

>Inductive and  
Capacitive Sensors

# CATALOG



 **DATALOGIC**  
THE VISION IS YOURS

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# DATLOGIC: SOLUTIONS FOR INDUSTRIAL AUTOMATION



Datalogic Industrial Automation is an industry-leader in products and solutions for material handling, traceability, inspection and detection applications.

With the acquisitions of Accu-Sort and PPT Vision in 2012, the company offers a comprehensive portfolio of products, technologies and solutions delivered by a team of skilled professionals dedicated in providing superior service to customers.

Datalogic is the partner of choice for organizations in the Industrial Automation market.

## Manufacturing

- AUTOMOTIVE
- ELECTRONICS
- FOOD & BEVERAGE
- GENERAL MANUFACTURING
- HEALTHCARE - PHARMACEUTICAL

## Transportation & Logistics

- AIRPORTS
- COURIER, EXPRESS PARCEL (CEP)
- POSTAL
- RETAIL DISTRIBUTION

## Product portfolio

Datalogic Industrial Automation has the most comprehensive offering of products and solutions for traceability, inspection and detection applications in factory automation and logistics processes: industrial LASER scanners, cameras and vision systems, sensors, machine safety devices and LASER markers.

## Identification

Even the most demanding and efficient automation of identification processes can leverage Datalogic Industrial Automation's leadership in the market. We manufacture the world's most comprehensive family of fixed-mount line and omnidirectional scanners.

We also offer the latest CCD vision technology with the world's largest installed base of CCD systems for bar code reading and dimensioning.

All of our AUTO-ID products and solutions leverage the broadest decoding library that has been developed through the years. Datalogic's comprehensive AUTO-ID portfolio is used in a wide range of applications and machines which are behind many of the everyday processes that keeps the global economy running.

## Sensors & Safety

Datalogic Industrial Automation offers a best-in-class, comprehensive product portfolio of photoelectric and proximity sensors, rotary encoders, temperature controllers and measurement devices, as well as type 2 and type 4 safety light curtains. These product lines provide solutions for applications involving color, contrast and luminescence, label detection, dimensional and distance measurement, in addition to machine safeguarding and access control in dangerous areas.

## Machine Vision

The Datalogic Industrial Automation machine vision product line encompasses both hardware and software while covering a wide range of performance and price point requirements. The vision portfolio of products and solutions ranges from standalone compact smart cameras to the highest performance embedded processors.

## Laser Marking

Laser Marking sources and systems provide value driven marking solutions for automotive, metal tools, medical, electronics and packaging. Datalogic Industrial Automation offers an extensive range of state-of-the-art technology, excellent performance and high reliability marking equipment.



## Inductive Sensors

Inductive proximity sensors generate a magnetic field from their detection faces. Whenever a detectable object moves into the sensor's field of detection, Eddy currents build up in the target and dampen the sensor's magnetic field. This effect triggers the sensor's output. Since a current in the target is needed for detection, inductive proximity sensors are uniquely suited for detection of all types of metals.

## ADVANTAGES

- Not affected by humidity and dust
- No moving parts, no mechanical wear
- Independent of the color of the object to detect
- No dead zone

## DISADVANTAGES

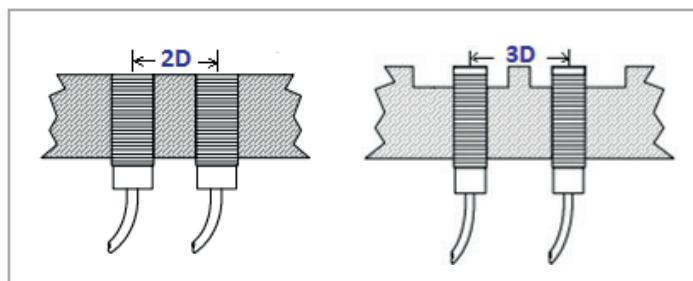
- only detect metallic objects
- low operating distance
- sensitive to electromagnetic interference (such as electric welding, induction ovens)

## Shielded models - FLUSH mounting

Shielded models can be installed with their sensing faces flush to the metal. The distance from opposing metal surfaces must be  $\geq 3sn$  and the distance between two proximity switches (side-by-side)  $\geq 2D$ .

## Unshielded models - NON-FLUSH mounting

Unshielded models can be identified by their 'caps', since they have no metal housing surrounding the area of the sensing face. The sensing face must extend  $\geq 2sn$  from the metallic installation medium. The distance from opposing metal surfaces must be  $\geq 3sn$  and the distance between two adjacent proximity switches  $\geq 3D$ . The metal body leaves uncovered part of the sensing area resulting in an increased sensing distance.



Main tubular models are available in both nickel plated brass and stainless steel housing, with the active sensing face in LCP plastic.

### METAL FACE version:

Are available stainless steel versions (M12,M18). Are used in especially harsh environments and applications which are too extreme for standard sensors. They resist to abrasive media, aggressive cleaners and solvents with their rugged sensing face. IP67 protection.

### WELD FIELD IMMUNE version:

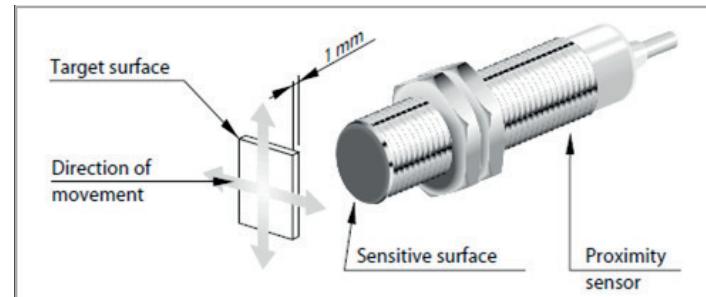
These special field immune models are ideal for welding environments and other applications where large magnetic fields are present. They are rated for reliable operation near the current line carrying 20,000 amps.

### NAMUR version:

Are available 2 wires versions (M5, M6, M8, M12, M18, M30). They can be used in conjunction with suitable switching amplifiers. The switch amplifier must be installed outside the explosive area. Almost all versions have IP67 mechanical protection.

## Nominal Switching distance (Sn) According to EN 60947-5-2

When an inductive proximity sensor is rated for sensing distance, it refers to the sensor's ability to detect the 'standard detectable object' at its specified sensing distance. The 'standard detectable object' is a 1mm thick square piece of ferrous iron that is in height and width the size of the proximity sensor's detection face's diameter.

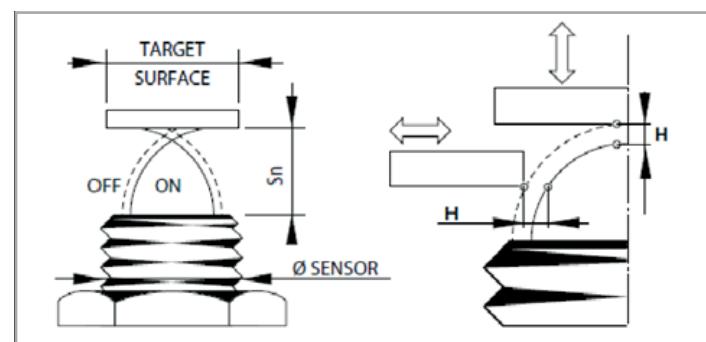


### REDUCTION FACTOR

Fe37	$1 \times Sn^*$
Stainless Steel AISI316L (X2CrNiMo17-12-2, UNI EN 10088-3)	$0,9 \times Sn$
Brass-Bronze (CuZn33, UNI EN 12163:1999)	$0,5 \times Sn$
Aluminum (25°C) (EN AW-1060, UNI EN 573-3:2006)	$0,4 \times Sn$
Copper (Cu-DHP, UNI EN 1652:1999)	$0,3 \times Sn$

### Hysteresis (H):

distance between the point of switching on and the point of switching off of the trigger object. The value is a percentage of the nominal switching distance Sn.



### AC/DC version:

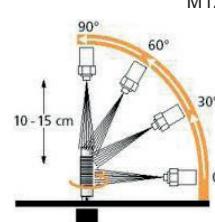
Are available 2/3-wires versions (M12, M18, M30), that operate in alternating current with voltage drop of 5 V for currents of the order of 100mA.

To be able to provide a proper potential drop at the load, it is recommended to power the sensors with at least a supply voltage equal to the Voltage drop indicated (5V).

"M12/18/30 models are Diversey and ECOLAB tested"



M12/18/30 FLUSH Vdc models are ATEX certified  
II 3G EX nA II T6  
II 3D EX tD A22 IP67 T85°C



**IP69K**

The Stainless Steel series is rated IP69K.



## OPERATING DISTANCE

MODEL	M4	M5	M6,5	M8	M12	M18	M30	SQUARE
DIAMETER (mm)	4	5	6,5	8	12	18	30	8X8; 40X40
OPERATING DISTANCE (mm)	0,8	0,8...1,5	1...3	1,5...3	2...8	5...14	10...20	1,5...30

## HOUSING

The following tables are showing the approximate housing length (mm) for the tubular inductive sensors and the absolute maximum installation limit of the mounting torque.

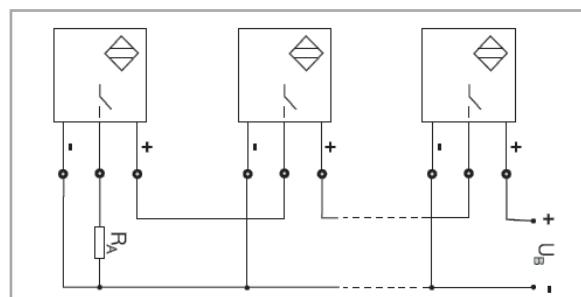
MODELS	STANDARD MODEL LENGTH (mm)		SHORT MODEL LENGTH (mm)	
	connector	cable	connector	cable
M4	---	25	---	---
M5	40	20...25	---	---
M6,5	53...63	46...55	50...54	40...44
M8	52...73	44...55	48...57	40...44
M12	68...72	58...64	48...54	42...48
M18	73...82	70...78	56...65	47...56
M30	74...85	70...82	56...68	49...56

INSTALLATION TIGHTENING TORQUE				
MOUNTING	Flush, No Flush mountable	Diameter	A (11 mm)	B
HOUSING MATERIAL	Stainless Steel, Nickel Brass	4 mm	1,5 [Nm]	1,5 [Nm]
INSTALLATION		5 mm	1,5 [Nm]	1,5 [Nm]
		8 mm	2 [Nm]	4 [Nm]
		12 mm	6 [Nm]	10 [Nm]
		18 mm	20 [Nm]	30 [Nm]
		30 mm	40 [Nm]	60 [Nm]

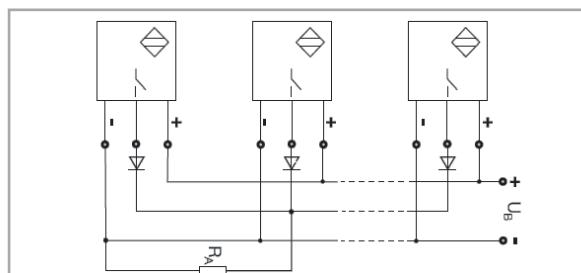
## WIRES

TYPE	DESCRIPTION
2-3 WIRES	Work with sinking or sourcing devices Vdc, Vac and NAMUR versions Higher leakage current
3 WIRES	Must select PNP or NPN, NC or NO version 10-30 Vdc version Low leakage current
4 WIRES	Programmable output PNP/NPN and NC/NO in one device

The number of inductive proximity sensors that can be connected in series or parallel is limited.



Parallel connection: the leakage current of each single sensor, when added to the other, may accumulate and drive the load even in the absence of operated switches.



This problem is more relevant in versions AC 2-wire, because of the high voltages and currents supplied to the sensor. For this type of connection you should use a 3-wire sensors working in DC.

## ELECTRICAL PARAMETERS

### NOMINAL VOLTAGE

Is the permissible voltage range in which certain safe operation of the switch is guaranteed.

### RESIDUAL RIPPLE

Is the maximum admissible ripple of the DC supply voltage shown as percentage to its medium value.

### MAX. OUTPUT CURRENT

It shows maximum output current a sensor can cope with when working steadily.

### MIN. OUTPUT CURRENT

Is the smallest load current required for function of the switch when ON.

### RESIDUAL CURRENT

Is the current flowing through the load when a proximity switch is not conducting (open).

### VOLTAGE DROP

Is the voltage measured across the load of a closed (conducting) sensor at load current.

### START UP DELAY

Is the time from when the supply voltage is applied, and the proximity switch assumes the ready state. This time may not be longer than 300 ms. During this time there must be no fault signal longer than 2 ms.

### SWITCHING FREQUENCY

Refers to the maximum number of switching operations per second.

### SHORT CIRCUIT PROTECTION

Is 100 A, i. e., per EN 60947-5-2 the power supply during testing in short circuit mode must be able to provide at least 100 A for a short duration. This current is prescribed in the standard in order to test.

### PROTECTION AGAINST INVERSION OF POLARITY

Available in DC supplied type, it prevents the sensor from being damaged when supply cables are incorrectly connected.

### INDUCTIVE LOAD PROTECTION

It protects sensor output in presence of high inductive loads. This protection is performed by a diode or zener diode.

# INDEX

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- Nickel-plated Brass housing
- LCP active face
- Standard length
- Short length
- Normal and Double range Operating distance
- Operating distance: 1,5 ... 20 mm
- M6,5, M8, M12, M18, M30
- cable, M8 or M12 connector
- 2, 3 or 4 wires
- PNP, NPN, PNP/NPN, NO, NC, NO/NC
- IP67 protection

INDUCTIVE AC

54

- Nickel-plated Brass housing
- PA 16 active face
- Standard length
- Operating distance 2 ... 10 mm
- M12, M18, M30
- cable or M12 connector
- 20+250 Vac (50,60 Hz)
- 2 or 3 wires
- NO
- IP67 protection

STAINLESS STEEL

32

- Stainless Steel housing
- M4, M5 POM active face - M6,5, M8, M12, M18, M30 LCP active face
- Standard length
- Short length
- Normal and Double range Operating distance
- Operating distance 0.8 ... 20 mm
- M4, M5, M6,5, M8, M12, M18, M30
- cable, M8 or M12 connector
- 3 wires
- PNP, NPN, NO, NC
- IP69K protection

NAMUR

60

- Nickel-plated Brass housing
- LCP active face
- Short length
- Operating distance 0.8 ... 15 mm
- M12, M18
- cable, M8 or M12 connector
- 2 wires
- PNP, NO
- IP67 protection

**M4**

- flush
- Stainless Steel
- op.dist.: 0,8 mm
- diameter: 4 mm
- 3 wires
- PNP or NPN, N.O.
- cable

**M5**

- flush
- Stainless Steel
- op.dist.: 0,8 mm
- double range vers.: 1,5 mm
- diameter: 5 mm
- 3 wires
- NAMUR vers.
- PNP or NPN, N.O., N.C.
- M8 connector or cable

**M6,5**

- flush, non-flush
- Stainless Steel, Nickel plated-Brass
- op.dist.: 1,5...2 mm
- double range vers.: 2...3 mm
- diameter: 6,5 mm
- standard or short housing
- 3 wires
- NAMUR (2wires) vers.
- PNP or NPN, N.O., N.C.
- M8 connector or cable

**M8**

- flush, non-flush
- Stainless Steel, Nickel plated-Brass
- op.dist.: 1,5...2 mm
- double range vers.: 2...3 mm
- diameter: 8 mm
- standard or short housing
- 3 wires
- NAMUR (2wires) vers.
- PNP or NPN, N.O., N.C.
- M8, M12 connector or cable

**M12**

- flush, non-flush
- Stainless Steel, Nickel plated-Brass
- op.dist.: 2...4 mm
- double range vers.: 4...8 mm
- diameter: 12 mm
- standard or short housing
- 2, 3, 4 (programmable PNP/PNP output) wires
- Vac/Vdc vers.
- Metal Face vers.
- NAMUR vers.
- Field Immune vers.
- PNP or NPN, N.O., N.C.
- M12 connector or cable

**METAL FACE****46**

- Stainless Steel housing
- Stainless Steel AISI 303 active face
- Stainless Steel active face
- Standard length
- 2 ... 8 mm
- M12, M18
- M12 connector
- 3 wires
- PNP, NO
- IP67 protection

**SQUARE****70**

- PBT (resin) or Nickel-plated Brass housing
- Operating distance 1.5 ... 15 mm
- 40x40 mm or 8x8 mm dimension
- cable, M8 connector or Terminal Block
- 2 or 3 wires
- PNP, PNP/NPN, NO, NC, NO/NC
- IP67

**WELD FIELD IMMUNE****50**

- Stainless Steel housing
- PTFE active face
- Standard length
- Operating distance 2 ... 8 mm
- M12, M18
- M12 connector
- 3 wires
- PNP, NO
- IP67 protection

**CAPACITIVE****76**

- Nickel plated brass
- M18, M30
- Basic line NO-NC
- Capacitive A.C. (plastic housing)
- Multivoltage (SPDT relay)
- Operating distance: 5...25 mm
- Cable or M8 connector
- 2,4,6 wires
- PNP or NPN, N.O. and N.C. outputs, SPDT relay
- Delay ON or delay OFF model
- IP67 protection

**CABLES, CONNECTORS & ACCESSORIES****84****M18**

- flush, non-flush
- Stainless Steel, Nickel plated-Brass
- op.dist.: 5..8 mm
- double range vers.: 8..14 mm
- diameter: 18 mm
- standard or short housing
- 2, 3 4 (programmable NPN/PNP output) wires
- Vac/Vdc vers.
- Metal Face vers.
- Field Immune vers.
- NAMUR vers.
- PNP or NPN, N.O., N.C.
- M12 connector or cable
- Capacitive D.C., N.O.-N.C. outputs
- Capacitive A.C., 2 wires, N.O.

**M30**

- flush, non-flush
- Stainless Steel, Nickel plated-Brass
- op.dist.: 10...15 mm
- double range vers.: 15...20 mm
- diameter: 30 mm
- standard or short housing
- 2, 3, 4 (programmable NPN/PNP output) wires
- Vac/Vdc vers.
- NAMUR vers.
- PNP or NPN, N.O., N.C.
- M12 connector or cable
- Capacitive D.C., N.O.-N.C. outputs
- Capacitive A.C., 2 wires, N.O.
- Capacitive Multivoltage with timer relay output

**SQUARE 40X40**

- flush, non-flush
- standard or short housing
- Plastic (PBT resin)
- op.dist.: 15...30 mm; 7-20 mm (Analog vers.)
- diameter: 40 mm
- 2, 3 wires
- Vac/Vdc vers.
- Analog output 4-20mA vers.
- PNP or NPN, N.O., N.C.
- Terminal block

**SQUARE 8X8**

- flush
- Nickel-Plated Brass
- op.dist.: 1,5 mm
- diameter: 8 mm
- 3 wires, PNP, N.O.
- M8 connector or cable

# BASIC

Nickel-plated Brass housing  
LCP active face  
Standard length  
Short length  
Normal and double range operating distance  
Operating distance: 1,5 ... 20 mm  
M6,5, M8, M12, M18, M30  
cable, M8 or M12 connector  
2, 3 or 4 wires  
PNP, NPN, PNP/NPN, NO, NC, NO/NC  
IP67 protection

## REDUCTION FACTOR

	ALUMINUM (25°C)	STAINLESS STEEL AISI316L	COPPER	BRASS
FLUSH	0,3...0,5	0,7...0,9	0,2...0,5	0,4...0,6
NON-FLUSH	0,4...0,6	0,7...1,05	0,4...0,5	0,5...0,7

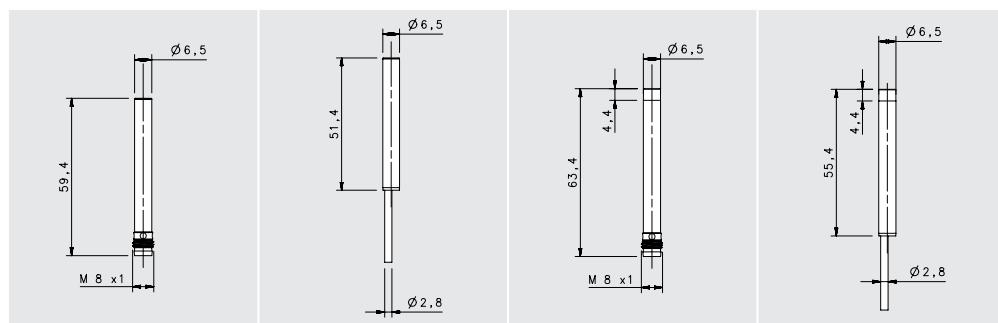
~M12/18/30 models are Diversey and ECOLAB tested~





## BASIC

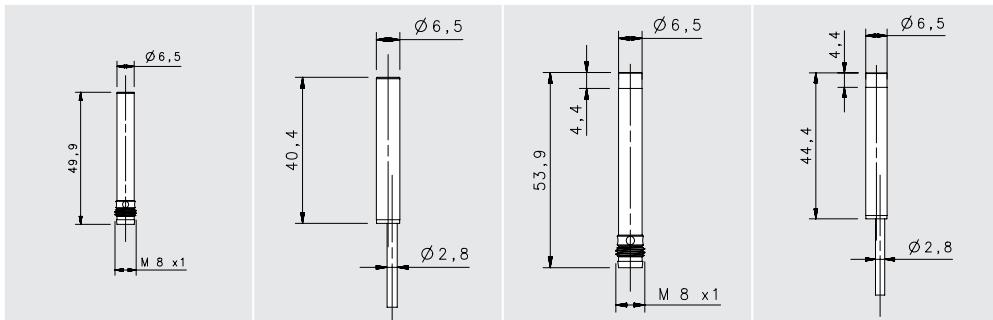
# BASIC M6.5



## STANDARD

				FLUSH	NON FLUSH		
				M8 conn	cable	M8 conn	cable
				1,5 mm	1,5 mm	2 mm	2 mm
<b>NOMINAL SWITCHING DISTANCE</b>							
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---	---	---
				---	---	---	---
10-30 Vdc	PNP NO	3 wires	order No.	IS-65-A1-S1 95B066050	IS-65-A1-03 95B064730	IS-65-C1-S1 95B066210	IS-65-C1-03 95B064890
10-30 Vdc	PNP NC	3 wires	order No.	IS-65-A2-S1 95B066090	IS-65-A2-03 95B064770	IS-65-C2-S1 95B066250	IS-65-C2-03 95B066300
10-30 Vdc	NPN NO	3 wires	order No.	IS-65-A3-S1 95B064970	IS-65-A3-03 95B064650	IS-65-C3-S1 95B066130	IS-65-C3-03 95B064810
10-30 Vdc	NPN NC	3 wires	order No.	IS-65-A4-S1 95B066010	IS-65-A4-03 95B064690	IS-65-C4-S1 95B066170	IS-65-C4-03 95B064850
10-30 Vdc	PNP NO-NC	4 wires	order No.	---	---	---	---
				---	---	---	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---	---	---	---
10-30 Vdc	NO-NC	2 wires	order No.	---	---	---	---
20-250 Vac/Vdc	NO	2 wires	order No.	---	---	---	---
20-250 Vac/Vdc	NC	2 wires	order No.	---	---	---	---
20-250 Vac	NO	2/3 wires	order No.	---	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	---	---	---
NAMUR amplifier	NAMUR	2 wires	order No.	---	---	---	---

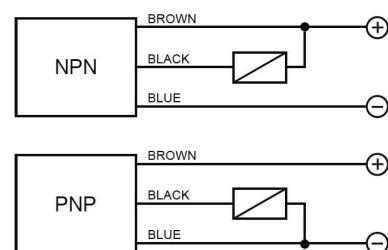
Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%	< 10%
Max. Output Current	200 mm	200 mA	200 mm	200 mA
Min. Output Current	---	---	---	---
Residual Current	< 1,6 mA	< 1,6 mA	< 1,6 mA	< 1,6 mA
Voltage Drop	< 1,2 V (I=100 mA)			
Operation Led	Yellow	Yellow	Yellow	Yellow
Switching Frequency	1000 Hz	1000 Hz	1000 Hz	1000 Hz
Start Up Delay	< 50 ms	< 50 ms	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads			
Temperature Limit	(-25 ... +70 °C)			
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	2 m	---	2 m
Cable Section	---	3x 0,14 mm <sup>2</sup>	---	3x 0,14 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active Face	LCP	LCP	LCP	LCP
Tightening torque	---	---	---	---
Weight - Cable Output	---	80 g	---	80 g
Weight - Connector Output	40 g	---	40 g	---



### SHORT

FLUSH		NON FLUSH	
M8 conn	cable	M8 conn	cable
1,5 mm	1,5 mm	2 mm	2 mm
---	---	---	---
---	---	---	---
IS-65-B1-S1	IS-65-B1-03	IS-65-D1-S1	IS-65-D1-03
95B066070	95B064750	95B066230	95B064910
IS-65-B2-S1	IS-65-B2-03	IS-65-D2-S1	IS-65-D2-03
95B066110	95B064790	95B066270	95B064950
IS-65-B3-S1	IS-65-B3-03	IS-65-D3-S1	IS-65-D3-03
95B064990	95B064670	95B066150	95B064830
IS-65-B4-S1	IS-65-B4-03	IS-65-D4-S1	IS-65-D4-03
95B066030	95B064710	95B066190	95B066190
---	---	---	---
---	---	---	---
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---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%	< 10%	< 10%
< 10%	< 10%	< 10%	< 10%
200 mA	200 mA	200 mA	200 mA
---	---	---	---
< 10 mA	< 10 mA	< 10 mA	< 10 mA
< 1,2 V (I=100mA)			
Yellow	Yellow	Yellow	Yellow
1000 Hz	1000 Hz	1000 Hz	1000 Hz
< 50 ms	< 50 ms	< 50 ms	< 50 ms
< 3%	< 3%	< 3%	< 3%
Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads			
(-25 ... +70 °C)			
IP67	IP67	IP67	IP67
---	2 m	---	2 m
---	3 x 0,14 mm <sup>2</sup>	---	3 x 0,14 mm <sup>2</sup>
Nickel-plated brass LCP	Nickel-plated brass LCP	Nickel-plated brass LCP	Nickel-plated brass LCP
---	80 g	---	80 g
40 g	---	40 g	---

3 wires PNP or NPN



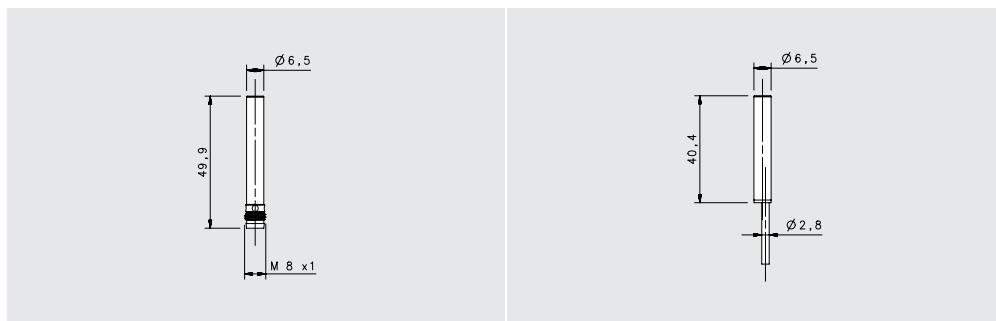
M8 3 pole



#### CONTACTS CONFIGURATION

Available	Contacts numbers		
	1 BROWN	3 BLUE	4 BLACK
NPN/PNP	+	-	NO/NC

# BASIC M6.5

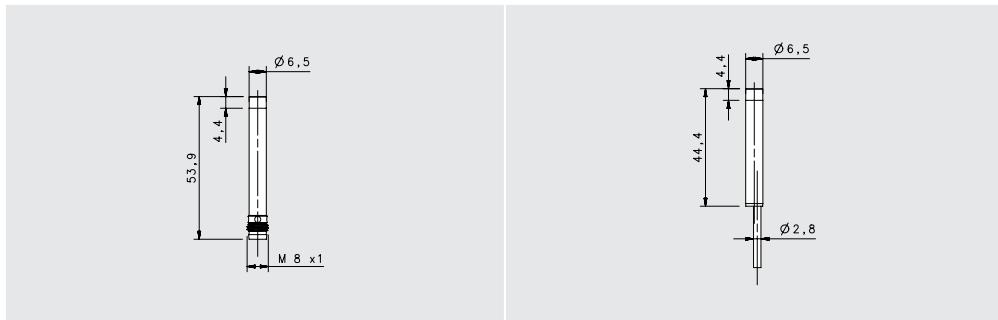


## SHORT X2

FLUSH

		M8 conn	cable
		2 mm	2 mm
<b>NOMINAL SWITCHING DISTANCE</b>			
10-30 Vdc	PNP/NPN NO-NC	4 wires order No.	---
			---
10-30 Vdc	PNP NO	3 wires order No.	IS-65-G1-S1 95B066060
			IS-65-G1-03 95B064740
10-30 Vdc	PNP NC	3 wires order No.	IS-65-G2-S1 95B066100
			IS-65-G2-03 95B064780
10-30 Vdc	NPN NO	3 wires order No.	IS-65-G3-S1 95B064980
			IS-65-G3-03 95B064660
10-30 Vdc	NPN NC	3 wires order No.	IS-65-G4-S1 95B066020
			IS-65-G4-03 95B064700
10-30 Vdc	PNP NO-NC	4 wires order No.	---
			---
10-30 Vdc	NPN NO-NC	4 wires order No.	---
			---
10-30 Vdc	NO-NC	2 wires order No.	---
			---
20-250 Vac/Vdc	NO	2 wires order No.	---
			---
20-250 Vac/Vdc	NC	2 wires order No.	---
			---
20-250 Vac	NO	2/3 wires order No.	---
			---
10-30 Vdc	Analog 0-20 mA	3 wires order No.	---
			---
NAMUR amplifier	NAMUR	2 wires order No.	---

Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%
Hysteresis	< 10%	< 10%
Max. Output Current	200 mA	200 mA
Min. Output Current	---	---
Residual Current	< 10 mA	< 10 mA
Voltage Drop	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Operation Led	Yellow	Yellow
Switching Frequency	500 Hz	500 Hz
Start Up Delay	< 75 ms	< 75 ms
Repeatability	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67
Cable Length	---	2 m
Cable Section	---	3 x 0,14 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP
Tightening torque	---	---
Weight - Cable Output	---	80 g
Weight - Connector Output	40 g	---

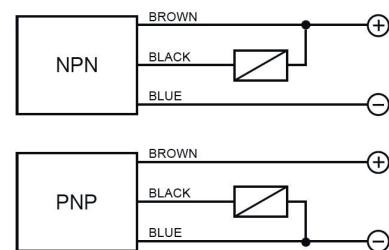


## SHORT X 2

NON FLUSH

M8 conn	cable
<b>3 mm</b>	<b>3 mm</b>
---	---
---	---
IS-65-H1-S1	IS-65-H1-03
95B066220	95B064900
IS-65-H2-S1	IS-65-H2-03
95B066260	95B064940
IS-65-H3-S1	IS-65-H3-03
95B066140	95B064820
IS-65-H4-S1	IS-65-H4-03
95B066180	95B064860
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---	---
---	---
---	---
10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%
< 10%	< 10%
200 mA	200 mA
---	---
< 10 mA	< 10 mA
< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Yellow	Yellow
500 Hz	500 Hz
< 75 ms	< 75 ms
< 3%	< 3%
Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +70 °C)	(-25 ... +70 °C)
IP67	IP67
---	2 m
---	3 x 0,14 mm <sup>2</sup>
Nickel-plated brass	Nickel-plated brass
LCP	LCP
---	---
---	80 g
40 g	---

3 wires PNP or NPN



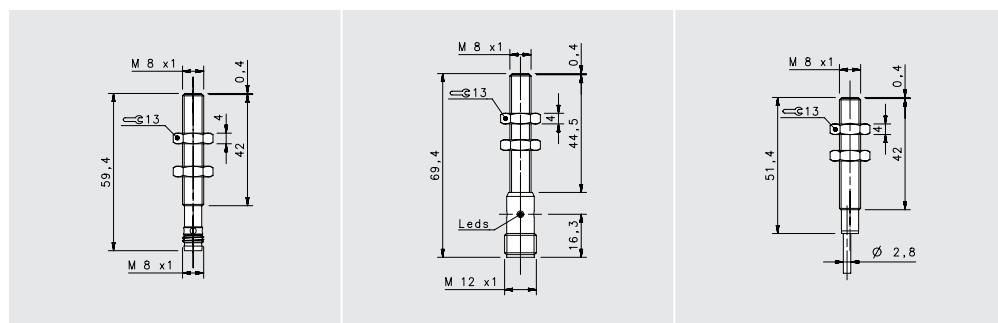
M8 3 pole



### CONTACTS CONFIGURATION

Available	Contacts numbers		
	1 BROWN	3 BLUE	4 BLACK
NPN/PNP	+	-	NO/NC

# BASIC M8

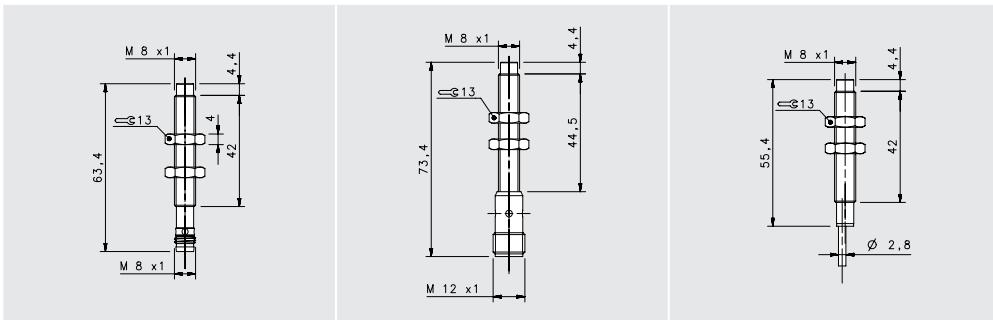


## STANDARD

### FLUSH

		M8 conn	M12 conn	cable
NOMINAL SWITCHING DISTANCE				1,5 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires order No.	---	---
			---	---
10-30 Vdc	PNP NO	3 wires order No.	IS-08-A1-S1 95B061141	IS-08-A1-S2 95B061131
10-30 Vdc	PNP NC	3 wires order No.	IS-08-A2-S1 95B061171	IS-08-A2-S2 95B061161
10-30 Vdc	NPN NO	3 wires order No.	IS-08-A3-S1 95B061081	IS-08-A3-S2 95B061071
10-30 Vdc	NPN NC	3 wires order No.	IS-08-A4-S1 95B061111	IS-08-A4-S2 95B061101
10-30 Vdc	PNP NO-NC	4 wires order No.	---	---
10-30 Vdc	NPN NO-NC	4 wires order No.	---	---
10-30 Vdc	NO-NC	2 wires order No.	---	---
20-250 Vac/Vdc	NO	2 wires order No.	---	---
20-250 Vac/Vdc	NC	2 wires order No.	---	---
20-250 Vac	NO	2/3 wires order No.	---	---
10-30 Vdc	Analog 0-20 mA	3 wires order No.	---	---
NAMUR amplifier	NAMUR	2 wires order No.	---	---

Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%
Max. Output Current	200mA	200mA	200mA
Min. Output Current	---	---	---
Residual Current	< 10 mA	< 10 mA	< 10 mA
Voltage Drop	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Operation Led	Yellow	Yellow	Yellow
Switching Frequency	1000 Hz	1000 Hz	1000 Hz
Start Up Delay	< 50 ms	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67	IP67
Cable Length	---	---	2 m
Cable Section	---	---	3x 0,14 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output			80 g
Weight - Connector Output	35g	55g	---

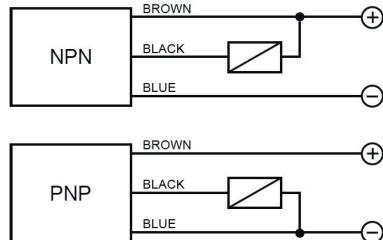


## STANDARD

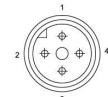
### NON FLUSH

M8 conn	M12 conn	cable
<b>2 mm</b>	<b>2 mm</b>	<b>2 mm</b>
---	---	---
---	---	---
IS-08-C1-S1	IS-08-C1-S2	IS-08-C1-03
95B061541	95B061531	95B061521
IS-08-C2-S1	IS-08-C2-S2	IS-08-C2-03
95B061571	95B061561	95B061551
IS-08-C3-S1	IS-08-C3-S2	IS-08-C3-03
95B061481	95B061471	95B066410
IS-08-C4-S1	IS-08-C4-S2	IS-08-C4-03
95B061511	95B061501	95B066450
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---	---	---
---	---	---
10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%	< 10%
< 10%	< 10%	< 10%
200mA	200mA	200mA
---	---	---
< 10 mA	< 10 mA	< 10 mA
< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Yellow	Yellow	Yellow
1000 Hz	1000 Hz	1000 Hz
< 50 ms	< 50 ms	< 50 ms
< 3%	< 3%	< 3%
Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
IP67	IP67	IP67
---	---	2 m
---	---	3x 0,14 mm <sup>2</sup>
Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
LCP	LCP	LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
		80 g
35g	55g	---

3 wires PNP or NPN



M12 3 pole



CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
(NO or NC)	+		-	NO/NC

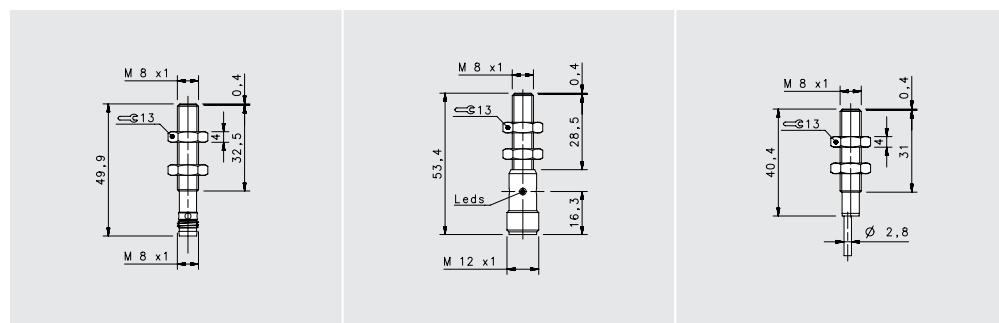
M8 3 pole



CONTACTS CONFIGURATION

Available	Contacts numbers		
	1 BROWN	3 BLUE	4 BLACK
NPN/PNP	+	-	NO/NC

# BASIC M8

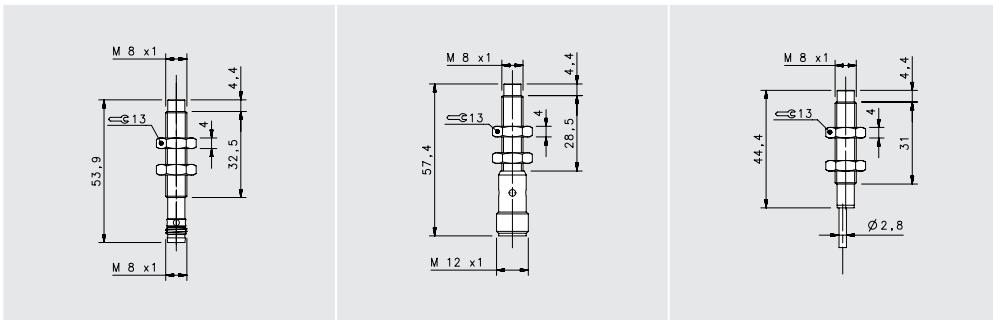


## SHORT

### FLUSH

		M8 conn	M12 conn	cable		
NOMINAL SWITCHING DISTANCE				1,5 mm	1,5 mm	1,5 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires order No.	---	---	---	---
			---	---	---	---
10-30 Vdc	PNP NO	3 wires order No.	IS-08-B1-S1 95B066860	IS-08-B1-S2 95B066590	IS-08-B1-03 95B061921	IS-08-B1-03 95B061921
10-30 Vdc	PNP NC	3 wires order No.	IS-08-B2-S1 95B066890	IS-08-B2-S2 95B066620	IS-08-B2-03 95B061951	IS-08-B2-03 95B061951
10-30 Vdc	NPN NO	3 wires order No.	IS-08-B3-S1 95B066810	IS-08-B3-S2 95B066530	IS-08-B3-03 95B061861	IS-08-B3-03 95B061861
10-30 Vdc	NPN NC	3 wires order No.	IS-08-B4-S1 95B066830	IS-08-B4-S2 95B066560	IS-08-B4-03 95B061891	IS-08-B4-03 95B061891
10-30 Vdc	PNP NO-NC	4 wires order No.	---	---	---	---
10-30 Vdc	NPN NO-NC	4 wires order No.	---	---	---	---
10-30 Vdc	NO-NC	2 wires order No.	---	---	---	---
20-250 Vac/Vdc	NO	2 wires order No.	---	---	---	---
20-250 Vac/Vdc	NC	2 wires order No.	---	---	---	---
20-250 Vac	NO	2/3 wires order No.	---	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires order No.	---	---	---	---
NAMUR amplifier	NAMUR	2 wires order No.	---	---	---	---

Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%
Max. Output Current	200mA	200mA	200mA
Min. Output Current	---	---	---
Residual Current	< 10 mA	< 10 mA	< 10 mA
Voltage Drop	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Operation Led	Yellow	Yellow	Yellow
Switching Frequency	1000 Hz	1000 Hz	1000 Hz
Start Up Delay	< 50 ms	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67	IP67
Cable Length	---	---	2 m
Cable Section	---	---	3 x 0,14 mm²
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output			80 g
Weight - Connector Output	35g	55g	---

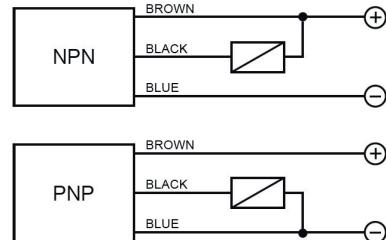


## SHORT

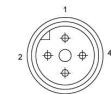
### NON FLUSH

M8 conn	M12 conn	cable
<b>2 mm</b>	<b>2 mm</b>	<b>2 mm</b>
---	---	---
---	---	---
IS-08-D1-S1 95B066970	IS-08-D1-S2 95B066700	IS-08-D1-03 95B062321
IS-08-D2-S1 95B067000	IS-08-D2-S2 95B066720	IS-08-D2-03 95B062351
IS-08-D3-S1 95B066920	IS-08-D3-S2 95B066650	IS-08-D3-03 95B066430
IS-08-D4-S1 95B066940	IS-08-D4-S2 95B066670	IS-08-D4-03 95B062291
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---	---	---
10-30 Vdc (-15/10%) < 10% < 10% 200mA ---	10-30 Vdc (-15/10%) < 10% < 10% 200mA ---	10-30 Vdc (-15/10%) < 10% < 10% 200mA ---
< 10 mA < 1,2 V (I=100mA) Yellow 1000 Hz < 50 ms < 3%	< 10 mA < 1,2 V (I=100mA) Yellow 1000 Hz < 50 ms < 3%	< 10 mA < 1,2 V (I=100mA) Yellow 1000 Hz < 50 ms < 3%
Present (self-resetting) Against polarity reversal inductive loads (-25 ... +70 °C) IP67 ---	Present (self-resetting) Against polarity reversal inductive loads (-25 ... +70 °C) IP67 ---	Present (self-resetting) Against polarity reversal inductive loads (-25 ... +70 °C) IP67 2 m 3 x 0,14 mm <sup>2</sup>
Nickel-plated brass LCP	Nickel-plated brass LCP	Nickel-plated brass LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
35g	55g	80 g

3 wires PNP or NPN



M12 3 pole



CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
(NO or NC)	+		-	NO/NC

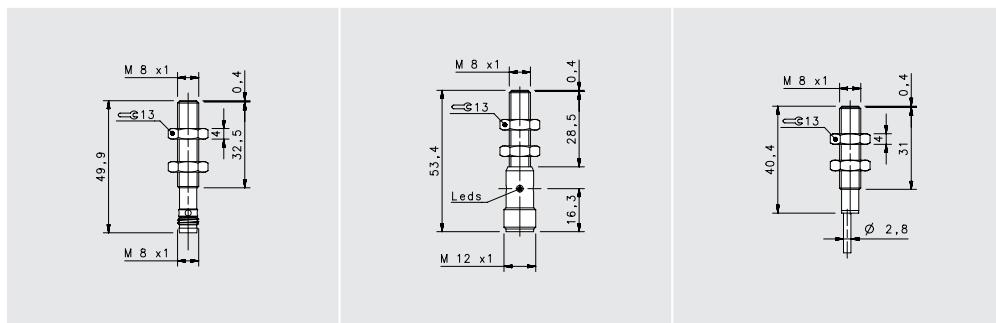
M8 3 pole



CONTACTS CONFIGURATION

Available	Contacts numbers		
	1 BROWN	3 BLUE	4 BLACK
NPN/PNP	+	-	NO/NC

# BASIC M8

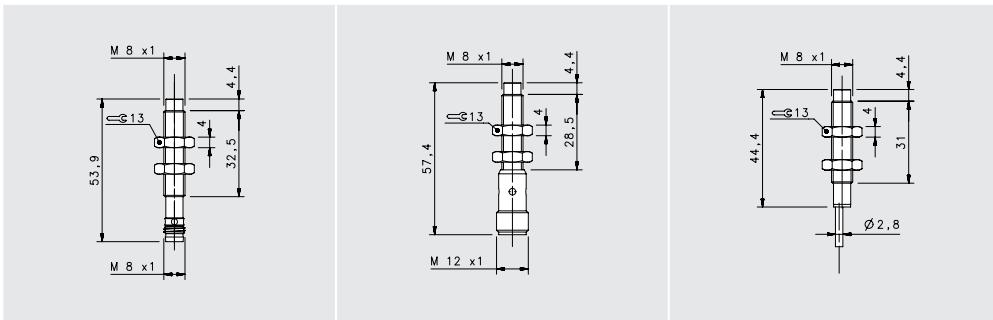


## SHORT X2

### FLUSH

		M8 conn	M12 conn	cable		
NOMINAL SWITCHING DISTANCE				2 mm	2 mm	2 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires order No.	---	---	---	---
			---	---	---	---
10-30 Vdc	PNP NO	3 wires order No.	IS-08-G1-S1 95B066850	IS-08-G1-S2 95B066580	IS-08-G1-03 95B066370	IS-08-G1-03 95B066370
10-30 Vdc	PNP NC	3 wires order No.	IS-08-G2-S1 95B066880	IS-08-G2-S2 95B066610	IS-08-G2-03 95B066390	IS-08-G2-03 95B066390
10-30 Vdc	NPN NO	3 wires order No.	IS-08-G3-S1 95B066800	IS-08-G3-S2 95B066520	IS-08-G3-03 95B066330	IS-08-G3-03 95B066330
10-30 Vdc	NPN NC	3 wires order No.	IS-08-G4-S1 95B063131	IS-08-G4-S2 95B066550	IS-08-G4-03 95B066350	IS-08-G4-03 95B066350
10-30 Vdc	PNP NO-NC	4 wires order No.	---	---	---	---
10-30 Vdc	NPN NO-NC	4 wires order No.	---	---	---	---
10-30 Vdc	NO-NC	2 wires order No.	---	---	---	---
20-250 Vac/Vdc	NO	2 wires order No.	---	---	---	---
20-250 Vac/Vdc	NC	2 wires order No.	---	---	---	---
20-250 Vac	NO	2/3 wires order No.	---	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires order No.	---	---	---	---
NAMUR amplifier	NAMUR	2 wires order No.	---	---	---	---

Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%
Max. Output Current	200mA	200mA	200mA
Min. Output Current	---	---	---
Residual Current	< 10 mA	< 10 mA	< 10 mA
Voltage Drop	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Operation Led	Yellow	Yellow	Yellow
Switching Frequency	500 Hz	500 Hz	500 Hz
Start Up Delay	< 75 ms	< 75 ms	< 75 ms
Repeatability	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +60 °C)	(-25 ... +60 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67	IP67
Cable Length	---	---	2 m
Cable Section	---	---	3 x 0,14 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output			80 g
Weight - Connector Output	35g	55g	---

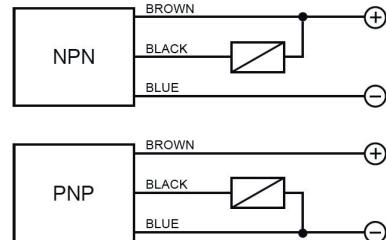


## SHORT X2

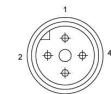
### NON FLUSH

M8 conn	M12 conn	cable
<b>3 mm</b>	<b>3 mm</b>	<b>3 mm</b>
---	---	---
---	---	---
IS-08-H1-S1	IS-08-H1-S2	IS-08-H1-03
95B066960	95B066960	95B066480
IS-08-H2-S1	IS-08-H2-S2	IS-08-H2-03
95B066990	95B063301	95B066500
IS-08-H3-S1	IS-08-H3-S2	IS-08-H3-03
95B066910	95B066640	95B066420
IS-08-H4-S1	IS-08-H4-S2	IS-08-H4-03
95B063251	95B063241	95B066460
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---	---	---
---	---	---
10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%	< 10%
< 10%	< 10%	< 10%
200mA	200mA	200mA
---	---	---
< 10 mA	< 10 mA	< 10 mA
< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Yellow	Yellow	Yellow
500 Hz	500 Hz	500 Hz
< 75 ms	< 75 ms	< 75 ms
< 3%	< 3%	< 3%
Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +60 °C)	(-25 ... +60 °C)	(-25 ... +70 °C)
IP67	IP67	IP67
---	---	2 m
---	---	3 x 0,14 mm <sup>2</sup>
Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
LCP	LCP	LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
		80 g
35g	55g	---

3 wires PNP or NPN



M12 3 pole



CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
(NO or NC)	+		-	NO/NC

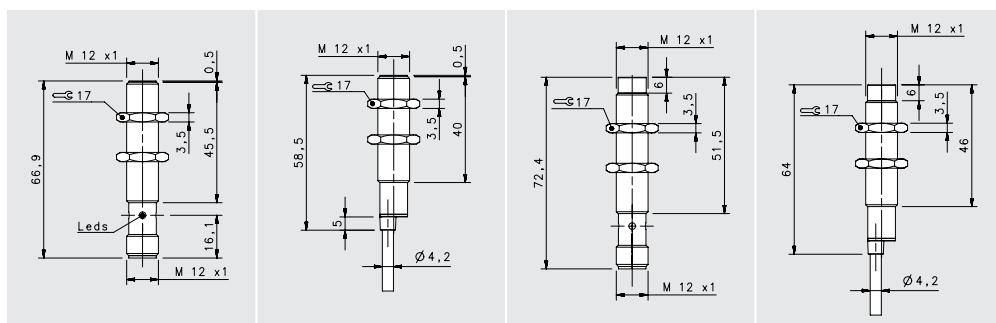
M8 3 pole



CONTACTS CONFIGURATION

Available	Contacts numbers		
	1 BROWN	3 BLUE	4 BLACK
NPN/PNP	+	-	NO/NC

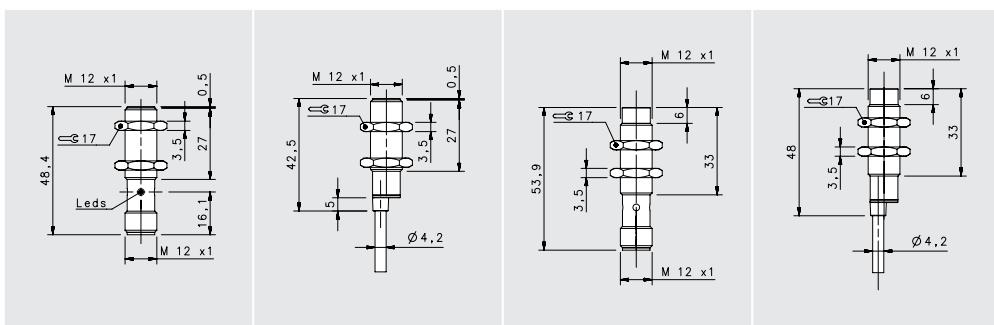
# BASIC M12



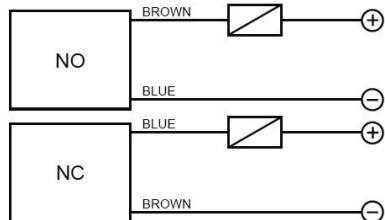
## STANDARD

	FLUSH		NON FLUSH			
	M12 conn	cable	M12 conn	cable		
NOMINAL SWITCHING DISTANCE	2 mm	2 mm	4 mm	4 mm		
10-30 Vdc	PNP/NPN NO-NC 4 wires	order No.	IS-12-A0-S2 95B064060	IS-12-A0-03 95B064030	IS-12-C0-S2 95B064080	IS-12-C0-03 95B064040
10-30 Vdc	PNP NO 3 wires	order No.	IS-12-A1-S2 95B061251	IS-12-A1-03 95B061241	IS-12-C1-S2 95B061651	IS-12-C1-03 95B061641
10-30 Vdc	PNP NC 3 wires	order No.	IS-12-A2-S2 95B061281	IS-12-A2-03 95B061271	IS-12-C2-S2 95B061681	IS-12-C2-03 95B061671
10-30 Vdc	NPN NO 3 wires	order No.	IS-12-A3-S2 95B061191	IS-12-A3-03 95B061181	IS-12-C3-S2 95B061591	IS-12-C3-03 95B061581
10-30 Vdc	NPN NC 3 wires	order No.	IS-12-A4-S2 95B061221	IS-12-A4-03 95B061211	IS-12-C4-S2 95B061621	IS-12-C4-03 95B061611
10-30 Vdc	PNP NO-NC 4 wires	order No.	---	---	---	---
10-30 Vdc	NPN NO-NC 4 wires	order No.	---	---	---	---
10-30 Vdc	NO-NC 2 wires	order No.	IS-12-A9-S2 95B063931	IS-12-A9-03 95B064100	IS-12-C9-S2 95B064140	IS-12-C9-03 95B064110
20-250 Vac/Vdc	NO 2 wires	order No.	---	---	---	---
20-250 Vac/Vdc	NC 2 wires	order No.	---	---	---	---
20-250 Vac	NO 2/3 wires	order No.	---	---	---	---
10-30 Vdc	Analog 0-20 mA 3 wires	order No.	---	---	---	---
NAMUR amplifier	NAMUR 2 wires	order No.	---	---	---	---

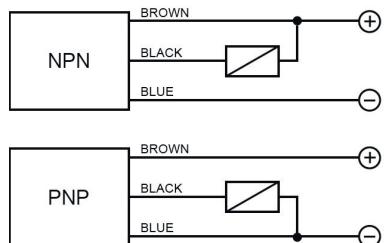
Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%	< 10%
Max. Output Current	200mA; 100 mA (2wires)	200mA; 100 mA (2wires)	200mA; 100 mA (2wires)	200mA; 100 mA (2wires)
Min. Output Current	> 1,6 mA (2wires)	> 1,6 mA (2wires)	> 1,6 mA (2wires)	> 1,6 mA (2wires)
Residual Current	< 10mA; < 1,6 mA (2wires)	< 10mA; < 1,6 mA (2wires)	< 10mA; < 1,6 mA (2wires)	< 10mA; < 1,6 mA (2wires)
Voltage Drop	< 1,8V; < 6,5 V (2wires)	< 1,8V; < 6,5 V (2wires)	< 1,8V; < 6,5 V (2wires)	< 1,8V; < 6,5 V (2wires)
Operation Led	Yellow	Yellow	Yellow	Yellow
Switching Frequency	1000 Hz/200 Hz (2 wires NO-NC)	1000 Hz/200 Hz (2 wires NO-NC)	1000 Hz/200 Hz (2 wires NO-NC)	1000 Hz/200 Hz (2 wires NO-NC)
Start Up Delay	< 50 ms	< 50 ms	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	2 m	---	2 m
Cable Section	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	110 g	---	110 g
Weight - Connector Output	60 g	---	60 g	---



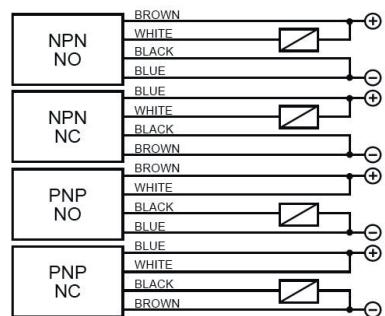
### 2 wires NO or NC



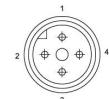
### 3 wires PNP or NPN



### 4 wires (PNP/NPN, NO/NC)



### M12 connector - connections



### 2 wires NO or NC

Available	CONTACTS CONFIGURATION			
	1	2	3	4
NO	+		-	
NC	-		+	

### 3 wires

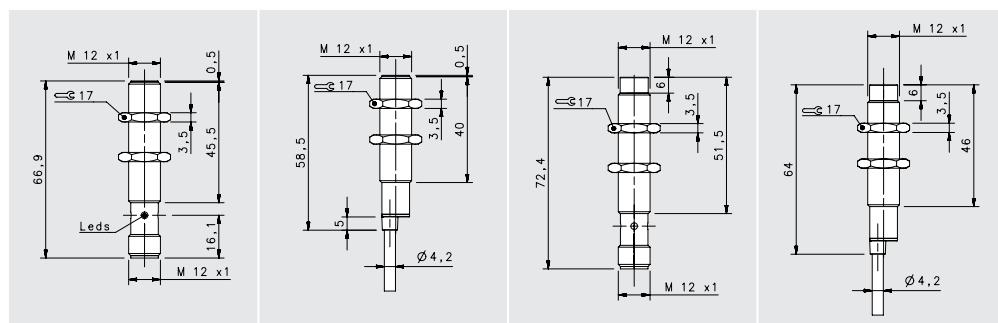
Available	CONTACTS CONFIGURATION			
	1	2	3	4
(NO or NC)	+		-	NO/NC

### 4 wires (PNP/NPN, NO/NC)

Output	CONTACTS CONFIGURATION			
	1	2	3	4
NPN NO	+	NO	-	-
NPN NC	-	NC	+	-
PNP NO	+	+	-	NO
PNP NC	-	+	+	NC

SHORT			
FLUSH	NON FLUSH		
M12 conn	cable	M12conn	cable
<b>2 mm</b>	<b>2 mm</b>	<b>4 mm</b>	<b>4 mm</b>
---	---	---	---
---	---	---	---
IS-12-B1-S2	IS-12-B1-03	IS-12-D1-S2	IS-12-D1-03
95B062051	95B062041	95B062451	95B062441
IS-12-B2-S2	IS-12-B2-03	IS-12-D2-S2	IS-12-D2-03
95B062081	95B062071	95B062481	95B062471
IS-12-B3-S2	IS-12-B3-03	IS-12-D3-S2	IS-12-D3-03
95B061991	95B061981	95B062391	95B062381
IS-12-B4-S2	IS-12-B4-03	IS-12-D4-S2	IS-12-D4-03
95B062021	95B062011	95B062421	95B062411
---	---	---	---
---	---	---	---
---	---	---	---
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---	---	---	---
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---	---	---	---
---	---	---	---
---	---	---	---
10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%	< 10%	< 10%
< 10%	< 10%	< 10%	< 10%
200 mA	200 mA	200 mA	200 mA
---	---	---	---
< 10 mA	< 10 mA	< 10 mA	< 10 mA
< 1,8 V (I=100mA)			
Yellow	Yellow	Yellow	Yellow
1000 Hz	1000 Hz	1000 Hz	1000 Hz
< 50 ms	< 50 ms	< 50 ms	< 50 ms
< 3%	< 3%	< 3%	< 3%
Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads			
(-25 ... +60 °C)	(-25 ... +70 °C)	(-25 ... +60 °C)	(-25 ... +70 °C)
IP67	IP67	IP67	IP67
2 m	---	---	2 m
3 x 0,14 mm <sup>2</sup>	---	---	3 x 0,14 mm <sup>2</sup>
Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
LCP	LCP	LCP	LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
---	110 g	---	110 g
60 g	---	60 g	---

# BASIC M12



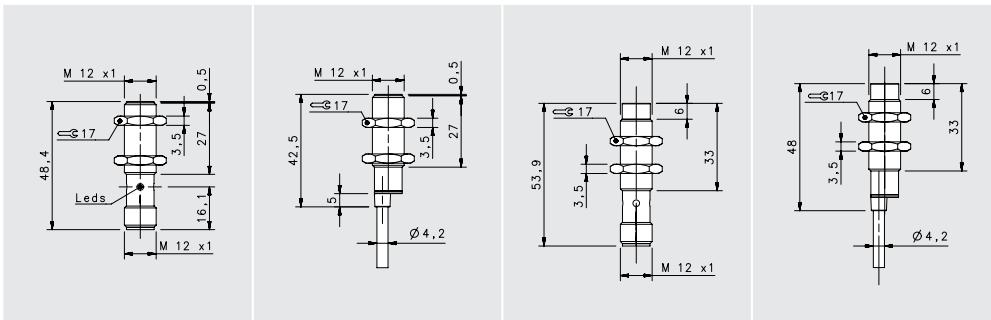
## STANDARD X2

	FLUSH		NON FLUSH	
	M12 conn	cable	M12 conn	cable

### NOMINAL SWITCHING DISTANCE

			4 mm	8 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	IS-12-E0-S2 95B067230
10-30 Vdc	PNP NO	3 wires	order No.	IS-12-E1-S2 95B067030
10-30 Vdc	PNP NC	3 wires	order No.	IS-12-E2-S2 95B067640
10-30 Vdc	NPN NO	3 wires	order No.	IS-12-E3-S2 95B067650
10-30 Vdc	NPN NC	3 wires	order No.	IS-12-E4-S2 95B067660
10-30 Vdc	PNP NO-NC	4 wires	order No.	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---
10-30 Vdc	NO-NC	2 wires	order No.	IS-12-E9-S2 95B067240
20-250 Vac/Vdc	NO	2 wires	order No.	---
20-250 Vac/Vdc	NC	2 wires	order No.	---
20-250 Vac	NO	2/3 wires	order No.	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---
NAMUR amplifier	NAMUR	2 wires	order No.	---

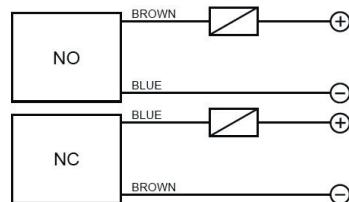
Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%	< 10%
Max. Output Current	100 mA	100 mA	100 mA	100 mA
Min. Output Current	---	---	---	---
Residual Current	< 10 mA	< 10 mA	< 10 mA	< 10 mA
Voltage Drop	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Operation Led	Yellow	Yellow	Yellow	Yellow
Switching Frequency	500 Hz/200 Hz (2 wires NO-NC)	500 Hz/200 Hz (2 wires NO-NC)	400 Hz/200 Hz (2 wires NO-NC)	400 Hz/200 Hz (2 wires NO-NC)
Start Up Delay	< 75 ms	< 75 ms	< 75 ms	< 75 ms
Repeatability	< 3%	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	---	---	---
Cable Section	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	---	---	---
Weight - Connector Output	60 g	60 g	60 g	60 g



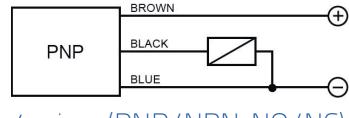
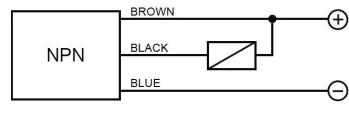
## SHORT X2

FLUSH		NON FLUSH	
M12 con	cable	M12 conn	cable
4 mm	4 mm	8 mm	8 mm
---	---	---	---
---	---	---	---
IS-12-G1-S2	IS-12-G1-03	IS-12-H1-S2	IS-12-H1-03
95B063371	95B063361	95B063451	95B063441
IS-12-G2-S2	IS-12-G2-03	IS-12-H2-S2	IS-12-H2-03
95B063391	95B063381	95B063471	95B063461
IS-12-G3-S2	IS-12-G3-03	IS-12-H3-S2	IS-12-H3-03
95B063331	95B063321	95B063411	95B063401
IS-12-G4-S2	IS-12-G4-03	IS-12-H4-S2	IS-12-H4-03
95B063351	95B063341	95B063431	95B063421
IS-12-G5-S2	IS-12-G5-03	IS-12-H5-S2	IS-12-H5-03
95B062691	95B062681	95B062771	95B062761
IS-12-G6-S2	IS-12-G6-03	IS-12-H6-S2	IS-12-H6-03
95B062671	95B062661	95B062751	95B062741
---	---	---	---
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---	---	---	---
---	---	---	---
10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%	< 10%	< 10%
< 10%	< 10%	< 10%	< 10%
200 mA	200 mA	200 mA	200 mA
> 1,6 mA (2wires ver.)	> 1,6 mA (2wires ver.)	> 1,6 mA (2wires ver.)	> 1,6 mA (2wires ver.)
< 10 mA	< 10 mA	< 10 mA	< 10 mA
< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Yellow	Yellow	Yellow	Yellow
500 Hz/200 Hz (4 wires NO-NC)	500 Hz/200 Hz (4 wires NO-NC)	500 Hz/200 Hz (4 wires NO-NC)	500 Hz/200 Hz (4 wires NO-NC)
< 75 ms	< 75 ms	< 75 ms	< 75 ms
< 3%	< 3%	< 3%	< 3%
Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
IP67	IP67	IP67	IP67
---	2 m		2 m
---	3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>		3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>
Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
LCP	LCP	LCP	LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
---	110 g	---	110 g
60 g	---	60 g	---

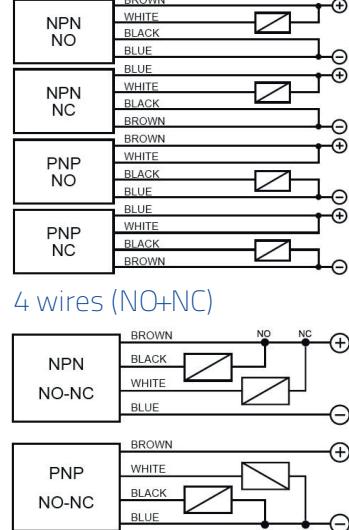
### 2 wires NO or NC



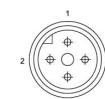
### 3 wires PNP or NPN



### 4 wires (NO+NC)



### M12 connector connections



### 2 wires NO or NC

Available	CONTACTS CONFIGURATION			
	1	2	3	4
NO	+	-		
NC	-		+	

### 3 wires

Available	CONTACTS CONFIGURATION			
	1	2	3	4
(NO or NC)	+	-		NO/NC

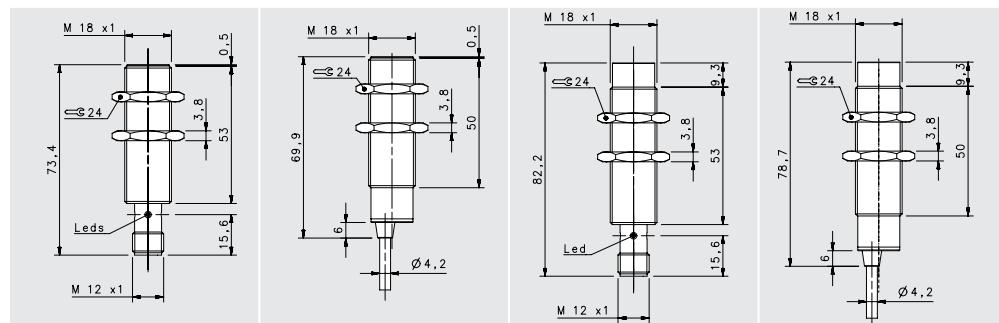
### 4 wires (PNP/NPN, NO/NC)

Output	CONTACTS CONFIGURATION			
	1	2	3	4
NPN NO	+	NO	-	-
NPN NC	-	NC	+	-
PNP NO	+	+	-	NO
PNP NC	-	+	+	NC

### 4 wires (NO+NC)

Available	CONTACTS numbers			
	1	2	3	4
(NO + NC)	+	NC	-	NO

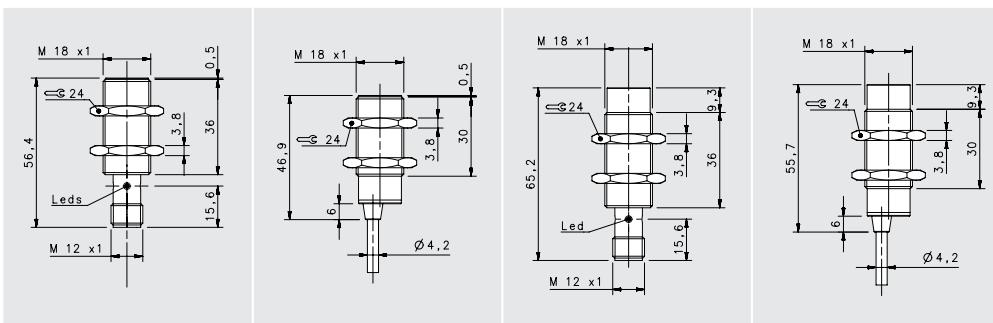
# BASIC M18



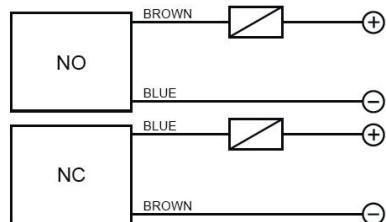
## STANDARD

	FLUSH		NON FLUSH		
	M12 conn	cable	M12 conn	cable	
NOMINAL SWITCHING DISTANCE	5 mm	5 mm	8 mm	8 mm	
10-30 Vdc	PNP/NPN NO-NC order No.	4 wires IS-18-A0-S2 95B064260	IS-18-A0-03 95B064230	IS-18-C0-S2 95B064280	IS-18-C0-03 95B064240
10-30 Vdc	PNP NO order No.	3 wires IS-18-A1-S2 95B061351	IS-18-A1-03 95B061341	IS-18-C1-S2 95B061751	IS-18-C1-03 95B061741
10-30 Vdc	PNP NC order No.	3 wires IS-18-A2-S2 95B061371	IS-18-A2-03 95B061361	IS-18-C2-S2 95B061771	IS-18-C2-03 95B061761
10-30 Vdc	NPN NO order No.	3 wires IS-18-A3-S2 95B061311	IS-18-A3-03 95B061301	IS-18-C3-S2 95B061711	IS-18-C3-03 95B061701
10-30 Vdc	NPN NC order No.	3 wires IS-18-A4-S2 95B061331	IS-18-A4-03 95B061321	IS-18-C4-S2 95B061731	IS-18-C4-03 95B061721
10-30 Vdc	PNP NO-NC order No.	4 wires ---	---	---	---
10-30 Vdc	NPN NO-NC order No.	4 wires ---	---	---	---
10-30 Vdc	NO-NC order No.	2 wires IS-18-A9-S2 95B063941	S-18-A9-03 95B064300	IS-18-C9-S2 95B064340	IS-18-C9-03 95B064310
20-250 Vac/Vdc	NO order No.	2 wires ---	---	---	---
20-250 Vac/Vdc	NC order No.	2 wires ---	---	---	---
20-250 Vac	NO order No.	2/3 wires ---	---	---	---
10-30 Vdc	Analog 0-20 mA order No.	3 wires ---	---	---	---
NAMUR amplifier	NAMUR order No.	2 wires ---	---	---	---

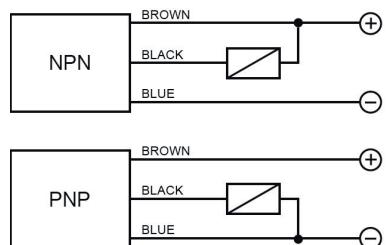
Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%	< 10%
Max. Output Current	200 mA	200 mA	200 mA	200 mA
Min. Output Current	> 1,6 mA (2wires ver.)	> 1,6 mA (2wires ver.)	> 1,6 mA (2wires ver.)	> 1,6 mA (2wires ver.)
Residual Current	< 10 mA	< 10 mA	< 10 mA	< 10 mA
Voltage Drop	< 1,8V; < 6,5 V (2wires ver.)	< 1,8V; < 6,5 V (2wires ver.)	< 1,8V; < 6,5 V (2wires ver.)	< 1,8V; < 6,5 V (2wires ver.)
Operation Led	Yellow	Yellow	Yellow	Yellow
Switching Frequency	1000 Hz/200 Hz (2 wires NO-NC)	1000 Hz/200 Hz (2 wires NO-NC)	1000 Hz/200 Hz (2 wires NO-NC)	1000 Hz/200 Hz (2 wires NO-NC)
Start Up Delay	< 50 ms	< 50 ms	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +60 °C)	(-25 ... +60 °C)	(-25 ... +60 °C)	(-25 ... +60 °C)
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	2 m	---	2 m
Cable Section	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	145g	---	145g
Weight - Connector Output	95g	---	95g	---



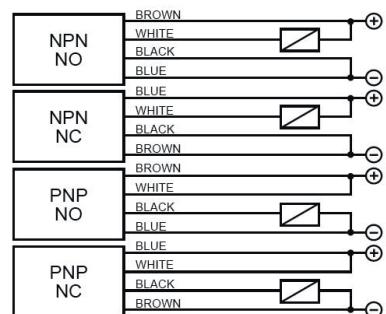
## 2 wires NO or NC



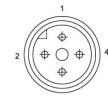
## 3 wires PNP or NPN



## 4 wires (PNP/NPN, NO/NC)



## M12 connector - connections



## 2 wires NO or NC

Available	CONTACTS CONFIGURATION			
	1	2	3	4
NO	+		-	
NC	-		+	

## 3 wires

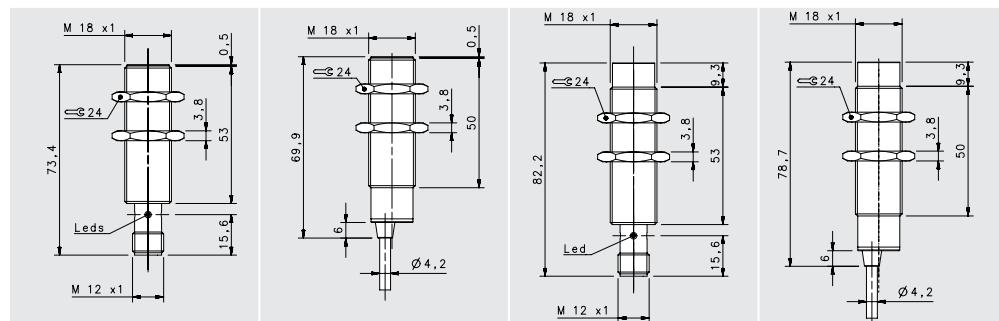
Available	CONTACTS CONFIGURATION			
	1	2	3	4
(NO or NC)	+		-	NO/NC

## 4 wires (PNP/NPN, NO/NC)

Output	CONTACTS CONFIGURATION			
	1	2	3	4
NPN NO	+	NO	-	-
NPN NC	-	NC	+	-
PNP NO	+	+	-	NO
PNP NC	-	+	+	NC

SHORT			
FLUSH	NON FLUSH		
M12 conn	cable	M12 conn	cable
<b>5 mm</b>	<b>5 mm</b>	<b>8 mm</b>	<b>8 mm</b>
---	---	---	---
IS-18-B1-52	IS-18-B1-03	IS-18-D1-S2	IS-18-D1-03
95B062151	95B062141	95B062551	95B062541
IS-18-B2-S2	IS-18-B2-03	IS-18-D2-S2	IS-18-D2-03
95B062171	95B062161	95B062571	95B062561
IS-18-B3-S2	IS-18-B3-03	IS-18-D3-S2	IS-18-D3-03
95B062111	95B062101	95B062511	95B062501
IS-18-B4-S2	IS-18-B4-03	IS-18-D4-S2	IS-18-D4-03
95B062131	95B062121	95B062531	95B062521
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10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%	< 10%	< 10%
< 10%	< 10%	< 10%	< 10%
200 mA	200 mA	200 mA	200 mA
---	---	---	---
< 10 mA	< 10 mA	< 10 mA	< 10 mA
< 1.8 V (I=100mA)			
Yellow	Yellow	Yellow	Yellow
1000 Hz	1000 Hz	1000 Hz	1000 Hz
< 50 ms	< 50 ms	< 50 ms	< 50 ms
< 3%	< 3%	< 3%	< 3%
Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads (-25 ... +60 °C)	Against polarity reversal inductive loads (-25 ... +60 °C)	Against polarity reversal inductive loads (-25 ... +60 °C)	Against polarity reversal inductive loads (-25 ... +60 °C)
IP67	IP67	IP67	IP67
---	2 m	---	2 m
---	3 x 0,14 mm <sup>2</sup>	---	3 x 0,14 mm <sup>2</sup>
Nickel-plated brass LCP	Nickel-plated brass LCP	Nickel-plated brass LCP	Nickel-plated brass LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
---	145g	---	145g
95g	---	95g	---

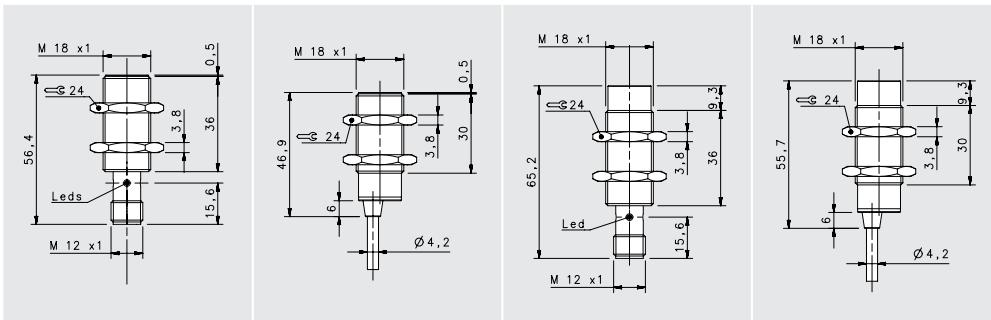
# BASIC M18



## STANDARD X2

	FLUSH		NON FLUSH	
	M12 conn	cable	M12 conn	cable
<b>NOMINAL SWITCHING DISTANCE</b>				
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	IS-18-E0-S2 95B067310
10-30 Vdc	PNP NO	3 wires	order No.	IS-18-E1-S2 95B067050
10-30 Vdc	PNP NC	3 wires	order No.	IS-18-E2-S2 95B067780
10-30 Vdc	NPN NO	3 wires	order No.	IS-18-E3-S2 95B067790
10-30 Vdc	NPN NC	3 wires	order No.	IS-18-E4-S2 95B067800
10-30 Vdc	PNP NO-NC	4 wires	order No.	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---
10-30 Vdc	NO-NC	2 wires	order No.	IS-18-E9-S2 95B067320
20-250 Vac/Vdc	NO	2 wires	order No.	---
20-250 Vac/Vdc	NC	2 wires	order No.	---
20-250 Vac	NO	2/3 wires	order No.	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---
NAMUR amplifier	NAMUR	2 wires	order No.	---
<b>8 mm</b>				<b>14 mm</b>
10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%	< 10%	< 10%	< 10%
< 10%	< 10%	< 10%	< 10%	< 10%
200 mA	200 mA	200 mA	200 mA	200 mA
---	---	---	---	---
< 10 mA	< 10 mA	< 10 mA	< 10 mA	< 10 mA
< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Yellow	Yellow	Yellow	Yellow	Yellow
400 Hz	400 Hz	100 Hz	100 Hz	100 Hz
< 50 ms	< 50 ms	< 50 ms	< 50 ms	< 50 ms
< 3%	< 3%	< 3%	< 3%	< 3%
Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
IP67	IP67	IP67	IP67	IP67
---	---	---	---	---
---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>	---	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>
Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
LCP	LCP	LCP	LCP	LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
---	---	145g	145g	---
95g	95g	---	---	---

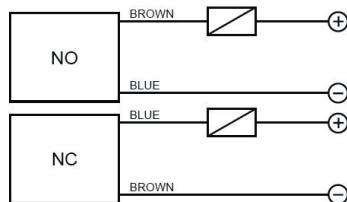
Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%	< 10%
Max. Output Current	200 mA	200 mA	200 mA	200 mA
Min. Output Current	---	---	---	---
Residual Current	< 10 mA	< 10 mA	< 10 mA	< 10 mA
Voltage Drop	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Operation Led	Yellow	Yellow	Yellow	Yellow
Switching Frequency	400 Hz	400 Hz	100 Hz	100 Hz
Start Up Delay	< 50 ms	< 50 ms	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	---	---	---
Cable Section	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	---	145g	145g
Weight - Connector Output	95g	95g	---	---



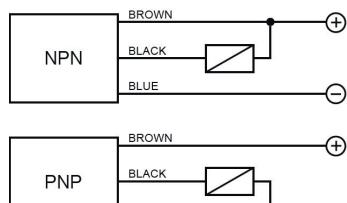
## SHORT X2

FLUSH		NON FLUSH	
M12 conn	cable	M12 conn	cable
8 mm	8 mm	14 mm	14 mm
---	---	---	---
---	---	---	---
IS-18-G1-S2	IS-18-G1-03	IS-18-H1-S2	IS-18-H1-03
95B063531	95B063521	95B063611	95B063601
IS-18-G2-S2	IS-18-G2-03	IS-18-H2-S2	IS-18-H2-03
95B063551	95B063541	95B063631	95B063621
IS-18-G3-S2	IS-18-G3-03	IS-18-H3-S2	IS-18-H3-03
95B063491	95B063061	95B063571	95B063561
IS-18-G4-S2	IS-18-G4-03	IS-18-H4-S2	IS-18-H4-03
95B063511	95B063501	95B063591	95B063581
IS-18-G5-S2	IS-18-G5-03	IS-18-H5-S2	IS-18-H5-03
95B062731	95B062721	95B062811	95B064220
IS-18-G6-S2	IS-18-G6-03	IS-18-H6-S2	IS-18-H6-03
95B062711	95B064200	95B062791	95B064210
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10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%	< 10%	< 10%
< 10%	< 10%	< 10%	< 10%
200 mA	200 mA	200 mA	200 mA
> 1,6 mA (2wires ver.)	> 1,6 mA (2wires ver.)	> 1,6 mA (2wires ver.)	> 1,6 mA (2wires ver.)
< 10 mA	< 10 mA	< 10 mA	< 10 mA
< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Yellow	Yellow	Yellow	Yellow
400 Hz/100 Hz (4 wires NO-NC)	400 Hz/100 Hz (4 wires NO-NC)	400 Hz/100 Hz (4 wires NO-NC)	400 Hz/100 Hz (4 wires NO-NC)
< 75 ms	< 75 ms	< 75 ms	< 75 ms
< 3%	< 3%	< 3%	< 3%
Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +60 °C)	(-25 ... +70 °C)	(-25 ... +60 °C)	(-25 ... +70 °C)
IP67	IP67	IP67	IP67
---	2 m	---	2 m
---	3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>	---	3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>
Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
LCP	LCP	LCP	LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
---	145g	---	145g
95g	---	95g	---

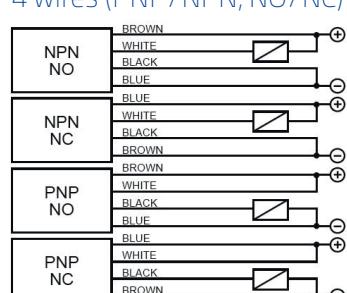
## 2 wires NO or NC



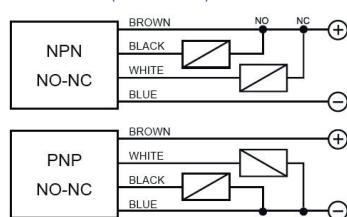
## 3 wires PNP or NPN



## 4 wires (PNP/NPN, NO/NC)



## 4 wires (NO+NC)



## M12 connector connections

### 2 wires NO or NC

Available	CONTACTS CONFIGURATION			
	1	2	3	4
NO	+		-	
NC	-		+	

### 3 wires

Available	CONTACTS CONFIGURATION			
	1	2	3	4
(NO or NC)	+		-	NO/NC

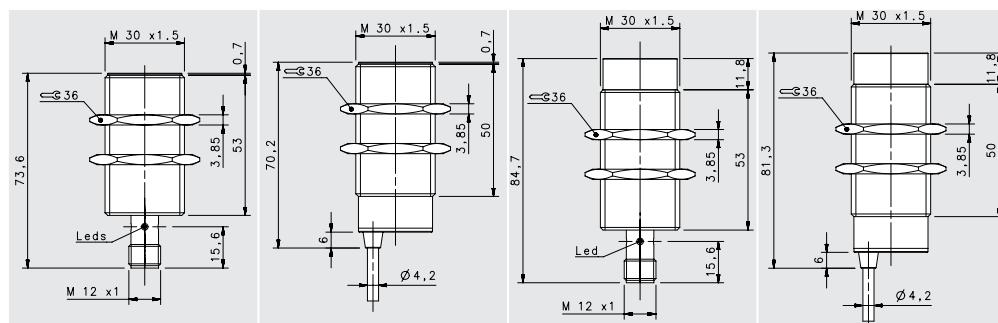
### 4 wires (PNP/NPN, NO/NC)

Output	CONTACTS CONFIGURATION			
	1	2	3	4
NPN NO	+	NO	-	-
NPN NC	-	NC	+	-
PNP NO	+	+	-	NO
PNP NC	-	+	+	NC

### 4 wires (NO+NC)

Available	CONTACTS numbers			
	1	2	3	4
(NO + NC)	+	NC	-	NO

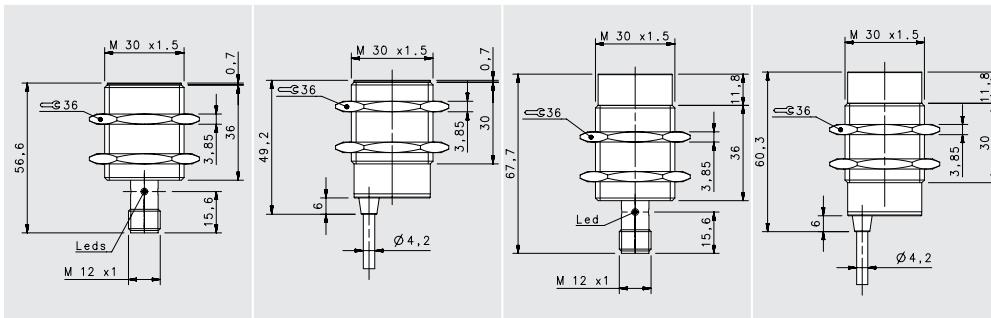
# BASIC M30



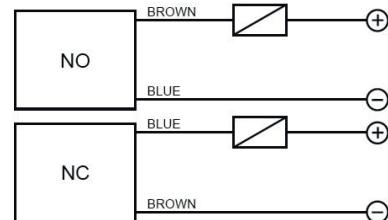
## STANDARD

		FLUSH		NON FLUSH	
		M12 conn	cable	M12 conn	cable
NOMINAL SWITCHING DISTANCE		10 mm	10 mm	15 mm	15 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires order No.	IS-30-A0-S2 95B064490	IS-30-A0-03 95B064460	IS-30-C0-S2 95B064510
10-30 Vdc	PNP NO	3 wires order No.	IS-30-A1-S2 95B061431	IS-30-A1-03 95B061421	IS-30-C1-S2 95B061831
10-30 Vdc	PNP NC	3 wires order No.	IS-30-A2-S2 95B061451	IS-30-A2-03 95B061441	IS-30-C2-S2 95B061851
10-30 Vdc	NPN NO	3 wires order No.	IS-30-A3-S2 95B061391	IS-30-A3-03 95B061381	IS-30-C3-S2 95B061791
10-30 Vdc	NPN NC	3 wires order No.	IS-30-A4-S2 95B061411	IS-30-A4-03 95B061401	IS-30-C4-S2 95B061811
10-30 Vdc	PNP NO-NC	4 wires order No.	---	---	---
10-30 Vdc	NPN NO-NC	4 wires order No.	---	---	---
10-30 Vdc	NO-NC	2 wires order No.	IS-30-A9-S2 95B064570	IS-30-A9-03 95B064530	IS-30-C9-S2 95B064590
20-250 Vac/Vdc	NO	2 wires order No.	---	---	---
20-250 Vac/Vdc	NC	2 wires order No.	---	---	---
20-250 Vac	NO	2/3 wires order No.	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires order No.	---	---	---
NAMUR amplifier	NAMUR	2 wires order No.	---	---	---

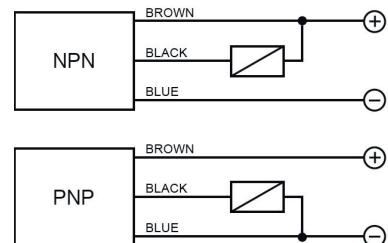
Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%	< 10%
Max. Output Current	200mA; 100 mA (2wires)	200mA; 100 mA (2wires)	200mA; 100 mA (2wires)	200mA; 100 mA (2wires)
Min. Output Current	> 1,6 mA (2wires)	> 1,6 mA (2wires)	> 1,6 mA (2wires)	> 1,6 mA (2wires)
Residual Current	< 1,6 mA	< 1,6 mA	< 1,6 mA	< 1,6 mA
Voltage Drop	< 1,8V; < 6,5 V (2wires)	< 1,8V; < 6,5 V (2wires)	< 1,8V; < 6,5 V (2wires)	< 1,8V; < 6,5 V (2wires)
Operation Led	Yellow	Yellow	Yellow	Yellow
Switching Frequency	300 Hz/250 Hz (2 wires NO-NC)	300 Hz/250 Hz (2 wires NO-NC)	300 Hz/250 Hz (2 wires NO-NC)	300 Hz/250 Hz (2 wires NO-NC)
Start Up Delay	< 50 ms	< 50 ms	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	2 m	---	2 m
Cable Section	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	210 g	---	210 g
Weight - Connector Output	170 g	---	170 g	---



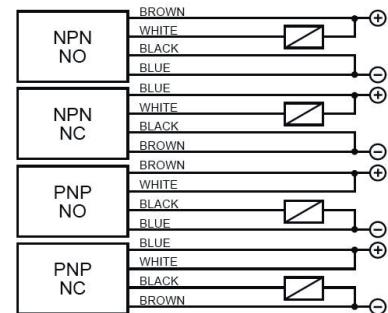
### 2 wires NO or NC



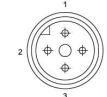
### 3 wires PNP or NPN



### 4 wires (PNP/NPN, NO/NC)



### M12 connector - connections



### 2 wires NO or NC

Available	CONTACTS CONFIGURATION			
	1	2	3	4
NO	+		-	
NC	-		+	

### 3 wires

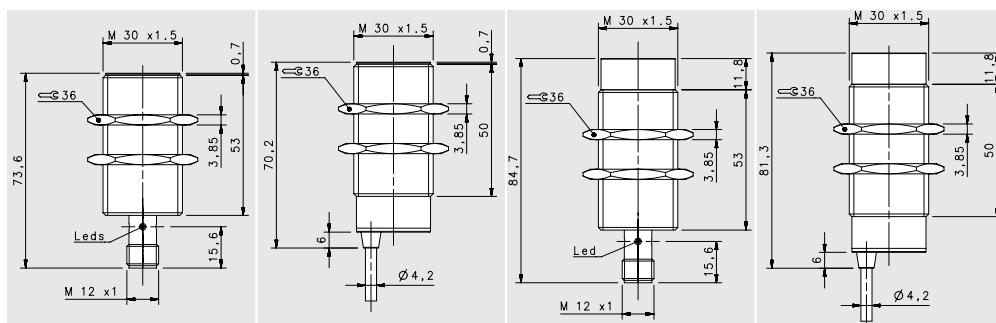
Available	CONTACTS CONFIGURATION			
	1	2	3	4
(NO or NC)	+		-	NO/NC

### 4 wires (PNP/NPN, NO/NC)

Output	CONTACTS CONFIGURATION			
	1	2	3	4
NPN NO	+	NO	-	-
NPN NC	-	NC	+	-
PNP NO	+	+	-	NO
PNP NC	-	+	+	NC

SHORT			
FLUSH	NON FLUSH		
M12 conn	cable	M12 conn	cable
<b>10 mm</b>	<b>10 mm</b>	<b>15 mm</b>	<b>15 mm</b>
---	---	---	---
IS-30-B1-S2	IS-30-B1-03	IS-30-D1-S2	IS-30-D1-03
95B062231	95B062221	95B062631	95B062621
IS-30-B2-S2	IS-30-B2-03	IS-30-D2-S2	IS-30-D2-03
95B062251	95B062241	95B062651	95B062641
IS-30-B3-S2	IS-30-B3-03	IS-30-D3-S2	IS-30-D3-03
95B062191	95B062181	95B062591	95B062581
IS-30-B4-S2	IS-30-B4-03	IS-30-D4-S2	IS-30-D4-03
95B062211	95B062201	95B062611	95B062601
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10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%	< 10%	< 10%
< 10%	< 10%	< 10%	< 10%
200 mA	200 mA	200 mA	200 mA
---	---	---	---
< 10 mA	< 10 mA	< 10 mA	< 10 mA
< 1.8 V (I=100mA)			
Yellow	Yellow	Yellow	Yellow
300 Hz	300 Hz	300 Hz	300 Hz
< 50 ms	< 50 ms	< 50 ms	< 50 ms
< 3%	< 3%	< 3%	< 3%
Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads (-25 ... +60 °C)	Against polarity reversal inductive loads (-25 ... +60 °C)	Against polarity reversal inductive loads (-25 ... +60 °C)	Against polarity reversal inductive loads (-25 ... +60 °C)
IP67	IP67	IP67	IP67
---	2 m	---	2 m
---	3 x 0,14 mm <sup>2</sup>	---	3 x 0,14 mm <sup>2</sup>
Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
LCP	LCP	LCP	LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
---	210 g	---	210 g
170 g	---	170 g	---

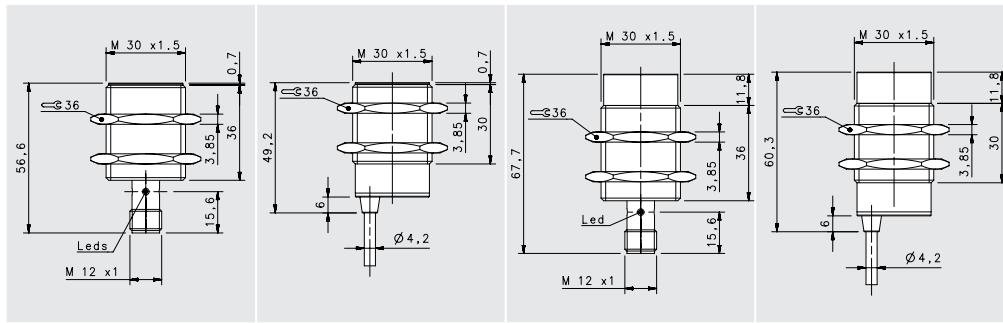
# BASIC M30



## STANDARD X2

	FLUSH		NON-FLUSH	
	M12 conn	cable	M12 conn	cable
<b>NOMINAL SWITCHING DISTANCE</b>				
	<b>15mm</b>	<b>15mm</b>	<b>20 mm</b>	<b>20 mm</b>
10-30 Vdc	PNP/NPN NO-NC order No.	IS-30-E0-S2 95B067390	IS-30-E0-03 95B067350	IS-30-F0-S2 95B067410
10-30 Vdc	PNP NO order No.	IS-30-E1-S2 95B067060	IS-30-E1-03 95B067950	IS-30-F1-S2 95B067990
10-30 Vdc	PNP NC order No.	IS-30-E2-S2 95B067920	IS-30-E2-03 95B067960	IS-30-F2-S2 95B068000
10-30 Vdc	NPN NO order No.	IS-30-E3-S2 95B067930	IS-30-E3-03 95B067970	IS-30-F3-S2 95B068010
10-30 Vdc	NPN NC order No.	IS-30-E4-S2 95B067940	IS-30-E4-03 95B067980	IS-30-F4-S2 95B068020
10-30 Vdc	PNP NO-NC order No.	---	---	---
10-30 Vdc	NPN NO-NC order No.	---	---	---
10-30 Vdc	NO-NC order No.	IS-30-E9-S2 95B067400	IS-30-E9-03 95B067360	IS-30-F9-S2 95B067420
20-250 Vac/Vdc	NO order No.	---	---	---
20-250 Vac/Vdc	NC order No.	---	---	---
20-250 Vac	NO 2/3 wires order No.	---	---	---
10-30 Vdc	Analog 0-20 mA order No.	---	---	---
NAMUR amplifier	NAMUR order No.	---	---	---

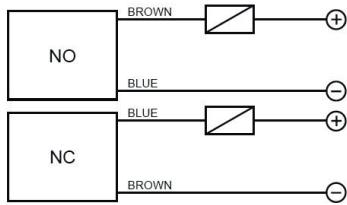
Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%	< 10%
Max. Output Current	200 mA	200 mA	200 mA	200 mA
Min. Output Current	---	---	---	---
Residual Current	< 10 mA	< 10 mA	< 10 mA	< 10 mA
Voltage Drop	< 6,5 V (I=100mA)	< 6,5 V (I=100mA)	< 6,5 V (I=100mA)	< 6,5 V (I=100mA)
Operation Led	Yellow	Yellow	Yellow	Yellow
Switching Frequency	200 Hz/100 Hz (2 wires NO-NC)	200 Hz/100 Hz (2 wires NO-NC)	200 Hz/100 Hz (2 wires NO-NC)	200 Hz/100 Hz (2 wires NO-NC)
Start Up Delay	< 75 ms	< 75 ms	< 75 ms	< 75 ms
Repeatability	< 3%	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	---	---	---
Cable Section	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>	---	2 x 0,34 mm <sup>2</sup> 3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	---	---	---
Weight - Connector Output	170 g	170 g	170 g	170 g



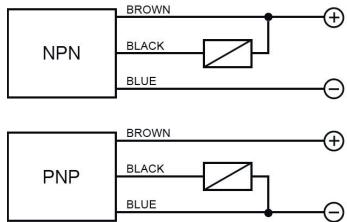
## SHORT X2

FLUSH		NON FLUSH	
M12 conn	cable	M12 conn	cable
<b>15mm</b>	<b>15mm</b>	<b>20 mm</b>	<b>20 mm</b>
---	---	---	---
---	---	---	---
IS-30-G1-S2 95B063691	IS-30-G1-03 95B063681	IS-30-H1-S2 95B063771	IS-30-H1-03 95B063761
IS-30-G2-S2 95B063711	IS-30-G2-03 95B063701	IS-30-H2-S2 95B063791	IS-30-H2-03 95B063781
IS-30-G3-S2 95B063651	IS-30-G3-03 95B063641	IS-30-H3-S2 95B063731	IS-30-H3-03 95B063721
IS-30-G4-S2 95B063671	IS-30-G4-03 95B063661	IS-30-H4-S2 95B063751	IS-30-H4-03 95B063741
IS-30-G5-S2 95B063831	IS-30-G5-03 95B063821	IS-30-H5-S2 95B064450	IS-30-H5-03 95B064420
IS-30-G6-S2 95B064430	IS-30-G6-03 95B064400	IS-30-H6-S2 95B064440	IS-30-H6-03 95B064410
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---	---	---	---
10-30 Vdc (-15/10%) < 10%			
< 10%	< 10%	< 10%	< 10%
200 mA ---	200 mA ---	200 mA ---	200 mA ---
< 10 mA < 1,2 V (I=100mA) Yellow 200 Hz < 75 ms < 3%	< 10 mA < 1,2 V (I=100mA) Yellow 200 Hz < 75 ms < 3%	< 10 mA < 1,2 V (I=100mA) Yellow 200 Hz < 75 ms < 3%	< 10 mA < 1,2 V (I=100mA) Yellow 200 Hz < 75 ms < 3%
Present (self-resetting) Against polarity reversal inductive loads (-25 ... +70 °C) IP67 ---	Present (self-resetting) Against polarity reversal inductive loads (-25 ... +70 °C) IP67 2 m	Present (self-resetting) Against polarity reversal inductive loads (-25 ... +70 °C) IP67 ---	Present (self-resetting) Against polarity reversal inductive loads (-25 ... +70 °C) IP67 2 m
---	3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>	---	3 x 0,14 mm <sup>2</sup> 4 x 0,25 mm <sup>2</sup>
Nickel-plated brass LCP * see page 5 of the Inductive Sensors Catalog	Nickel-plated brass LCP * see page 5 of the Inductive Sensors Catalog	Nickel-plated brass LCP * see page 5 of the Inductive Sensors Catalog	Nickel-plated brass LCP * see page 5 of the Inductive Sensors Catalog
---	210 g	---	210 g
170 g	---	170 g	---

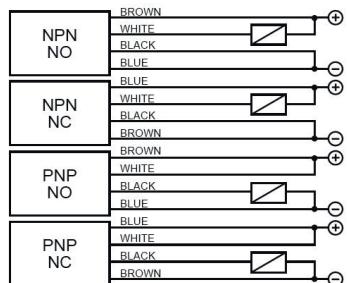
### 2 wires NO or NC



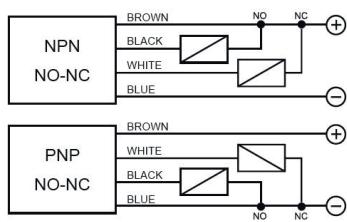
### 3 wires PNP or NPN



### 4 wires (PNP/NPN, NO/NC)



### 4 wires (NO+NC)



### M12 connector connections

#### 2 wires NO or NC

Available	CONTACTS CONFIGURATION			
	1	2	3	4
NO	+		-	
NC	-		+	

#### 3 wires

Available	CONTACTS CONFIGURATION			
	1	2	3	4
(NO or NC)	+		-	NO/NC

#### 4 wires (PNP/NPN, NO/NC)

Output	CONTACTS CONFIGURATION			
	1	2	3	4
NPN NO	+	NO	-	-
NPN NC	-	NC	+	-
PNP NO	+	+	-	NO
PNP NC	-	+	+	NC

#### 4 wires (NO+NC)

Available	Contacts numbers			
	1	2	3	4
(NO + NC)	+	NC	-	NO

# STAINLESS STEEL

Stainless Steel housing

M4, M5 POM active face - M6,5, M8, M12, M18, M30 LCP active face

Standard length

Short length

Normal and double range operating distance

Operating distance 0.8 ... 20 mm

M4, M5, M6,5, M8, M12, M18, M30

Cable, M8 or M12 connector

3 wires

PNP, NPN, NO, NC

IP69K protection

## REDUCTION FACTOR

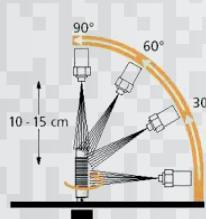
	ALUMINUM (25°C)	STAINLESS STEEL AISI316L	COPPER	BRASS
FLUSH	0,3...0,5	0,7...0,9	0,2...0,5	0,4...0,6
NON-FLUSH	0,4...0,6	0,7...1,05	0,4...0,5	0,5...0,7



~M12/18/30 models are Diversey and ECOLAB tested~



\*Excluded M4 and M5 models



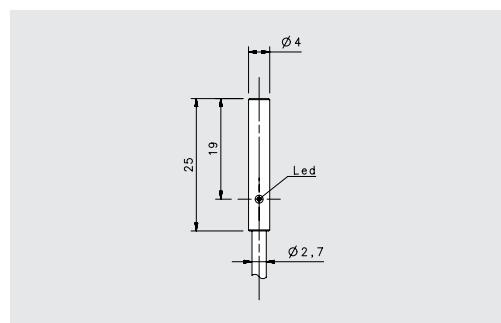
**IP69K**

Each Stainless Steel model is IP69K tested  
M12/18/30 models are IP69K certified



## STAINLESS STEEL

# STAINLESS STEEL M4



## STANDARD

### FLUSH

cable

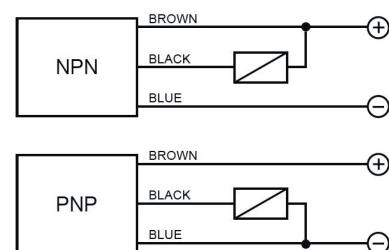
#### NOMINAL SWITCHING DISTANCE

**0,8 mm**

10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---
10-30 Vdc	PNP NO	3 wires	order No.	IS-04-A1-03 95B061011	
10-30 Vdc	PNP NC	3 wires	order No.	---	---
10-30 Vdc	NPN NO	3 wires	order No.	IS-04-A3-03 95B061001	
10-30 Vdc	NPN NC	3 wires	order No.	---	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	---	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---	---
10-30 Vdc	NO-NC	2 wires	order No.	---	---
20-250 Vac/Vdc	NO	2 wires	order No.	---	---
20-250 Vac/Vdc	NC	2 wires	order No.	---	---
20-250 Vac	NO	2/3wires	order No.	---	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	---
NAMUR amplifier	NAMUR	2 wires	order No.	---	---

Nominal Voltage	10-30 Vdc (-15/10%)
Residual Ripple	< 10%
Hysteresis	< 15%
Max. Output Current	100 mA
Min. Output Current	---
Residual Current	< 0,01 mA
Voltage Drop	< 1,5 V
Operation Led	Yellow
Switching Frequency	2000 Hz
Start Up Delay	---
Repeatability	< 1%
Short Circuit Protection	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)
Protection Degree	IP69K
Cable Length	2 m (PUR)
Cable Section	3x 0,15 mm <sup>2</sup>
Housing Material	Stainless-Steel
Active face	POM
Tightening torque	---
Weight - Cable Output	50 g
Weight - Connector Output	---

3 wires PNP or NPN



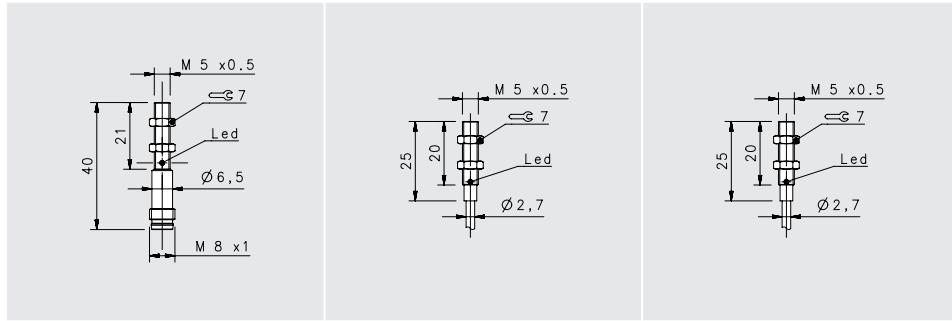
M8 3 pole



#### CONTACTS CONFIGURATION

Available	Contacts numbers		
	1 BROWN	3 BLUE	4 BLACK
NPN/PNP	+	-	NO/NC

# STAINLESS STEEL M5



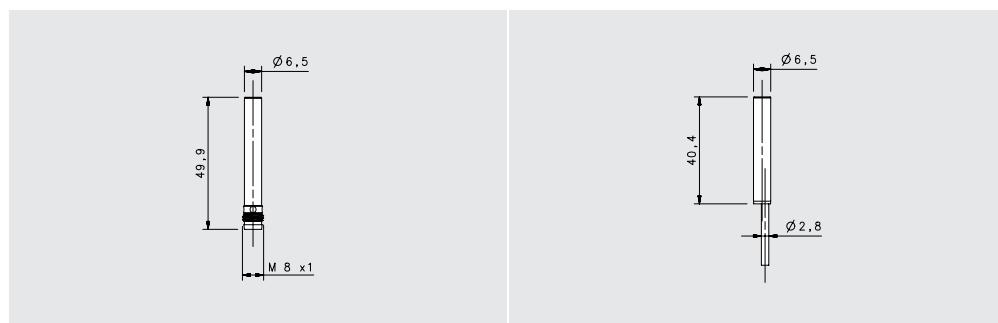
STANDARD				STANDARD X2	
FLUSH				FLUSH	

## NOMINAL SWITCHING DISTANCE

				M8 conn	cable	cable
				0,8 mm	0,8 mm	1,5 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---	---
				---	---	---
10-30 Vdc	PNP NO	3 wires	order No.	IS-05-A1-S1 95B061051	IS-05-A1-03 95B061041	---
10-30 Vdc	PNP NC	3 wires	order No.	---	---	---
10-30 Vdc	NPN NO	3 wires	order No.	IS-05-A3-S1 95B061031	IS-05-A3-03 95B061021	IS-05-E3-03 95B065400
10-30 Vdc	NPN NC	3 wires	order No.		IS-05-A4-03 95B065420	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	NO-NC	2 wires	order No.	---	---	---
20-250 Vac/Vdc	NO	2 wires	order No.	---	---	---
20-250 Vac/Vdc	NC	2 wires	order No.	---	---	---
20-250 Vac	NO	2/3 wires	order No.	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	---	---
NAMUR amplifier	NAMUR	2 wires	order No.	---	---	---

Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%
Hysteresis	< 15%	< 15%	< 15%
Max. Output Current	100 mA	100 mA	100 mA
Min. Output Current	---	---	---
Residual Current	< 0,01 mA	< 0,01 mA	< 0,01 mA
Voltage Drop	< 1,5V	< 1,5V	< 1,5V
Operation Led	Yellow	Yellow	Yellow
Switching Frequency	2000 Hz	2000 Hz	2000 Hz
Start Up Delay	---	---	---
Repeatability	< 1%	< 1%	---
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP69K	IP69K	IP69K
Cable Length	---	2 m (PUR)	2 m (PUR)
Cable Section	---	3x 0,15 mm <sup>2</sup>	3x 0,15 mm <sup>2</sup>
Housing Material	Stainless-Steel	Stainless-Steel	Stainless-Steel
Active face	POM	POM	POM
Tightening torque	1,5 Nm	1,5 Nm	1,5 Nm
Weight - Cable Output	---	25g	25g
Weight - Connector Output	14g	---	---

# STAINLESS STEEL M6.5

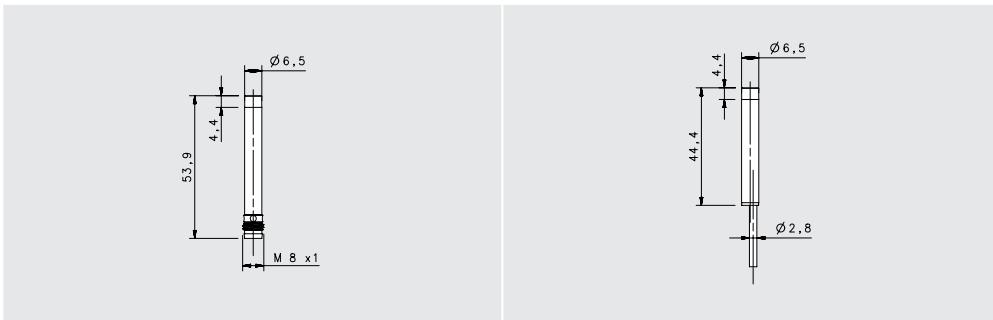


## SHORT STAINLESS STEEL

### FLUSH

			M8 conn	cable
1.5 mm				1.5 mm
<b>NOMINAL SWITCHING DISTANCE</b>				
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---
				---
10-30 Vdc	PNP NO	3 wires	order No.	IS-65-M1-S1 95B066080
10-30 Vdc	PNP NC	3 wires	order No.	IS-65-M2-S1 95B066120
10-30 Vdc	NPN NO	3 wires	order No.	IS-65-M3-S1 95B066000
10-30 Vdc	NPN NC	3 wires	order No.	IS-65-M4-S1 95B066040
10-30 Vdc	PNP NO-NC	4 wires	order No.	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---
10-30 Vdc	NO-NC	2 wires	order No.	---
20-250 Vac/Vdc	NO	2 wires	order No.	---
20-250 Vac/Vdc	NC	2 wires	order No.	---
20-250 Vac	NO	2/3wires	order No.	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---
NAMUR amplifier	NAMUR	2 wires	order No.	---

Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%
Hysteresis	< 10%	< 10%
Max. Output Current	200 mA	200 mA
Min. Output Current	---	---
Residual Current	< 10 mA	< 10 mA
Voltage Drop	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Operation Led	Yellow	Yellow
Switching Frequency	1000 Hz	1000 Hz
Start Up Delay	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP69K	IP69K
Cable Length	---	---
Cable Section	---	3x 0,14 mm <sup>2</sup>
Housing Material	Stainless-Steel	Stainless-Steel
Active face	LCP	LCP
Tightening torque	---	---
Weight - Cable Output	---	80 g
Weight - Connector Output	40 g	---

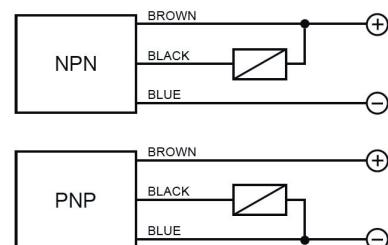


## SHORT STAINLESS STEEL

### NON FLUSH

M8 conn	cable
<b>2 mm</b>	<b>2 mm</b>
---	---
---	---
IS-65-N1-S1	IS-65-N1-03
95B066240	95B064920
IS-65-N2-S1	IS-65-N2-03
95B066280	95B064960
IS-65-N3-S1	IS-65-N3-03
95B066160	95B064840
IS-65-N4-S1	IS-65-N4-03
95B066200	95B064880
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---	---
---	---
---	---
10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%
< 10%	< 10%
200 mA	200 mA
---	---
< 10 mA	< 10 mA
< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Yellow	Yellow
1000 Hz	1000 Hz
< 50 ms	< 50 ms
< 3%	< 3%
Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +70 °C)	(-25 ... +70 °C)
IP69K	IP69K
---	---
---	3x 0,14 mm <sup>2</sup>
Stainless-Steel	Stainless-Steel
LCP	LCP
---	---
---	80 g
40 g	---

3 wires PNP or NPN



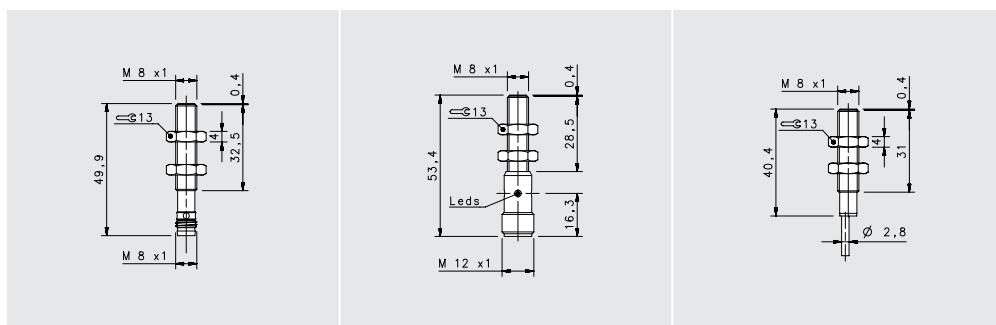
M8 3 pole



#### CONTACTS CONFIGURATION

Available	Contacts numbers		
	1 BROWN	3 BLUE	4 BLACK
NPN/PNP	+	-	NO/NC

# STAINLESS STEEL M8

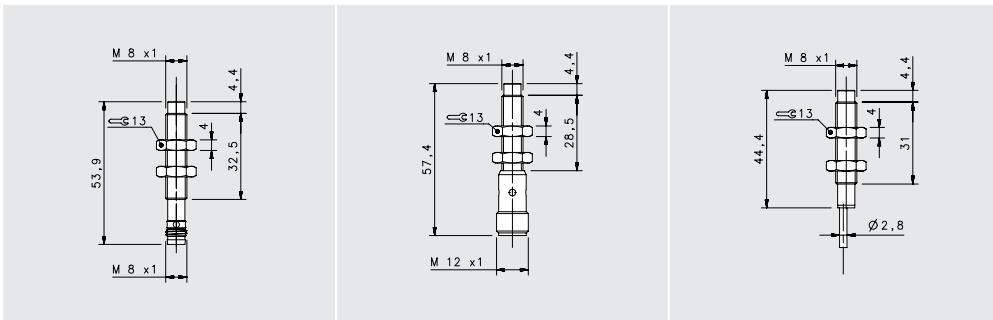


## SHORT STAINLESS STEEL

### FLUSH

		M8 conn	M12 conn	cable		
NOMINAL SWITCHING DISTANCE				1.5 mm	1.5 mm	1.5 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires order No.	---	---	---	---
10-30 Vdc	PNP NO	3 wires order No.	IS-08-M1-S1 95B066870	IS-08-M1-S2 95B066600	IS-08-M1-03 95B066380	
10-30 Vdc	PNP NC	3 wires order No.	IS-08-M2-S1 95B066900	IS-08-M2-S2 95B066630	IS-08-M2-03 95B066600	
10-30 Vdc	NPN NO	3 wires order No.	IS-08-M3-S1 95B066820	IS-08-M3-S2 95B066540	IS-08-M3-03 95B066340	
10-30 Vdc	NPN NC	3 wires order No.	IS-08-M4-S1 95B066840	IS-08-M4-S2 95B066570	IS-08-M4-03 95B066360	
10-30 Vdc	PNP NO-NC	4 wires order No.	---	---	---	
10-30 Vdc	NPN NO-NC	4 wires order No.	---	---	---	
10-30 Vdc	NO-NC	2 wires order No.	---	---	---	
20-250 Vac/Vdc	NO	2 wires order No.	---	---	---	
20-250 Vac/Vdc	NC	2 wires order No.	---	---	---	
20-250 Vac	NO	2/3 wires order No.	---	---	---	
10-30 Vdc	Analog 0-20 mA	3 wires order No.	---	---	---	
NAMUR amplifier	NAMUR	2 wires order No.	---	---	---	

Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%
Max. Output Current	200 mA	200 mA	200 mA
Min. Output Current	---	---	---
Residual Current	< 10 mA	< 10 mA	< 10 mA
Voltage Drop	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Operation Led	Yellow	Yellow	Yellow
Switching Frequency	1000 Hz	1000 Hz	1000 Hz
Start Up Delay	< 50 ms	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP69K	IP69K	IP69K
Cable Length	---	---	---
Cable Section	---	---	3x 0,14 mm <sup>2</sup>
Housing Material	Stainless-Steel LCP	Stainless-Steel LCP	Stainless-Steel LCP
Active face	*	*	*
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	---	80 g
Weight - Connector Output	35g	55g	---

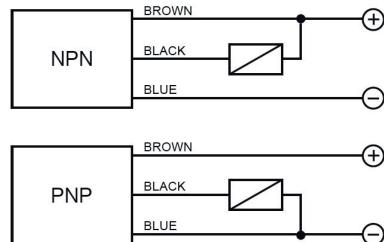


## SHORT STAINLESS STEEL

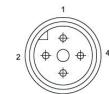
### NON FLUSH

M8 conn	M12 conn	cable
<b>2 mm</b>	<b>2 mm</b>	<b>2 mm</b>
---	---	---
---	---	---
IS-08-N1-S1	IS-08-N1-S2	IS-08-N1-03
95B066980	95B066710	95B066490
IS-08-N2-S1	IS-08-N2-S2	IS-08-N2-03
95B067010	95B066730	95B066510
IS-08-N3-S1	IS-08-N3-S2	IS-08-N3-03
95B066930	95B066660	95B066440
IS-08-N4-S1	IS-08-N4-S2	IS-08-N4-03
95B066950	95B066680	95B066470
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10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%	< 10%
< 10%	< 10%	< 10%
200 mA	200 mA	200 mA
---	---	---
< 10 mA	< 10 mA	< 10 mA
< 1,2 V (I=100mA)	< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Yellow	Yellow	Yellow
1000 Hz	1000 Hz	1000 Hz
< 50 ms	< 50 ms	< 50 ms
< 3%	< 3%	< 3%
Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +70 °C)	(-25 ... +70 °C)	(-25 ... +70 °C)
IP69K	IP69K	IP69K
---	---	---
---	---	3x 0,14 mm <sup>2</sup>
Stainless-Steel LCP	Stainless-Steel LCP	Stainless-Steel LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
---	---	80 g
35g	55g	---

3 wires PNP or NPN



M12 3 pole



CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
(NO or NC)	+		-	NO/NC

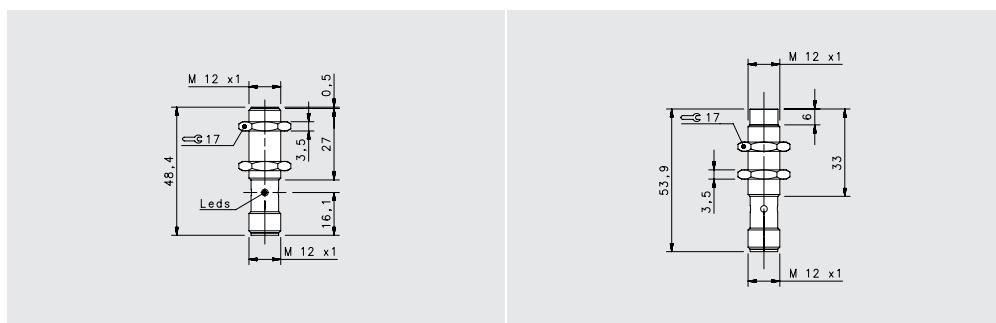
M8 3 pole



CONTACTS CONFIGURATION

Available	Contacts numbers		
	1 BROWN	3 BLUE	4 BLACK
NPN/PNP	+	-	NO/NC

# STAINLESS STEEL M12



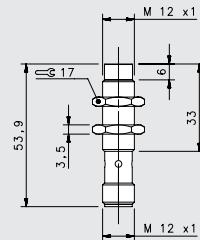
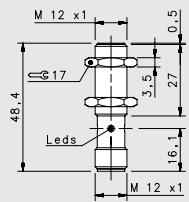
## SHORT STAINLESS STEEL

	FLUSH	NON FLUSH
--	-------	-----------

### NOMINAL SWITCHING DISTANCE

			2 mm	4 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires	M12 conn order No.	---
			---	---
			IS-12-M1-S2 95B060240	IS-12-N1-S2 95B060280
10-30 Vdc	PNP NO	3 wires	order No.	IS-12-M2-S2 95B060250
10-30 Vdc	PNP NC	3 wires	order No.	IS-12-M3-S2 95B060260
10-30 Vdc	NPN NO	3 wires	order No.	IS-12-M4-S2 95B060270
10-30 Vdc	NPN NC	3 wires	order No.	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---
10-30 Vdc	NO-NC	2 wires	order No.	---
20-250 Vac/Vdc	NO	2 wires	order No.	---
20-250 Vac/Vdc	NC	2 wires	order No.	---
20-250 Vac	NO	2/3 wires	order No.	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---
NAMUR amplifier	NAMUR	2 wires	order No.	---

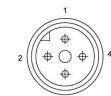
Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%
Hysteresis	< 10%	< 10%
Max. Output Current	200 mA	200 mA
Min. Output Current	---	---
Residual Current	< 10 mA	< 10 mA
Voltage Drop	< 1.8 V (I=100mA)	< 1.8 V (I=100mA)
Operation Led	Yellow	Yellow
Switching Frequency	1000 Hz	1000 Hz
Start Up Delay	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP69K	IP69K
Cable Length	---	---
Cable Section	---	---
Housing Material	Stainless-Steel	Stainless-Steel
Active face	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	---
Weight - Connector Output	60 g	60 g



## SHORT STAINLESS STEEL X2

FLUSH	NON FLUSH
M12 conn	M12 conn
<b>4 mm</b>	<b>8 mm</b>
---	---
---	---
IS-12-01-S2	IS-12-P1-S2
95B060000	95B060040
IS-12-02-S2	IS-12-P2-S2
95B060010	95B060050
IS-12-03-S2	IS-12-P3-S2
95B060020	95B060060
IS-12-04-S2	IS-12-P4-S2
95B060030	95B060070
---	---
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---	---
---	---
---	---
---	---
---	---
---	---
---	---
---	---
10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%
< 10%	< 10%
200 mA	200 mA
---	---
< 10 mA	< 10 mA
< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Yellow	Yellow
500 Hz	500 Hz
< 75 ms	< 75 ms
< 3%	< 3%
Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +70 °C)	(-25 ... +70 °C)
IP69K	IP69K
---	---
---	---
Stainless-Steel	Stainless-Steel
LCP	LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
---	---
60 g	60 g

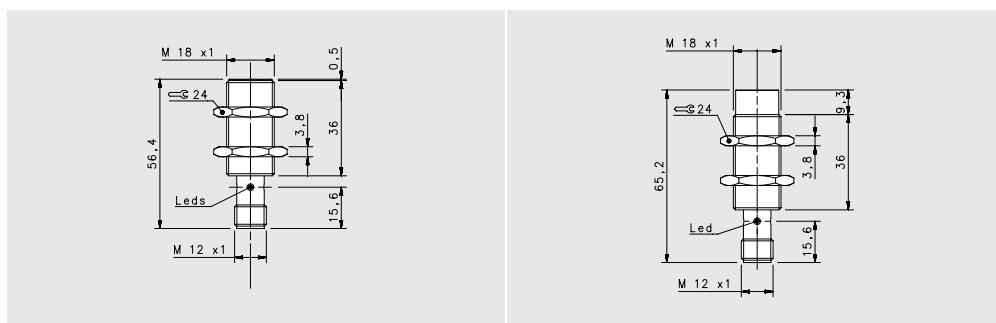
M12 3 pole



### CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
(NO or NC)	+		-	NO/NC

# STAINLESS STEEL M18



## SHORT STAINLESS STEEL

	FLUSH	NON FLUSH
--	-------	-----------

M12 conn

M12 conn

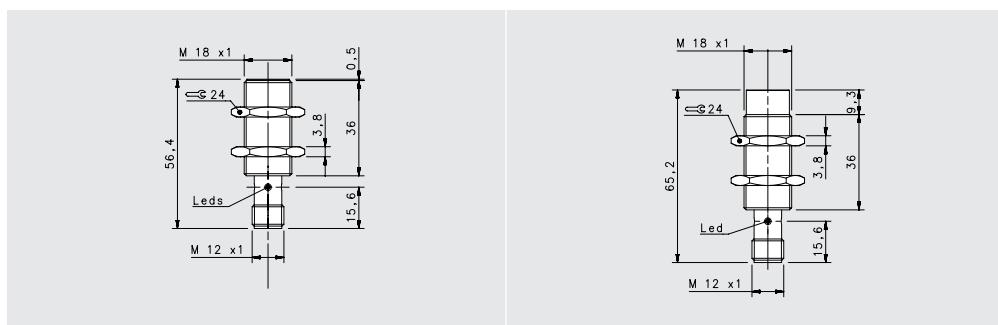
**5 mm**

**8 mm**

### NOMINAL SWITCHING DISTANCE

10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	PNP NO	3 wires	order No.	IS-18-M1-S2 95B060320		IS-18-N1-S2 95B060360
10-30 Vdc	PNP NC	3 wires	order No.	IS-18-M2-S2 95B060330		IS-18-N2-S2 95B060370
10-30 Vdc	NPN NO	3 wires	order No.	IS-18-M3-S2 95B060340		IS-18-N3-S2 95B060380
10-30 Vdc	NPN NC	3 wires	order No.	IS-18-M4-S2 95B060350		IS-18-N4-S2 95B060390
10-30 Vdc	PNP NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	NO-NC	2 wires	order No.	---	---	---
20-250 Vac/Vdc	NO	2 wires	order No.	---	---	---
20-250 Vac/Vdc	NC	2 wires	order No.	---	---	---
20-250 Vac	NO	2/3 wires	order No.	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	---	---
NAMUR amplifier	NAMUR	2 wires	order No.	---	---	---

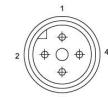
Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%
Hysteresis	< 10%	< 10%
Max. Output Current	200 mA	200 mA
Min. Output Current	---	---
Residual Current	< 10 mA	< 10 mA
Voltage Drop	< 1.8 V (I=100mA)	< 1.8 V (I=100mA)
Operation Led	Yellow	Yellow
Switching Frequency	1000 Hz	1000 Hz
Start Up Delay	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP69K	IP69K
Cable Length	---	---
Cable Section	---	---
Housing Material	Stainless-Steel	Stainless-Steel
Active face	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	---
Weight - Connector Output	95g	95g



## SHORT STAINLESS STEEL X2

FLUSH	NON FLUSH
M12 conn	M12 conn
<b>8 mm</b>	<b>14 mm</b>
---	---
---	---
IS-18-01-S2	IS-18-P1-S2
95B060080	95B060120
IS-18-02-S2	IS-18-P2-S2
95B060090	95B060130
IS-18-03-S2	IS-18-P3-S2
95B060100	95B060140
IS-18-04-S2	IS-18-P4-S2
95B060110	95B060150
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---	---
---	---
---	---
---	---
---	---
---	---
10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%
< 10%	< 10%
200 mA	200 mA
---	---
< 10 mA	< 10 mA
< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Yellow	Yellow
200 Hz	200 Hz
< 75 ms	< 75 ms
< 3%	< 3%
Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +70 °C)	(-25 ... +70 °C)
IP69K	IP69K
---	---
---	---
Stainless-Steel	Stainless-Steel
LCP	LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
---	---
95g	95g

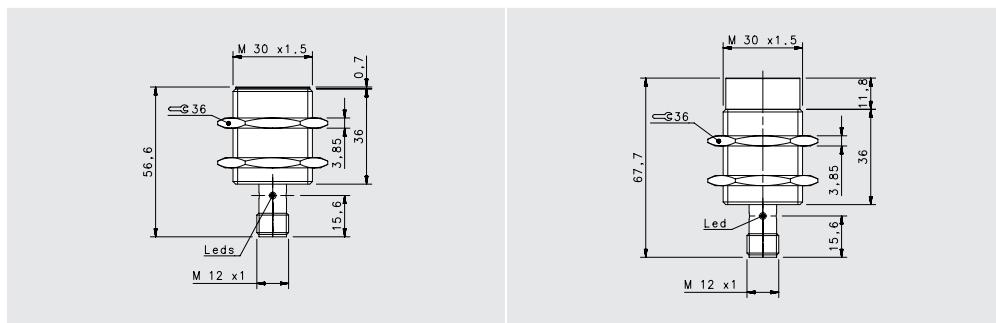
M12 3 pole



### CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
(NO or NC)	+		-	NO/NC

# STAINLESS STEEL M30



## SHORT STAINLESS STEEL

	FLUSH	NON FLUSH
--	-------	-----------

M12 conn

M12

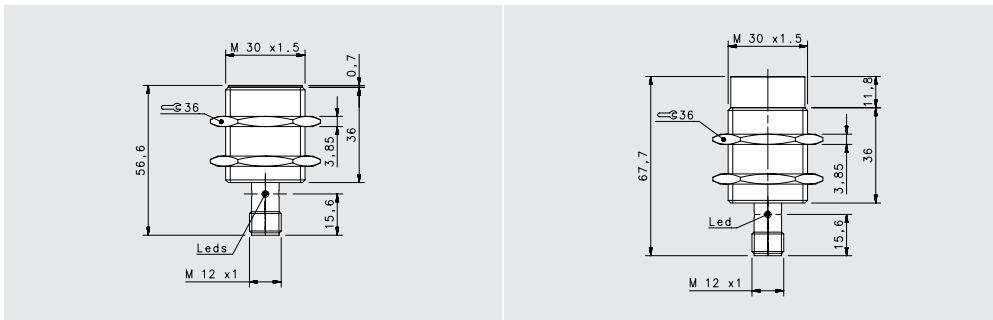
**10 mm**

**15 mm**

### NOMINAL SWITCHING DISTANCE

10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	PNP NO	3 wires	order No.	IS-30-M1-S2 95B060400		IS-30-N1-S2 95B060440
10-30 Vdc	PNP NC	3 wires	order No.	IS-30-M2-S2 95B060410		IS-30-N2-S2 95B060450
10-30 Vdc	NPN NO	3 wires	order No.	IS-30-M3-S2 95B060420		IS-30-N3-S2 95B060460
10-30 Vdc	NPN NC	3 wires	order No.	IS-30-M4-S2 95B060430		IS-30-N4-S2 95B060470
10-30 Vdc	PNP NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	NO-NC	2 wires	order No.	---	---	---
20-250 Vac/Vdc	NO	2 wires	order No.	---	---	---
20-250 Vac/Vdc	NC	2 wires	order No.	---	---	---
20-250 Vac	NO	2/3 wires	order No.	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	---	---
NAMUR amplifier	NAMUR	2 wires	order No.	---	---	---

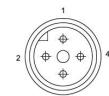
Nominal Voltage	10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
Residual Ripple	< 10%	< 10%
Hysteresis	< 10%	< 10%
Max. Output Current	200 mA	200 mA
Min. Output Current	---	---
Residual Current	< 10 mA	< 10 mA
Voltage Drop	< 1.8 V (I=100mA)	< 1.8 V (I=100mA)
Operation Led	Yellow	Yellow
Switching Frequency	300 Hz	300 Hz
Start Up Delay	< 50 ms	< 50 ms
Repeatability	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP69K	IP69K
Cable Length	---	---
Cable Section	---	---
Housing Material	Stainless-Steel	Stainless-Steel
Active face	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	---
Weight - Connector Output	170 g	170 g



## SHORT STAINLESS STEEL X2

FLUSH	NON FLUSH
M12 conn	M12 conn
<b>15 mm</b>	<b>20 mm</b>
---	---
---	---
IS-30-01-S2	IS-30-P1-S2
95B060160	95B060200
IS-30-02-S2	IS-30-P2-S2
95B060170	95B060210
IS-30-03-S2	IS-30-P3-S2
95B060180	95B060220
IS-30-04-S2	IS-30-P4-S2
95B060190	95B060230
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---	---
---	---
---	---
---	---
10-30 Vdc (-15/10%)	10-30 Vdc (-15/10%)
< 10%	< 10%
< 10%	< 10%
200 mA	200 mA
---	---
< 10 mA	< 10 mA
< 1,2 V (I=100mA)	< 1,2 V (I=100mA)
Yellow	Yellow
100 Hz	100 Hz
< 75 ms	< 75 ms
< 3%	< 3%
Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +70 °C)	(-25 ... +70 °C)
IP69K	IP69K
---	---
---	---
Stainless-Steel	Stainless-Steel
LCP	LCP
* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
---	---
170 g	170 g

M12 3 pole



### CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
(NO or NC)	+		-	NO/NC

## METAL FACE

Stainless Steel housing

Stainless Steel AISI 303 active face

Standard length

2 ... 8 mm

M12, M18

M12 connector

3 wires

PNP, NO

IP67 protection

*REDUCTION FACTOR*

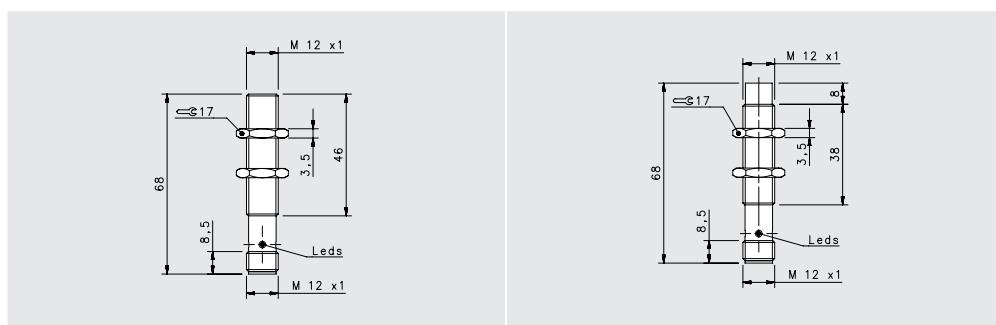
	ALUMINUM (25°C)	STAINLESS STEEL AISI316L	COPPER	BRASS
Average red. Fact.	0,45	0,85	0,4	0,5





## METAL FACE

# METAL FACE M12



## METAL FACE

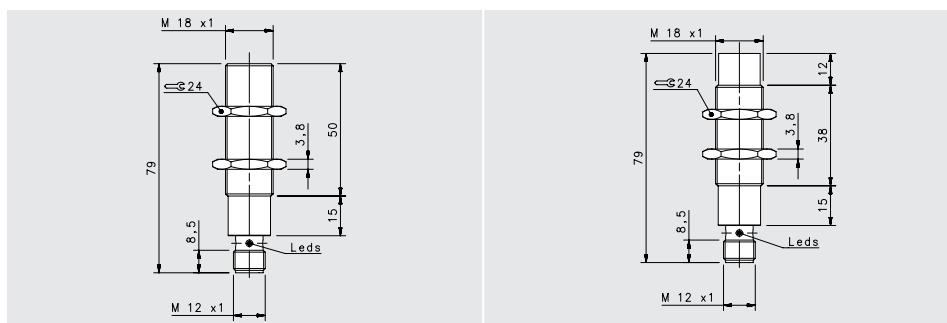
	FLUSH	NON FLUSH
--	-------	-----------

### NOMINAL SWITCHING DISTANCE

			2 mm	4 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires	M12 conn order No.	---
10-30 Vdc	PNP NO	3 wires	IS-12-I1-S2 order No.	IS-12-L1-S2 95B065340
10-30 Vdc	PNP NC	3 wires	order No.	---
10-30 Vdc	NPN NO	3 wires	order No.	---
10-30 Vdc	NPN NC	3 wires	order No.	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---
10-30 Vdc	NO-NC	2 wires	order No.	---
20-250 Vac/Vdc	NO	2 wires	order No.	---
20-250 Vac/Vdc	NC	2 wires	order No.	---
20-250 Vac	NO	2/3 wires	order No.	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---
NAMUR amplifier	NAMUR	2 wires	order No.	---

Nominal Voltage	10-30 Vdc	10-30 Vdc
Residual Ripple	< 10%	< 10%
Hysteresis	< 15%	< 15%
Max. Output Current	200 mA	200 mA
Min. Output Current	---	---
Residual Current	< 0,01 mA	< 0,01 mA
Voltage Drop	< 1,5 V (I=100mA)	< 1,5 V (I=100mA)
Operation Led	Present	Present
Switching Frequency	2000 Hz	1000 Hz
Start Up Delay	---	---
Repeatability	< 1%	< 1%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67
Cable Length	---	---
Cable Section	---	---
Housing Material	Stainless-Steel	Stainless-Steel
Active face	Stainless Steel AISI 303	Stainless Steel AISI 303
Tightening torque	10Nm	10Nm
Weight - Cable Output	---	---
Weight - Connector Output	30 g	30 g

# METAL FACE M18



## METAL FACE

### FLUSH

M12 conn

### 5 mm

### NON FLUSH

M12 conn

### 8 mm

#### NOMINAL SWITCHING DISTANCE

				order No.	5 mm	8 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires			---	---
					---	---
10-30 Vdc	PNP NO	3 wires	order No.		IS-18-I1-S2 95B065350	IS-18-L1-S2 95B063881
10-30 Vdc	PNP NC	3 wires	order No.		---	---
10-30 Vdc	NPN NO	3 wires	order No.		---	---
10-30 Vdc	NPN NC	3 wires	order No.		---	---
10-30 Vdc	PNP NO-NC	4 wires	order No.		---	---
10-30 Vdc	NPN NO-NC	4 wires	order No.		---	---
10-30 Vdc	NO-NC	2 wires	order No.		---	---
20-250 Vac/Vdc	NO	2 wires	order No.		---	---
20-250 Vac/Vdc	NC	2 wires	order No.		---	---
20-250 Vac	NO	2/3 wires	order No.		---	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.		---	---
NAMUR amplifier	NAMUR	2 wires	order No.		---	---

Nominal Voltage	10-30 Vdc	10-30 Vdc
Residual Ripple	< 10%	< 10%
Hysteresis	< 15%	< 15%
Max. Output Current	200 mA	200 mA
Min. Output Current	> 1,6 mA	> 1,6 mA
Residual Current	< 0,01 mA	< 0,01 mA
Voltage Drop	< 1,5 V	< 1,5 V
Operation Led	Present	Present
Switching Frequency	1000 Hz	500 Hz
Start Up Delay	---	---
Repeatability	< 1%	< 1%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67
Cable Length	---	---
Cable Section	---	---
Housing Material	Stainless-Steel	Stainless-Steel
Active face	Stainless Steel AISI 303	Stainless Steel AISI 303
Tightening torque	10Nm	10Nm
Weight - Cable Output	---	---
Weight - Connector Output	95g	95g

# WELD FIELD IMMUNE

Stainless Steel housing  
PTFE active face  
Standard length  
Operating distance 2 ... 8 mm  
M12, M18  
M12 connector  
3 wires  
PNP, NO  
IP67 protection

REDUCTION FACTOR

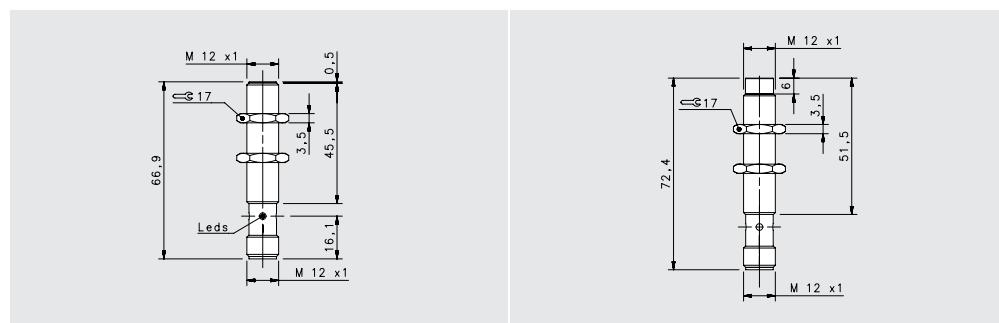
	ALUMINUM (25°C)	STAINLESS STEEL AISI316L	COPPER	BRASS
Average red. Fact.	0,45	0,85	0,4	0,5





## WELD FIELD IMMUNE

# WELD FIELD IMMUNE M12



## FIELD IMMUNE STAINLESS STEEL

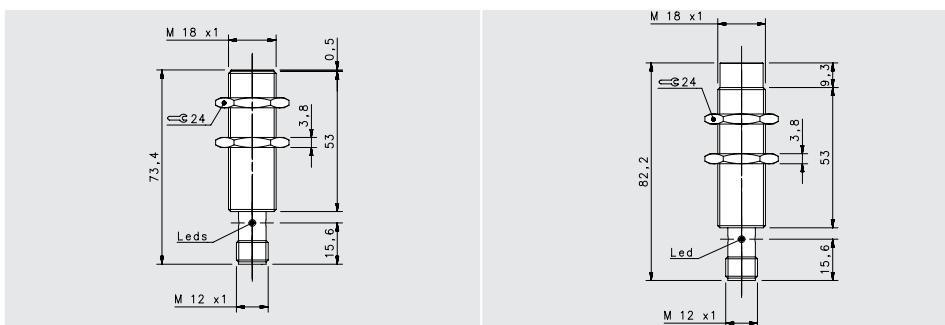
	FLUSH	NON FLUSH
--	-------	-----------

### NOMINAL SWITCHING DISTANCE

			M12 conn	M12 conn
			2 mm	4 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---
				---
10-30 Vdc	PNP NO	3 wires	order No.	IS-F12-S1-S2 95B065360
10-30 Vdc	PNP NC	3 wires	order No.	---
10-30 Vdc	NPN NO	3 wires	order No.	---
10-30 Vdc	NPN NC	3 wires	order No.	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---
10-30 Vdc	NO-NC	2 wires	order No.	---
20-250 Vac/Vdc	NO	2 wires	order No.	---
20-250 Vac/Vdc	NC	2 wires	order No.	---
20-250 Vac	NO	2/3wires	order No.	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---
NAMUR amplifier	NAMUR	2 wires	order No.	---

Nominal Voltage	10-30 Vdc	10-30 Vdc
Residual Ripple	< 10%	< 10%
Hysteresis	< 15%	< 15%
Max. Output Current	200 mA	200 mA
Min. Output Current	< 10mA	< 10mA
Residual Current	< 0,1 mA	< 0,1 mA
Voltage Drop	< 1,5V	< 1,5V
Operation Led	Present	Present
Switching Frequency	2000 Hz	1000 Hz
Start Up Delay	< 0,1 ms	< 0,1 ms
Repeatability	< 1%	< 1%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67
Cable Length	---	---
Cable Section	---	---
Housing Material	Stainless-Steel	Stainless-Steel
Active face	PTFE	PTFE
Tightening torque	10 Nm	10 Nm
Weight - Cable Output	---	---
Weight - Connector Output	25g	23g

# WELD FIELD IMMUNE M18



## FIELD IMMUNE STAINLESS STEEL

### FLUSH

M12 conn

### NON FLUSH

M12 conn

#### NOMINAL SWITCHING DISTANCE

				5 mm		8 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	PNP NO	3 wires	order No.	IS-F18-S1-S2 95B065380	IS-F18-T1-S2 95B065390	---
10-30 Vdc	PNP NC	3 wires	order No.	---	---	---
10-30 Vdc	NPN NO	3 wires	order No.	---	---	---
10-30 Vdc	NPN NC	3 wires	order No.	---	---	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	NO-NC	2 wires	order No.	---	---	---
20-250 Vac/Vdc	NO	2 wires	order No.	---	---	---
20-250 Vac/Vdc	NC	2 wires	order No.	---	---	---
20-250 Vac	NO	2/3 wires	order No.	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	---	---
NAMUR amplifier	NAMUR	2 wires	order No.	---	---	---

Nominal Voltage	10-30 Vdc	10-30 Vdc
Residual Ripple	< 10%	< 10%
Hysteresis	< 15%	< 15%
Max. Output Current	200 mA	200 mA
Min. Output Current	< 10mA	< 10mA
Residual Current	< 0,1 mA	< 0,1 mA
Voltage Drop	< 1,5V	< 1,5V
Operation Led	Present	Present
Switching Frequency	1000 Hz	500 Hz
Start Up Delay	< 0,2 ms	< 0,5 ms
Repeatability	< 1%	< 1%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67
Cable Length	---	---
Cable Section	---	---
Housing Material	Stainless-Steel	Stainless-Steel
Active face	PTFE	PTFE
Tightening torque	30 Nm	30 Nm
Weight - Cable Output	---	---
Weight - Connector Output	94g	91g

# INDUCTIVE AC

Nickel-plated Brass housing

PA 16 active face

Standard length

Operating distance 2 ... 10 mm

M12, M18, M30

cable or M12 connector

20+250 Vac (50,60 Hz)

2 or 3 wires

NO

IP67 protection

## REDUCTION FACTOR

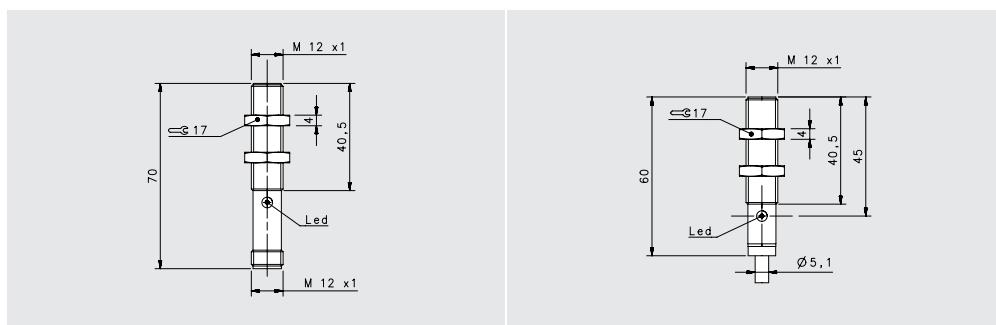
	ALUMINUM (25°C)	STAINLESS STEEL AISI316L	COPPER	BRASS
Average red. Fact.	0,3..0,45	0,6..1	0,25..0,45	0,35..0,5





## INDUCTIVE AC

# INDUCTIVE AC M12



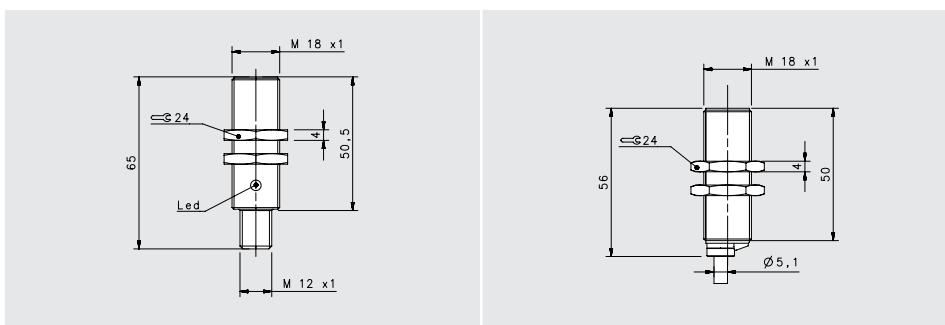
## STANDARD VAC

FLUSH

		M12 conn	cable
NOMINAL SWITCHING DISTANCE			
		2 mm	2 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires order No.	---
10-30 Vdc	PNP NO	3 wires order No.	---
10-30 Vdc	PNP NC	3 wires order No.	---
10-30 Vdc	NPN NO	3 wires order No.	---
10-30 Vdc	NPN NC	3 wires order No.	---
10-30 Vdc	PNP NO-NC	4 wires order No.	---
10-30 Vdc	NPN NO-NC	4 wires order No.	---
10-30 Vdc	NO-NC	2 wires order No.	---
20-250 Vac/Vdc	NO	2 wires order No.	---
20-250 Vac/Vdc	NC	2 wires order No.	---
20-250 Vac	NO	2/3wires order No.	IS-12-A15-S2 95B060690
10-30 Vdc	Analog 0-20 mA	3 wires order No.	---
NAMUR amplifier	NAMUR	2 wires order No.	---

Nominal Voltage	20+250 Vac (50,60 Hz)	20+250 Vac (50,60 Hz)
Residual Ripple	< 10%	< 10%
Hysteresis	< 10%	< 10%
Max. Output Current	500 mA, inrush:1,5A	500 mA, inrush:1,5A
Min. Output Current	20 mA	20 mA
Residual Current	< 0,7 mA	< 0,7 mA
Voltage Drop	< 4 V (I=100mA)	< 4 V (I=100mA)
Operation Led	Yellow	Yellow
Switching Frequency	25 Hz	25 Hz
Start Up Delay	< 300 ms	< 300 ms
Repeatability	5%	5%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67
Cable Length	---	2 m
Cable Section	---	2 x 0,25 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass
Active face	PA 16	PA 16
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	145g
Weight - Connector Output	95g	---

# INDUCTIVE AC M18



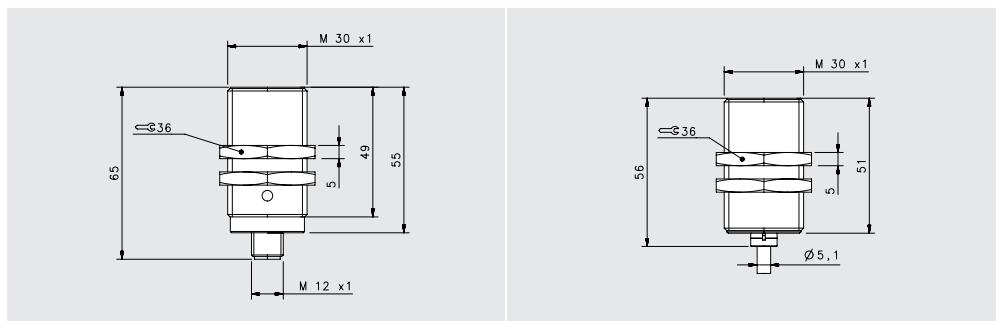
## STANDARD VAC

### FLUSH

		M12 conn	cable
NOMINAL SWITCHING DISTANCE			
10-30 Vdc	PNP/NPN NO-NC	4 wires order No.	---
10-30 Vdc	PNP NO	3 wires order No.	---
10-30 Vdc	PNP NC	3 wires order No.	---
10-30 Vdc	NPN NO	3 wires order No.	---
10-30 Vdc	NPN NC	3 wires order No.	---
10-30 Vdc	PNP NO-NC	4 wires order No.	---
10-30 Vdc	NPN NO-NC	4 wires order No.	---
10-30 Vdc	NO-NC	2 wires order No.	---
20-250 Vac/Vdc	NO	2 wires order No.	---
20-250 Vac/Vdc	NC	2 wires order No.	---
20-250 Vac	NO	2/3 wires order No.	IS-18-A15-S2 95B060780
10-30 Vdc	Analog 0-20 mA	3 wires order No.	---
NAMUR amplifier	NAMUR	2 wires order No.	---

Nominal Voltage	20+250 Vac (50,60 Hz)	20+250 Vac (50,60 Hz)
Residual Ripple	< 10%	< 10%
Hysteresis	< 10%	< 10%
Max. Output Current	500 mA, inrush:1,5A	500 mA, inrush:1,5A
Min. Output Current	20 mA	20 mA
Residual Current	< 0,7 mA	< 0,7 mA
Voltage Drop	< 4 V (I=100mA)	< 4 V (I=100mA)
Operation Led	Yellow	Yellow
Switching Frequency	25 Hz	25 Hz
Start Up Delay	< 300 ms	< 300 ms
Repeatability	5%	5%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67
Cable Length	---	2 m
Cable Section	---	2 x 0,25 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass
Active face	PA 16	PA 16
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	145g
Weight - Connector Output	95g	---

# INDUCTIVE AC M30



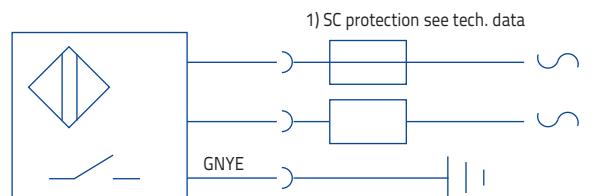
## STANDARD VAC

FLUSH

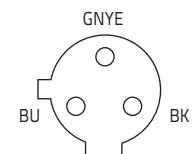
		M12 conn	cable
		10 mm	10 mm
NOMINAL SWITCHING DISTANCE			
10-30 Vdc	PNP/NPN NO-NC	4 wires order No.	---
10-30 Vdc	PNP NO	3 wires order No.	---
10-30 Vdc	PNP NC	3 wires order No.	---
10-30 Vdc	NPN NO	3 wires order No.	---
10-30 Vdc	NPN NC	3 wires order No.	---
10-30 Vdc	PNP NO-NC	4 wires order No.	---
10-30 Vdc	NPN NO-NC	4 wires order No.	---
10-30 Vdc	NO-NC	2 wires order No.	---
20-250 Vac/Vdc	NO	2 wires order No.	---
20-250 Vac/Vdc	NC	2 wires order No.	---
20-250 Vac	NO	2/3 wires order No.	IS-30-A15-S2 95B060820
10-30 Vdc	Analog 0-20 mA	3 wires order No.	---
NAMUR amplifier	NAMUR	2 wires order No.	---

Nominal Voltage	20+250 Vac (50,60 Hz)	20+250 Vac (50,60 Hz)
Residual Ripple	< 10%	< 10%
Hysteresis	< 10%	< 10%
Max. Output Current	500 mA, inrush:1,5A	500 mA, inrush:1,5A
Min. Output Current	20 mA	20 mA
Residual Current	< 0,7 mA	< 0,7 mA
Voltage Drop	< 4 V (I=100mA)	< 4 V (I=100mA)
Operation Led	Yellow	Yellow
Switching Frequency	25 Hz	25 Hz
Start Up Delay	< 300 ms	< 300 ms
Repeatability	5%	5%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67
Cable Length	---	2 m
Cable Section	---	2 x 0,25 mm²
Housing Material	Nickel-plated brass	Nickel-plated brass
Active face	PA 16	PA 16
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	145g
Weight - Connector Output	95g	---

## INDUCTIVE AC



Double key connector for inductive AC sensors



# NAMUR

Stainless Steel housing  
LCP active face  
Short length  
Operating distance 0.8 ... 15 mm  
M5, M8, M12, M30  
Cable, M8 or M12 connector  
2 wires  
IP67 protection

#### REDUCTION FACTOR

	ALUMINUM (25°C)	STAINLESS STEEL AISI316L	COPPER	BRASS
FLUSH	0,3...0,5	0,7...0,9	0,2..0,5	0,4...0,6
NON-FLUSH	0,4...0,6	0,7...1,05	0,4..0,5	0,5...0,7

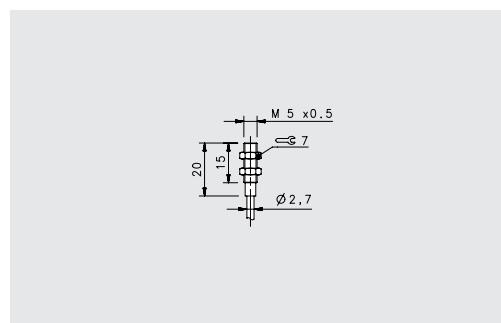


M12/18/30 FLUSH models are ATEX certified  
II 3G EX nA II T6  
II 3D EX tD A22 IP67 T85°C



**NAMUR**

# NAMUR M5



## NAMUR

### FLUSH

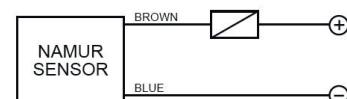
cable

#### NOMINAL SWITCHING DISTANCE

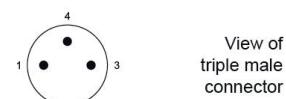
				0,8 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---
10-30 Vdc	PNP NO	3 wires	order No.	---
10-30 Vdc	PNP NC	3 wires	order No.	---
10-30 Vdc	NPN NO	3 wires	order No.	---
10-30 Vdc	NPN NC	3 wires	order No.	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---
10-30 Vdc	NO-NC	2 wires	order No.	---
20-250 Vac/Vdc	NO	2 wires	order No.	---
20-250 Vac/Vdc	NC	2 wires	order No.	---
20-250 Vac	NO	2/3wires	order No.	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---
NAMUR amplifier	NAMUR	2 wires	order No.	IS-05-A20-03 95B065410

Nominal Voltage	6+12 V DC
Residual Ripple	---
Hysteresis	< 10%
Max. Output Current	< 3 mA (metal absent)
Min. Output Current	< 1 mA (metal present)
Residual Current	---
Voltage Drop	---
Operation Led	---
Switching Frequency	2000 Hz
Start Up Delay	< 10 ms
Repeatability	---
Short Circuit Protection	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)
Protection Degree	IP67
Cable Length	2 m (PVC)
Cable Section	2x 0,15 mm <sup>2</sup>
Housing Material	Stainless-Steel
Active face	LCP
Tightening torque	1,5Nm
Weight - Cable Output	25g
Weight - Connector Output	---

#### 2 wires NAMUR



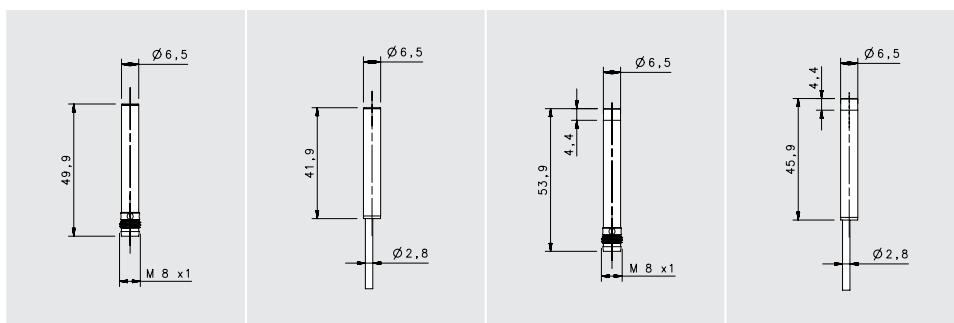
#### M8 2 wires NAMUR



View of  
triple male  
connector

Available	Contacts numbers		
	1	3	4
NAMUR	+	-	

# NAMUR M6.5



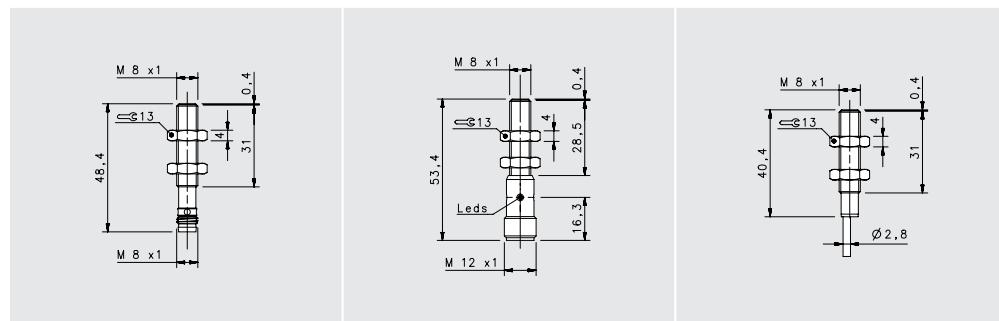
NAMUR			
FLUSH		NON FLUSH	
	M8 conn	cable	M8 conn

## NOMINAL SWITCHING DISTANCE

			1 mm	2 mm	2 mm	2 mm	
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---	---	
10-30 Vdc	PNP NO	3 wires	order No.	---	---	---	
10-30 Vdc	PNP NC	3 wires	order No.	---	---	---	
10-30 Vdc	NPN NO	3 wires	order No.	---	---	---	
10-30 Vdc	NPN NC	3 wires	order No.	---	---	---	
10-30 Vdc	PNP NO-NC	4 wires	order No.	---	---	---	
10-30 Vdc	NPN NO-NC	4 wires	order No.	---	---	---	
10-30 Vdc	NO-NC	2 wires	order No.	---	---	---	
20-250 Vac/Vdc	NO	2 wires	order No.	---	---	---	
20-250 Vac/Vdc	NC	2 wires	order No.	---	---	---	
20-250 Vac	NO	2/3 wires	order No.	---	---	---	
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	---	---	
NAMUR amplifier	NAMUR	2 wires	order No.	IS-65-A20-S1 95B066310	IS-65-A20-03 95B066290	IS-65-C20-S1 95B066320	IS-65-C20-03 95B066300

Nominal Voltage	7,7 + 9 V DC			
Residual Ripple	< 10%	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%	< 10%
Max. Output Current	< 3 mA (metal absent)			
Min. Output Current	< 1 mA (metal present)			
Residual Current	---	---	---	---
Voltage Drop	---	---	---	---
Operation Led	---	---	---	---
Switching Frequency	2000 Hz	2000 Hz	2000 Hz	2000 Hz
Start Up Delay	---	---	---	---
Repeatability	< 3%	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads			
Temperature Limit	(-25 ... +60 °C)			
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	2 m	---	2 m
Cable Section	---	2x 0,25 mm²	---	2 x 0,25 mm²
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP	LCP
Weight - Cable Output	---	80 g	---	80 g
Weight - Connector Output	40 g	---	40 g	---

# NAMUR M8

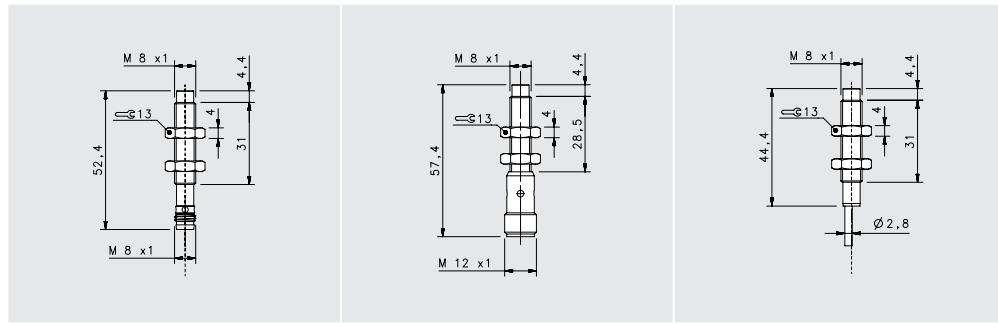


## NAMUR

### FLUSH

		M8 conn	M12 conn	cable		
NOMINAL SWITCHING DISTANCE				1 mm	1 mm	1 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires order No.	---	---	---	---
10-30 Vdc	PNP NO	3 wires order No.	---	---	---	---
10-30 Vdc	PNP NC	3 wires order No.	---	---	---	---
10-30 Vdc	NPN NO	3 wires order No.	---	---	---	---
10-30 Vdc	NPN NC	3 wires order No.	---	---	---	---
10-30 Vdc	PNP NO-NC	4 wires order No.	---	---	---	---
10-30 Vdc	NPN NO-NC	4 wires order No.	---	---	---	---
10-30 Vdc	NO-NC	2 wires order No.	---	---	---	---
20-250 Vac/Vdc	NO	2 wires order No.	---	---	---	---
20-250 Vac/Vdc	NC	2 wires order No.	---	---	---	---
20-250 Vac	NO	2/3 wires order No.	---	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires order No.	---	---	---	---
NAMUR amplifier	NAMUR	2 wires order No.	IS-08-A20-S1 95B066780	IS-08-A20-S2 95B066760	S-08-A20-03 95B066740	

Nominal Voltage	7,7 + 9 V DC	7,7 + 9 V DC	7,7 + 9 V DC
Residual Ripple	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%
Max. Output Current	< 3 mA (metal absent)	< 3 mA (metal absent)	< 3 mA (metal absent)
Min. Output Current	< 1 mA (metal present)	< 1 mA (metal present)	< 1 mA (metal present)
Residual Current	---	---	---
Voltage Drop	---	---	---
Operation Led	---	---	---
Switching Frequency	2000 Hz	2000 Hz	2000 Hz
Start Up Delay	---	---	---
Repeatability	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +60 °C)	(-25 ... +60 °C)	(-25 ... +60 °C)
Protection Degree	IP67	IP67	IP67
Cable Length	---	---	2 m
Cable Section	---	---	2x 0,25 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output			80 g
Weight - Connector Output	35g	55g	---

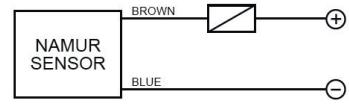


## NAMUR

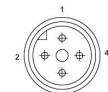
### NON FLUSH

M8 conn 2 mm	M12 conn 2 mm	cable 2 mm
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IS-08-C20-S1 95B066790	IS-08-C20-S2 95B066770	IS-08-C20-03 95B066750
7,7 + 9 V DC < 10% < 10% < 3 mA (metal absent) < 1 mA (metal present)	7,7 + 9 V DC < 10% < 10% < 3 mA (metal absent) < 1 mA (metal present)	7,7 + 9 V DC < 10% < 10% < 3 mA (metal absent) < 1 mA (metal present)
2000 Hz --- < 3% Present (self-resetting) Against polarity reversal inductive loads (-25 ... +60 °C) IP67 ---	2000 Hz --- < 3% Present (self-resetting) Against polarity reversal inductive loads (-25 ... +60 °C) IP67 ---	2000 Hz --- < 3% Present (self-resetting) Against polarity reversal inductive loads (-25 ... +60 °C) IP67 2 m 2 x 0,25 mm² Nickel-plated brass LCP
* see page 5 of the Inductive Sensors Catalog		
* see page 5 of the Inductive Sensors Catalog		
* see page 5 of the Inductive Sensors Catalog		
35g	55g	---

### 2 wires NAMUR



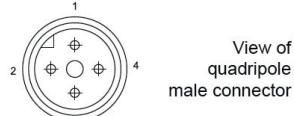
### M8 2 wires NAMUR



CONTACTS CONFIGURATION

Available	Contacts numbers		
	1	3	4
NAMUR	+	-	

### M12 2 wires NAMUR

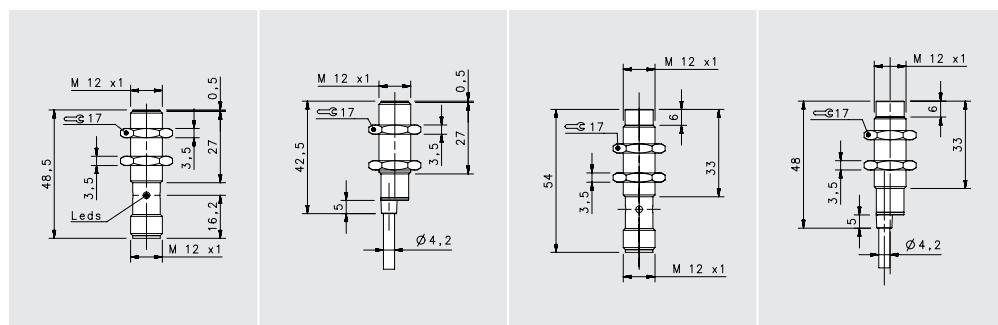


View of  
quadrupole  
male connector

CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
NAMUR	+		-	

# NAMUR M12

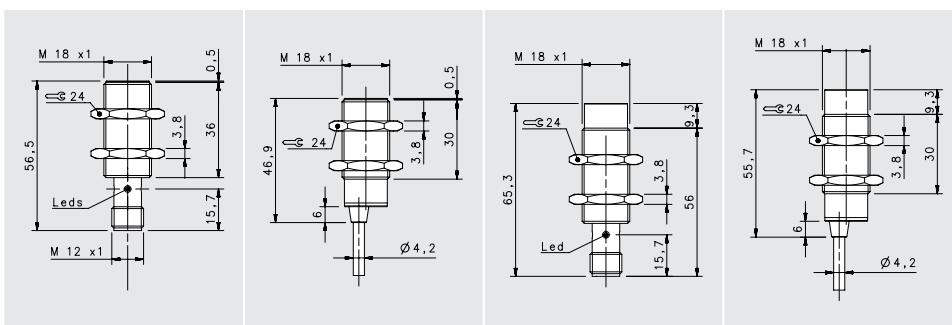


## NAMUR

	FLUSH		NON FLUSH			
	M12 conn	cable	M12 conn	cable		
NOMINAL SWITCHING DISTANCE	2 mm	2 mm	4mm	4mm		
10-30 Vdc	PNP/NPN NO-NC order No.	4 wires	---	---		
10-30 Vdc	PNP NO order No.	3 wires	---	---		
10-30 Vdc	PNP NC order No.	3 wires	---	---		
10-30 Vdc	NPN NO order No.	3 wires	---	---		
10-30 Vdc	NPN NC order No.	3 wires	---	---		
10-30 Vdc	PNP NO-NC order No.	4 wires	---	---		
10-30 Vdc	NPN NO-NC order No.	4 wires	---	---		
10-30 Vdc	NO-NC order No.	2 wires	---	---		
20-250 Vac/Vdc	NO order No.	2 wires	---	---		
20-250 Vac/Vdc	NC order No.	2 wires	---	---		
20-250 Vac	NO order No.	2/3wires	---	---		
10-30 Vdc	Analog 0-20 mA order No.	3 wires	---	---		
NAMUR amplifier	NAMUR order No.	2 wires	IS-12-A20-S2 95B064180	IS-12-A20-03 95B064160	IS-12-C20-S2 95B064190	IS-12-C20-03 95B064170

Nominal Voltage	7,7 + 9 V DC			
Residual Ripple	< 10%	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%	< 10%
Max. Output Current	< 3 mA (metal absent)			
Min. Output Current	< 1 mA (metal present)			
Residual Current	---	---	---	---
Voltage Drop	---	---	---	---
Operation Led	---	---	---	---
Switching Frequency	2000 Hz	2000 Hz	2000 Hz	2000 Hz
Start Up Delay	---	---	---	---
Repeatability	< 3%	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads			
Temperature Limit	(-25 ... +60 °C)			
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	2 m	---	2 m
Cable Section	---	2 x 0,25 mm^2	---	2 x 0,25 mm^2
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	110 g	---	110 g
Weight - Connector Output	60 g	---	60 g	---

# NAMUR M18

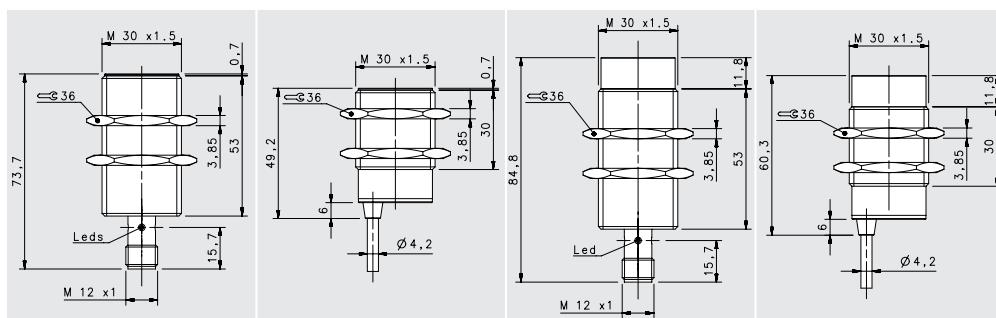


## NAMUR

	FLUSH		NON FLUSH		
	M12 conn	cable	M12 conn	cable	
<b>NOMINAL SWITCHING DISTANCE</b>	<b>5mm</b>	<b>5mm</b>	<b>8mm</b>	<b>8mm</b>	
10-30 Vdc	PNP/NPN NO-NC 4 wires order No.	---	---	---	
10-30 Vdc	PNP NO 3 wires order No.	---	---	---	
10-30 Vdc	PNP NC 3 wires order No.	---	---	---	
10-30 Vdc	NPN NO 3 wires order No.	---	---	---	
10-30 Vdc	NPN NC 3 wires order No.	---	---	---	
10-30 Vdc	PNP NO-NC 4 wires order No.	---	---	---	
10-30 Vdc	NPN NO-NC 4 wires order No.	---	---	---	
10-30 Vdc	NO-NC 2 wires order No.	---	---	---	
20-250 Vac/Vdc	NO 2 wires order No.	---	---	---	
20-250 Vac/Vdc	NC 2 wires order No.	---	---	---	
20-250 Vac	NO 2/3 wires order No.	---	---	---	
10-30 Vdc	Analog 0-20 mA 3 wires order No.	---	---	---	
NAMUR amplifier	NAMUR 2 wires order No.	IS-18-A20-S2 95B064380	IS-18-A20-03 95B064360	IS-18-C20-S2 95B064390	IS-18-C20-03 95B064370

Nominal Voltage	7,7 + 9 V DC			
Residual Ripple	< 10%	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%	< 10%
Max. Output Current	< 3 mA (metal absent)			
Min. Output Current	< 1 mA (metal present)			
Residual Current	---	---	---	---
Voltage Drop	---	---	---	---
Operation Led	---	---	---	---
Switching Frequency	1000 Hz	1000 Hz	1000 Hz	1000 Hz
Start Up Delay	---	---	---	---
Repeatability	< 3%	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads			
Temperature Limit	(-25 ... +60 °C)			
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	2 m	---	2 m
Cable Section	---	2 x 0,25 mm <sup>2</sup>	---	2 x 0,25 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	145g	---	145g
Weight - Connector Output	95g	---	95g	---

# NAMUR M30



## NAMUR

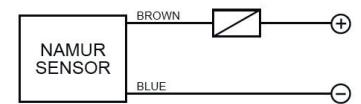
	FLUSH		NON FLUSH	
	M12 conn	cable	M12 conn	cable

### NOMINAL SWITCHING DISTANCE

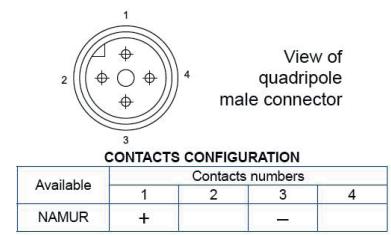
			10mm	10mm	15mm	15mm	
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---	---	
10-30 Vdc	PNP NO	3 wires	order No.	---	---	---	
10-30 Vdc	PNP NC	3 wires	order No.	---	---	---	
10-30 Vdc	NPN NO	3 wires	order No.	---	---	---	
10-30 Vdc	NPN NC	3 wires	order No.	---	---	---	
10-30 Vdc	PNP NO-NC	4 wires	order No.	---	---	---	
10-30 Vdc	NPN NO-NC	4 wires	order No.	---	---	---	
10-30 Vdc	NO-NC	2 wires	order No.	---	---	---	
20-250 Vac/Vdc	NO	2 wires	order No.	---	---	---	
20-250 Vac/Vdc	NC	2 wires	order No.	---	---	---	
20-250 Vac	NO	2/3 wires	order No.	---	---	---	
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	---	---	
NAMUR amplifier	NAMUR	2 wires	order No.	IS-30-A20-S2 95B064630	IS-30-A20-03 95B064610	IS-30-C20-S2 95B064640	IS-30-C20-03 95B064620

Nominal Voltage	7,7 + 9 V DC			
Residual Ripple	< 10%	< 10%	< 10%	< 10%
Hysteresis	< 10%	< 10%	< 10%	< 10%
Max. Output Current	< 3 mA (metal absent)			
Min. Output Current	< 1 mA (metal present)			
Residual Current	---	---	---	---
Voltage Drop	---	---	---	---
Operation Led	---	---	---	---
Switching Frequency	500 Hz	500 Hz	500 Hz	500 Hz
Start Up Delay	---	---	---	---
Repeatability	< 3%	< 3%	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads			
Temperature Limit	(-25 ... +60 °C)			
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	2 m	---	2 m
Cable Section	---	2 x 0,25 mm <sup>2</sup>	---	2 x 0,25 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Active face	LCP	LCP	LCP	LCP
Tightening torque	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog	* see page 5 of the Inductive Sensors Catalog
Weight - Cable Output	---	210 g	---	210 g
Weight - Connector Output	170 g	---	170 g	---

## 2 wires NAMUR



## M12 2 wires NAMUR



## SQUARE

PBT (resin) or Nickel-plated Brass housing

Operating distance 1.5 ... 15 mm

40x40 mm or 8x8 mm dimension

Cable, M8 connector or Terminal Block

2 or 3 wires

PNP, PNP/NPN, NO, NC, NO/NC

IP67

### REDUCTION FACTOR

	ALUMINUM (25°C)	STAINLESS STEEL AISI316L	COPPER	BRASS
Average red. Fact.	0,45	0,85	0,4	0,5

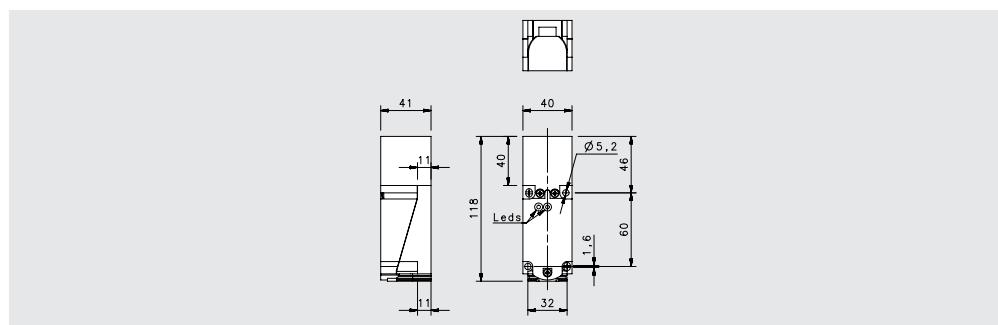


\*IS-88 models only



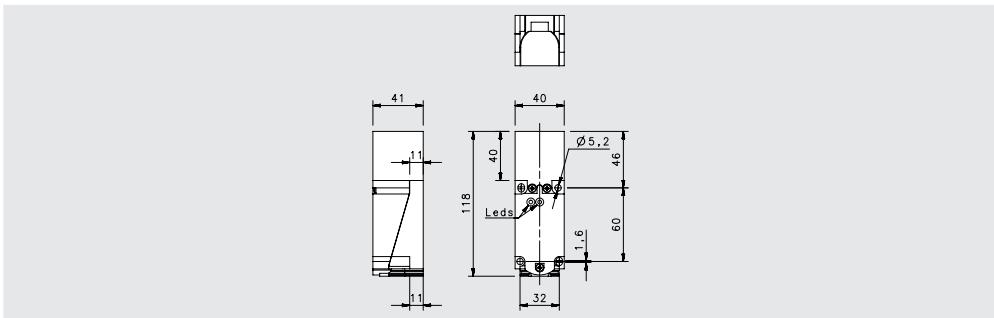
## SQUARE

# SQUARE 40X40



**40X40**

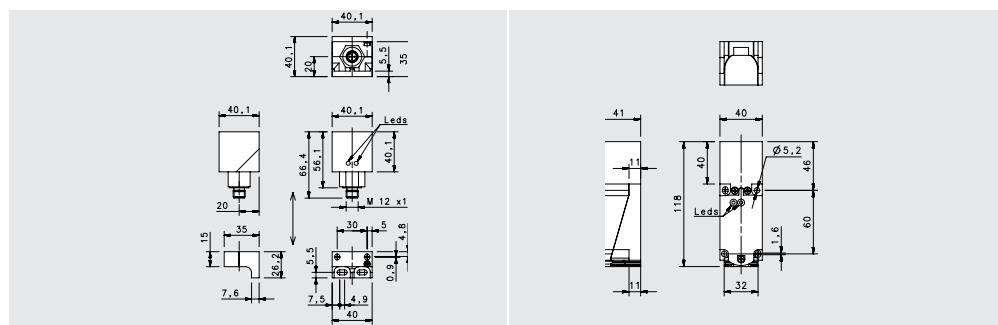
				FLUSH	NON FLUSH
				Terminal Block	Terminal Block
				15 mm	30mm
<b>NOMINAL SWITCHING DISTANCE</b>					
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---
10-30 Vdc	PNP NO	3 wires	order No.	---	---
10-30 Vdc	PNP NC	3 wires	order No.	---	---
10-30 Vdc	NPN NO	3 wires	order No.	---	---
10-30 Vdc	NPN NC	3 wires	order No.	---	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	IS-40-W5-S3 95B065240	IS-40-Y5-S3 95B065280
10-30 Vdc	NPN NO-NC	4 wires	order No.	IS-40-W6-S3 95B065230	IS-40-Y6-S3 95B065270
10-30 Vdc	NO-NC	2 wires	order No.	---	---
20-250 Vac/Vdc	NO	2 wires	order No.	---	---
20-250 Vac/Vdc	NC	2 wires	order No.	---	---
20-250 Vac	NO	2/3wires	order No.	---	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	---
NAMUR amplifier	NAMUR	2 wires	order No.	---	---
<b>Technical Parameters</b>					
Nominal Voltage				10-30 Vdc	10-30 Vdc
Residual Ripple				< 10%	< 10%
Hysteresis				< 15% (Sr)	< 15% (Sr)
Max. Output Current				200mA	200mA
Min. Output Current				---	---
Residual Current				< 0,01 mA	< 0,01 mA
Voltage Drop				< 1,5V	< 1,5V
Operation Led				YES	YES
Switching Frequency				100 Hz	100 Hz
Start Up Delay				---	---
Repeatability				< 1.0% (Sr)	< 1.0% (Sr)
Short Circuit Protection				Present (self-resetting)	Present (self-resetting)
Electric Protection				Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit				(-25 ...+75C)	(-25 ... +75 °C)
Protection Degree				IP67	IP67
Cable Length				---	---
Cable Section				---	---
Housing Material				PBT ( RESIN)	PBT ( RESIN)
Weight - Cable Output				---	---
Weight - Connector Output				262g	262g



## 40X40 VAC/VDC

FLUSH	NON FLUSH
Terminal Block	Terminal Block
<b>15 mm</b>	<b>30mm</b>
---	---
---	---
---	---
---	---
---	---
---	---
---	---
---	---
---	---
---	---
---	---
---	---
---	---
---	---
IS-40-W7-S3	IS-40-Y7-S3
95B065250	95B065290
IS-40-W8-S3	IS-40-Y8-S3
95B065260	95B065300
---	---
---	---
---	---
---	---
---	---
---	---
20-250 VAC/Vdc, 50-60 Hz	20-250 VAC/Vdc, 50-60 Hz
< 10%	< 10%
< 15% (Sr)	< 15% (Sr)
200mA	200mA
---	---
< 2,5mA	< 2,5mA
< 10Vac ; < 8Vdc	< 10Vac ; < 8Vdc
YES	YES
25 Hz AC; 40 Hz DC	25 Hz AC; 40 Hz DC
---	---
< 1.0% (Sr)	< 1.0% (Sr)
Present (self-resetting)	Present (self-resetting)
Against polarity reversal inductive loads	Against polarity reversal inductive loads
(-25 ... +70 °C)	(-25 ... +70 °C)
IP67	IP67
---	---
---	---
PBT ( RESIN)	PBT ( RESIN)
---	---
262g	262g

# SQUARE 40X40



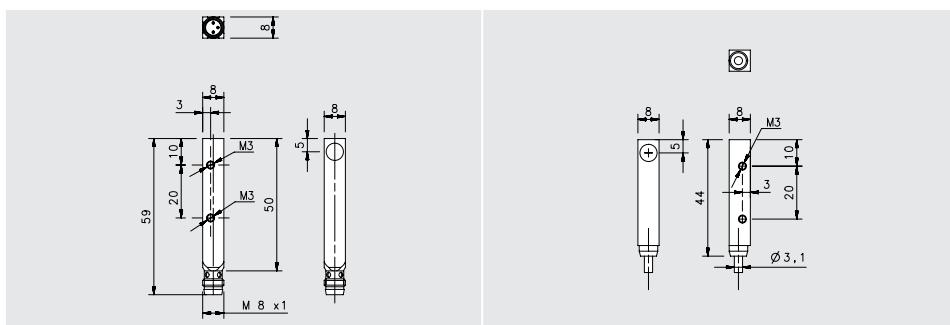
	SHORT FLUSH	ANALOG OUTPUT NON FLUSH
--	----------------	----------------------------

## NOMINAL SWITCHING DISTANCE

10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---	---
10-30 Vdc	PNP NO	3 wires	order No.	---	---	---
10-30 Vdc	PNP NC	3 wires	order No.	---	---	---
10-30 Vdc	NPN NO	3 wires	order No.	---	---	---
10-30 Vdc	NPN NC	3 wires	order No.	---	---	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	IS-40-X5-S2 95B065320	---	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	IS-40-X6-S2 95B065310	---	---
10-30 Vdc	NO-NC	2 wires	order No.	---	---	---
20-250 Vac/Vdc	NO	2 wires	order No.	---	---	---
20-250 Vac/Vdc	NC	2 wires	order No.	---	---	---
20-250 Vac	NO	2/3 wires	order No.	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	IS-40-C11-S3 95B065330	---
NAMUR amplifier	NAMUR	2 wires	order No.	---	---	---

Nominal Voltage	10-30 Vdc	18-30 Vdc
Residual Ripple	< 10%	< 10%
Hysteresis	< 15% (Sr)	< 10% (Sr)
Max. Output Current	200mA	0-20mA/200 Ω Max.
Min. Output Current	---	---
Residual Current	< 0,01mA	---
Voltage Drop	< 1,5V	---
Operation Led	YES	---
Switching Frequency	100 Hz	100 Hz
Start Up Delay	---	---
Repeatability	< 1.0% (Sr)	0,02 mm
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25...+70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67
Cable Length	---	---
Cable Section	---	---
Housing Material	PBT (RESIN)	PBT (RESIN)
Weight - Cable Output	---	---
Weight - Connector Output	170 g	242g

# SQUARE 8X8



## SHORT

### FLUSH

#### NOMINAL SWITCHING DISTANCE

			M8 conn	cable
			1,5mm	1,5mm
10-30 Vdc	PNP/NPN NO-NC	4 wires	---	---
		order No.	---	---
10-30 Vdc	PNP NO	3 wires	IS-88-Q1-S1 95B060840	IS-88-Q1-03 95B060830
10-30 Vdc	PNP NC	3 wires	order No.	---
10-30 Vdc	NPN NO	3 wires	order No.	---
10-30 Vdc	NPN NC	3 wires	order No.	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---
10-30 Vdc	NO-NC	2 wires	order No.	---
20-250 Vac/Vdc	NO	2 wires	order No.	---
20-250 Vac/Vdc	NC	2 wires	order No.	---
20-250 Vac	NO	2/3 wires	order No.	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---
NAMUR amplifier	NAMUR	2 wires	order No.	---

Nominal Voltage	10-30 Vdc	10-30 Vdc
Residual Ripple	< 10%	< 10%
Hysteresis	< 10% (Sr)	< 10% (Sr)
Max. Output Current	200mA	200mA
Min. Output Current	---	---
Residual Current	---	---
Voltage Drop	< 1,2V	< 1,2V
Operation Led	Yellow	Yellow
Switching Frequency	500 Hz	500 Hz
Start Up Delay	75 ms	75 ms
Repeatability	< 3%	< 3%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	(-25 ... +70 °C)	(-25 ... +70 °C)
Protection Degree	IP67	IP67
Cable Length	---	2 m
Cable Section	---	3x0,14mm <sup>2</sup>
Housing Material	nickel-plated brass	nickel-plated brass
Weight - Cable Output	---	80 g
Weight - Connector Output	40 g	---

# CAPACITIVE

**Capacitive sensors** are noncontact proximity devices suitable for detecting metals, nonmetals, solids, and liquids. The oscillating circuit is influenced by variations in capacity. When any material comes close to the active face, the capacity of the sensor varies and, if the threshold distance is passed, the sensor switches the state of its outputs. Like for the inductive sensors, the operating distance is calculated using a square piece of Fe37, with 1 mm thickness. The variation of the capacitance is due to the conductivity or non-conductivity of the different materials. Conductive materials change the capacitance of the sensor, while non-conductive materials change the dielectric constant of the reference capacitor; the sensor feel the variation of the generated electric field by its active sensing face.

Datalogic offers a basic range for the Capacitive sensors, M18 and M30 tubular housing, in Direct or Alternated Current, in nickel-plated brass or plastic housing, with timer and sensitivity adjustment trimmer, equipped with the industrial standard outputs, suitable for the most common applications of detection and in the filling level control of the materials.

Nickel plated brass

M18, M30

Basic series (NO-NC)

Capacitive A.C. series (plastic housing)

Multi-voltage series (SPDT relay)

Operating distance: 5...25 mm

Cable or M8 connector

2,4,6 wires

PNP or NPN, N.O. and N.C. outputs, SPDT relay

Delay ON or delay OFF model

IP67 protection

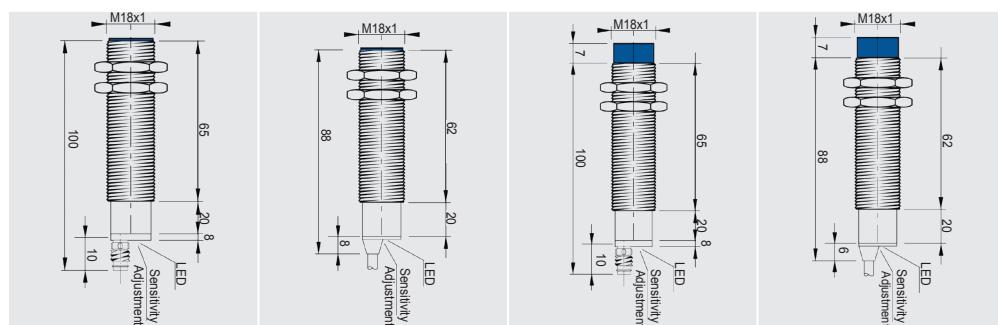
MATERIALS	REDUCTION FACTOR
Metal (Fe37)	1xSn
Water	1xSn
P.V.C.	0.5xSn
Glass	0.5xSn
Wood	0.4xSn





## CAPACITIVE BASIC, CAPACITIVE A.C., MULTIVOLTAGE

# CAPACITIVE BASIC M18

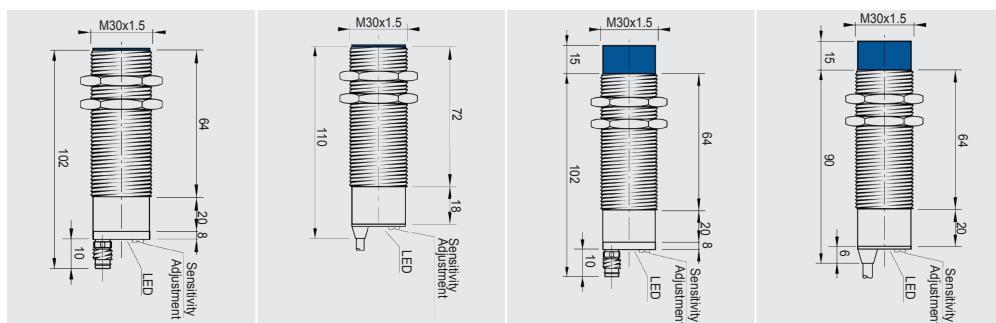


## STANDARD

				FLUSH	NON FLUSH		
				M8 conn	cable	M8 conn	cable
				1...5 mm	1...5 mm	1...10 mm	1...10 mm
NOMINAL SWITCHING DISTANCE							
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---	---	---
10-30 Vdc	PNP NO	3 wires	order No.	---	---	---	---
10-30 Vdc	PNP NC	3 wires	order No.	---	---	---	---
10-30 Vdc	NPN NO	3 wires	order No.	---	---	---	---
10-30 Vdc	NPN NC	3 wires	order No.	---	---	---	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	CS08K2 958901040	CS08 958901020	CS14K2 958901270	CS14 958901120
10-30 Vdc	NPN NO-NC	4 wires	order No.	CS07K2 958901000	CS07 958901160	CS13K2 958901250	CS13 958901100
10-30 Vdc	NO-NC	2 wires	order No.	---	---	---	---
20-250 Vac/Vdc	NO	2 wires	order No.	---	---	---	---
20-250 Vac/Vdc	NC	2 wires	order No.	---	---	---	---
20-250 Vac	NO	2/3 wires	order No.	---	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	---	---	---
NAMUR amplifier	NAMUR	2 wires	order No.	---	---	---	---

Nominal Voltage	12-30Vdc(-15/10%)	12-30Vdc(-15/10%)	12-30Vdc(-15/10%)	12-30Vdc(-15/10%)
Residual Ripple	<10%	<10%	<10%	<10%
Hysteresis	depends on the sensing distance			
Max. Output Current	200 mA	200 mA	200 mA	200 mA
Residual Current	< 10 mA	< 10 mA	< 10 mA	< 10 mA
Voltage Drop	< 1,8 V (I=100 mA)			
Setting	sensitivity adjustment trimmer	sensitivity adjustment trimmer	sensitivity adjustment trimmer	sensitivity adjustment trimmer
Operation Led	Yellow	Yellow	Yellow	Yellow
Switching Frequency	10 Hz	10 Hz	10 Hz	10 Hz
Start Up Delay	< 100 ms	< 100 ms	< 100 ms	< 100 ms
Repeatability	≤ 5%	≤ 5%	≤ 5%	≤ 5%
Short Circuit Protection	Present(self-resetting)	Present(self-resetting)	Present(self-resetting)	Present(self-resetting)
Electric Protections	Against polarity reversal inductive loads			
Temperature Limits	- 25 +70 C			
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	2 m	---	2 m
Cable Section	---	4x 0,25 mm^2	---	4x 0,25 mm^2
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Weight - Cable Output	---	160 g	---	160 g
Weight - Connector Output	120 g	---	120 g	---

# CAPACITIVE BASIC M30

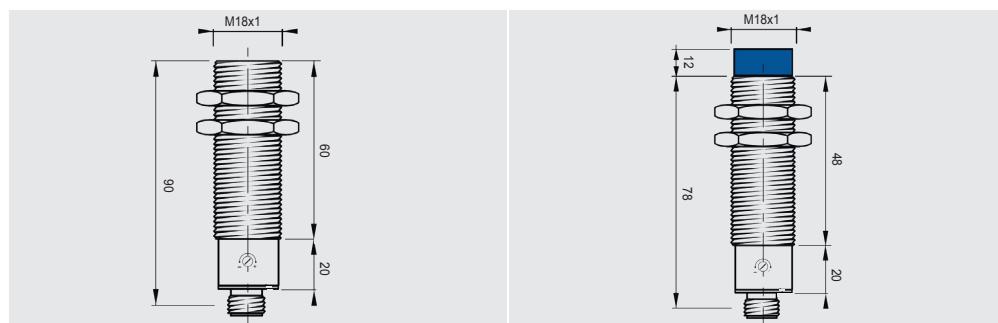


## STANDARD

				FLUSH	NON FLUSH		
				M8 conn	cable	M8 conn	cable
NOMINAL SWITCHING DISTANCE				1...15 mm	1...15 mm	1...25 mm	1...25 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---	---	---	---
10-30 Vdc	PNP NO	3 wires	order No.	---	---	---	---
10-30 Vdc	PNP NC	3 wires	order No.	---	---	---	---
10-30 Vdc	NPN NO	3 wires	order No.	---	---	---	---
10-30 Vdc	NPN NC	3 wires	order No.	---	---	---	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	CS10K2 958901080	CS10 958901060	CS16K2 958901330	CS16 958901140
10-30 Vdc	NPN NO-NC	4 wires	order No.	CS09K2 958901230	CS09 958901180	CS15K2 958901300	CS15 958901200
10-30 Vdc	NO-NC	2 wires	order No.	---	---	---	---
20-250 Vac/Vdc	NO	2 wires	order No.	---	---	---	---
20-250 Vac/Vdc	NC	2 wires	order No.	---	---	---	---
20-250 Vac	NO	2/3 wires	order No.	---	---	---	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---	---	---	---
NAMUR amplifier	NAMUR	2 wires	order No.	---	---	---	---

Nominal Voltage	12-30Vdc(-15/10%)	12-30Vdc(-15/10%)	12-30Vdc(-15/10%)	12-30Vdc(-15/10%)
Residual Ripple	<10%	<10%	<10%	<10%
Hysteresis	depends on the sensing distance			
Max. Output Current	200 mA	200 mA	200 mA	200 mA
Residual Current	< 10 mA	< 10 mA	< 10 mA	< 10 mA
Voltage Drop	< 1.8 V (I=100 mA)			
Setting	sensitivity adjustment trimmer	sensitivity adjustment trimmer	sensitivity adjustment trimmer	sensitivity adjustment trimmer
Operation Led	Yellow	Yellow	Yellow	Yellow
Switching Frequency	10 Hz	10 Hz	10 Hz	10 Hz
Start Up Delay	< 100 ms	< 100 ms	< 100 ms	< 100 ms
Repeatability	≤ 5%	≤ 5%	≤ 5%	≤ 5%
Short Circuit Protection	Present(self-resetting)	Present(self-resetting)	Present(self-resetting)	Present(self-resetting)
Electric Protections	Against polarity reversal inductive loads			
Temperature Limits	- 25 +70 C			
Protection Degree	IP67	IP67	IP67	IP67
Cable Length	---	2 m	---	2 m
Cable Section	---	4x 0,25 mm^2	---	4x 0,25 mm^2
Housing Material	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass	Nickel-plated brass
Weight - Cable Output	---	250 g	---	250 g
Weight - Connector Output	210 g	---	210 g	---

# CAPACITIVE A.C. M18



## STANDARD

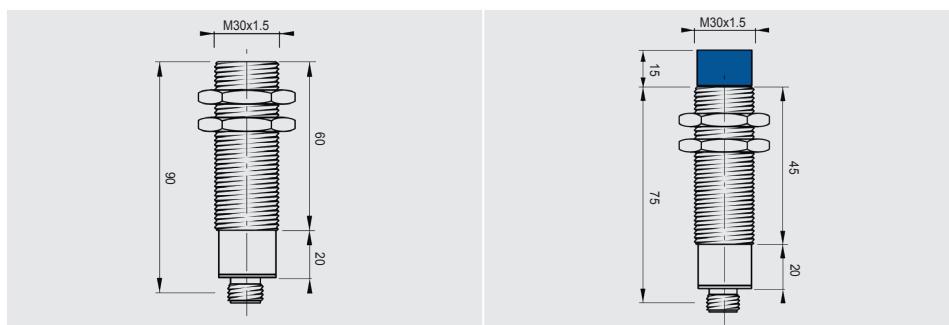
	FLUSH	NON FLUSH
--	-------	-----------

### NOMINAL SWITCHING DISTANCE

			M12 conn	M12 conn
			2...8 mm	2...15 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---
10-30 Vdc	PNP NO	3 wires	order No.	---
10-30 Vdc	PNP NC	3 wires	order No.	---
10-30 Vdc	NPN NO	3 wires	order No.	---
10-30 Vdc	NPN NC	3 wires	order No.	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---
10-30 Vdc	NO-NC	2 wires	order No.	---
20-250 Vac/Vdc	NO	2 wires	order No.	CSP40K4 958901380
20-250 Vac/Vdc	NC	2 wires	order No.	---
20-250 Vac	NO	2/3 wires	order No.	---
10-30 Vdc	Analog 0-20 mA	3 wires	order No.	---
NAMUR amplifier	NAMUR	2 wires	order No.	---

Nominal Voltage	20-250 Vac (-15/10%)-5A source current	20-250 Vac (-15/10%)-5A source current
Residual Ripple	<10%	<10%
Hysteresis	< 15%	< 15%
Max. Output Current	300 mA	300 mA
Min. Output Current	2,5 mA	2,5 mA
Residual Current	< 2,5 mA	< 2,5 mA
Setting	sensitivity adjustment trimmer	sensitivity adjustment trimmer
Operation Led	Yellow	Yellow
Switching Frequency	25 Hz	25 Hz
Start Up Delay	---	---
Repeatability	< 5%	< 5%
Short Circuit Protection	Present(self-resetting)	Present(self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	- 25 +70 C	- 25 +70 C
Protection Degree	IP67	IP67
Cable Length	---	---
Cable Section	---	---
Housing Material	Plastic (PBT)	Plastic (PBT)
Weight - Cable Output	---	---
Weight - Connector Output	80 g	80 g

# CAPACITIVE A.C. M30

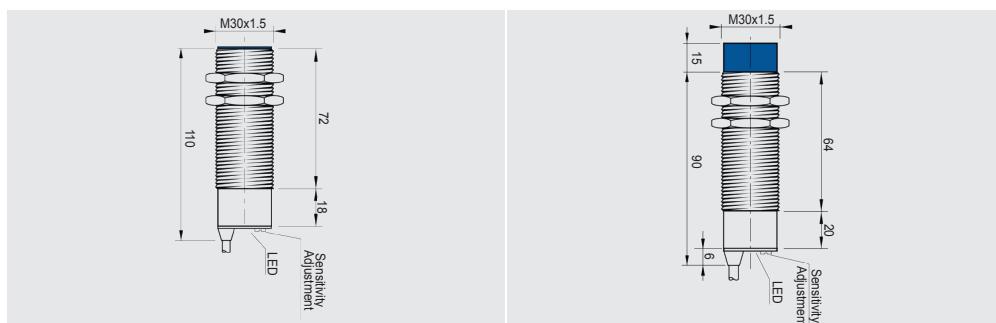


## STANDARD

		FLUSH	NON FLUSH
		2...20 mm	2...30 mm
<b>NOMINAL SWITCHING DISTANCE</b>			
10-30 Vdc	PNP/NPN NO-NC	4 wires order No.	---
10-30 Vdc	PNP NO	3 wires order No.	---
10-30 Vdc	PNP NC	3 wires order No.	---
10-30 Vdc	NPN NO	3 wires order No.	---
10-30 Vdc	NPN NC	3 wires order No.	---
10-30 Vdc	PNP NO-NC	4 wires order No.	---
10-30 Vdc	NPN NO-NC	4 wires order No.	---
10-30 Vdc	NO-NC	2 wires order No.	---
20-250 Vac/Vdc	NO	2 wires order No.	CSP50K4 958901400
20-250 Vac/Vdc	NC	2 wires order No.	---
20-250 Vac	NO	2/3 wires order No.	---
10-30 Vdc	Analog 0-20 mA	3 wires order No.	---
NAMUR amplifier	NAMUR	2 wires order No.	---

Nominal Voltage	20-250 Vac (-15/10%)-5A source current	20-250 Vac (-15/10%)-5A source current
Residual Ripple	<10%	<10%
Hysteresis	< 15%	< 15%
Max. Output Current	300 mA	300 mA
Min. Output Current	2,5 mA	2,5 mA
Residual Current	< 2,5 mA	< 2,5 mA
Setting	sensitivity adjustment trimmer	sensitivity adjustment trimmer
Operation Led	Yellow	Yellow
Switching Frequency	25 Hz	25 Hz
Start Up Delay	---	---
Repeatability	< 5%	< 5%
Short Circuit Protection	Present(self-resetting)	Present(self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	- 25 +70 C	- 25 +70 C
Protection Degree	IP67	IP67
Cable Length	---	---
Cable Section	---	---
Housing Material	Plastic (PBT)	Plastic (PBT)
Weight - Cable Output	---	---
Weight - Connector Output	200 g	200 g

# CAPACITIVE MULTIVOLTAGE M30



## STANDARD (TIMER TRIMMER)

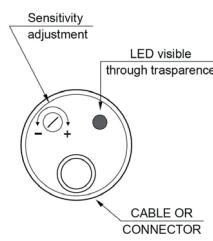
	FLUSH	NON FLUSH
--	-------	-----------

### NOMINAL SWITCHING DISTANCE

			20 mm	30 mm
10-30 Vdc	PNP/NPN NO-NC	4 wires	order No.	---
10-30 Vdc	PNP NO	3 wires	order No.	---
10-30 Vdc	PNP NC	3 wires	order No.	---
10-30 Vdc	NPN NO	3 wires	order No.	---
10-30 Vdc	NPN NC	3 wires	order No.	---
10-30 Vdc	PNP NO-NC	4 wires	order No.	---
10-30 Vdc	NPN NO-NC	4 wires	order No.	---
10-30 Vdc	NO-NC	2 wires	order No.	---
20-250 Vac/Vdc	NO	2 wires	order No.	---
18...230 VAC/DC	relay SPDT	6 wires	order No.	CS31 958901150
18...230 Vac/dc	relay SPDT (delay ON)	6 wires	order No.	CS32 958901220 CS32TD5 958901360
18...230 VAC/DC	relay SPDT (delay OFF)	6 wires	order No.	CS31TE5 958901370 958901210
NAMUR amplifier	NAMUR	2 wires	order No.	---

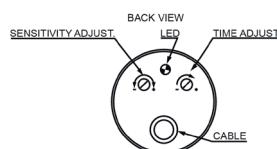
Nominal Voltage	18-230Vac/dc (-15/10%)	18-230Vac/dc (-15/10%)
Residual Ripple	<10%	<10%
Hysteresis	<10%	<10%
Max. Output Current	3A 30 Vac- 1A 220 Vac (90 W, 360 VA)	3A 30 Vac- 1A 220 Vac (90 W, 360 VA)
Absorption	2,5 VA	2,5 VA
Residual Current	---	---
Setting	sensitivity and time adj. trimmer	sensitivity and time adj. trimmer
Operation Led	Yellow	Yellow
Switching Frequency	10 Hz	10 Hz
Start Up Delay	<300 ms	<300 ms
Repeatability	<5%	<5%
Short Circuit Protection	Present (self-resetting)	Present (self-resetting)
Electric Protection	Against polarity reversal inductive loads	Against polarity reversal inductive loads
Temperature Limit	- 25 +70 C	- 25 +70 C
Protection Degree	IP65	IP65
Cable Length	2 m	2 m
Cable Section	6x0,30 mm <sup>2</sup>	6x0,30 mm <sup>2</sup>
Housing Material	Nickel-plated brass	Nickel-plated brass
Weight - Cable Output	250 g	250 g
Weight - Connector Output	---	---

# CAPACITIVE SETTINGS & CONNECTIONS



## Sensitivity adjustment

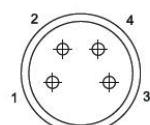
The sensitivity adjustment must be done when the sensor is installed in a definite and steady position. The regulation must be done in a position half way between minimum and maximum, because, being air dielectric, a strong humidity variation could cause, if the regulation is very light, nuisance tripping. The sensing distance of the sensor depends on the materials to detect, on its dimension and conductivity. The distance could change according to temperature variations.



## Timer adjustment

The timer trimmer allows to set a delay, on the activation (delay ON) or in the de-activation of the output, depends on the model, after the detection of the object. The output will remain active (or inactive) proportionally to the setting point of the screw, starting from 1 second up to 5 minutes.

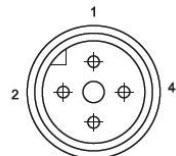
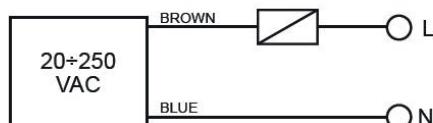
### M8 4-pole NO-NC models



View of quadripole male connector

Output	Contacts numbers			
	1	2	3	4
NPN/PNP NO+NC	+	NC	-	NO

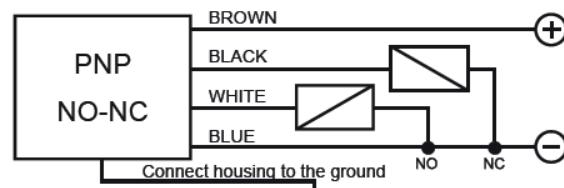
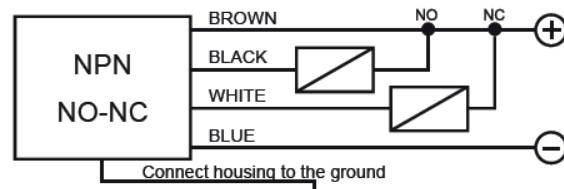
### 2 wires Vac models



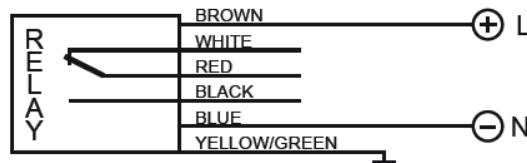
View of quadripole male connector

Available	Contacts numbers			
	1	2	3	4
NO	L		N	

### 4 wires NO-NC Vdc model



### 6 wires Multivoltage models



# CABLES, CONNECTORS & ACCESSORIES

2, 3, 4 wires

M12, M8 connector

Axial or radial 90°

Shielded or unshielded

Double key

A.C. cable

3, 5, 7, 10, 15, 25m cable



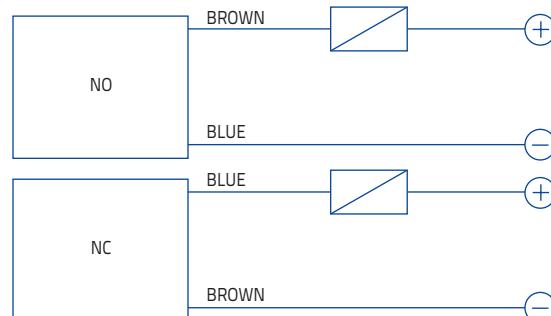
# **CABLES, CONNECTORS & ACCESSORIES**



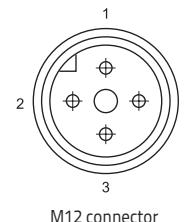
# CABLES, CONNECTORS & ACCESSORIES

## 2 WIRES SENSORS

### 2 WIRES NO-NC



**WARNING:** The load can be indifferently connected in series to the blue wire or to the brown wire to simulate NPN or PNP functioning logic.

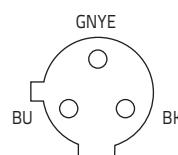
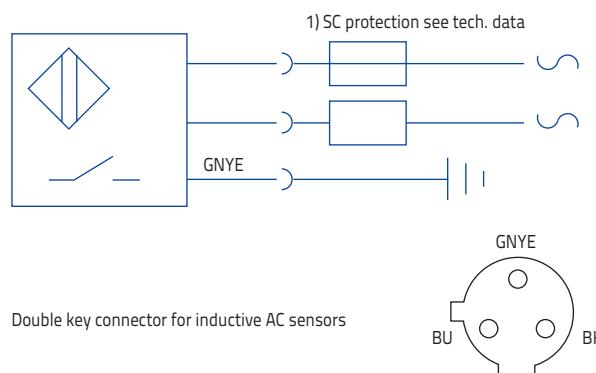


M12 connector

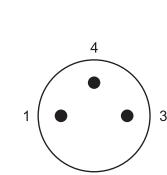
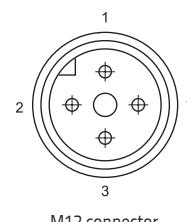
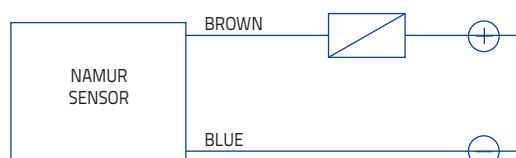
### CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
NO	+		-	
NC	-		+	

### INDUCTIVE AC



### NAMUR

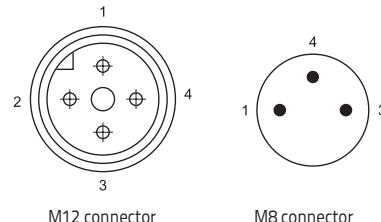
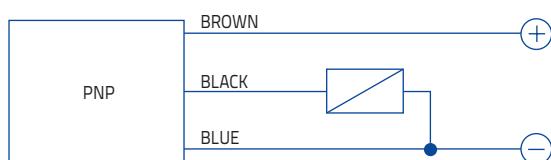
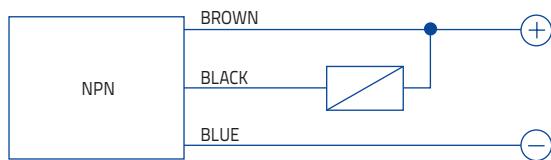


### CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
NAMUR	+		-	

## 3 WIRES SENSORS

3 WIRES PNP or NPN, NO or NC

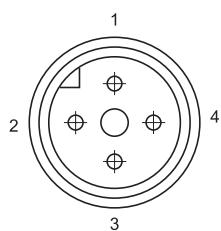
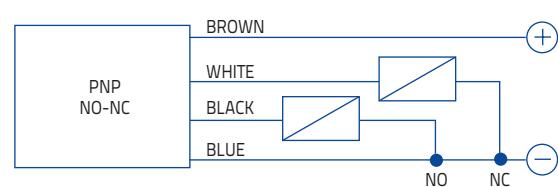
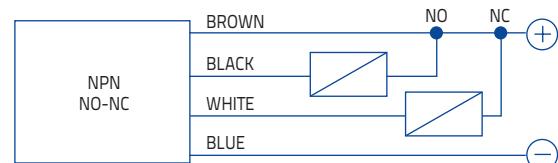


CONTACTS CONFIGURATION

Available	Contacts numbers			
	1	2	3	4
(NO or NC)	+		-	NO/NC

## 4 WIRES SENSORS

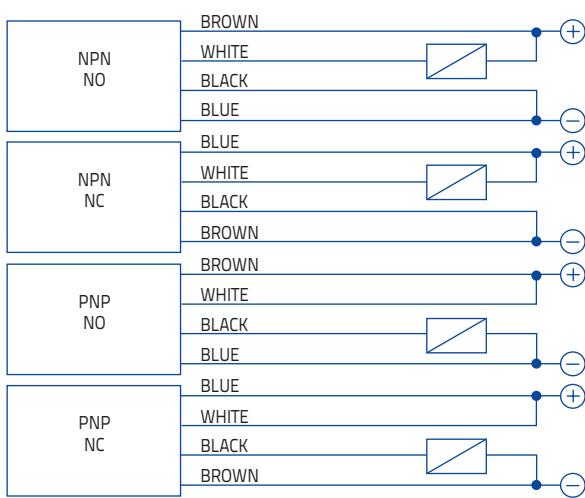
4 wires (NO+NC)



CONTACTS CONFIGURATION

Output	Contacts numbers			
	1	2	3	4
NO + NC	+	NC	-	NO

4 wires (PNP/NPN, NO/NC)



Output	Contacts numbers			
	1	2	3	4
NPN NO	+	NO	-	-
NPN NC	-	NC	+	-
PNP NO	+	+	-	NO
PNP NC	-	+	+	NC

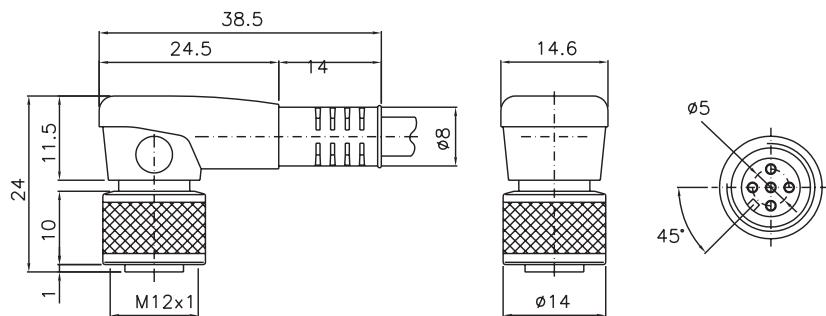
# CABLES, CONNECTORS & ACCESSORIES

CONNECTOR & DIRECTION	WIRES	STYLE	CABLE LENGTH	MODEL	ORDER No.
<b>M8</b>					
M8 Connector (Axial)	3	Grey, P.V.C.	3 m	CS-B1-01-G-03	95A251490
			5 m	CS-B1-01-G-05	95A251510
M8 Connector (Radial 90°)	3	P.U.R.	2 m	CS-B1-01-R-02	95A251580
			5 m	CS-B1-01-R-05	95A251600
M8 Connector (Axial)	4	Grey, P.V.C.	3 m	CS-B2-01-G-03	95A251500
			5 m	CS-B2-01-G-05	95A251520
			2 m	CS-B2-01-R-02	95A251590
			5 m	CS-B2-01-R-05	95A251610
M8 Connector (Radial 90°)	4	Grey, PVC	3 m	CS-B1-02-G-03	95A251420
			5 m	CS-B1-02-G-05	95A251430
			7 m	CS-B1-02-G-07	95A251440
			10 m	CS-B1-02-G-10	95A251480
M8 Connector (Radial 90°)	4	P.U.R.	2 m	CS-B1-02-R-02	95A251620
			5 m	CS-B1-02-R-05	95A251640
	4	OIL resistant (CEI 2034-01)	5 m	CS-B1-02-O-05	95A251730
			10 m	CS-B1-02-O-10	95A251100
<b>M12</b>					
M12 Connector (Axial)	3	Grey, P.V.C.	3 m	CS-A1-01-G-03	95A251290
			5 m	CS-A1-01-G-05	95A251300
			7 m	CS-A1-01-G-07	95A251320
			10 m	CS-A1-01-G-10	95A251340
M12 Connector (Radial 90°)	3	Grey, P.V.C.	3 m	CS-A2-01-G-03	95A251200
			5 m	CS-A2-01-G-05	95A251210
			7 m	CS-A2-01-G-07	95A251220
			10 m	CS-A2-01-G-10	95A251230
M12 Connector with LED (for PNP N.O. sensors) (Radial 90°)	3	Grey, P.V.C.	3 m	CS-A2-01-O-03	95A251660
			5 m	CS-A2-01-O-05	95A251670
			10 m	CS-A2-01-O-10	95A251680
			5 m	CS-A2-11-G-05	95A251310
Shielded M12 Connector (Axial)	3	Grey, P.V.C.	10 m	CV-A1-21-G-10	95ACC2060
M12 Connector Axial Double Keyd + PE for AC inductive	3	Orange, P.V.C.	2 m	CS-A1-21-R-02	95ACC8000
			3 m	CS-A1-21-R-03	95ACC8010
			5 m	CS-A1-21-R-05	95ACC8020
M12 Connector (Axial)	4	Grey, P.V.C.	3 m	CS-A1-02-G-03	95A251380
			5 m	CS-A1-02-G-05	95A251270
			7 m	CS-A1-02-G-07	95A251280
			10 m	CS-A1-02-G-10	95A251390
M12 Connector (Radial 90°)	4	P.U.R.	2 m	CS-A1-02-R-02	95A251540
			5 m	CS-A1-02-R-05	95A251560
	4	Grey, P.V.C.	3 m	CS-A2-02-G-03	95A251360
			5 m	CS-A2-02-G-05	95A251240
M12 Connector (Radial 90°)	4	P.U.R.	7 m	CS-A2-02-G-07	95A251245
			10 m	CS-A2-02-G-10	95A251260
			2 m	CS-A2-02-R-02	95A251550
			5 m	CS-A2-02-R-05	95A251570
M12 Connector with LED (for PNP N.O. sensors) (Radial 90°)	4	Grey, P.V.C.	5 m	CS-A2-02-O-05	95A251690
			10 m	CS-A2-02-O-10	95A251700
			3 m	CS-A2-12-G-03	95A251400
			5 m	CS-A2-12-G-05	95A251350
M12 Connector with LED (for PNP N.O. sensors) (Radial 90°)	4	Grey, P.V.C.	10 m	CS-A2-12-G-10	95A251370

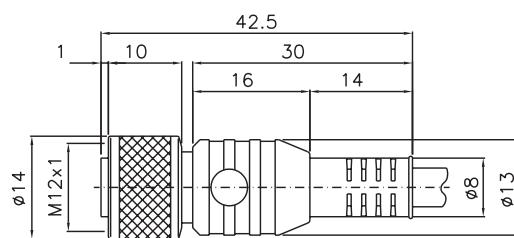
Shielded M12 Connector (Axial)	4	Black, P.V.C.	3 m	CV-A1-22-B-03	95ACC1480
			5 m	CV-A1-22-B-05	95ACC1490
			10 m	CV-A1-22-B-10	95ACC1500
			15 m	CV-A1-22-B-15	95ACC2070
			25 m	CV-A1-22-B-25	95ACC2090
Shielded M12 Connector (Radial 90°)	4	Black, P.V.C.	3 m	CV-A2-22-B-03	95ACC1540
			5 m	CV-A2-22-B-05	95ACC1550
			10 m	CV-A2-22-B-10	95ACC1560
M12 Connector (Axial)	4	U.L., Black, P.V.C.	3 m	CS-A1-02-U-03	95ASE1120
			5 m	CS-A1-02-U-05	95ASE1130
			10 m	CS-A1-02-U-10	95ASE1140
			15 m	CS-A1-02-U-15	95ASE1150
			25 m	CS-A1-02-U-25	95ASE1160
<b>CONNECTOR (not cabled)</b>					
M12 Connector (Axial)	4	Black	Connector- not cabled	CS-A1-02-B-NC	G5085002
M12 Connector (Radial 90°)	4	Black	Connector- not cabled	CS-A2-02-B-NC	G5085003

## CONNECTOR

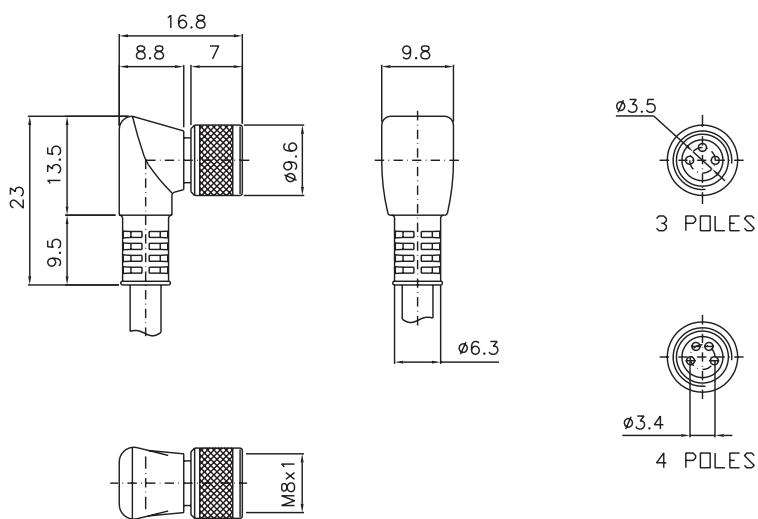
**RADIAL M12**



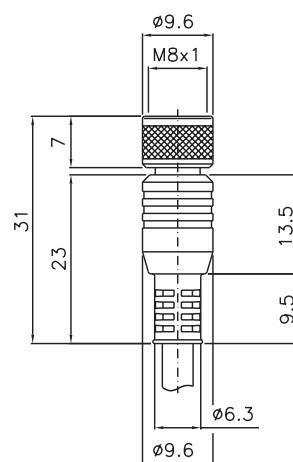
**AXIAL M12**



**RADIAL M8**



**AXIAL M8**

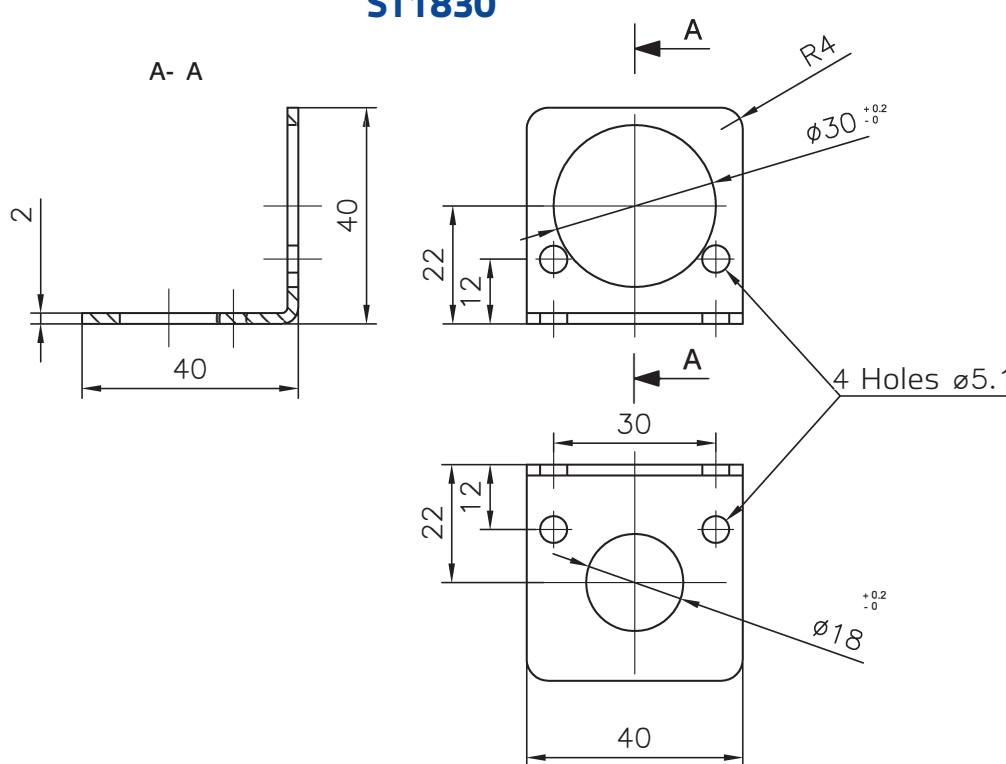


# CABLES, CONNECTORS & ACCESSORIES

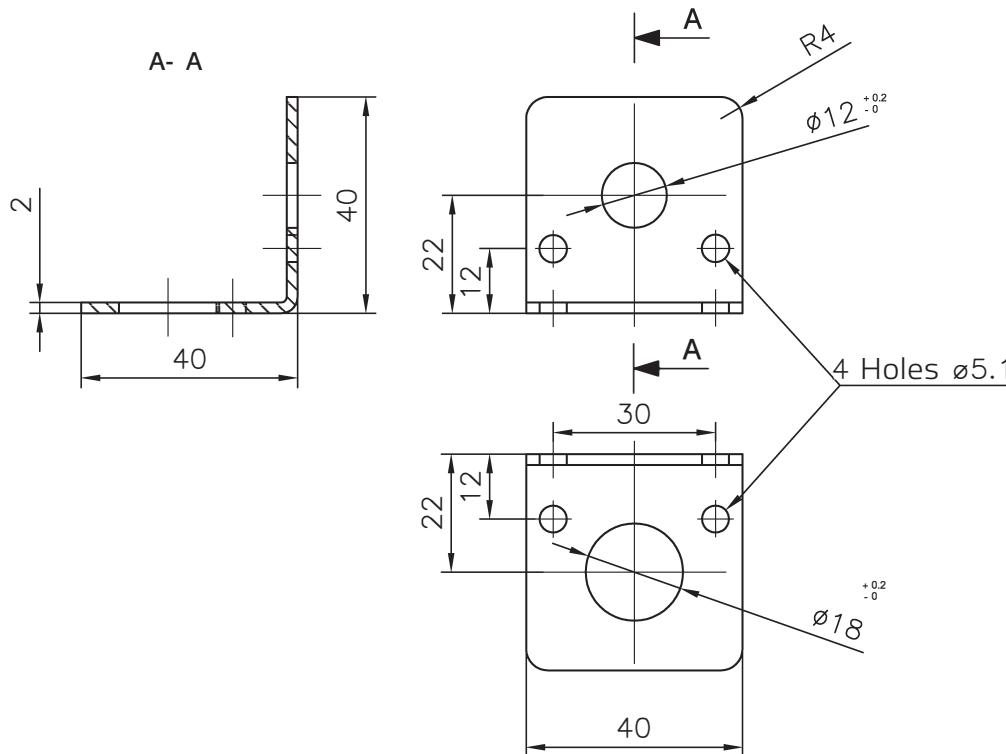
## ACCESSORIES SELECTION AND ORDER INFORMATION

CONNECTOR	TYPE	MATERIAL	CODING	ORDER No.
M12	fixing bracket	Stainless Steel	ST1218	95ACC3340
M18	fixing bracket	Stainless Steel	ST1218	95ACC3340
M30	fixing bracket	Stainless Steel	ST1830	95ACC3350

**ST1830**



**ST1218**



mm



# INDEX

## INDUCTIVE

M4, M5, M6,5			
SENSOR	Order No.	Category	Pag.
IS-04-A1-03	95B061011	STAINLESS STEEL	34
IS-04-A3-03	95B061001	STAINLESS STEEL	34
IS-05-A1-03	95B061041	BASIC	35
IS-05-A1-S1	95B061051	BASIC	35
IS-05-A20-03	95B065410	NAMUR	62
IS-05-A3-03	95B061021	BASIC	35
IS-05-A3-S1	95B061031	BASIC	35
IS-05-A4-03	95B065420	BASIC	35
IS-05-E3-03	95B065400	BASIC	35
IS-65-A1-03	95B064730	BASIC	10
IS-65-A1-S1	95B066050	BASIC	10
IS-65-A20-03	95B066290	NAMUR	63
IS-65-A20-S1	95B066310	NAMUR	63
IS-65-A2-03	95B064770	BASIC	10
IS-65-A2-S1	95B066090	BASIC	10
IS-65-A3-03	95B064650	BASIC	10
IS-65-A3-S1	95B064970	BASIC	10
IS-65-A4-03	95B064690	BASIC	10
IS-65-A4-S1	95B066010	BASIC	10
IS-65-B1-03	95B064750	BASIC	11
IS-65-B1-S1	95B066070	BASIC	11
IS-65-B2-03	95B064790	BASIC	11
IS-65-B2-S1	95B066110	BASIC	11
IS-65-B3-03	95B064670	BASIC	11
IS-65-B3-S1	95B064990	BASIC	11
IS-65-B4-03	95B064710	BASIC	11
IS-65-B4-S1	95B066030	BASIC	11
IS-65-C1-03	95B064890	BASIC	10
IS-65-C1-S1	95B066210	BASIC	10
IS-65-C20-03	95B066300	NAMUR	63
IS-65-C20-S1	95B066320	NAMUR	63
IS-65-C2-03	95B064930	BASIC	10
IS-65-C2-S1	95B066250	BASIC	10
IS-65-C3-03	95B064810	BASIC	10
IS-65-C3-S1	95B066130	BASIC	10
IS-65-C4-03	95B064850	BASIC	10
IS-65-C4-S1	95B066170	BASIC	10
IS-65-D1-03	95B064910	BASIC	11
IS-65-D1-S1	95B066230	BASIC	11
IS-65-D2-03	95B064950	BASIC	11
IS-65-D2-S1	95B066270	BASIC	11
IS-65-D3-03	95B064830	BASIC	11
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IS-65-D4-03	95B064870	BASIC	11
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IS-65-H3-03	95B064820	BASIC	13
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IS-65-M3-03	95B064680	STAINLESS STEEL	36
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IS-08-A20-S1	95B066760	NAMUR	64
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IS-08-A2-S2	95B061151	BASIC	14
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IS-08-A2-S4	95B061161	BASIC	14
IS-08-A3-03	95B061061	BASIC	14
IS-08-A3-S1	95B061081	BASIC	14
IS-08-A3-S2	95B061071	BASIC	14
IS-08-A4-03	95B061091	BASIC	14
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IS-08-C2-S3	95B061551	BASIC	15
IS-08-C2-S4	95B061571	BASIC	15
IS-08-C2-S5	95B061561	BASIC	15
IS-08-C3-03	95B066410	BASIC	15
IS-08-C3-S1	95B061481	BASIC	15
IS-08-C3-S2	95B061471	BASIC	15
IS-08-C4-03	95B066450	BASIC	15
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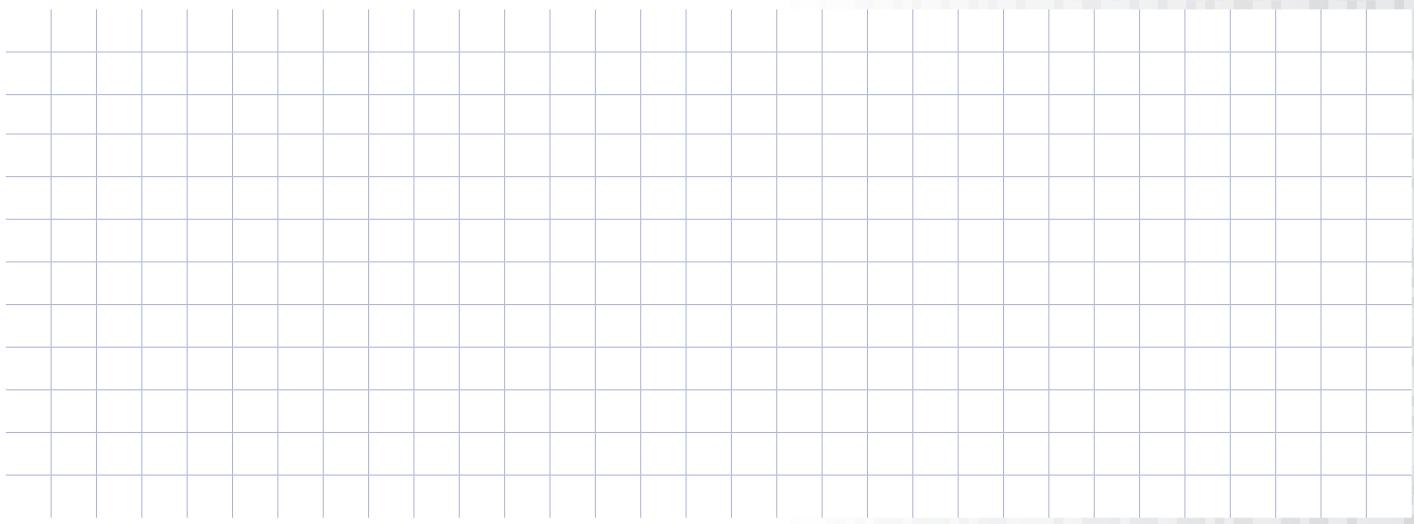
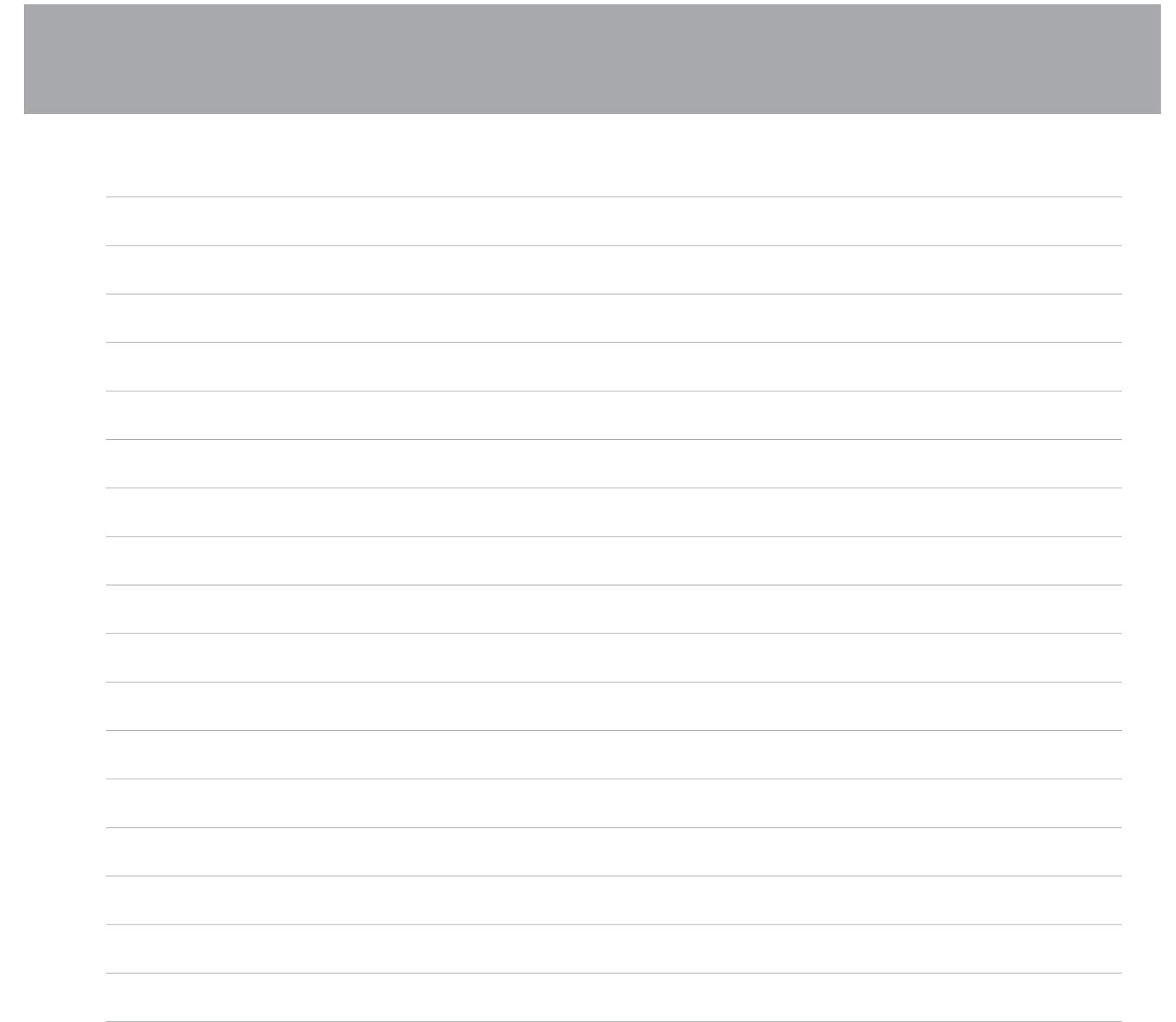
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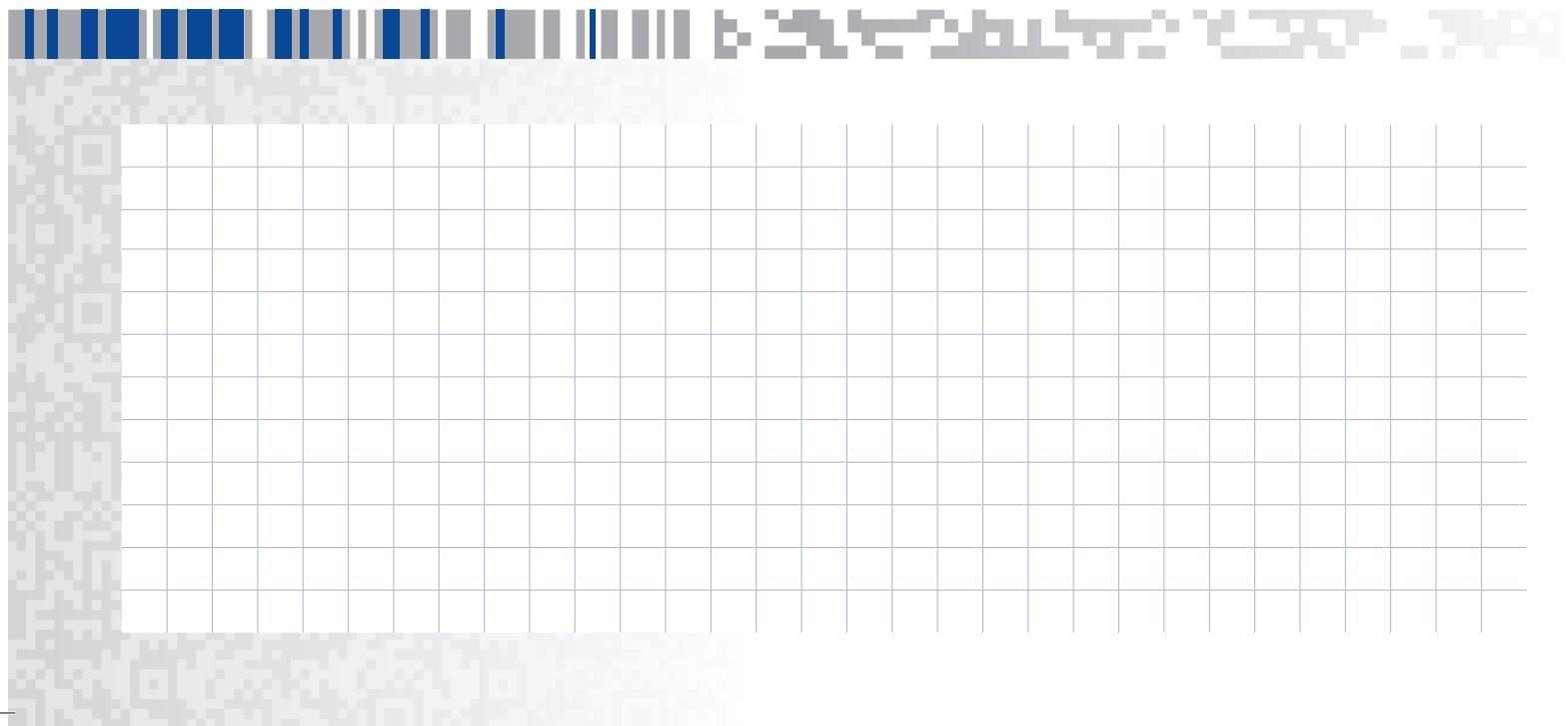
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