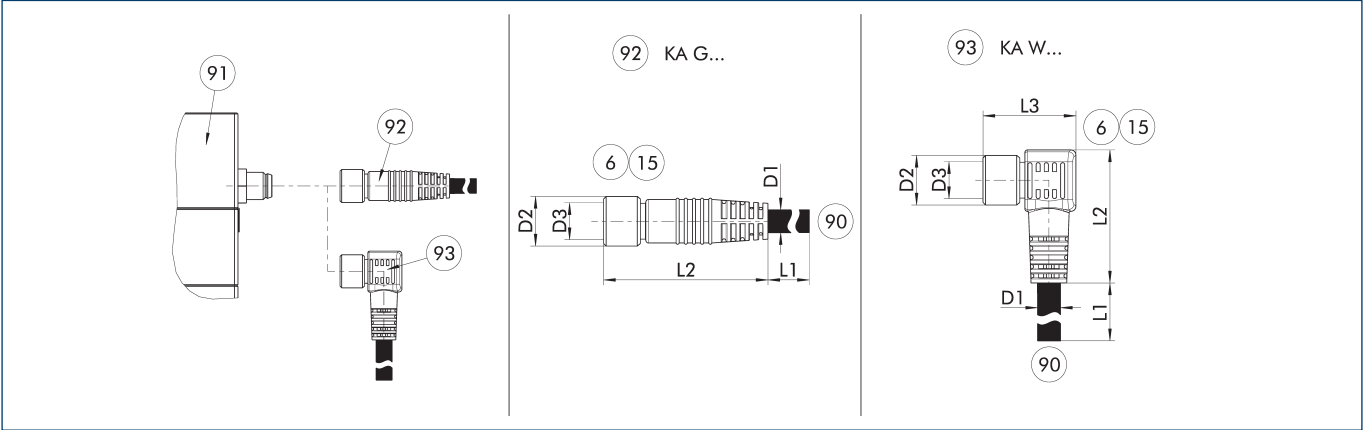
M8 connector



76 LED

The plug has no coupling ring. The cable extension or the sensor distributor has to be equipped with a coupling ring.

Voltage supply/signals connection cable



- KA G...

KA W...
- Connection cable with straight socket

Connection cable with angular socket
- 6

15

90
- Connection module side

Socket

SAC connection cable with open wire strands
- 91

92

93
- Connection plug component

Cable with straight female connector

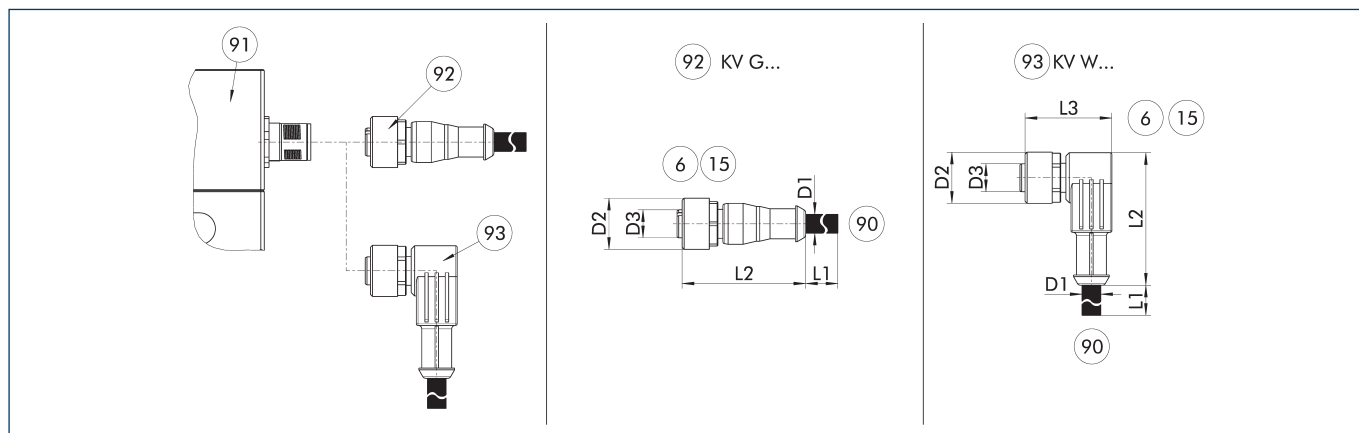
Cable with angled female connector

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		[m]	[mm]		
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KA BG08-L 3P-0300-PNP	0301622	3	4.5		●
KA BW08-L 3P-0300-PNP	0301594	3	4.5		
KA BW08-L 3P-0500-PNP	0301502	5	4.5	M8	

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IO-Link cable extension



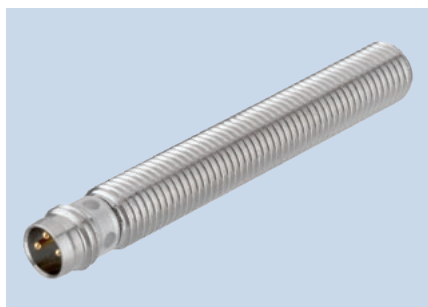
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- ⑥ Connection module side
- ⑮ Socket
- ⑨⑩ Cable end with straight connector

- ⑨① Connection plug component
- ⑨② Cable with straight female connector
- ⑨③ Cable with angled female connector

Description	ID	L1 [m]	D1 [mm]	Often combined
Cable extension				
KV BW08-SG08 3P-0030-PNP	0301495	0.3	1.25	
KV BW08-SG08 3P-0100-PNP	0301496	1	1.25	
KV BW08-SG08 3P-0200-PNP	0301497	2	1.25	●

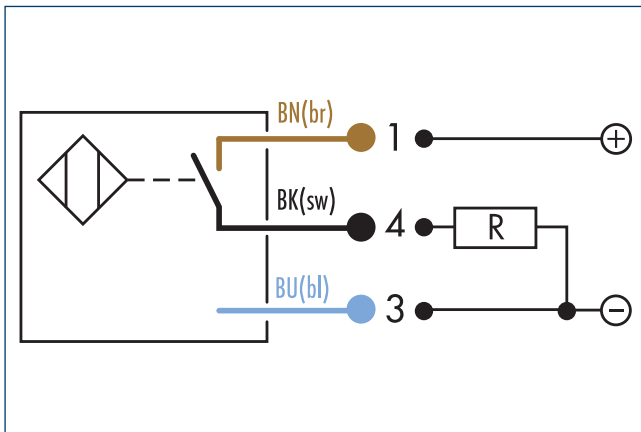
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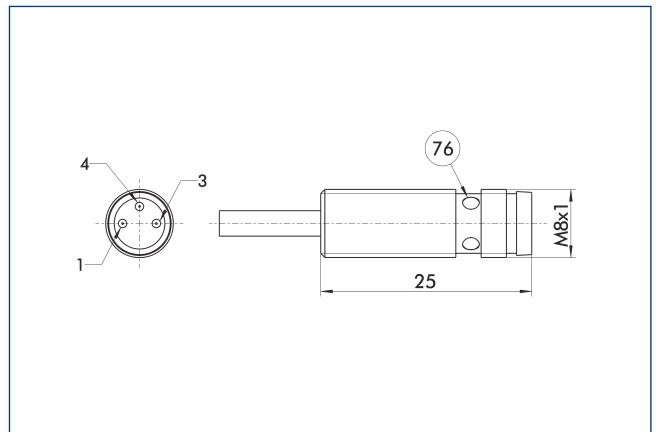
Technical data

Description		NI 41-0	NI 41-S
ID		0315495	0319456
Operating principle			
Switching function		Opener	Closer
Type of switching		PNP	PNP
Switching distance	[mm]	2	1.5
Switching hysteresis from the nominal switching distance		< 15%	< 15%
Max. switching frequency	[Hz]	3000	5000
Linearity error			
Min./max. ambient temperature	[°C]	-25/70	-25/70
Tightness IP (sensor, connected)		67	67
Type of voltage		DC	DC
Nominal voltage	[V]	24	24
Min. voltage	[V]	10	10
Max. voltage	[V]	30	30
Max. switching current	[A]	0.2	0.2
Cable connector/cable end		M8	M8

Wiring diagram closer PNP

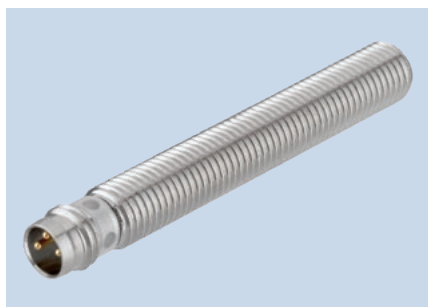


M8 connector



76 LED

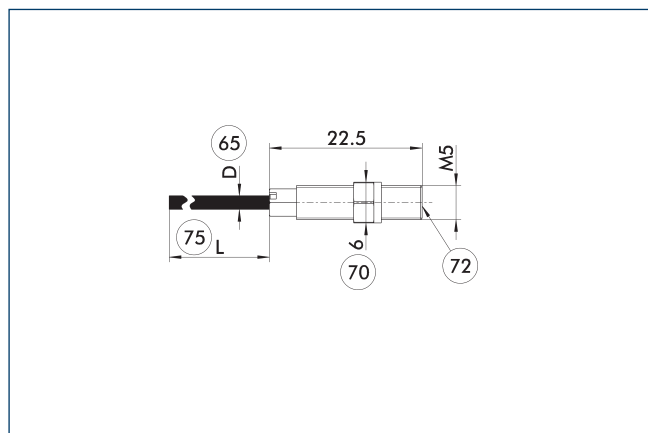
The plug has no coupling ring. The cable extension or the sensor distributor has to be equipped with a coupling ring.



Technical data

Description		NIA 50-KT
ID		1353751
Operating principle		
Switching function		Closer
Type of switching		PNP
Switching distance	[mm]	1
Switching hysteresis from the nominal switching distance		< 10%
Max. switching frequency	[Hz]	3000
Linearity error		
Min./max. ambient temperature	[°C]	-25/70
Tightness IP (sensor, connected)		67
Type of voltage		DC
Nominal voltage	[V]	24
Min. voltage	[V]	10
Max. voltage	[V]	30
Max. switching current	[A]	0.1
Cable diameter D	[mm]	2.6
Min. bending radius (dynamic)	[mm]	26
Min. bending radius (static)	[mm]	26
Cable length L	[cm]	20
Cable connector/cable end		M8

NIA 50-KT



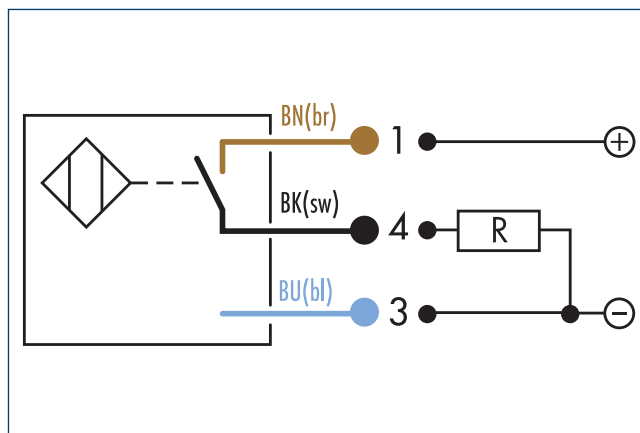
65 Cable diameter

70 Wrench size

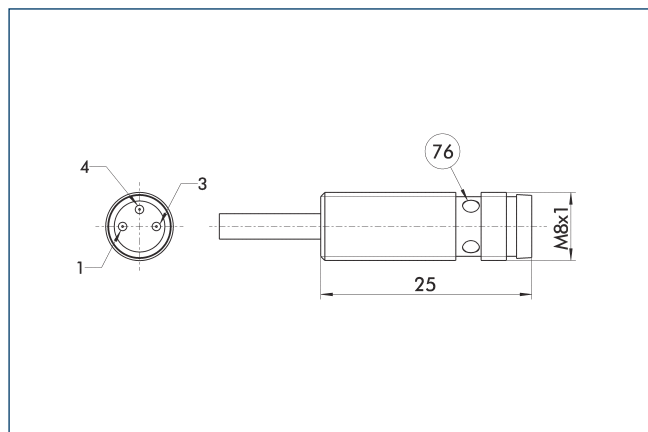
72 Active sensor surface

75 Cable length

Wiring diagram closer PNP



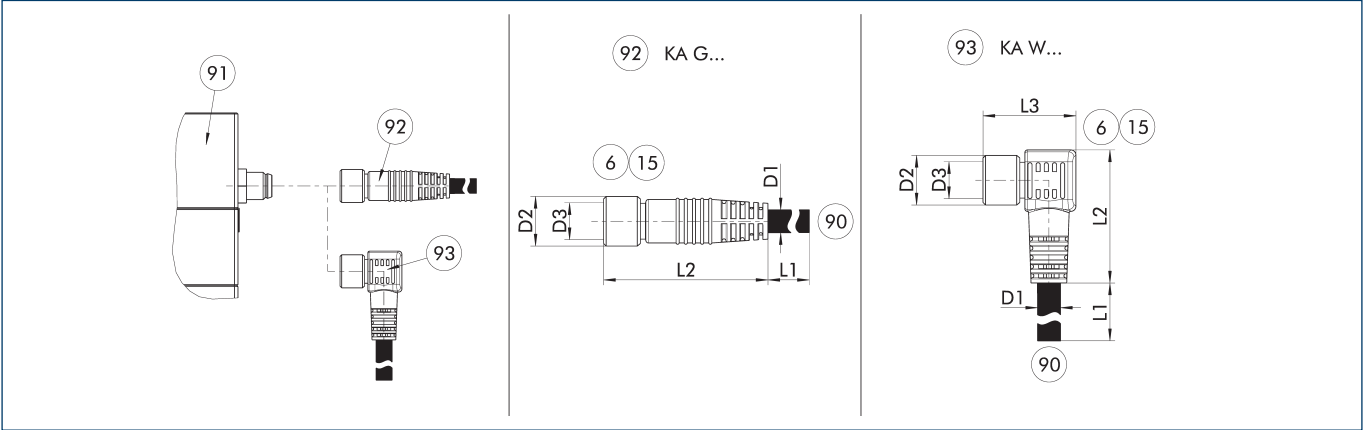
M8 connector



76 LED

The plug has no coupling ring. The cable extension or the sensor distributor has to be equipped with a coupling ring.

Voltage supply/signals connection cable



- KA G...

Connection cable with straight socket
- KA W...

Connection cable with angular socket
- 6

Connection module side
- 15

Socket
- 90

SAC connection cable with open wire strands
- 91

Connection plug component
- 92

Cable with straight female connector
- 93

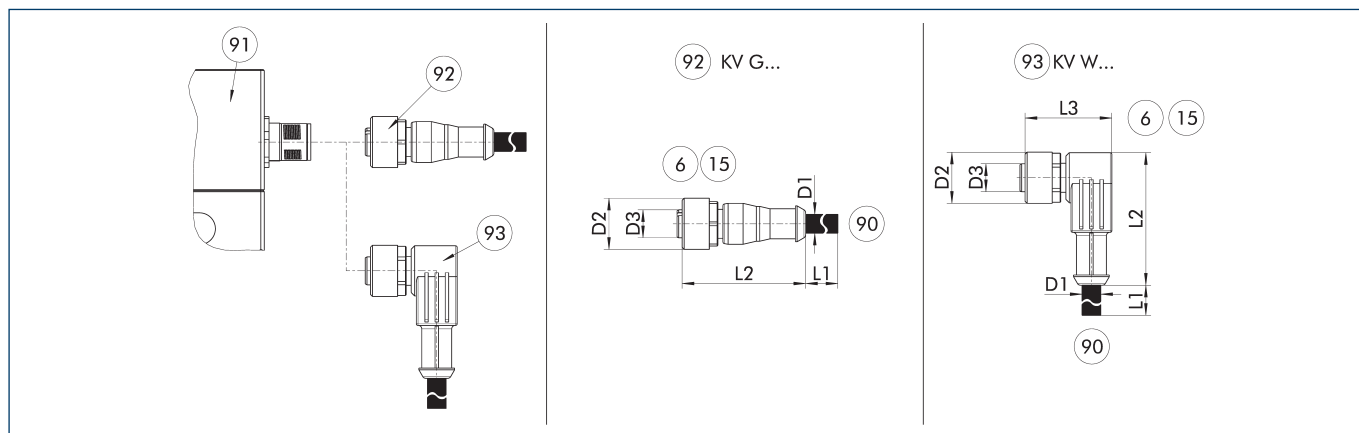
Cable with angled female connector

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Description	ID	L1	D1	D3	Often combined
		[m]	[mm]		
Connection cables					
KA BG08-L 3P-0300-PNP	0301622	3	4.5		●
KA BW08-L 3P-0300-PNP	0301594	3	4.5		
KA BW08-L 3P-0500-PNP	0301502	5	4.5	M8	

ⓘ Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.

IO-Link cable extension



The cable extensions are ideal for connecting the relevant components to the control system, or for use as extension cables. The cable extensions have a 4-pin M8 socket with a straight or angled design on the module side and a 4-pin M8 connector with a straight design on the other side. The cable extensions are suitable for use in the cable track and in torsion applications.

- ⑥ Connection module side
- ⑮ Socket
- ⑨⑩ Cable end with straight connector

- ⑨① Connection plug component
- ⑨② Cable with straight female connector
- ⑨③ Cable with angled female connector

Description	ID	L1 [m]	D1 [mm]	Often combined
Cable extension				
KV BW08-SG08 3P-0030-PNP	0301495	0.3	1.25	
KV BW08-SG08 3P-0100-PNP	0301496	1	1.25	
KV BW08-SG08 3P-0200-PNP	0301497	2	1.25	●

① Please observe the min. bending radius for cable track-compatible cables or the max. torsion angle for torsion-compatible cables. These are generally 10 times the cable diameter or +/- 180°/m.



SCHUNK SE & Co. KG

Spanntechnik

Greiftechnik

Automatisierungstechnik

Bahnhofstr. 106 - 134

D-74348 Lauffen/Neckar

Tel. +49-7133-103-0

Fax +49-7133-103-2399

info@de.schunk.com

schunk.com

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