



# TABLE OF CONTENTS

## Designation code

How to read sensor designations	3
---------------------------------	---

## Circuit diagrams

Connection according to EN 60947-5-2	4
--------------------------------------	---

## Sensors

Cylinder AC	5
Cylinder AC/DC	7
Square AC	9
Square AC/DC	11

## Product overview

All sensors at a glance	12
-------------------------	----



## NOTES

---





## DESIGNATION CODE

Example: **K J 10 - M 30 M B 45 - D P S - V1 - X0000**

T	T	T	T	T	T	T	T	T	T	T	T
1	2	3	4	5	6	7	8	9	10	11	12

### 1 = Working principle

<b>A</b>	Acoustic		
<b>B</b>	Acceleration sensor		
<b>C</b>	Capacitive		
<b>D</b>	Strain gauge sensor		
<b>H</b>	Hall-effect		
<b>J</b>	Inductive	<b>JR</b>	Inductive ring
		<b>JF</b>	Inductive surface
		<b>JG</b>	Inductive slot
		<b>JD</b>	Metalface
<b>M</b>	Magneto resistive		
<b>N</b>	Inclination sensor		
<b>R</b>	Reed-contact		
<b>W</b>	Angle sensor		

### 2 = Switching distance / range

### 3 = Design

<b>D</b>	Ring housing
<b>G</b>	Cylindrical housing without thread
<b>M</b>	Cylindrical housing with metrical thread
<b>Q</b>	Square housing

### 4 = Housing diameter / edge length

### 5 = Housing material

<b>A</b>	Aluminium
<b>E</b>	Stainless steel
<b>K</b>	Plastic
<b>M</b>	Brass, nickel plated
<b>T</b>	PTFE

### 6 = Installation

<b>B</b>	Shielded
<b>N</b>	Non shielded

### 7 = Tube length

### 8 = Operating voltage

<b>AZ</b>	AC alternating current voltage
<b>D</b>	DC direct current voltage
<b>VZ</b>	AC/DC all voltages

### 9 = Type of output signal

<b>AN</b>	Analog	<b>ANI</b>	Current output
		<b>ANU</b>	Voltage output
<b>CAN</b>	CAN-bus interface		
<b>N</b>	NPN		
<b>NA</b>	Namur		
<b>P</b>	PNP		
<b>Z</b>	Two wire		

### 10 = Function

<b>A</b>	Changeover
<b>I</b>	Impulse output
<b>Ö</b>	N.C.
<b>S</b>	N.O.
<b>U</b>	Switchable

### 11 = Termination

<b>V1</b>	M8 screw-/snap-in
<b>V2</b>	M12 metal
<b>V2/1</b>	M12 plastic
<b>V3</b>	M5 metal
<b>V4</b>	Amphenol Tuchel
<b>V6</b>	Brad Harrison
<b>V7</b>	Valve connector type A
<b>V8</b>	M8 snap-in only
<b>V9</b>	Torson
<b>V10</b>	Valve connector type C
<b>V11</b>	AC connector 1/2" UNF
<b>V12</b>	M18 plastic
<b>VE</b>	Euchner connector
<b>RS232</b>	Data interface
<b>PG</b>	Thread joint PG
<b>Mxx</b>	Thread joint metrical

others as requested

### 12 = Additional marks

<b>AM</b>	Sensing face in centre
<b>FE</b>	Reduction 1 to steel / iron
<b>HT</b>	High temperature
<b>NF</b>	Reduction 1 to nonferrous metal
<b>SF</b>	Weld field immune
<b>T</b>	Enlarged temperature range
<b>W</b>	Angled sensing face / angled cable exit
<b>X</b>	Customized design with detailed description



# INDUCTIVE SENSORS AC + AC/DC

## CIRCUIT DIAGRAMS

Circuit diagram for	Cable / clamp connection	Connector V1 ... V9
DPS DC PNP N.O.		
DPÖ DC PNP N.C.		
DPA DC PNP changeover		
DPU DC NO/NC switchable		
DNS DC NPN N.O.		
DNÖ DC NPN N.C.		
DNA DC NPN changeover		
DNU DC NO/NC switchable		
NA Namur EN 60947-5-6		
DZS DC two-wire N.O.		
DZÖ DC two-wire N.C.		
AZS/VZS AC/DC two-wire N.O.		
AZÖ/VZÖ AC/DC two-wire N.C.		
Analog		



## CYLINDER AC

### General data

Operating voltage $U_b$	20 ... 250V AC
Voltage frequency	50/60Hz
Voltage drop $U_d$	$\leq 5V$
Min. load current $I_{emin}$	5mA
Residual current $I_r$	$\leq 2mA$
Peak current	2A (20ms / 1Hz)
Max. switching frequency $f$	15Hz
Hysteresis $H$	$\leq 15\%$
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$
Repeat accuracy $R$	$\leq 5\%$
Protection class	IP67
Switching state	LED
EMV-standard	according to EN60947-5-2
Housing material	brass, nickel-plated
Front cap	PCP
Connection	2m cable PVC 3 x 0,5mm <sup>2</sup>



The drawings of these sensors are shown on the following page.

Other cable lengths as requested.

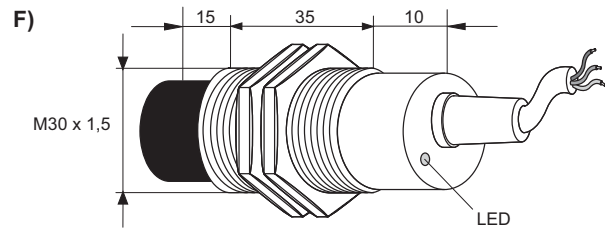
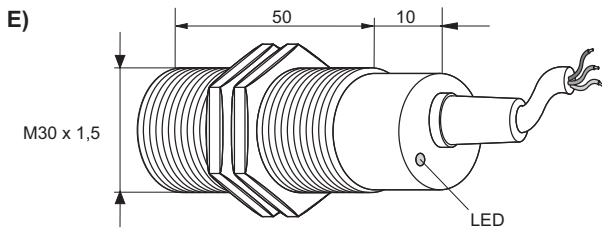
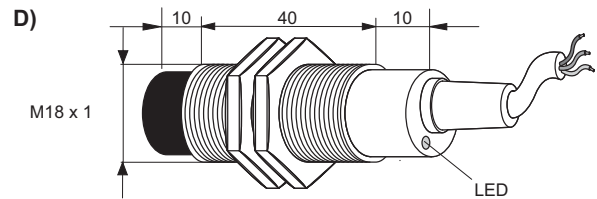
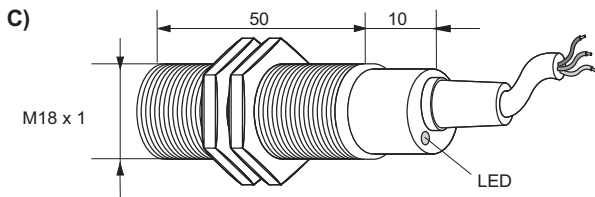
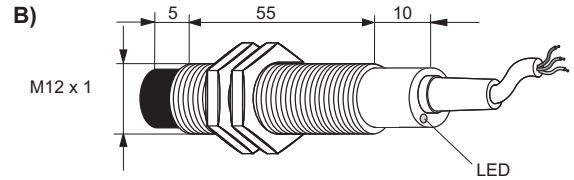
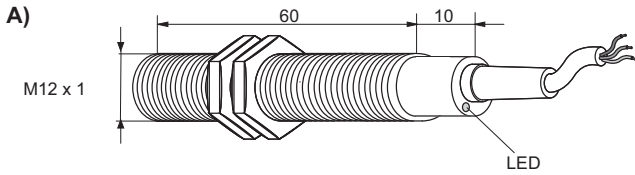
### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Max. load current	Drawing (next page)
08317240500	<b>KJ2-M12MB70-AZS</b>	shielded	two-wire	2	300mA	A
08317240400	<b>KJ2-M12MB70-AZÖ</b>	shielded	two-wire	2	300mA	A
08317240700	<b>KJ4-M12MN70-AZS</b>	non shielded	two-wire	4	300mA	B
08317240900	<b>KJ4-M12MN70-AZÖ</b>	non shielded	two-wire	4	300mA	B
08317211200	<b>KJ5-M18MB60-AZS</b>	shielded	two-wire	5	300mA	C
08317211300	<b>KJ5-M18MB60-AZÖ</b>	shielded	two-wire	5	300mA	C
08317211500	<b>KJ10-M18MN60-AZS</b>	non shielded	two-wire	10	300mA	D
08317211700	<b>KJ10-M18MN60-AZÖ</b>	non shielded	two-wire	10	300mA	D
08317162600	<b>KJ10-M30MB60-AZS</b>	shielded	two-wire	10	300mA	E
08317162100	<b>KJ10-M30MB60-AZÖ</b>	shielded	two-wire	10	300mA	E
08317162700	<b>KJ15-M30MN60-AZS</b>	non shielded	two-wire	15	300mA	F
08317162300	<b>KJ15-M30MN60-AZÖ</b>	non shielded	two-wire	15	300mA	F



## CYLINDER AC

### Dimensions



all data in mm



## INDUCTIVE SENSORS AC + AC/DC

### CYLINDER AC/DC

#### General data

Operating voltage $U_b$	20 ... 250V AC/DC
Voltage frequency	50/60Hz
Voltage drop $U_d$	$\leq 5V$
Min. load current $I_{e\min}$	2mA
Max. load current $I_e$	350mA (M12 300mA)
Residual current $I_r$	$\leq 1,7mA$
Peak current	2A (20ms/1Hz)
Max. switching frequency $f$	30Hz
Hysteresis $H$	$\leq 15\%$
Operating temperature $T_a$	$-25^\circ C \dots +70^\circ C$
Temperature drift	$\leq 10\%$
Repeat accuracy $R$	$\leq 5\%$
Protection class	IP67
Switching state	LED
EMV-standard	according to EN60947-5-2
Housing material	brass, nickel-plated
Front cap	PCP
Connection	2m cable PVC 3 x 0,5mm <sup>2</sup>















The drawings of these sensors are shown on the following page.

Short circuit protection and overload protection locking. After removal of the short circuit the voltage supply has to be interrupted for approximately 2sec.

Other cable lengths as requested.

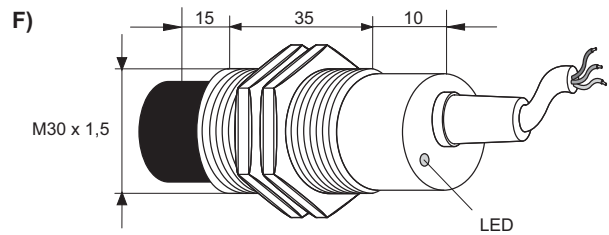
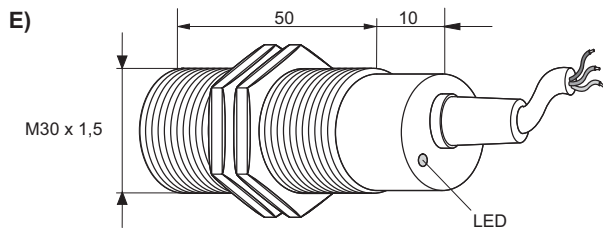
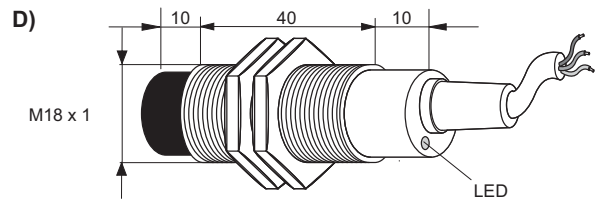
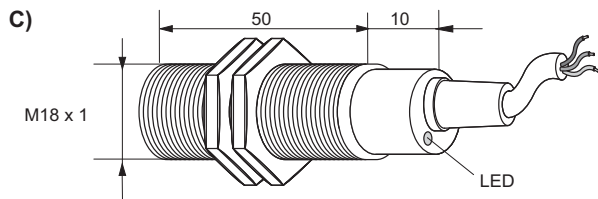
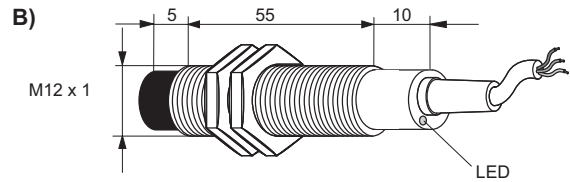
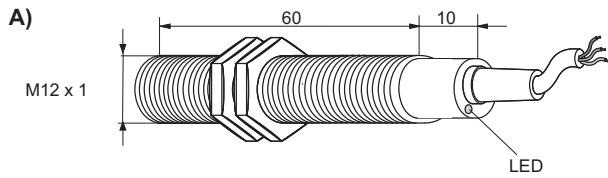
#### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Drawing (next page)
08317251200	<b>KJ2-M12MB70-VZS</b>	shielded	two-wire 	2	A
08317251300	<b>KJ2-M12MB70-VZÖ</b>	shielded	two-wire 	2	A
08317251500	<b>KJ4-M12MN70-VZS</b>	non shielded	two-wire 	4	B
08317251700	<b>KJ4-M12MN70-VZÖ</b>	non shielded	two-wire 	4	B
08317231200	<b>KJ5-M18MB60-VZS</b>	shielded	two-wire 	5	C
08317231300	<b>KJ5-M18MB60-VZÖ</b>	shielded	two-wire 	5	C
08317231500	<b>KJ8-M18MN60-VZS</b>	non shielded	two-wire 	8	D
08317231700	<b>KJ8-M18MN60-VZÖ</b>	non shielded	two-wire 	8	D
08317171200	<b>KJ10-M30MB60-VZS</b>	shielded	two-wire 	10	E
08317171300	<b>KJ10-M30MB60-VZÖ</b>	shielded	two-wire 	10	E
08317171500	<b>KJ15-M30MN60-VZS</b>	non shielded	two-wire 	15	F
08317171700	<b>KJ15-M30MN60-VZÖ</b>	non shielded	two-wire 	15	F



## CYLINDER AC/DC

### Dimensions



all data in mm





## SQUARE AC

### General data

	KJ15-Q40KB-AZU	KJ40-Q40KN-AZU	KJ50-Q80KN-AZS
Operating voltage $U_b$	20 ... 250V AC	20 ... 250V AC or DC	20 ... 250V AC
Voltage frequency	50/60Hz	50/60Hz	50/60Hz
Voltage drop $U_d$	$\leq 5V$	$\leq 5V$	$\leq 8V$ bei 400mA
Min. load current $I_{emin}$	5mA	5mA	5mA
Max. load current $I_e$	$\leq 500mA$	$\leq 500mA$	$\leq 400mA$
Residual current $I_r$	$\leq 2mA$	$\leq 2mA$	$\leq 1,8mA$
Peak current	8,0A (20ms)	8,0A (20ms)	5,0A (20ms)
Max. switching frequency $f$	15Hz	15Hz	25Hz
Output function	two-wire changeover	two-wire changeover	two-wire changeover
Hysteresis $H$	$\leq 15\%$	$\leq 15\%$	$\leq 15\%$
Operating temperature $T_a$	-25°C ... +70°C	-25°C ... +70°C	-25°C ... +70°C
Temperature drift	$\leq 10\%$	$\leq 10\%$	$\leq 10\%$
Repeat accuracy $R$	$\leq 5\%$	$\leq 5\%$	$\leq 5\%$
Protection class	IP67	IP67	IP67
Switching state	2 LED	2 LED	2 LED
EMV-standard	according to EN60947-5-2	according to EN60947-5-2	according to EN60947-5-2
Housing material	Trogamide T	Trogamide T	PBT Resin
Connection	clamps 1,5mm <sup>2</sup>	clamps 1,5mm <sup>2</sup>	clamps 1,5mm <sup>2</sup>



The drawings of these sensors are shown on the following page.

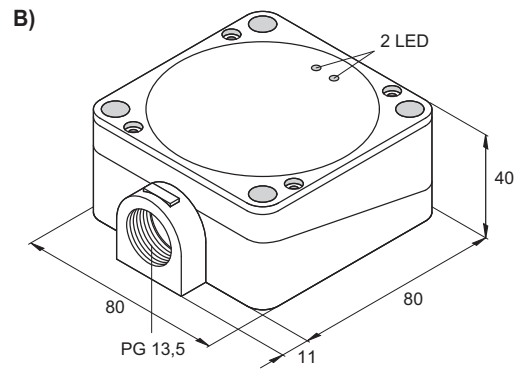
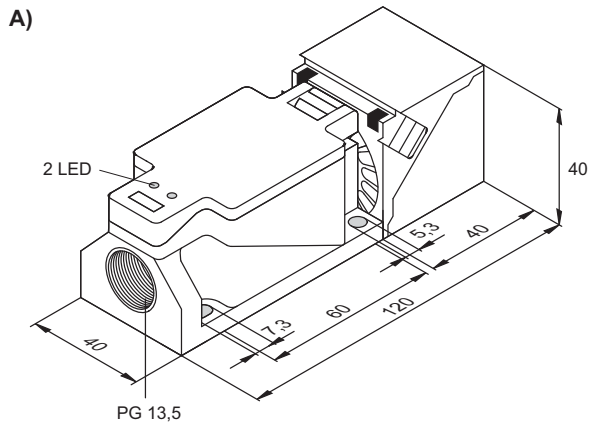
### Selection chart

Article number	Designations	Mounting	Switching distance in mm	Drawing (next page)
08317533000	<b>KJ15-Q40KB-AZU</b>	shielded	15	A
08317533200	<b>KJ40-Q40KN-AZU</b>	non shielded	40	A
08317551000	<b>KJ50-Q80KN-AZS</b>	non shielded	50	B



## SQUARE AC

### Dimensions



all data in mm



## INDUCTIVE SENSORS AC + AC/DC

### SQUARE AC/DC

#### General data

Mounting	shielded
Operating voltage $U_b$	20 ... 250V AC /DC
Voltage frequency	50/60Hz
Voltage drop $U_d$	$\leq 5V$
Min. load current $I_{emin}$	5mA
Max. load current $I_e$	400mA
Residual current $I_r$	$\leq 2mA$
Peak current	8A (20ms)
Max. switching frequency $f$	15Hz
Output function	two-wire changeover
Hysteresis $H$	$\leq 15\%$
Operating temperature $T_a$	$-25^\circ C \dots +70^\circ C$
Temperature drift	$\leq 10\%$
Repeat accuracy $R$	$\leq 5\%$
Protection class	IP67
Switching state	2 LED
EMV-standard	according to EN 60947-5-2
Housing material	PA 6.6 GF30
Connection	clamps $1,5mm^2$

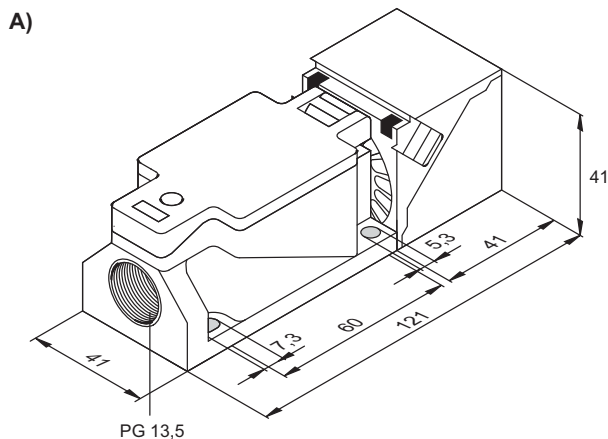


Short circuit protection and overload protection locking. After removal of the short circuit the voltage supply has to be interrupted for approximately 2sec.

#### Selection chart

Article number	Designation	Switching distance in mm	Drawing
08317730000	<b>KJ20-Q40KB-VZU</b>	20	A
08317730200	<b>KJ40-Q40KN-VZU</b>	40	A

#### Dimensions



all data in mm



## PRODUCT OVERVIEW

Product group	Designation	Article number	Matchcode	Page
Induktive ACDC	KJ2-M12MB70-AZS	08317240500	9924-0500	5
Induktive ACDC	KJ2-M12MB70-AZÖ	08317240400	9924-0400	5
Induktive ACDC	KJ2-M12MB70-VZS	08317251200		7
Induktive ACDC	KJ2-M12MB70-VZÖ	08317251300		7
Induktive ACDC	KJ4-M12MN70-AZS	08317240700	9924-0700	5
Induktive ACDC	KJ4-M12MN70-AZÖ	08317240900	9924-0900	5
Induktive ACDC	KJ4-M12MN70-VZS	08317251500		7
Induktive ACDC	KJ4-M12MN70-VZÖ	08317251700		7
Induktive ACDC	KJ5-M18MB60-AZS	08317211200	9921-1200	5
Induktive ACDC	KJ5-M18MB60-AZÖ	08317211300	9921-1300	5
Induktive ACDC	KJ5-M18MB60-VZS	08317231200		7
Induktive ACDC	KJ5-M18MB60-VZÖ	08317231300		7
Induktive ACDC	KJ8-M18MN60-VZS	08317231500		7
Induktive ACDC	KJ8-M18MN60-VZÖ	08317231700		7
Induktive ACDC	KJ10-M18MN60-AZS	08317211500	9921-1500	5
Induktive ACDC	KJ10-M18MN60-AZÖ	08317211700	9921-1700	5
Induktive ACDC	KJ10-M30MB60-AZS	08317162600	9916-2600	5
Induktive ACDC	KJ10-M30MB60-AZÖ	08317162100	9916-2100	5
Induktive ACDC	KJ10-M30MB60-VZS	08317171200		7
Induktive ACDC	KJ10-M30MB60-VZÖ	08317171300		7
Induktive ACDC	KJ15-M30MN60-AZS	08317162700	9916-2700	5
Induktive ACDC	KJ15-M30MN60-AZÖ	08317162300	9916-2300	5
Induktive ACDC	KJ15-M30MN60-VZS	08317171500		7
Induktive ACDC	KJ15-M30MN60-VZÖ	08317171700		7
Induktive ACDC	KJ15-Q40KB-AZU	08317533000	9853-3000	9
Induktive ACDC	KJ20-Q40KB-VZU	08317730000	9873-0000	11
Induktive ACDC	KJ40-Q40KN-AZU	08317533200	9853-3200	9
Induktive ACDC	KJ40-Q40KN-VZU	08317730200	9873-0200	11
Induktive ACDC	KJ50-Q80KN-AZS	08317551000	9855-1000	9



# INDUCTIVE SENSORS ANALOG

## TABLE OF CONTENT

<b>Designation code</b>	
How to read sensor designations	3
<b>Circuit diagrams</b>	
Connection according to EN 60947-5-2	4
<b>Sensors</b>	
Programmable analog sensors	5
Cylinder G6,5 analog voltage output (ANU)	6
Cylinder M8 analog voltage output (ANU)	7
Cylinder M12 analog voltage output (ANU)	8
Cylinder M12 analog current output (ANI)	9
Cylinder M18 analog voltage output (ANU)	10
Cylinder M18 analog current output (ANI)	11
Cylinder M30 analog voltage output (ANU)	12
Cylinder M30 analog current output (ANI)	14
Square Q40 analog voltage output (ANU)	15
Cylinder M18, M30 analog voltage and current output (ANUI)	16
Square Q40 analog voltage and current output (ANUI)	18
<b>Product overview</b>	
All sensors at a glance	19



## INDUCTIVE SENSORS ANALOG

### NOTES

---



# INDUCTIVE SENSORS ANALOG

## DESIGNATION CODE

Example: **K J 10 - M 30 M B 45 - D P S - V1 - X0000**

1	2	3	4	5	6	7	8	9	10	11	12

### 1 = Working principle

<b>A</b>	Acoustic		
<b>B</b>	Acceleration sensor		
<b>C</b>	Capacitive		
<b>D</b>	Strain gauge sensor		
<b>H</b>	Hall-effect		
<b>J</b>	Inductive	<b>JR</b>	Inductive ring
		<b>JF</b>	Inductive surface
		<b>JG</b>	Inductive slot
		<b>JD</b>	Metalface
<b>M</b>	Magnetoresistive		
<b>N</b>	Inclination sensor		
<b>R</b>	Reed-contact		
<b>W</b>	Angle sensor		

### 2 = Switching distance / range

### 3 = Design

<b>D</b>	Ring housing
<b>G</b>	Cylindrical housing without thread
<b>M</b>	Cylindrical housing with metrical thread
<b>Q</b>	Square housing

### 4 = Housing diameter / edge length

### 5 = Housing material

<b>A</b>	Aluminium
<b>E</b>	Stainless steel
<b>K</b>	Plastic
<b>M</b>	Brass, nickel plated
<b>T</b>	PTFE

### 6 = Installation

<b>B</b>	Shielded
<b>N</b>	Non shielded

### 7 = Tube length

### 8 = Operating voltage

<b>AZ</b>	AC alternating current voltage
<b>D</b>	DC direct current voltage
<b>VZ</b>	AC/DC all voltages

### 9 = Type of output signal

<b>AN</b>	Analog	<b>ANI</b>	Current output
		<b>ANU</b>	Voltage output
<b>CAN</b>	CAN-bus interface		
<b>N</b>	NPN		
<b>NA</b>	Namur		
<b>P</b>	PNP		
<b>Z</b>	Two wire		

### 10 = Function

<b>A</b>	Changeover
<b>I</b>	Impulse output
<b>Ö</b>	N.C.
<b>S</b>	N.O.
<b>U</b>	Switchable

### 11 = Termination

<b>V1</b>	M8 screw-/snap-in
<b>V2</b>	M12 metal
<b>V2/1</b>	M12 plastic
<b>V3</b>	M5 metal
<b>V4</b>	Amphenol Tuchel
<b>V6</b>	Brad Harrison
<b>V7</b>	Valve connector type A
<b>V8</b>	M8 snap-in only
<b>V9</b>	Torson
<b>V10</b>	Valve connector type C
<b>V11</b>	AC connector 1/2" UNF
<b>V12</b>	M18 plastic
<b>VE</b>	Euchner connector
<b>RS232</b>	Data interface
<b>PG</b>	Thread joint PG
<b>Mxx</b>	Thread joint metrical

others as requested

### 12 = Additional marks

<b>AM</b>	Sensing face in centre
<b>FE</b>	Reduction 1 to steel / iron
<b>HT</b>	High temperature
<b>NF</b>	Reduction 1 to nonferrous metal
<b>SF</b>	Weld field immune
<b>T</b>	Enlarged temperature range
<b>W</b>	Angled sensing face / angled cable exit
<b>X</b>	Customized design with detailed description



# INDUCTIVE SENSORS ANALOG

## CIRCUIT DIAGRAMS

Circuit diagram for	Cable / clamp connection	Connector V1 ... V9
DPS DC PNP N.O.		
DPÖ DC PNP N.C.		
DPA DC PNP changeover		
DPU DC NO/NC switchable		
DNS DC NPN N.O.		
DNÖ DC NPN N.C.		
DNA DC NPN changeover		
DNU DC NO/NC switchable		
NA Namur EN 60947-5-6		
DZS DC two-wire N.O.		
DZÖ DC two-wire N.C.		
AZS/VZS AC/DC two-wire N.O.		
AZÖ/VZÖ AC/DC two-wire N.C.		
Analog		





## INDUCTIVE SENSORS ANALOG

### PROGRAMMABLE ANALOG SENSORS

#### Technical data

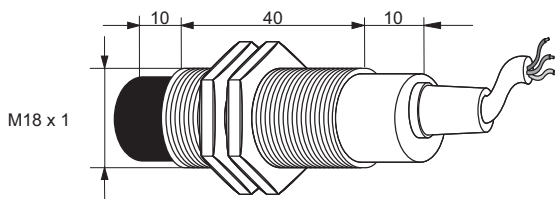
With four programmable switching points and an enlarged switching distance this sensor provides for large flexibility. Depending on the application the switching points can be configured as normally open or normally close contact. Current and voltage values can be set freely within the thresholds. The user realises any desired output characteristics until an ideal linearity in the application is attained. By programming a switching window the user is able to gate out unwanted measured data.



<b>Article number</b>	<b>Designation</b>
08317144730	<b>KJ10-M18MN60-ANU-DPSS</b>
<b>Mounting</b>	non shielded
<b>Output signal</b>	0 ... 10V
<b>Operating voltage <math>U_b</math></b>	11 ... 30V DC
<b>Ripple voltage of <math>U_b</math></b>	$\leq 5\%$
<b>Reverse voltage protection</b>	between + and -
<b>Linearity</b>	$\leq 3\%$
<b>Off-state current <math>I_0</math></b>	$\leq 10,0\text{mA}$ (typ. 4 ... 5mA)
<b>Operating current <math>I_e</math></b>	$\leq 10\text{mA}$
<b>Internal resistor <math>R_i</math></b>	$\leq 500\text{Ohm}$
<b>Operating frequency <math>f</math></b>	200Hz
<b>Switching distance</b>	0,5 ... 10,0mm
<b>Repeat accuracy <math>R</math></b>	$\leq 1\%$
<b>Average Rising</b>	1,05V / mm +/- 5%
<b>Operating temperature <math>T_a</math></b>	-25°C ... +70°C
<b>Temperature drift</b>	+/- 8%
<b>Protection class</b>	IP67
<b>EMV-standard</b>	according to IEC 60947-5-7
<b>Housing material</b>	brass, nickel-plated
<b>Front cap</b>	PA 6.6
<b>Termination</b>	2m cable PVC 4 x 0,34mm <sup>2</sup>

Other cable lengths as requested.

#### Dimensions



all data in mm



## INDUCTIVE SENSORS ANALOG

### CYLINDER G6,5 ANALOG VOLTAGE OUTPUT (ANU)

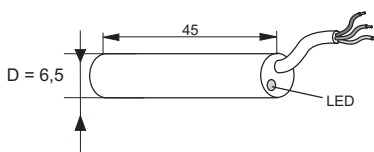
#### Technical data

<b>Article number</b>	<b>Designation</b>
08317140050	KJ2-G6,5MB40-ANU
<b>Mounting</b>	shielded
<b>Output signal</b>	0V ... 10V
<b>Operating voltage <math>U_b</math></b>	11V ... 35V DC
<b>Ripple voltage of <math>U_b</math></b>	$\leq 5\%$
<b>Reverse voltage protection</b>	between + and -
<b>Linearity</b>	$\leq 3\%$
<b>Off-state current <math>I_o</math></b>	10,0mA (typ. 4 ... 5mA)
<b>Operating frequency <math>f</math></b>	400Hz
<b>Switching distance</b>	0,5 ... 2mm
<b>Repeat accuracy <math>R</math></b>	$\leq 1\%$
<b>Average rising</b>	6,66V / mm
<b>Operating temperature <math>T_a</math></b>	-25°C ... +70°C
<b>Temperature drift</b>	+/- 8%
<b>Protection class</b>	IP67
<b>EMV-standard</b>	according to IEC 60947-5-7
<b>Housing material</b>	brass, nickel-plated
<b>Front cap</b>	PA 6.6
<b>Termination</b>	2m cable PVC 3 x 0,14mm <sup>2</sup>



Other cable lengths as requested.

#### Dimensions



all data in mm

**p-u-l-s-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!



## INDUCTIVE SENSORS ANALOG

### CYLINDER M8 ANALOG VOLTAGE OUTPUT (ANU)

#### General data

Mounting	shielded
Output signal	0V ... 10V
Operating voltage $U_b$	11V ... 35V DC
Ripple voltage of $U_b$	$\leq 5\%$
Reverse voltage protection	between + and -
Linearity	$\leq 3\%$
Off-state current $I_0$	10,0mA (typ. 4 ... 5mA)
Operating frequency $f$	400Hz
Switching distance	0,5 ... 2mm
Repeat accuracy $R$	$\leq 1\%$
Average rising	6,66V / mm
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	+/- 8%
Protection class	IP67
EMV-standard	according to IEC 60947-5-7
Housing material	brass, nickel-plated
Front cap	PA 6.6

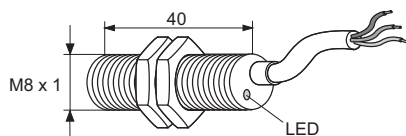


#### Selection chart

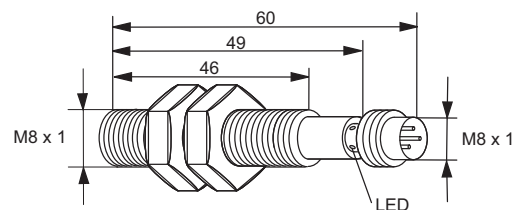
Article number	Designation	Termination	Drawing
08317140000	<b>KJ2-M8MB40-ANU</b>	2m cable PVC 3 x 0,14mm <sup>2</sup>	A
08317140064	<b>KJ2-M8MB60-ANU-V1</b>	Connector M8 3-pole	B

#### Dimensions

A)



B)



all data in mm



# INDUCTIVE SENSORS ANALOG

## CYLINDER M12 ANALOG VOLTAGE OUTPUT (ANU)

### General data

Output signal	1V ... 9V
Operating voltage $U_b$	11V ... 35V DC
Ripple voltage of $U_b$	$\leq 10\%$
Reverse voltage protection	yes
Linearity	$\leq 5\%$
Off-state current $I_o$	$\leq 5\text{mA}$
Operating frequency $f$	KJ3... 500Hz KJ4... 400Hz
Repeat accuracy $R$	$\leq 1\%$
Average rising	KJ3... 2,91V / mm KJ4... 2,28V / mm
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	+/- 5%
Protection class	IP67
EMV-standard	according to EN 60947-5-7
Housing material	brass, nickel-plated
Front cap	PCP

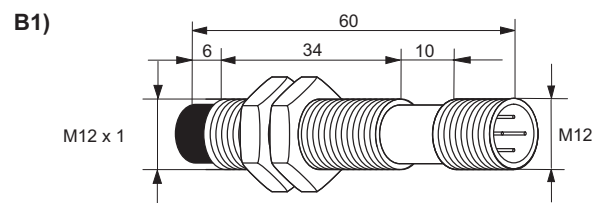
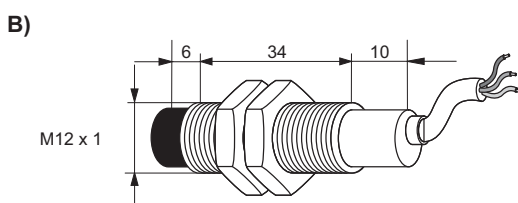
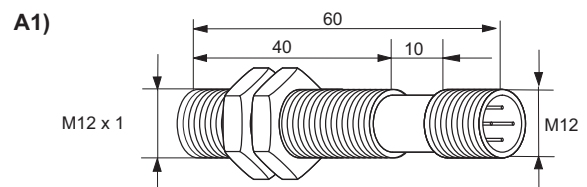
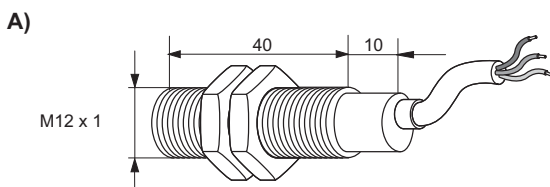


### Selection chart

Article number	Designation	Mounting	Switching distance in mm	Termination	Drawing
08317143800	<b>KJ3-M12MB50-ANU</b>	shielded	0,25 ... 3	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317143865	<b>KJ3-M12MB60-ANU-V2</b>	shielded	0,25 ... 3	Connector M12 4-pole	A1
08317144800	<b>KJ4-M12MN50-ANU</b>	non shielded	0,5 ... 4	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08317144865	<b>KJ4-M12MN60-ANU-V2</b>	non shielded	0,5 ... 4	Connector M12 4-pole	B1

Other cable lengths as requested.

### Dimensions



alle data in mm



# INDUCTIVE SENSORS ANALOG

## CYLINDER M12 ANALOG CURRENT OUTPUT (ANI)

### General data

Output signal	4 ... 20mA
Operating voltage $U_b$	10 ... 35V DC
Ripple voltage of $U_b$	$\leq 10\%$
Reverse voltage protection	yes
Linearity	$\leq 5\%$
Off-state current $I_0$	$\leq 10\text{mA}$
Operating frequency $f$	KJ3... 450Hz KJ4... 400Hz
Repeat accuracy $R$	$\leq 1\%$
Average rising	KJ3... 5,82mA / mm KJ4... 4,57mA / mm
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	+/- 5%
Protection class	IP67
EMV-standard	according to EN 60947-5-7
Housing material	brass, nickel-plated
Front cap	PCP

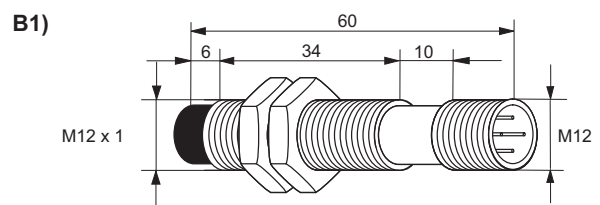
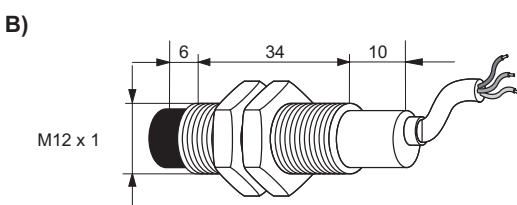
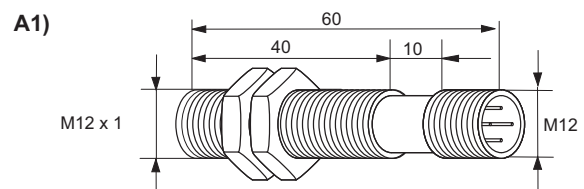
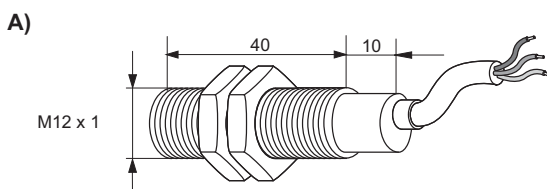


### Selection chart

Article number	Designation	Mounting	Switching distance in mm	Termination	Drawing
08317141800	<b>KJ3-M12MB50-ANI</b>	shielded	0,25 ... 3	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317141865	<b>KJ3-M12MB60-ANI-V2</b>	shielded	0,25 ... 3	Connector M12 4-pole	A1
08310000287	<b>KJ4-M12MN50-ANI</b>	non shielded	0,5 ... 4	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08310001033	<b>KJ4-M12MN60-ANI-V2</b>	non shielded	0,5 ... 4	Connector M12 4-pole	B1

Other cable lengths as requested.

### Dimensions



all data in mm



# INDUCTIVE SENSORS ANALOG

## CYLINDER M18 ANALOG VOLTAGE OUTPUT (ANU)

### General data

Output signal	1V ... 9V
Operating voltage $U_b$	11V ... 35V DC
Ripple voltage of $U_b$	$\leq 10\%$
Reverse voltage protection	yes
Linearity	$\leq 5\%$
Off-state current $I_0$	$\leq 5\text{mA}$
Operating frequency $f$	KJ5... 500Hz KJ8... 400Hz
Repeat accuracy $R$	$\leq 1\%$
Average rising	KJ5... 1,778V / mm KJ8... 1,143V / mm
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	+/- 5%
Protection class	IP67
EMV-standard	according to EN 60947-5-7
Housing material	brass, nickel-plated
Front cap	PCP

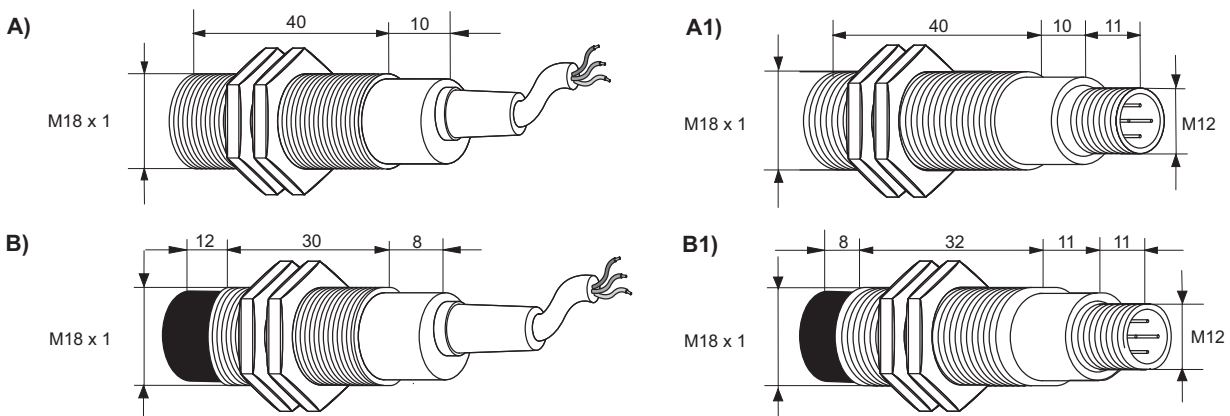


### Selection chart

Article number	Designation	Mounting	Switching distance in mm	Termination	Drawing
08317143700	<b>KJ5-M18MB50-ANU</b>	shielded	0,5 ... 5	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317143765	<b>KJ5-M18MB61-ANU-V2</b>	shielded	0,5 ... 5	Connector M12 4-pole	A1
08317144700	<b>KJ8-M18MN50-ANU</b>	non shielded	1 ... 8	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08317144765	<b>KJ8-M18MN61-ANU-V2</b>	non shielded	1 ... 8	Connector M12 4-pole	B1

Other cable lengths as requested.

### Dimensions



all data in mm



# INDUCTIVE SENSORS ANALOG

## CYLINDER M18 ANALOG CURRENT OUTPUT (ANI)

### General data

Output signal	4 ... 20mA
Operating voltage $U_b$	10V ... 35V DC
Ripple voltage of $U_b$	$\leq 10\%$
Reverse voltage protection	yes
Linearity	$\leq 5\%$
Off-state current $I_0$	$\leq 10\text{mA}$
Operating frequency $f$	400Hz
Repeat accuracy R	$\leq 1\%$
Average rising	KJ5... 3,56mA / mm KJ8... 2,29mA / mm
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	+/- 5%
Protection class	IP67
EMV-standard	according to EN 60947-5-7
Housing material	brass, nickel-plated
Front cap	PCP

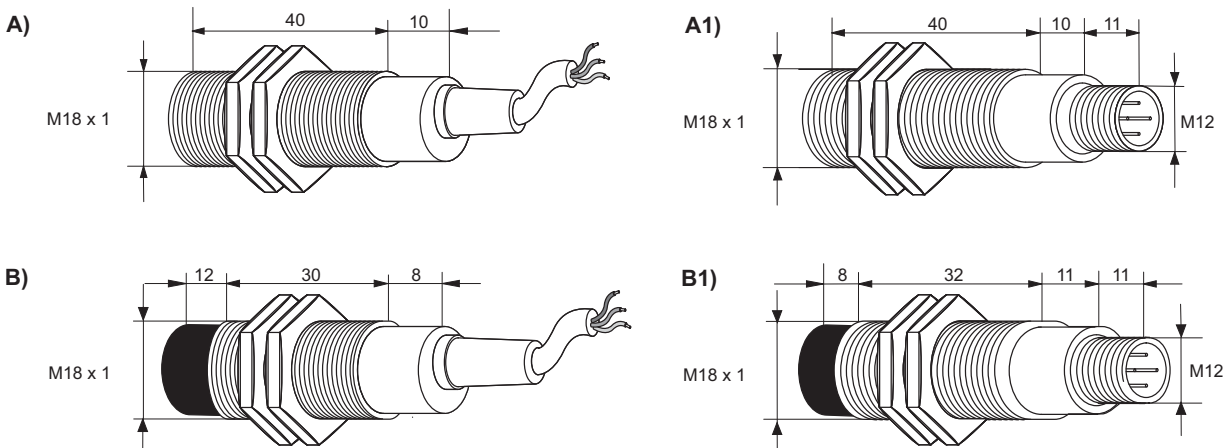


### Selection chart

Article number	Designation	Mounting	Switching distance in mm	Termination	Drawing
08317141700	<b>KJ5-M18MB50-ANI</b>	shielded	0,5 ... 5	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317141765	<b>KJ5-M18MB61-ANI-V2</b>	shielded	0,5 ... 5	Connector M12 4-pole	A1
08310000293	<b>KJ8-M18MN50-ANI</b>	non shielded	1 ... 8	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08310001031	<b>KJ8-M18MN61-ANI-V2</b>	non shielded	1 ... 8	Connector M12 4-pole	B1

Other cable lengths as requested.

### Dimensions



alle data in mm



# INDUCTIVE SENSORS ANALOG

## CYLINDER M30 ANALOG VOLTAGE OUTPUT (ANU)

### General data

<b>Output signal</b>	1V ... 9V	
<b>Operating voltage <math>U_b</math></b>	KJ9...	11 ... 35V DC
	KJ14...	18 ... 30V DC
	KJ15...	11 ... 35V DC
<b>Ripple voltage of <math>U_b</math></b>	≤ 10%	
<b>Reverse voltage protection</b>	yes	
<b>Linearity</b>	≤ 5%	
<b>Off-state current <math>I_o</math></b>	KJ9...	5mA
	KJ14...	≤ 10mA
	KJ15...	≤ 5mA
<b>Repeat accuracy R</b>	≤ 1%	
<b>Average rising</b>	KJ9...	1V / mm
	KJ14 ... (4BIT)	1,14V / mm
	KJ15...	0,667V / mm
<b>Operating temperature <math>T_a</math></b>	-25°C ... +70°C	
<b>Temperature drift</b>	+/- 5%	
<b>Protection class</b>	IP67	
<b>EMV-standard</b>	according to EN 60947-5-7	
<b>Housing material</b>	brass, nickel-plated	
<b>Frontcap</b>	PCP	



The drawings of these sensors are shown on the following page.

### Selection chart

Article number	Designation M30 Switching distance 1 ... 9mm	Mounting	Operating frequency	Termination	Drawing (following page)
08317143600	<b>KJ9-M30MB40-ANU</b>	shielded	400Hz	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317143665	<b>KJ9-M30MB50-ANU-V2</b>	shielded	400Hz	Connector M12 4-pole	A1

	Designation M30 Switching distance 7 ... 14mm				
08317140500	<b>KJ14-M30MN80-ANU-F1*</b>	non shielded	100Hz	2m cable PVC 3 x 0,14mm <sup>2</sup>	B
08317140600	<b>KJ14-M30MN80-ANU-F2*</b>	non shielded	100Hz	2m cable PVC 3 x 0,14mm <sup>2</sup>	B
08317141000	<b>KJ14-M30MN80-ANU 4BIT**</b>	non shielded	30Hz	2m cable PVC 7 x 0,14mm <sup>2</sup>	B

\* several working frequencies for opposed mounting

\*\* with additional 4 BIT NPN-digital output

	Designation M30 Switching distance 3 ... 15mm				
08317144600	<b>KJ15-M30MN40-ANU</b>	non shielded	300Hz	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
08317144665	<b>KJ15-M30MN50-ANU-V2</b>	non shielded	300Hz	Connector M12 4-pole	C1

Other cable lengths as requested.

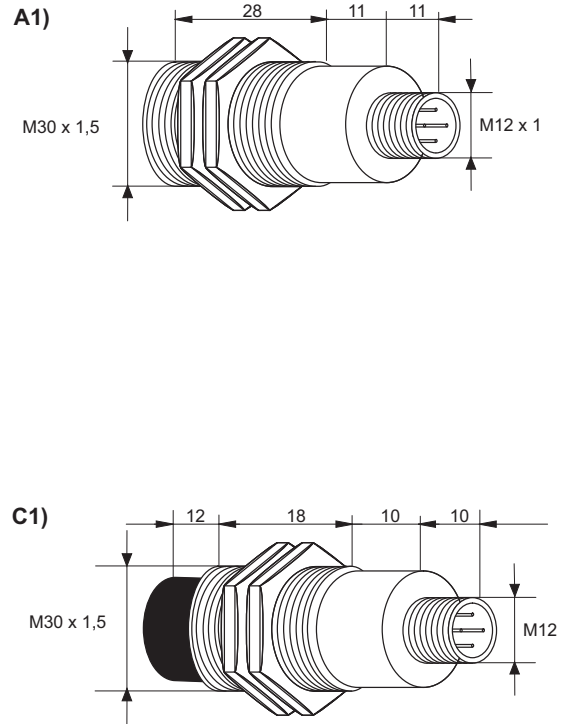
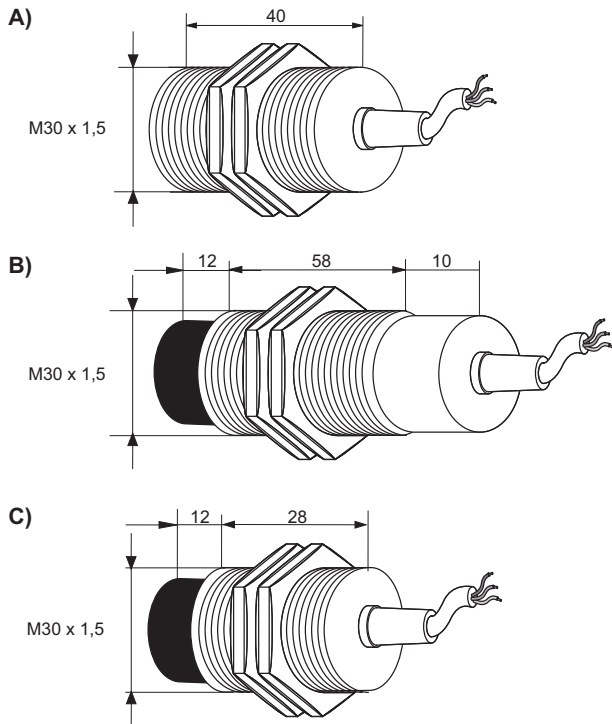




# INDUCTIVE SENSORS ANALOG

## CYLINDER M30 ANALOG VOLTAGE OUTPUT (ANU)

### Dimensions



all data in mm



# INDUCTIVE SENSORS ANALOG

## CYLINDER M30 ANALOG CURRENT OUTPUT (ANI)

### General data

Output signal	4 ... 20mA
Operating voltage $U_b$	10V ... 35V DC
Ripple voltage of $U_b$	$\leq 10\%$
Reverse voltage protection	yes
Linearity	$\leq 5\%$
Off-state current $I_0$	$\leq 10\text{mA}$
Operating frequency $f$	KJ9... 350Hz KJ15... 300Hz
Repeat accuracy $R$	$\leq 1\%$
Average rising	KJ9... 2mA / mm KJ15... 1,33mA / mm
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	+/- 5%
Protection class	IP67
EMV-standard	according to EN 60947-5-7
Housing material	brass, nickel-plated
Front cap	PCP

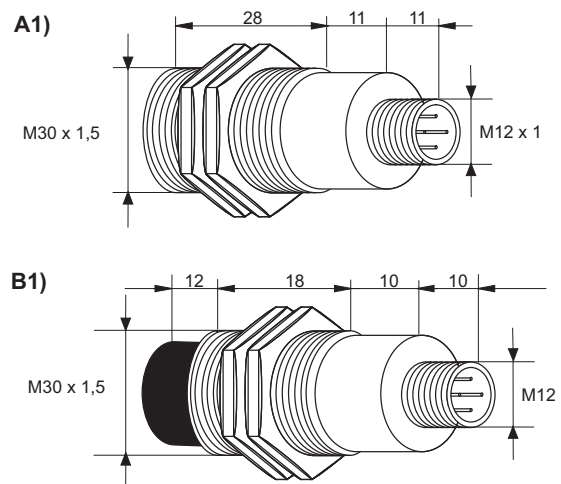
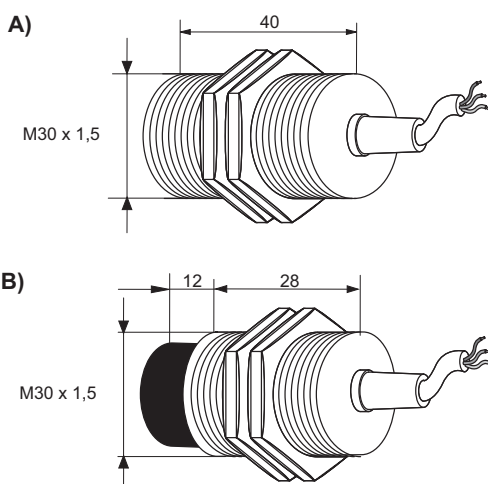


### Selection chart

Article number	Designation	Mounting	Switching distance in mm	Termination	Drawing
08317141600	<b>KJ9-M30MB40-ANI</b>	shielded	1 ... 9	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317141665	<b>KJ9-M30MB50-ANI-V2</b>	shielded	1 ... 9	Connector M12 4-pole	A1
0831000294	<b>KJ15-M30MN40-ANI</b>	non shielded	3 ... 15	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08310001032	<b>KJ15-M30MN50-ANI-V2</b>	non shielded	3 ... 15	Connector M12 4-pole	B1

Other cable lengths as requested.

### Dimensions



all data in mm



## INDUCTIVE SENSORS ANALOG

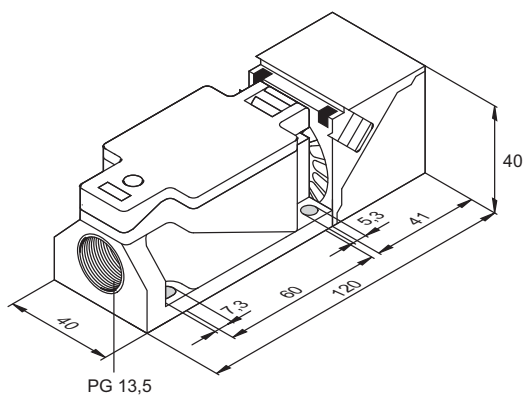
### SQUARE Q40 ANALOG VOLTAGE OUTPUT (ANU)

#### Technical data

<b>Article number</b>	<b>Designation</b>
08317141100	KJ20-Q40KN-ANU
<b>Mounting</b>	non shielded
<b>Output signal</b>	1 ... 9V
<b>Operating voltage <math>U_b</math></b>	18 ... 30V DC
<b>Ripple voltage of <math>U_b</math></b>	$\leq 10\%$
<b>Reverse voltage protection</b>	between + and -
<b>Linearity</b>	$\leq 5\%$
<b>Off-state current <math>I_0</math></b>	$\leq 10\text{mA}$
<b>Operating frequency <math>f</math></b>	25Hz
<b>Switching distance</b>	10 ... 20mm
<b>Repeat accuracy <math>R</math></b>	$\leq 5\%$
<b>Average rising</b>	0,8V / mm
<b>Operating temperature <math>T_a</math></b>	-25°C ... +70°C
<b>Temperature drift</b>	+/- 5%
<b>Protection class</b>	IP67
<b>EMV-standard</b>	according to EN 60947-5-7
<b>Housing material</b>	Trogamid
<b>Termination</b>	Terminals 1,5mm <sup>2</sup>



#### Dimensions



all data in mm



## INDUCTIVE SENSORS ANALOG

### CYLINDER ANALOG VOLTAGE AND CURRENT OUTPUT (ANUI)

#### General data

Output signal	0 ... 10V 4 ... 20mA
Operating voltage $U_b$	18V ... 30V DC
Ripple voltage of $U_b$	$\leq 10\%$
Reverse voltage protection	yes
Linearity	$\leq 10\%$
Off-state current $I_o$	$\leq 15\text{mA}$
Operating frequency $f$	SJ4... 100Hz SJ7... 30Hz SJ10... 100Hz SJ14... 30Hz
Repeat accuracy $R$	$\leq 0,02\%$
Average Rising	SJ4... 3,3V /mm / 6,66mA /mm SJ7... 1,66V /mm / 3,33mA /mm SJ10... 2V /mm / 4mA /mm SJ14... 1,43V /mm / 2,86mA /mm
Operating temperature $T_a$	0°C ... +70°C
Temperature drift	+/- 5%
Protection class	IP67
EMV-standard	according to EN 60947-5-7
Housing material	brass, nickel-plated
Front cap	PBT
Termination	2m cable PUR 4 x 0,5mm <sup>2</sup>



The drawings of these sensors are shown on the following page.

#### Selection chart

Article number	Designation	Mounting	Switching distance in mm	Drawing (following page)
08313180410	<b>SJ4-M18MB80-ANUI</b>	shielded	1 ... 4	A
08313180710	<b>SJ7-M18MN80-ANUI</b>	non shielded	1 ... 7	B
08313103010	<b>SJ10-M30MB80-ANUI</b>	shielded	5 ... 10	C
08313301410	<b>SJ14-M30MN80-ANUI</b>	non shielded	7 ... 14	D

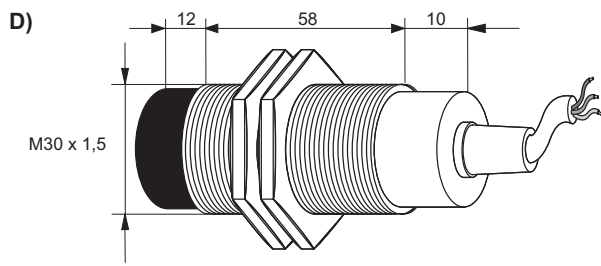
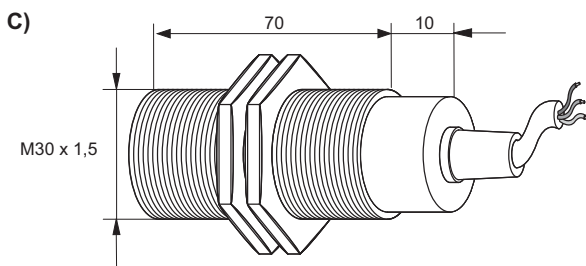
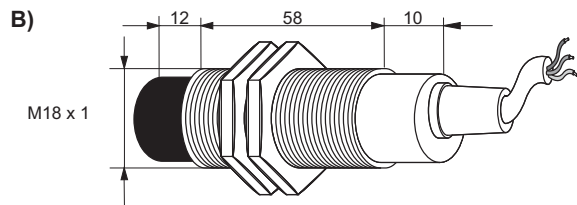
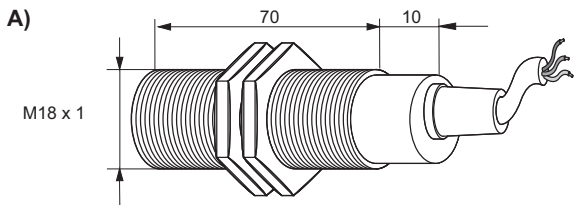
Other cable lengths as requested.



# INDUCTIVE SENSORS ANALOG

## CYLINDER ANALOG VOLTAGE AND CURRENT OUTPUT (ANUI)

### Dimensions



all data in mm



## INDUCTIVE SENSORS ANALOG

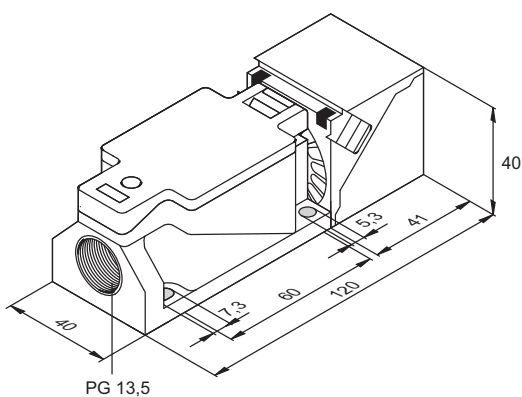
### SQUARE ANALOG VOLTAGE AND CURRENT OUTPUT (ANUI)

#### Technical data

<b>Article number</b>	<b>Designation</b>
08313204010	<b>SJ20-Q40KN-ANUI</b>
<b>Mounting</b>	non shielded
<b>Output signal</b>	0 ... 10V 0mA ... 20mA
<b>Operating voltage <math>U_b</math></b>	18 ... 30V DC
<b>Ripple voltage of <math>U_b</math></b>	$\leq 10\%$
<b>Reverse voltage protection</b>	yes
<b>Linearity</b>	0%
<b>Off-state current <math>I_0</math></b>	$\leq 15\text{mA}$
<b>Operating frequency <math>f</math></b>	30Hz
<b>Switching distance</b>	10 ... 20mm
<b>Repeat accuracy <math>R</math></b>	$\leq 0,02\%$
<b>Average rising</b>	$0,77\text{V} / \text{mm} = 1,54 \text{mA} / \text{mm}$
<b>Operating temperature <math>T_a</math></b>	$0^\circ\text{C} \dots +70^\circ\text{C}$
<b>Temperature drift</b>	$\pm 5\%$
<b>Protection class</b>	IP67
<b>EMV-standard</b>	according to EN 60947-5-7
<b>Housing material</b>	PBT
<b>Termination</b>	Terminals 1,5mm <sup>2</sup>



#### Dimensions



all data in mm



# INDUCTIVE SENSORS ANALOG

## PRODUCT OVERVIEW

Product group	Designation	Article number	Matchcode	Page
Inductive Analog	KJ2-G6,5MB40-ANU	08317140050		6
Inductive Analog	KJ2-M8MB40-ANU	08317140000		7
Inductive Analog	KJ2-M8MB60-ANU-V1	08317140064		7
Inductive Analog	KJ3-M12MB50-ANU	08317143800		8
Inductive Analog	KJ3-M12MB60-ANU-V2	08317143865		8
Inductive Analog	KJ3-M12MB50-ANI	08317141800		9
Inductive Analog	KJ3-M12MB60-ANI-V2	08317141865		9
Inductive Analog	KJ4-M12MN50-ANU	08317144800		8
Inductive Analog	KJ4-M12MN60-ANU-V2	08317144865		8
Inductive Analog	KJ4-M12MN50-ANI	08310000287		9
Inductive Analog	KJ4-M12MN60-ANI-V2	08310001033		9
Inductive Analog	SJ4-M18MB80-ANUI	08313180410		16
Inductive Analog	KJ5-M18MB50-ANU	08317143700		10
Inductive Analog	KJ5-M18MB61-ANU-V2	08317143765		10
Inductive Analog	KJ5-M18MB50-ANI	08317141700	9914-1700	11
Inductive Analog	KJ5-M18MB61-ANI-V2	08317141765	9914-1765	11
Inductive Analog	SJ7-M18MN80-ANUI	08313180710		16
Inductive Analog	KJ8-M18MN50-ANU	08317144700		10
Inductive Analog	KJ8-M18MN61-ANU-V2	08317144765		10
Inductive Analog	KJ8-M18MN50-ANI	08310000293		11
Inductive Analog	KJ8-M18MN61-ANI-V2	08310001031		11
Inductive Analog	KJ9-M30MB40-ANU	08317143600		12
Inductive Analog	KJ9-M30MB50-ANU-V2	08317143665		12
Inductive Analog	KJ9-M30MB40-ANI	08317141600	9914-1600	14
Inductive Analog	KJ9-M30MB50-ANI-V2	08317141665	9914-1665	14
Inductive Analog	KJ10-M18MN60-ANU-DPSS-D	08317144730		5
Inductive Analog	SJ10-M30MB80-ANUI	08313103010		16
Inductive Analog	KJ14-M30MN80-ANU-4BIT	08317141000	9914-1000	12
Inductive Analog	KJ14-M30MN80-ANU-F1	08317140500	9914-0500	12
Inductive Analog	KJ14-M30MN80-ANU-F2	08317140600	9914-0600	12
Inductive Analog	SJ14-M30MN80-ANUI	08313301410		16
Inductive Analog	KJ15-M30MN40-ANU	08317144600		12
Inductive Analog	KJ15-M30MN50-ANU-V2	08317144665		12
Inductive Analog	KJ15-M30MN40-ANI	08310000294		14
Inductive Analog	KJ15-M30MN50-ANI-V2	08310001032		14
Inductive Analog	KJ20-Q40KN-ANU	08317141100	9814-1100	15
Inductive Analog	SJ20-Q40KN-ANUI	08313204010		18



# INDUCTIVE SENSORS CYLINDER DC

## TABLE OF CONTENT

### Designation code

How to read sensor designations

3

### Circuit diagrams

Connection according to EN 60947-5-2

4

### Sensors

Cylinder G6,5	5
Cylinder M8 - Standard	7
Cylinder M8 - Advanced	9
Cylinder M12 - Shorties	11
Cylinder M12 - Standard	13
Cylinder M12 - Advanced	15
Cylinder M18 - Shorties	17
Cylinder M18 - Standard	19
Cylinder M18 - Advanced	21
Cylinder G20	23
Cylinder M30 - Shorties	24
Cylinder M30 - Standard	26
Cylinder M30 - Advanced	28
Cylinder G34	30

### Product overview

All sensors at a glance

31





# INDUCTIVE SENSORS CYLINDER DC

## NOTES

---



## DESIGNATION CODE

Example: **K J 10 - M 30 M B 45 - D P S - V1 - X0000**

1	2	3	4	5	6	7	8	9	10	11	12

### 1 = Working principle

<b>A</b>	Acoustic		
<b>B</b>	Acceleration sensor		
<b>C</b>	Capacitive		
<b>D</b>	Strain gauge sensor		
<b>H</b>	Hall-effect		
<b>J</b>	Inductive	<b>JR</b>	Inductive ring
		<b>JF</b>	Inductive surface
		<b>JG</b>	Inductive slot
		<b>JD</b>	Metalface
<b>M</b>	Magnetostrictive		
<b>N</b>	Inclination sensor		
<b>R</b>	Reed-contact		
<b>W</b>	Angle sensor		

### 2 = Switching distance / range

### 3 = Design

<b>D</b>	Ring housing
<b>G</b>	Cylindrical housing without thread
<b>M</b>	Cylindrical housing with metrical thread
<b>Q</b>	Square housing

### 4 = Housing diameter / edge length

### 5 = Housing material

<b>A</b>	Aluminium
<b>E</b>	Stainless steel
<b>K</b>	Plastic
<b>M</b>	Brass, nickel plated
<b>T</b>	PTFE

### 6 = Installation

<b>B</b>	Shielded
<b>N</b>	Non shielded

### 7 = Tube length

### 8 = Operating voltage

<b>AZ</b>	AC alternating current voltage
<b>D</b>	DC direct current voltage
<b>VZ</b>	AC/DC all voltages

### 9 = Type of output signal

<b>AN</b>	Analog	<b>ANI</b>	Current output
		<b>ANU</b>	Voltage output
<b>CAN</b>	CAN-Bus interface		
<b>N</b>	NPN		
<b>NA</b>	Namur		
<b>P</b>	PNP		
<b>Z</b>	Two wire		

### 10 = Function

<b>A</b>	Changeover
<b>I</b>	Impulse output
<b>Ö</b>	N.C.
<b>S</b>	N.O.
<b>U</b>	Switchable

### 11 = Connection

<b>V1</b>	M8 screw-/snap-in
<b>V2</b>	M12 metal
<b>V2/1</b>	M12 plastic
<b>V3</b>	M5 metal
<b>V4</b>	Amphenol Tuchel
<b>V6</b>	Brad Harrison
<b>V7</b>	Valve connector type A
<b>V8</b>	M8 snap-in only
<b>V9</b>	Torson
<b>V10</b>	Valve connector type C
<b>V11</b>	AC connector 1/2" UNF
<b>V12</b>	M18 plastic
<b>VE</b>	Euchner connector
<b>RS232</b>	Data interface
<b>PG</b>	Thread joint PG
<b>Mxx</b>	Thread joint metrical

others as requested

### 12 = Additional marks

<b>AM</b>	Sensing face in centre
<b>FE</b>	Reduction 1 to steel / iron
<b>HT</b>	High temperature
<b>NF</b>	Reduction 1 to nonferrous metal
<b>SF</b>	Weld field immune
<b>T</b>	Enlarged temperature range
<b>W</b>	Angled sensing face / angled cable exit
<b>X</b>	Customized design with detailed description



# INDUCTIVE SENSORS CYLINDER DC

## CIRCUIT DIAGRAMS

Circuit diagram for	Cable / clamp connection	Connector V1 ... V9
DPS DC PNP N.O.		
DPÖ DC PNP N.C.		
DPA DC PNP changeover		
DPU DC NO/NC switchable		
DNS DC NPN N.O.		
DNÖ DC NPN N.C.		
DNA DC NPN changeover		
DNU DC NO/NC switchable		
NA Namur EN 60947-5-6		
DZS DC two-wire N.O.		
DZÖ DC two-wire N.C.		
AZS/VZS AC/DC two-wire N.O.		
AZÖ/VZÖ AC/DC two-wire N.C.		
Analog		



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER G6,5

### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_r$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_0$	$\leq 10mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	SJ1,5... 2000Hz KJ2... 3000Hz KJ3... 2500Hz
Hysteresis $H$	typ. $5\% \leq 10\%$ (SJ1,5... $\leq 15\%$ )
Repeatability $R$	$\leq 2\%$ (SJ1,5... $\leq 1\%$ )
Temperature range $T_a$	$-25^\circ C \dots +75^\circ C$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated (SJ1,5... stainless steel)
Front cap	PA 6.6 (SJ1,5... POM)



### Selection chart

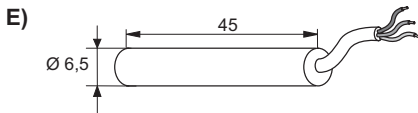
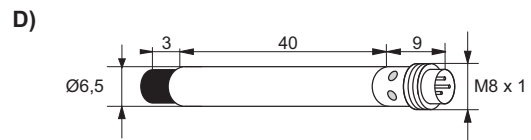
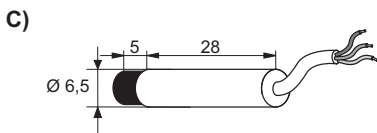
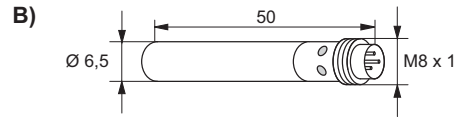
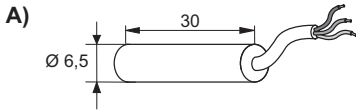
Article number	Designation brass	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317816000	KJ2-G6,5MB30-DPS	shielded	PNP	2	2m cable PVC 3 x 0,14mm <sup>2</sup>	A
08317826400	KJ2-G6,5MB30-DPÖ	shielded	PNP	2	2m cable PVC 3 x 0,14mm <sup>2</sup>	A
08317816100	KJ2-G6,5MB30-DNS	shielded	NPN	2	2m cable PVC 3 x 0,14mm <sup>2</sup>	A
08317816500	KJ2-G6,5MB30-DNÖ	shielded	NPN	2	2m cable PVC 3 x 0,14mm <sup>2</sup>	A
08317816064	KJ2-G6,5MB50-DPS-V1	shielded	PNP	2	connector M8 3-pole	B
08317816464	KJ2-G6,5MB50-DPÖ-V1	shielded	PNP	2	connector M8 3-pole	B
08317816164	KJ2-G6,5MB50-DNS-V1	shielded	NPN	2	connector M8 3-pole	B
08317816564	KJ2-G6,5MB50-DNÖ-V1	shielded	NPN	2	connector M8 3-pole	B
08317816200	KJ3-G6,5MN33-DPS	non shielded	PNP	3	2m cable PVC 3 x 0,14mm <sup>2</sup>	C
08317816600	KJ3-G6,5MN33-DPÖ	non shielded	PNP	3	2m cable PVC 3 x 0,14mm <sup>2</sup>	C
08317816300	KJ3-G6,5MN33-DNS	non shielded	NPN	3	2m cable PVC 3 x 0,14mm <sup>2</sup>	C
08317816700	KJ3-G6,5MN33-DNÖ	non shielded	NPN	3	2m cable PVC 3 x 0,14mm <sup>2</sup>	C
08317816264	KJ3-G6,5MN53-DPS-V1	non shielded	PNP	3	connector M8 3-pole	D
08317816664	KJ3-G6,5MN53-DPÖ-V1	non shielded	PNP	3	connector M8 3-pole	D
08317816364	KJ3-G6,5MN53-DNS-V1	non shielded	NPN	3	connector M8 3-pole	D
08317816764	KJ3-G6,5MN53-DNÖ-V1	non shielded	NPN	3	connector M8 3-pole	D
	<b>Designation stainless steel</b>					
08313651564	SJ1,5-G6,5EB45-DPA	shielded	PNP	1,5	2m cable PVC 4 x 0,15mm <sup>2</sup>	E
08313651554	SJ1,5-G6,5EB45-DNA	shielded	NPN	1,5	2m cable PVC 4 x 0,15mm <sup>2</sup>	E

Other cable lengths as requested.



## CYLINDER G6,5

### Dimensions



all data in mm

**p-u-l-s-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M8 - STANDARD

### General data

Operating voltage $U_b$	10 ... 30V DC*
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$ (SJ1,5... $\leq 1,0V$ )
Max. load current	200mA
Off-state current $I_0$	$\leq 10mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	2000Hz
Hysteresis $H$	$\leq 15\%$
Repeatability $R$	$\leq 10\%$ (SJ1,5... $\leq 1,0\%$ )
Temperature range $T_a$	$-25^\circ C \dots +70^\circ C$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated, stainless steel
Front cap	brass: PCP stainless steel: POM



\* KJ1,5-M8MB50-DPS-V2: 10 ... 35V DC

### Selection chart

Article number	Designation brass	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317610200	<b>KJ1,5-M8MB40-DPS</b>	shielded	PNP	1,5	2m cable PVC 3 x 0,14mm <sup>2</sup>	A
08317610300	<b>KJ1,5-M8MB40-DNS</b>	shielded	NPN	1,5	2m cable PVC 3 x 0,14mm <sup>2</sup>	A
08317610264	<b>KJ1,5-M8MB50-DPS-V1</b>	shielded	PNP	1,5	connector M8 3-pole	B
08317610364	<b>KJ1,5-M8MB50-DNS-V1</b>	shielded	NPN	1,5	connector M8 3-pole	B
08317610265	<b>KJ1,5-M8MB50-DPS-V2</b>	shielded	PNP	1,5	connector M12 4-pole	C
08317610365	<b>KJ1,5-M8MB50-DNS-V2</b>	shielded	NPN	1,5	connector M12 4-pole	C
08317610400	<b>KJ2-M8MN40-DPS</b>	non shielded	PNP	2	2m cable PVC 3 x 0,14mm <sup>2</sup>	D
08317610500	<b>KJ2-M8MN40-DNS</b>	non shielded	NPN	2	2m cable PVC 3 x 0,14mm <sup>2</sup>	D
08317610464	<b>KJ2-M8MN50-DPS-V1</b>	non shielded	PNP	2	connector M8 3-pole	E
08317610564	<b>KJ2-M8MN50-DNS-V1</b>	non shielded	NPN	2	connector M8 3-pole	E
08317610465	<b>KJ2-M8MN50-DPS-V2</b>	non shielded	PNP	2	connector M12 4-pole	F
08317610565	<b>KJ2-M8MN50-DNS-V2</b>	non shielded	NPN	2	connector M12 4-pole	F
	<b>Designation stainless steel</b>					
08313081560	<b>SJ1,5-M8EB45-DPA</b>	shielded	PNP	1,5	2m cable PVC 3 x 0,15mm <sup>2</sup>	G
08313081550	<b>SJ1,5-M8EB45-DNA</b>	shielded	NPN	1,5	2m cable PVC 3 x 0,15mm <sup>2</sup>	G

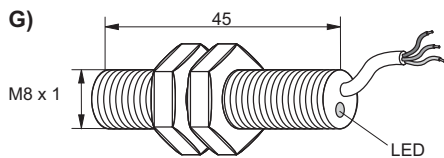
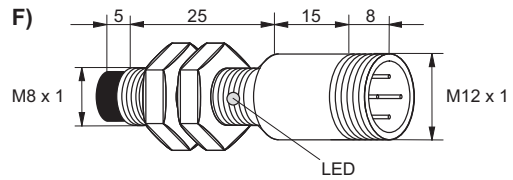
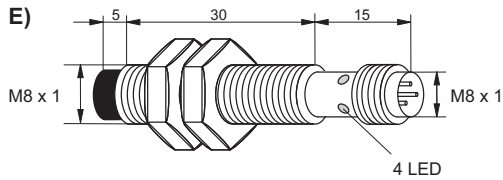
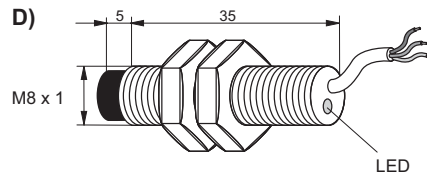
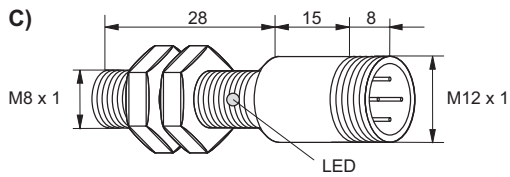
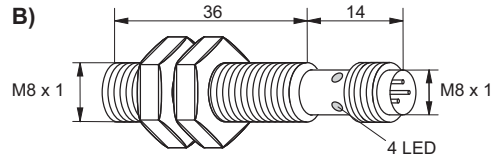
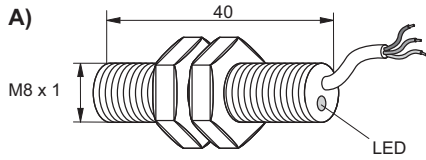
Other cable lengths as requested.



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M8 - STANDARD

### Dimensions



all data in mm

**p-u-l-s-o-t-r-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!



## INDUCTIVE SENSORS CYLINDER DC

### CYLINDER M8 - ADVANCED

#### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_0$	$\leq 10mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	KJ2... 3000Hz KJ3... 2500Hz
Hysteresis H	typ. $5\% \leq 10\%$
Repeatability R	$\leq 10\%$
Temperature range $T_a$	$-25^\circ C \dots +70^\circ C$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated
Front cap	PCP



#### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317811000	KJ2-M8MB33-DPS	shielded	PNP	2	2m cable PVC 3 x 0,14mm <sup>2</sup>	A
08317811400	KJ2-M8MB33-DPÖ	shielded	PNP	2	2m cable PVC 3 x 0,14mm <sup>2</sup>	A
08317811100	KJ2-M8MB33-DNS	shielded	NPN	2	2m cable PVC 3 x 0,14mm <sup>2</sup>	A
08317811500	KJ2-M8MB33-DNÖ	shielded	NPN	2	2m cable PVC 3 x 0,14mm <sup>2</sup>	A
08317811064	KJ2-M8MB50-DPS-V1	shielded	PNP	2	connector M8 3-pole	B
08317811464	KJ2-M8MB50-DPÖ-V1	shielded	PNP	2	connector M8 3-pole	B
08317811164	KJ2-M8MB50-DNS-V1	shielded	NPN	2	connector M8 3-pole	B
08317811564	KJ2-M8MB50-DNÖ-V1	shielded	NPN	2	connector M8 3-pole	B
08317811050	KJ2-M8MB58-DPS-V2	shielded	PNP	2	connector M12 4-pole	C
08317811450	KJ2-M8MB58-DPÖ-V2	shielded	PNP	2	connector M12 4-pole	C
08317811150	KJ2-M8MB58-DNS-V2	shielded	NPN	2	connector M12 4-pole	C
08317811550	KJ2-M8MB58-DNÖ-V2	shielded	NPN	2	connector M12 4-pole	C
08317811200	KJ3-M8MN33-DPS	non shielded	PNP	3	2m cable PVC 3 x 0,14mm <sup>2</sup>	D
08317811600	KJ3-M8MN33-DPÖ	non shielded	PNP	3	2m cable PVC 3 x 0,14mm <sup>2</sup>	D
08317811300	KJ3-M8MN33-DNS	non shielded	NPN	3	2m cable PVC 3 x 0,14mm <sup>2</sup>	D
08317811700	KJ3-M8MN33-DNÖ	non shielded	NPN	3	2m cable PVC 3 x 0,14mm <sup>2</sup>	D
08317811264	KJ3-M8MN50-DPS-V1	non shielded	PNP	3	connector M8 3-pole	E
08317811664	KJ3-M8MN50-DPÖ-V1	non shielded	PNP	3	connector M8 3-pole	E
08317811364	KJ3-M8MN50-DNS-V1	non shielded	NPN	3	connector M8 3-pole	E
08317811764	KJ3-M8MN50-DNÖ-V1	non shielded	NPN	3	connector M8 3-pole	E
08317811250	KJ3-M8MN58-DPS-V2	non shielded	PNP	3	connector M12 4-pole	F
08317811650	KJ3-M8MN58-DPÖ-V2	non shielded	PNP	3	connector M12 4-pole	F
08317811350	KJ3-M8MN58-DNS-V2	non shielded	NPN	3	connector M12 4-pole	F
08317811750	KJ3-M8MN58-DNÖ-V2	non shielded	NPN	3	connector M12 4-pole	F

Other cable lengths as requested.

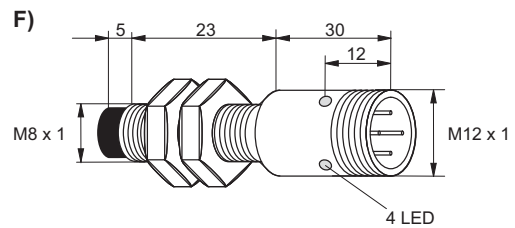
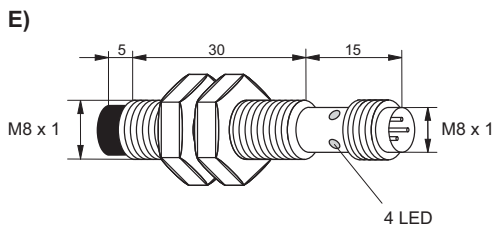
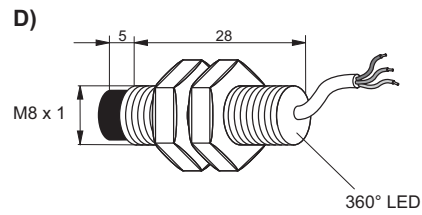
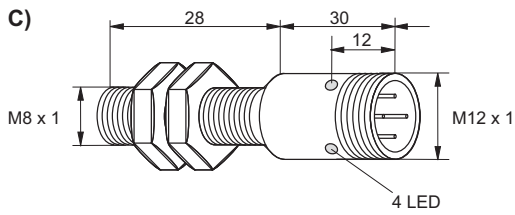
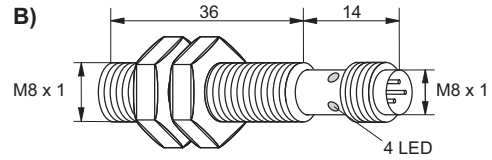
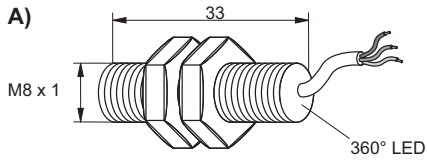




# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M8 - ADVANCED

### Dimensions



all data in mm



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M12 - SHORTIES

### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_0$	$\leq 13mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	KJ2... 2000Hz KJ4... 1000Hz
Hysteresis H	$\leq 15\%$
Repeatability R	$\leq 10\%$
Temperature range $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated
Front cap	PA 6.6



### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317822000	<b>KJ2-M12MB35-DPS</b>	shielded	PNP	2	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317822100	<b>KJ2-M12MB35-DNS</b>	shielded	NPN	2	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317822064	<b>KJ2-M12MB50-DPS-V1</b>	shielded	PNP	2	connector M8 3-pole	B
08317822164	<b>KJ2-M12MB50-DNS-V1</b>	shielded	NPN	2	connector M8 3-pole	B
08317822065	<b>KJ2-M12MB50-DPS-V2</b>	shielded	PNP	2	connector M12 4-pole	C
08317822165	<b>KJ2-M12MB50-DNS-V2</b>	shielded	NPN	2	connector M12 4-pole	C
08310009173	<b>KJ4-M12MB30-DPS</b>	shielded	PNP	4	2m cable PVC 3 x 0,34mm <sup>2</sup>	D
08310000288	<b>KJ4-M12MB50-DPS-V1</b>	shielded	PNP	4	connector M8 3-pole	E
08317824950	<b>KJ4-M12MB50-DPS-V2</b>	shielded	PNP	4	connector M12 4-pole	C
08317822200	<b>KJ4-M12MN35-DPS</b>	non shielded	PNP	4	2m cable PVC 3 x 0,14mm <sup>2</sup>	F
08317822300	<b>KJ4-M12MN35-DNS</b>	non shielded	NPN	4	2m cable PVC 3 x 0,14mm <sup>2</sup>	F
08317822264	<b>KJ4-M12MN50-DPS-V1</b>	non shielded	PNP	4	connector M8 3-pole	G
08317822364	<b>KJ4-M12MN50-DNS-V1</b>	non shielded	NPN	4	connector M8 3-pole	G
08317822265	<b>KJ4-M12MN50-DPS-V2</b>	non shielded	PNP	4	connector M12 4-pole	H
08317822365	<b>KJ4-M12MN50-DNS-V2</b>	non shielded	NPN	4	connector M12 4-pole	H
0831xxxxxxx	<b>KJ6-M12MN30-DPS</b>	non shielded	PNP	6	2m cable PVC 3 x 0,34mm <sup>2</sup>	I
08310000736	<b>KJ6-M12MN50-DPS-V1</b>	non shielded	PNP	6	connector M8 3-pole	G
0831xxxxxxx	<b>KJ6-M12MN50-DPS-V2</b>	non shielded	PNP	6	connector M12 4-pole	H

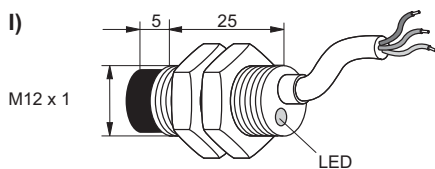
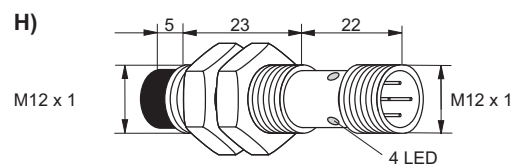
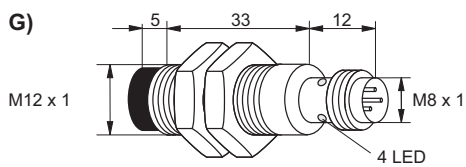
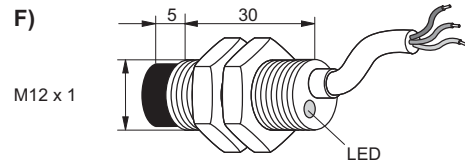
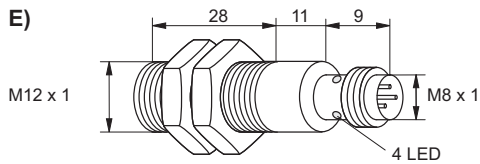
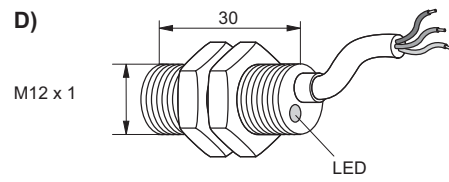
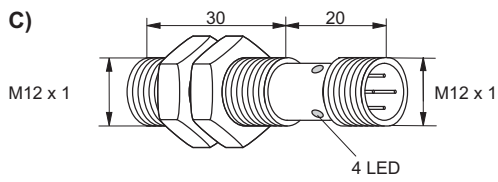
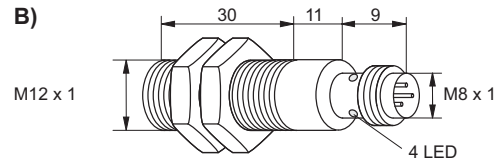
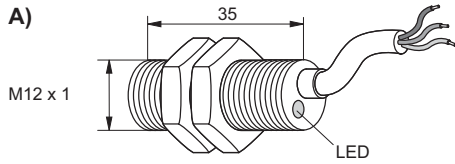
Other cable lengths as requested.



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M12 - SHORTIES

### Dimensions



all data in mm



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M12 - STANDARD

### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_a$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_0$	$\leq 13mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	KJ2... 1000Hz (antivalent 2000Hz) KJ4... 800Hz (antivalent 1000Hz)
Hysteresis H	$\leq 15\%$
Repeatability R	$\leq 10\%$
Temperature range $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	nach EN 60947-5-2
Switching state	LED
Housing material	Messing vernickelt
Front cap	PA 6.6



### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317624000	KJ2-M12MB40-DPS	shielded	PNP	2	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317624400	KJ2-M12MB40-DPÖ	shielded	PNP	2	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317624100	KJ2-M12MB40-DNS	shielded	NPN	2	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317624500	KJ2-M12MB40-DNÖ	shielded	NPN	2	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317624064	KJ2-M12MB60-DPS-V1	shielded	PNP	2	connector M8 3-pole	B
08317624464	KJ2-M12MB60-DPÖ-V1	shielded	PNP	2	connector M8 3-pole	B
08317624164	KJ2-M12MB60-DNS-V1	shielded	NPN	2	connector M8 3-pole	B
08317624564	KJ2-M12MB60-DNÖ-V1	shielded	NPN	2	connector M8 3-pole	B
08317624065	KJ2-M12MB60-DPS-V2	shielded	PNP	2	connector M12 4-pole	C
08317624465	KJ2-M12MB60-DPÖ-V2	shielded	PNP	2	connector M12 4-pole	C
08317624165	KJ2-M12MB60-DNS-V2	shielded	NPN	2	connector M12 4-pole	C
08317624565	KJ2-M12MB60-DNÖ-V2	shielded	NPN	2	connector M12 4-pole	C
08317626200	KJ2-M12MB60-DPA	shielded	PNP	2	2m cable PVC 4 x 0,34mm <sup>2</sup>	D
08310000705	KJ2-M12MB60-DNA	shielded	PNP	2	2m cable PVC 4 x 0,34mm <sup>2</sup>	D
08317626265	KJ2-M12MB80-DPA-V2	shielded	NPN	2	connector M12 4-pole	E
0831xxxxxxx	KJ2-M12MB80-DNA-V2	shielded	NPN	2	connector M12 4-pole	E
08317624200	KJ4-M12MN40-DPS	non shielded	PNP	4	2m cable PVC 3 x 0,34mm <sup>2</sup>	F
08317624600	KJ4-M12MN40-DPÖ	non shielded	NPN	4	2m cable PVC 3 x 0,34mm <sup>2</sup>	F
08317624300	KJ4-M12MN40-DNS	non shielded	PNP	4	2m cable PVC 3 x 0,34mm <sup>2</sup>	F
08317624700	KJ4-M12MN40-DNÖ	non shielded	NPN	4	2m cable PVC 3 x 0,34mm <sup>2</sup>	F
08317624264	KJ4-M12MN60-DPS-V1	non shielded	PNP	4	connector M8 3-pole	G
08317624664	KJ4-M12MN60-DPÖ-V1	non shielded	PNP	4	connector M8 3-pole	G
08317624364	KJ4-M12MN60-DNS-V1	non shielded	NPN	4	connector M8 3-pole	G
08317624764	KJ4-M12MN60-DNÖ-V1	non shielded	NPN	4	connector M8 3-pole	G

Continuation on the next page. Other cable lengths as requested.



# INDUCTIVE SENSORS CYLINDER DC

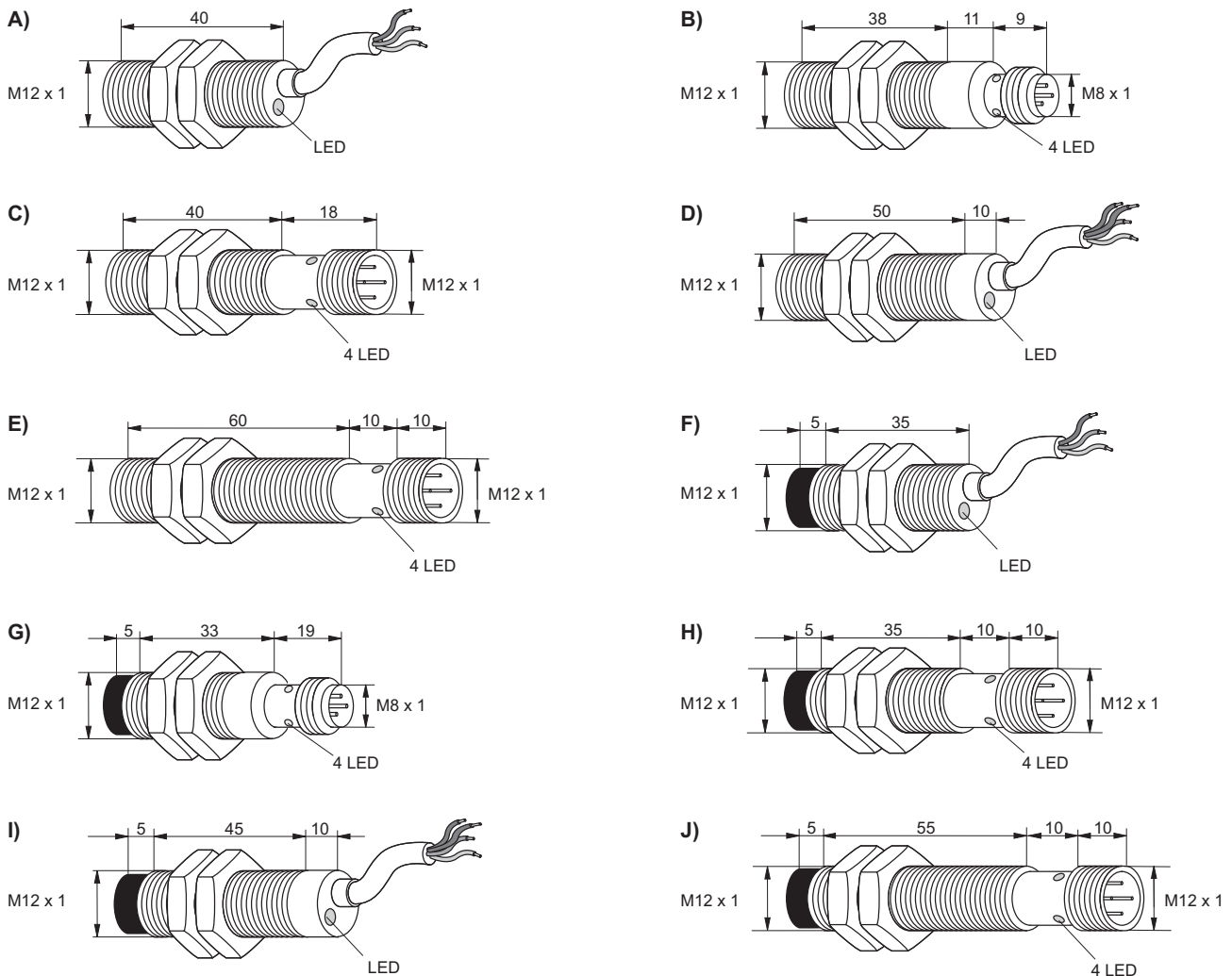
## CYLINDER M12 - STANDARD

### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing
08317624265	<b>KJ4-M12MN60-DPS-V2</b>	non shielded	PNP	4	connector M12 4-pole	H
08317624665	<b>KJ4-M12MN60-DPÖ-V2</b>	non shielded	PNP	4	connector M12 4-pole	H
08317624365	<b>KJ4-M12MN60-DNS-V2</b>	non shielded	NPN	4	connector M12 4-pole	H
08317624765	<b>KJ4-M12MN60-DNÖ-V2</b>	non shielded	NPN	4	connector M12 4-pole	H
08317626300	<b>KJ4-M12MN60-DPA</b>	non shielded	PNP	4	2m cable PVC 4 x 0,34mm <sup>2</sup>	I
08310000019	<b>KJ4-M12MN60-DNA</b>	non shielded	NPN	4	2m cable PVC 4 x 0,34mm <sup>2</sup>	I
08317626365	<b>KJ4-M12MN80-DPA-V2</b>	non shielded	PNP	4	connector M12 4-pole	J
0831xxxxxxx	<b>KJ4-M12MN80-DNA-V2</b>	non shielded	NPN	4	connector M12 4-pole	J

Other cable lengths as requested.

### Dimensions



all data in mm



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M12 - ADVANCED

### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_r$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_0$	$\leq 13mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	KJ4... 2000Hz KJ6... 1000Hz
Hysteresis H	typ. $5\% \leq 10\%$
Repeatability R	$-25^\circ C \dots +70^\circ C$
Temperature range $T_a$	$\leq 10\%$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated
Front cap	PA 6.6



### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317821000	KJ4-M12MB50-DPS	shielded	PNP	4	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317821400	KJ4-M12MB50-DPÖ	shielded	PNP	4	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317821100	KJ4-M12MB50-DNS	shielded	NPN	4	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317821500	KJ4-M12MB50-DNÖ	shielded	NPN	4	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317821050	KJ4-M12MB60-DPS-V2	shielded	PNP	4	connector M12 4-pole	B
08317821450	KJ4-M12MB60-DPÖ-V2	shielded	PNP	4	connector M12 4-pole	B
08317821150	KJ4-M12MB60-DNS-V2	shielded	NPN	4	connector M12 4-pole	B
08317821550	KJ4-M12MB60-DNÖ-V2	shielded	NPN	4	connector M12 4-pole	B
0831xxxxxxx	KJ4-M12MB50-DPA	shielded	PNP	4	2m cable PVC 4 x 0,34mm <sup>2</sup>	A
0831xxxxxxx	KJ4-M12MB50-DNA	shielded	PNP	4	2m cable PVC 4 x 0,34mm <sup>2</sup>	A
08310000388	KJ4-M12MB60-DPA-V2	shielded	NPN	4	connector M12 4-pole	B
0831xxxxxxx	KJ4-M12MB60-DNA-V2	shielded	NPN	4	connector M12 4-pole	B
08317821200	KJ6-M12MN50-DPS	non shielded	PNP	6	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
08317821600	KJ6-M12MN50-DPÖ	non shielded	PNP	6	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
08317821300	KJ6-M12MN50-DNS	non shielded	NPN	6	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
08317821700	KJ6-M12MN50-DNÖ	non shielded	NPN	6	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
08317821250	KJ6-M12MN60-DPS-V2	non shielded	PNP	6	connector M12 4-pole	D
08317821650	KJ6-M12MN60-DPÖ-V2	non shielded	PNP	6	connector M12 4-pole	D
08317821350	KJ6-M12MN60-DNS-V2	non shielded	NPN	6	connector M12 4-pole	D
08317821750	KJ6-M12MN60-DNÖ-V2	non shielded	NPN	6	connector M12 4-pole	D
0831xxxxxxx	KJ6-M12MN50-DPA	non shielded	PNP	6	2m cable PVC 4 x 0,34mm <sup>2</sup>	C
0831xxxxxxx	KJ6-M12MN50-DNA	non shielded	PNP	6	2m cable PVC 4 x 0,34mm <sup>2</sup>	C
0831xxxxxxx	KJ6-M12MN60-DPA-V2	non shielded	NPN	6	connector M12 4-pole	D
08310001176	KJ6-M12MN60-DNA-V2	non shielded	NPN	6	connector M12 4-pole	D

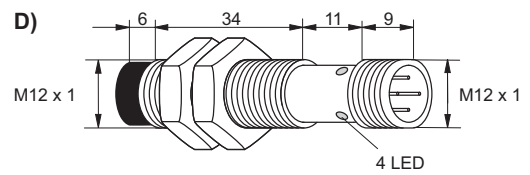
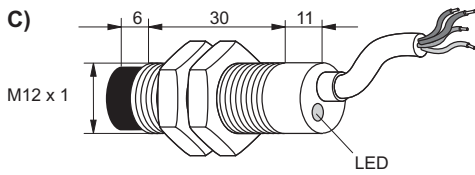
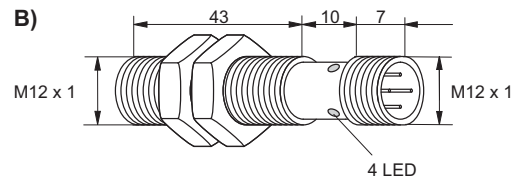
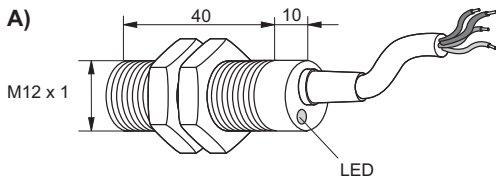
Other cable lengths as requested.



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M12 - ADVANCED

### Dimensions



all data in mm



## INDUCTIVE SENSORS CYLINDER DC

### CYLINDER M18 - SHORTIES

#### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$
Max. load current	200mA*
Off-state current $I_o$	$\leq 13mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	KJ5... 800Hz KJ8... 500Hz
Hysteresis H	$\leq 15\%$
Repeatability R	-25°C ... +70°C
Temperature range $T_a$	$\leq 10\%$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated
Front cap	PCP



\* KJ5-M18MB25-DPS: 100mA

#### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08310000562	<b>KJ5-M18MB25-DPS</b>	shielded	PNP $\text{—} \text{—} \text{—}$	5	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317842000	<b>KJ5-M18MB35-DPS</b>	shielded	PNP $\text{—} \text{—} \text{—}$	5	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08317842100	<b>KJ5-M18MB35-DNS</b>	shielded	NPN $\text{—} \text{—} \text{—}$	5	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08317842065	<b>KJ5-M18MB50-DPS-V2</b>	shielded	PNP $\text{—} \text{—} \text{—}$	5	connector M12 4-pole	C
08317842165	<b>KJ5-M18MB50-DNS-V2</b>	shielded	NPN $\text{—} \text{—} \text{—}$	5	connector M12 4-pole	C
08317844900	<b>KJ8-M18MB40-DPS</b>	shielded	PNP $\text{—} \text{—} \text{—}$	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	D
08317844800	<b>KJ8-M18MB40-DNS</b>	shielded	NPN $\text{—} \text{—} \text{—}$	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	D
08317844950	<b>KJ8-M18MB50-DPS-V2</b>	shielded	PNP $\text{—} \text{—} \text{—}$	8	connector M12 4-pole	C
08317844850	<b>KJ8-M18MB50-DNS-V2</b>	shielded	NPN $\text{—} \text{—} \text{—}$	8	connector M12 4-pole	C
08317842200	<b>KJ8-M18MN35-DPS</b>	non shielded	PNP $\text{—} \text{—} \text{—}$	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	E
08317842300	<b>KJ8-M18MN35-DNS</b>	non shielded	NPN $\text{—} \text{—} \text{—}$	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	E
08317842265	<b>KJ8-M18MN50-DPS-V2</b>	non shielded	PNP $\text{—} \text{—} \text{—}$	8	connector M12 4-pole	F
08317842365	<b>KJ8-M18MN50-DNS-V2</b>	non shielded	NPN $\text{—} \text{—} \text{—}$	8	connector M12 4-pole	F

Other cable lengths as requested.

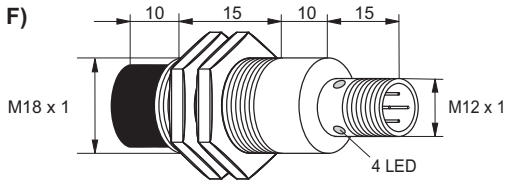
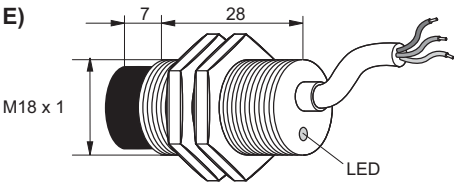
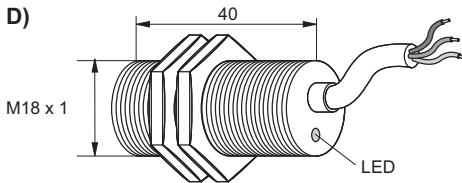
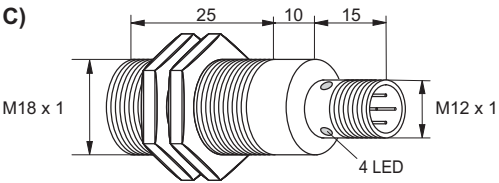
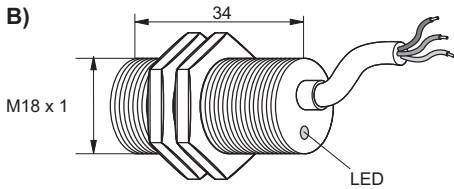
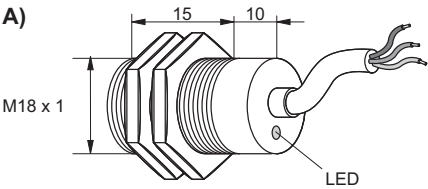




# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M18 - SHORTIES

### Dimensions



all data in mm



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M18 - STANDARD

### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_o$	$\leq 13mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	KJ5... 800Hz KJ8... 500Hz
Hysteresis H	$\leq 15\%$
Repeatability R	$-25^\circ C \dots +70^\circ C$
Temperature range $T_a$	$\leq 10\%$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated
Front cap	PCP (KJ5... and KJ8... cable versions: PA 6.6)



### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317644000	<b>KJ5-M18MB40-DPS</b>	shielded	PNP	5	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317644400	<b>KJ5-M18MB40-DPÖ</b>	shielded	PNP	5	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317644100	<b>KJ5-M18MB40-DNS</b>	shielded	NPN	5	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317644500	<b>KJ5-M18MB40-DNÖ</b>	shielded	NPN	5	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317644065	<b>KJ5-M18MB65-DPS-V2</b>	shielded	PNP	5	connector M12 4-pole	B
08317644465	<b>KJ5-M18MB65-DPÖ-V2</b>	shielded	PNP	5	connector M12 4-pole	B
08317644165	<b>KJ5-M18MB65-DNS-V2</b>	shielded	NPN	5	connector M12 4-pole	B
08317644565	<b>KJ5-M18MB65-DNÖ-V2</b>	shielded	NPN	5	connector M12 4-pole	B
08317646200	<b>KJ5-M18MB60-DPA</b>	shielded	PNP	5	2m cable PVC 4 x 0,34mm <sup>2</sup>	C
0831xxxxxxx	<b>KJ5-M18MB60-DNA</b>	shielded	NPN	5	2m cable PVC 4 x 0,34mm <sup>2</sup>	C
08317644200	<b>KJ8-M18MN40-DPS</b>	non shielded	PNP	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	D
08317644600	<b>KJ8-M18MN40-DPÖ</b>	non shielded	PNP	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	D
08317644300	<b>KJ8-M18MN40-DNS</b>	non shielded	NPN	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	D
08317644700	<b>KJ8-M18MN40-DNÖ</b>	non shielded	NPN	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	D
08317644265	<b>KJ8-M18MN65-DPS-V2</b>	non shielded	PNP	8	connector M12 4-pole	E
08317644665	<b>KJ8-M18MN65-DPÖ-V2</b>	non shielded	PNP	8	connector M12 4-pole	E
08317644365	<b>KJ8-M18MN65-DNS-V2</b>	non shielded	NPN	8	connector M12 4-pole	E
08317644765	<b>KJ8-M18MN65-DNÖ-V2</b>	non shielded	NPN	8	connector M12 4-pole	E
08317646300	<b>KJ8-M18MN60-DPA</b>	non shielded	PNP	8	2m cable PVC 4 x 0,34mm <sup>2</sup>	F
0831xxxxxxx	<b>KJ8-M18MN60-DNA</b>	non shielded	NPN	8	2m cable PVC 4 x 0,34mm <sup>2</sup>	F

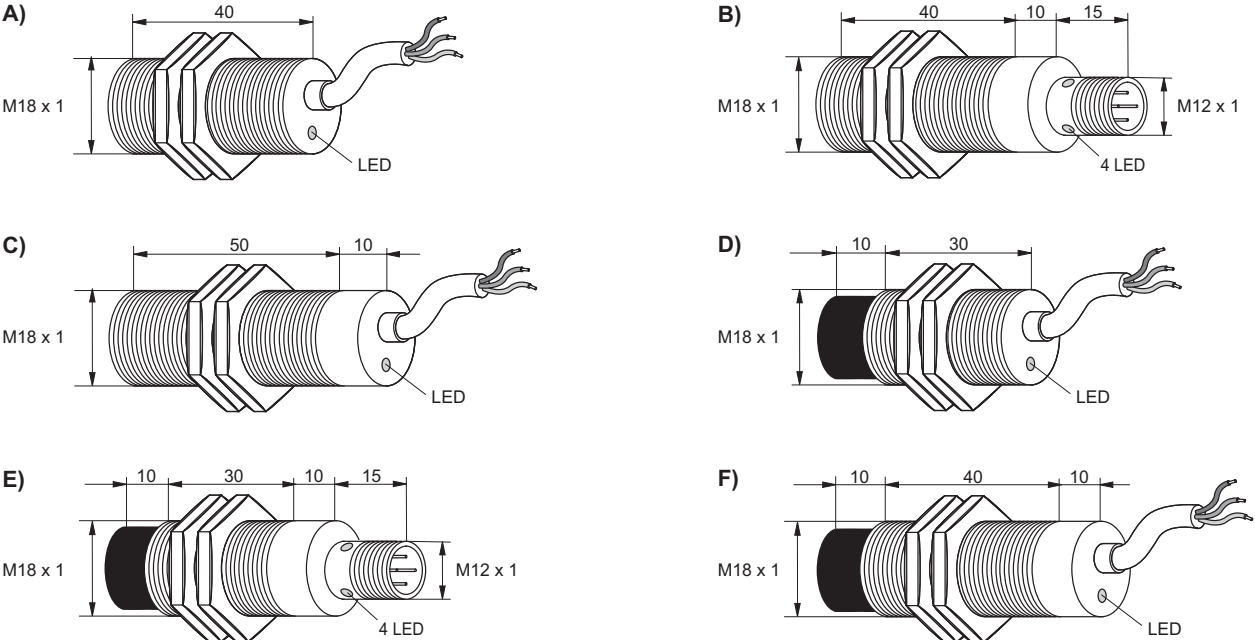
Other cable lengths as requested.



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M18 - STANDARD

### Dimensions



all data in mm

**p-u-l-s-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!



## INDUCTIVE SENSORS CYLINDER DC

### CYLINDER M18 - ADVANCED

#### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_0$	$\leq 10mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	KJ8... 500Hz
Hysteresis H	$\leq 15\%$
Repeatability R	$-25^\circ C \dots +70^\circ C$
Temperature range $T_a$	$\leq 10\%$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated
Front cap	PCP



#### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317643900	<b>KJ8-M18MB60-DPS</b>	shielded	PNP	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
0831xxxxxxx	<b>KJ8-M18MB60-DPÖ</b>	shielded	PNP	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
0831xxxxxxx	<b>KJ8-M18MB60-DNS</b>	shielded	NPN	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
0831xxxxxxx	<b>KJ8-M18MB60-DNÖ</b>	shielded	NPN	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317643965	<b>KJ8-M18MB75-DPS-V2</b>	shielded	PNP	8	connector M12 4-pole	B
0831xxxxxxx	<b>KJ8-M18MB75-DPÖ-V2</b>	shielded	PNP	8	connector M12 4-pole	B
08310000525	<b>KJ8-M18MB75-DNS-V2</b>	shielded	NPN	8	connector M12 4-pole	B
0831xxxxxxx	<b>KJ8-M18MB75-DNÖ-V2</b>	shielded	NPN	8	connector M12 4-pole	B
0831xxxxxxx	<b>KJ8-M18MB60-DPA</b>	shielded	PNP	8	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08310000919	<b>KJ8-M18MB75-DPA-V2</b>	shielded	PNP	8	connector M12 4-pole	B
0831xxxxxxx	<b>KJ12-M18MN60-DPS</b>	non shielded	PNP	12	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
0831xxxxxxx	<b>KJ12-M18MN60-DPÖ</b>	non shielded	PNP	12	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
0831xxxxxxx	<b>KJ12-M18MN60-DNS</b>	non shielded	NPN	12	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
0831xxxxxxx	<b>KJ12-M18MN60-DNÖ</b>	non shielded	NPN	12	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
0831xxxxxxx	<b>KJ12-M18MN75-DPS-V2</b>	non shielded	PNP	12	connector M12 4-pole	D
0831xxxxxxx	<b>KJ12-M18MN75-DPÖ-V2</b>	non shielded	PNP	12	connector M12 4-pole	D
0831xxxxxxx	<b>KJ12-M18MN75-DNS-V2</b>	non shielded	NPN	12	connector M12 4-pole	D
0831xxxxxxx	<b>KJ12-M18MN75-DNÖ-V2</b>	non shielded	NPN	12	connector M12 4-pole	D
0831xxxxxxx	<b>KJ12-M18MN60-DPA</b>	non shielded	PNP	12	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
0831xxxxxxx	<b>KJ12-M18MN75-DPA-V2</b>	non shielded	PNP	12	connector M12 4-pole	D

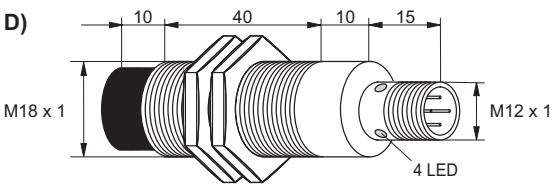
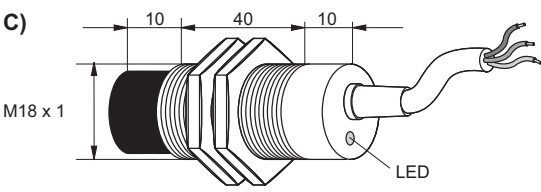
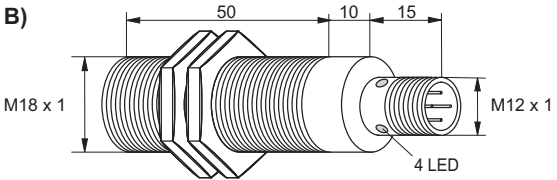
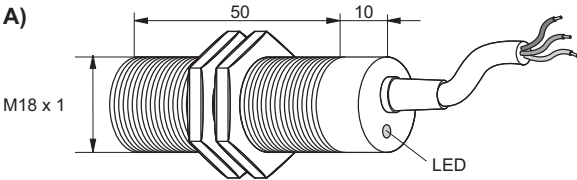
Other cable lengths as requested.



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M18 - ADVANCED

### Dimensions



all data in mm

**p-u-l-s-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!



## CYLINDER G20

### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_r$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_o$	$\leq 10mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	500Hz
Hysteresis H	$\leq 15\%$
Repeatability R	$-25^\circ C \dots +70^\circ C$
Temperature range $T_a$	$\leq 10\%$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	Trogamit T

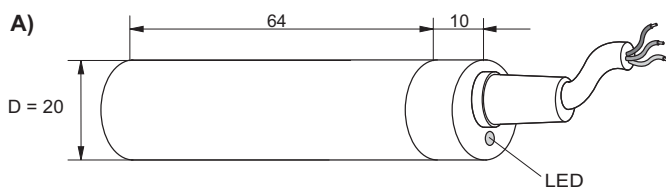


### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing
08310537100	<b>KJ10-G20KN-DPS</b>	non shielded	PNP	10	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08310020051	<b>KJ10-G20KN-DPÖ</b>	non shielded	PNP	10	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08310000503	<b>KJ10-G20KN-DPA</b>	non shielded	PNP	10	2m cable PVC 3 x 0,34mm <sup>2</sup>	A

Other cable lengths as requested.

### Dimensions



all data in mm



## CYLINDER M30 - SHORTIES

### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_0$	$\leq 10mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	KJ10... 500Hz KJ15... 300Hz
Hysteresis H	$\leq 15\%$
Repeatability R	$-25^\circ C \dots +70^\circ C$
Temperature range $T_a$	$\leq 10\%$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated
Front cap	PCP



### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317862000	<b>KJ10-M30MB35-DPS</b>	shielded	PNP	10	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317862100	<b>KJ10-M30MB35-DNS</b>	shielded	NPN	10	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317862065	<b>KJ10-M30MB50-DPS-V2</b>	shielded	PNP	10	connector M12 4-pole	B
08317862165	<b>KJ10-M30MB50-DNS-V2</b>	shielded	NPN	10	connector M12 4-pole	B
08317862200	<b>KJ15-M30MN35-DPS</b>	non shielded	PNP	15	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
08317862300	<b>KJ15-M30MN35-DNS</b>	non shielded	NPN	15	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
08317862265	<b>KJ15-M30MN50-DPS-V2</b>	non shielded	PNP	15	connector M12 4-pole	D
08317862365	<b>KJ15-M30MN50-DNS-V2</b>	non shielded	NPN	15	connector M12 4-pole	D

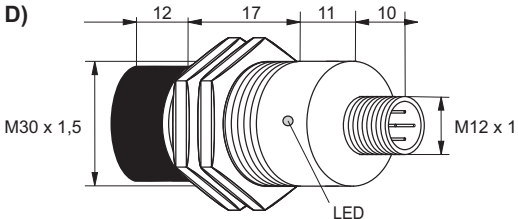
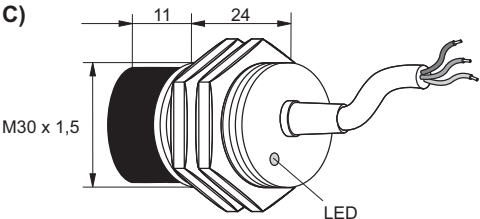
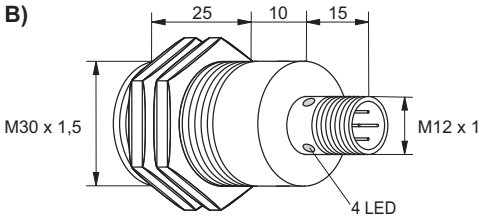
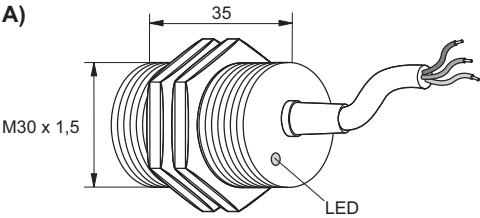
Other cable lengths as requested.



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M30 - SHORTIES

### Dimensions



all data in mm

**p-u-l-s-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!





# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M30 - STANDARD

### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_o$	$\leq 13mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	KJ10... 500Hz KJ15... 300Hz
Hysteresis H	$\leq 15\%$
Repeatability R	$-25^\circ C \dots +70^\circ C$
Temperature range $T_a$	$\leq 10\%$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated



### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317664000	KJ10-M30MB40-DPS	shielded	PNP	10	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317664400	KJ10-M30MB40-DPÖ	shielded	PNP	10	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317664100	KJ10-M30MB40-DNS	shielded	NPN	10	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317664500	KJ10-M30MB40-DNÖ	shielded	NPN	10	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317664065	KJ10-M30MB75-DPS-V2	shielded	PNP	10	connector M12 4-pole	B
08317664465	KJ10-M30MB75-DPÖ-V2	shielded	PNP	10	connector M12 4-pole	B
08317664165	KJ10-M30MB75-DNS-V2	shielded	NPN	10	connector M12 4-pole	B
08317664565	KJ10-M30MB75-DNÖ-V2	shielded	NPN	10	connector M12 4-pole	B
08317666200	KJ10-M30MB60-DPA	shielded	PNP	10	2m cable PVC 4 x 0,34mm <sup>2</sup>	C
08317666265	KJ10-M30MB80-DPA-V2	shielded	PNP	10	2m cable PVC 4 x 0,34mm <sup>2</sup>	D
08317664200	KJ15-M30MN40-DPS	non shielded	PNP	15	2m cable PVC 3 x 0,34mm <sup>2</sup>	E
08317664600	KJ15-M30MN40-DPÖ	non shielded	PNP	15	2m cable PVC 3 x 0,34mm <sup>2</sup>	E
08317664300	KJ15-M30MN40-DNS	non shielded	NPN	15	2m cable PVC 3 x 0,34mm <sup>2</sup>	E
08317664700	KJ15-M30MN40-DNÖ	non shielded	NPN	15	2m cable PVC 3 x 0,34mm <sup>2</sup>	E
08317664265	KJ15-M30MN75-DPS-V2	non shielded	PNP	15	connector M12 4-pole	F
08317664665	KJ15-M30MN75-DPÖ-V2	non shielded	PNP	15	connector M12 4-pole	F
08317664365	KJ15-M30MN75-DNS-V2	non shielded	NPN	15	connector M12 4-pole	F
08317664765	KJ15-M30MN75-DNÖ-V2	non shielded	NPN	15	connector M12 4-pole	F
08317666300	KJ15-M30MN60-DPA	non shielded	PNP	15	2m cable PVC 4 x 0,34mm <sup>2</sup>	G
08317666365	KJ15-M30MN80-DPA-V2	non shielded	PNP	15	2m cable PVC 4 x 0,34mm <sup>2</sup>	H

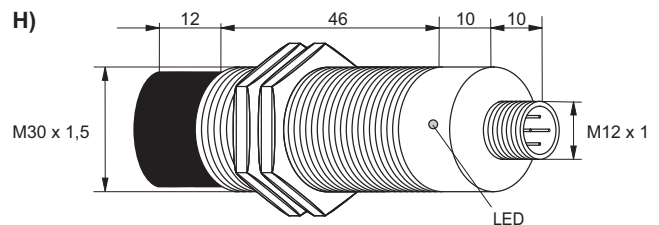
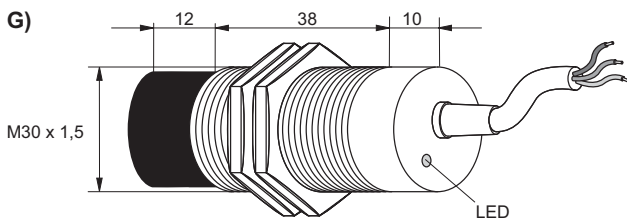
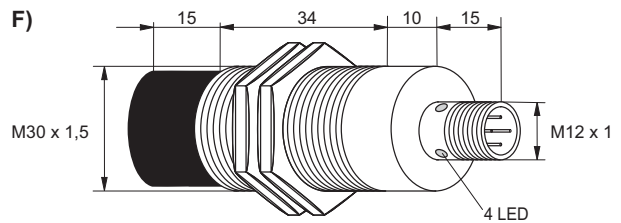
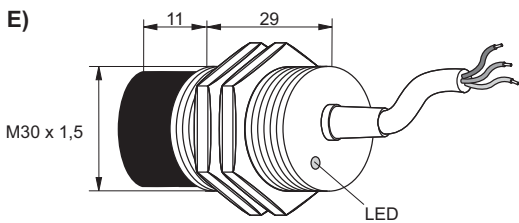
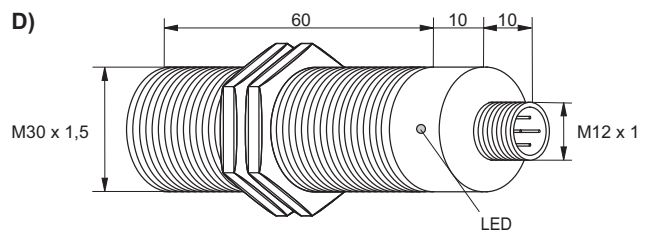
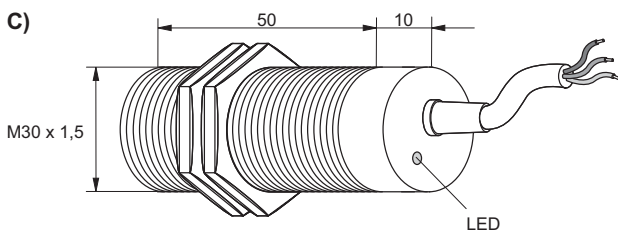
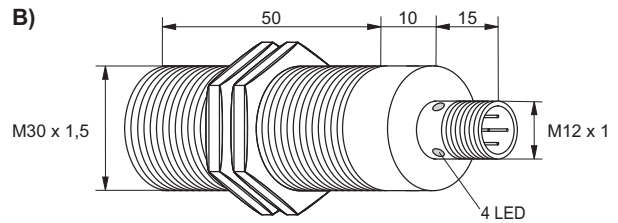
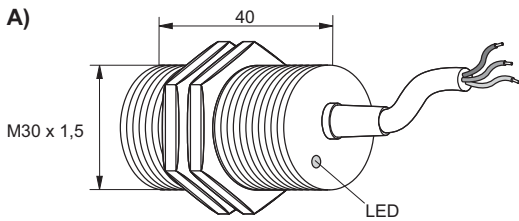
Other cable lengths as requested.



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER M30 - STANDARD

### Dimensions



all data in mm



## INDUCTIVE SENSORS CYLINDER DC

### CYLINDER M30 - ADVANCED

#### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_0$	$\leq 13mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	KJ15... 500Hz KJ30... 300Hz
Hysteresis H	$\leq 15\%$
Repeatability R	-25°C ... +70°C
Temperature range $T_a$	$\leq 10\%$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated
Front cap	PA 6.6



#### Selection chart

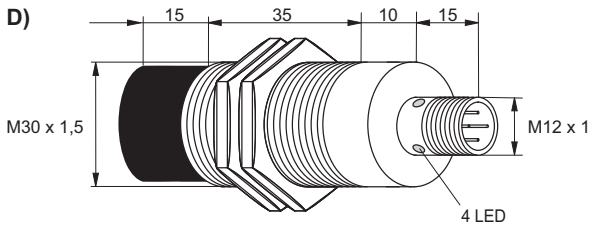
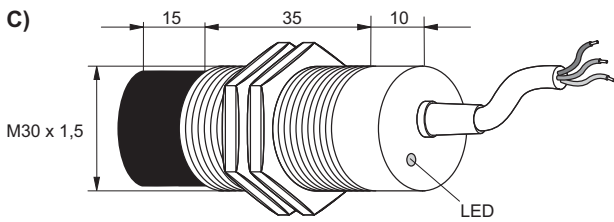
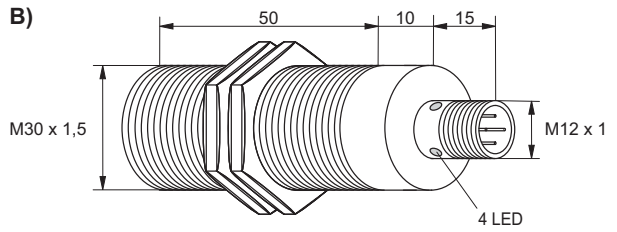
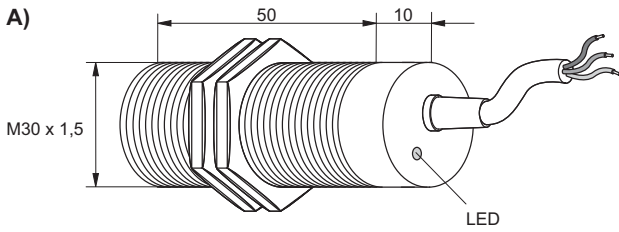
Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317663900	KJ15-M30MB60-DPS	shielded	PNP	15	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
0831xxxxxxx	KJ15-M30MB60-DPÖ	shielded	PNP	15	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
0831xxxxxxx	KJ15-M30MB60-DNS	shielded	NPN	15	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
0831xxxxxxx	KJ15-M30MB60-DNÖ	shielded	NPN	15	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317663965	KJ15-M30MB75-DPS-V2	shielded	PNP	15	connector M12 4-pole	B
0831xxxxxxx	KJ15-M30MB75-DPÖ-V2	shielded	PNP	15	connector M12 4-pole	B
0831xxxxxxx	KJ15-M30MB75-DNS-V2	shielded	NPN	15	connector M12 4-pole	B
0831xxxxxxx	KJ15-M30MB75-DNÖ-V2	shielded	NPN	15	connector M12 4-pole	B
08310000762	KJ30-M30MN60-DPS	non shielded	PNP	30	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
0831xxxxxxx	KJ30-M30MN60-DPÖ	non shielded	PNP	30	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
0831xxxxxxx	KJ30-M30MN60-DNS	non shielded	NPN	30	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
0831xxxxxxx	KJ30-M30MN60-DNÖ	non shielded	NPN	30	2m cable PVC 3 x 0,34mm <sup>2</sup>	C
08310000717	KJ30-M30MN75-DPS-V2	non shielded	PNP	30	connector M12 4-pole	D
0831xxxxxxx	KJ30-M30MN75-DPÖ-V2	non shielded	PNP	30	connector M12 4-pole	D
0831xxxxxxx	KJ30-M30MN75-DNS-V2	non shielded	NPN	30	connector M12 4-pole	D
0831xxxxxxx	KJ30-M30MN75-DNÖ-V2	non shielded	NPN	30	connector M12 4-pole	D

Other cable lengths as requested.



## CYLINDER M30 - ADVANCED

### Dimensions



all data in mm



# INDUCTIVE SENSORS CYLINDER DC

## CYLINDER G34 - ADVANCED

### General data

Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_a$	$\leq 2,4V$
Max. load current	200mA
Off-state current $I_0$	$\leq 13mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	200Hz (antivalent 300Hz)
Hysteresis $H$	$\leq 15\%$
Repeatability $R$	-25°C ... +70°C
Temperature range $T_a$	$\leq 10\%$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED
Housing material	brass nickel-plated
Front cap	PA 6.6

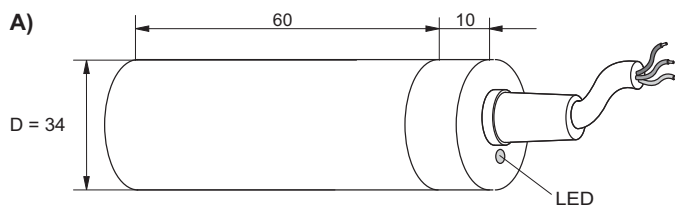


### Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing
08310000485	<b>KJ20-G34KN-DPS</b>	non shielded	PNP	20	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08310000622	<b>KJ20-G34KN-DPÖ</b>	non shielded	PNP	20	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08310000450	<b>KJ20-G34KN-DPA</b>	non shielded	PNP	20	2m cable PVC 4 x 0,34mm <sup>2</sup>	A

Version NPN and other cable lengths as requested.

### Dimensions



all data in mm

**p-u-l-s-o-t-r-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!



## INDUCTIVE SENSORS CYLINDER DC

### PRODUCT OVERVIEW

Product group	Designation	Article number	Matchcode	Page
Inductive Cylinder DC	SJ1,5-G6,5EB45-DPA	08313651564		5
Inductive Cylinder DC	SJ1,5-G6,5EB45-DNA	08313651554		5
Inductive Cylinder DC	KJ1,5-M8MB40-DPS	08317610200	9961-0200	7
Inductive Cylinder DC	KJ1,5-M8MB40-DNS	08317610300	9961-0300	7
Inductive Cylinder DC	KJ1,5-M8MB50-DPS-V1	08317610264	9961-0264	7
Inductive Cylinder DC	KJ1,5-M8MB50-DNS-V1	08317610364	9961-0364	7
Inductive Cylinder DC	KJ1,5-M8MB50-DPS-V2	08317610265	9961-0265	7
Inductive Cylinder DC	KJ1,5-M8MB50-DNS-V2	08317610365	9961-0365	7
Inductive Cylinder DC	SJ1,5-M8EB45-DPA	08313081560		7
Inductive Cylinder DC	SJ1,5-M8EB45-DNA	08313081550		7
Inductive Cylinder DC	KJ2-G6,5MB30-DPS	08317816000	9981-6000	5
Inductive Cylinder DC	KJ2-G6,5MB30-DPÖ	08317816400	9981-6400	5
Inductive Cylinder DC	KJ2-G6,5MB30-DNS	08317816100	9981-6100	5
Inductive Cylinder DC	KJ2-G6,5MB30-DNÖ	08317816500	9981-6500	5
Inductive Cylinder DC	KJ2-G6,5MB50-DPS-V1	08317816064	9981-6064	5
Inductive Cylinder DC	KJ2-G6,5MB50-DPÖ-V1	08317816464	9981-6464	5
Inductive Cylinder DC	KJ2-G6,5MB50-DNS-V1	08317816164	9981-6164	5
Inductive Cylinder DC	KJ2-G6,5MB50-DNÖ-V1	08317816564	9981-6564	5
Inductive Cylinder DC	KJ2-M8MN40-DPS	08317610400	9961-0400	7
Inductive Cylinder DC	KJ2-M8MB33-DPS	08317811000	9981-1000	9
Inductive Cylinder DC	KJ2-M8MB33-DPÖ	08317811400	9981-1400	9
Inductive Cylinder DC	KJ2-M8MN40-DNS	08317610500	9961-0500	7
Inductive Cylinder DC	KJ2-M8MB33-DNS	08317811100	9981-1100	9
Inductive Cylinder DC	KJ2-M8MB33-DNÖ	08317811500	9981-1500	9
Inductive Cylinder DC	KJ2-M8MN50-DPS-V1	08317610464	9961-0464	7
Inductive Cylinder DC	KJ2-M8MB50-DPS-V1	08317811064	9981-1064	9
Inductive Cylinder DC	KJ2-M8MB50-DPÖ-V1	08317811464	9981-1464	9
Inductive Cylinder DC	KJ2-M8MN50-DNS-V1	08317610564	9961-0564	7
Inductive Cylinder DC	KJ2-M8MB50-DNS-V1	08317811164	9981-1164	9
Inductive Cylinder DC	KJ2-M8MB50-DNÖ-V1	08317811564	9981-1564	9
Inductive Cylinder DC	KJ2-M8MN50-DPS-V2	08317610465	9961-0465	7
Inductive Cylinder DC	KJ2-M8MB58-DPS-V2	08317811050	9981-1050	9
Inductive Cylinder DC	KJ2-M8MB58-DPÖ-V2	08317811450	9981-1450	9
Inductive Cylinder DC	KJ2-M8MN50-DNS-V2	08317610565	9961-0565	7
Inductive Cylinder DC	KJ2-M8MB58-DNS-V2	08317811150	9981-1150	9
Inductive Cylinder DC	KJ2-M8MB58-DNÖ-V2	08317811550	9981-1550	9
Inductive Cylinder DC	KJ2-M12MB35-DPS	08317822000	9982-2000	11
Inductive Cylinder DC	KJ2-M12MB40-DPS	08317624000	9962-4000	13
Inductive Cylinder DC	KJ2-M12MB40-DPÖ	08317624400	9962-4400	13
Inductive Cylinder DC	KJ2-M12MB35-DNS	08317822100	9982-2100	11
Inductive Cylinder DC	KJ2-M12MB40-DNS	08317624100	9962-4100	13
Inductive Cylinder DC	KJ2-M12MB40-DNÖ	08317624500	9962-4500	13
Inductive Cylinder DC	KJ2-M12MB50-DPS-V1	08317822064	9982-2064	11
Inductive Cylinder DC	KJ2-M12MB60-DPS-V1	08317624064	9962-4064	13
Inductive Cylinder DC	KJ2-M12MB60-DPÖ-V1	08317624464	9962-4464	13
Inductive Cylinder DC	KJ2-M12MB50-DNS-V1	08317822164	9982-2164	11
Inductive Cylinder DC	KJ2-M12MB60-DNS-V1	08317624164	9962-4164	13



# INDUCTIVE SENSORS CYLINDER DC

## PRODUCT OVERVIEW

Product group	Designation	Article number	Matchcode	Page
Inductive Cylinder DC	KJ2-M12MB60-DNÖ-V1	08317624564	9962-4564	13
Inductive Cylinder DC	KJ2-M12MB50-DPS-V2	08317822065	9982-2065	11
Inductive Cylinder DC	KJ2-M12MB60-DPS-V2	08317624065	9962-4065	13
Inductive Cylinder DC	KJ2-M12MB60-DPÖ-V2	08317624465	9962-4465	13
Inductive Cylinder DC	KJ2-M12MB50-DNS-V2	08317822165	9982-2165	11
Inductive Cylinder DC	KJ2-M12MB60-DNS-V2	08317624165	9962-4165	13
Inductive Cylinder DC	KJ2-M12MB60-DNÖ-V2	08317624565	9962-4565	13
Inductive Cylinder DC	KJ2-M12MB60-DPA	08317626200	9962-6200	13
Inductive Cylinder DC	KJ2-M12MB60-DNA	08310000705		13
Inductive Cylinder DC	KJ2-M12MB80-DPA-V2	08317626265	9962-6265	13
Inductive Cylinder DC	KJ2-M12MB80-DNA-V2	0831xxxxxxx		13
Inductive Cylinder DC	KJ3-G6,5MN33-DPS	08317816200	9981-6200	5
Inductive Cylinder DC	KJ3-G6,5MN33-DPÖ	08317816600	9981-6600	5
Inductive Cylinder DC	KJ3-G6,5MN33-DNS	08317816300	9981-6300	5
Inductive Cylinder DC	KJ3-G6,5MN33-DNÖ	08317816700	9981-6700	5
Inductive Cylinder DC	KJ3-G6,5MN53-DPÖ-V1	08317816664	9981-6664	5
Inductive Cylinder DC	KJ3-G6,5MN53-DPS-V1	08317816264	9981-6264	5
Inductive Cylinder DC	KJ3-G6,5MN53-DNS-V1	08317816364	9981-6364	5
Inductive Cylinder DC	KJ3-G6,5MN53-DNÖ-V1	08317816764	9981-6764	5
Inductive Cylinder DC	KJ3-M8MN33-DPS	08317811200	9981-1200	9
Inductive Cylinder DC	KJ3-M8MN33-DPÖ	08317811600	9981-1600	9
Inductive Cylinder DC	KJ3-M8MN33-DNS	08317811300	9981-1300	9
Inductive Cylinder DC	KJ3-M8MN33-DNÖ	08317811700	9981-1700	9
Inductive Cylinder DC	KJ3-M8MN50-DPS-V1	08317811264	9981-1264	9
Inductive Cylinder DC	KJ3-M8MN50-DPÖ-V1	08317811664	9981-1664	9
Inductive Cylinder DC	KJ3-M8MN50-DNS-V1	08317811364	9981-1364	9
Inductive Cylinder DC	KJ3-M8MN50-DNÖ-V1	08317811764	9981-1764	9
Inductive Cylinder DC	KJ3-M8MN58-DPS-V2	08317811250	9981-1250	9
Inductive Cylinder DC	KJ3-M8MN58-DPÖ-V2	08317811650	9981-1650	9
Inductive Cylinder DC	KJ3-M8MN58-DNS-V2	08317811350	9981-1350	9
Inductive Cylinder DC	KJ3-M8MN58-DNÖ-V2	08317811750	9981-1750	9
Inductive Cylinder DC	KJ4-M12MB30-DPS	08310009173		11
Inductive Cylinder DC	KJ4-M12MN35-DPS	08317822200	9982-2200	11
Inductive Cylinder DC	KJ4-M12MN40-DPS	08317624200	9962-4200	13
Inductive Cylinder DC	KJ4-M12MB50-DPS	08317821000	9982-1000	15
Inductive Cylinder DC	KJ4-M12MN40-DPÖ	08317624600	9962-4600	13
Inductive Cylinder DC	KJ4-M12MB50-DPÖ	08317821400	9982-1400	15
Inductive Cylinder DC	KJ4-M12MN35-DNS	08317822300	9982-2300	13
Inductive Cylinder DC	KJ4-M12MN40-DNS	08317624300	9962-4300	15
Inductive Cylinder DC	KJ4-M12MB50-DNS	08317821100	9982-1100	15
Inductive Cylinder DC	KJ4-M12MN40-DNÖ	08317624700	9962-4700	13
Inductive Cylinder DC	KJ4-M12MB50-DNÖ	08317821500	9982-1500	15
Inductive Cylinder DC	KJ4-M12MB50-DPS-V1	08310000288		11
Inductive Cylinder DC	KJ4-M12MN50-DPS-V1	08317822264	9982-2264	11
Inductive Cylinder DC	KJ4-M12MN60-DPS-V1	08317624264	9962-4264	13
Inductive Cylinder DC	KJ4-M12MN60-DPÖ-V1	08317624664	9962-4664	13
Inductive Cylinder DC	KJ4-M12MN50-DNS-V1	08317822364	9982-2364	11



## INDUCTIVE SENSORS CYLINDER DC

### PRODUCT OVERVIEW

Product group	Designation	Article number	Matchcode	Page
Inductive Cylinder DC	KJ4-M12MN60-DNS-V1	08317624364	9962-4364	13
Inductive Cylinder DC	KJ4-M12MN60-DNÖ-V1	08317624764	9962-4764	13
Inductive Cylinder DC	KJ4-M12MB50-DPS-V2	08317824950	9982-4950	11
Inductive Cylinder DC	KJ4-M12MN50-DPS-V2	08317822265	9982-2265	11
Inductive Cylinder DC	KJ4-M12MN60-DPS-V2	08317624265	9962-4265	14
Inductive Cylinder DC	KJ4-M12MB60-DPS-V2	08317821050	9982-1050	15
Inductive Cylinder DC	KJ4-M12MN60-DPÖ-V2	08317624665	9962-4665	14
Inductive Cylinder DC	KJ4-M12MB60-DPÖ-V2	08317821450	9982-1450	15
Inductive Cylinder DC	KJ4-M12MN50-DNS-V2	08317822365	9982-2365	11
Inductive Cylinder DC	KJ4-M12MN60-DNS-V2	08317624365	9962-4365	14
Inductive Cylinder DC	KJ4-M12MB60-DNS-V2	08317821150	9982-1150	15
Inductive Cylinder DC	KJ4-M12MN60-DNÖ-V2	08317624765	9962-4765	14
Inductive Cylinder DC	KJ4-M12MB60-DNÖ-V2	08317821550	9982-1550	15
Inductive Cylinder DC	KJ4-M12MN60-DPA	08317626300	9962-6300	14
Inductive Cylinder DC	KJ4-M12MB50-DPA	0831xxxxxxx		15
Inductive Cylinder DC	KJ4-M12MN60-DNA	08310000019		14
Inductive Cylinder DC	KJ4-M12MB50-DNA	0831xxxxxxx		15
Inductive Cylinder DC	KJ4-M12MN80-DPA-V2	08317626365	9962-6365	14
Inductive Cylinder DC	KJ4-M12MB60-DPA-V2	08310000388		15
Inductive Cylinder DC	KJ4-M12MN80-DNA-V2	0831xxxxxxx		14
Inductive Cylinder DC	KJ4-M12MB60-DNA-V2	0831xxxxxxx		15
Inductive Cylinder DC	KJ5-M18MB25-DPS	08310000562		17
Inductive Cylinder DC	KJ5-M18MB35-DPS	08317842000	9984-2000	17
Inductive Cylinder DC	KJ5-M18MB40-DPS	08317644000	9964-4000	19
Inductive Cylinder DC	KJ5-M18MB40-DPÖ	08317644400	9964-4400	19
Inductive Cylinder DC	KJ5-M18MB35-DNS	08317842100	9984-2100	17
Inductive Cylinder DC	KJ5-M18MB40-DNS	08317644100	9964-4100	19
Inductive Cylinder DC	KJ5-M18MB40-DNÖ	08317644500	9964-4500	19
Inductive Cylinder DC	KJ5-M18MB50-DPS-V2	08317842065	9984-2065	17
Inductive Cylinder DC	KJ5-M18MB65-DPS-V2	08317644065	9964-4065	19
Inductive Cylinder DC	KJ5-M18MB65-DPÖ-V2	08317644465	9964-4465	19
Inductive Cylinder DC	KJ5-M18MB50-DNS-V2	08317842165	9984-2165	17
Inductive Cylinder DC	KJ5-M18EB65-DNS-V2	08317644165	9064-4165	19
Inductive Cylinder DC	KJ5-M18MB65-DNÖ-V2	08317644565	9964-4565	19
Inductive Cylinder DC	KJ5-M18MB60-DPA	08317646200	9964-6200	19
Inductive Cylinder DC	KJ5-M18MB60-DNA	0831xxxxxxx		19
Inductive Cylinder DC	KJ6-M12MN30-DPS	0831xxxxxxx		11
Inductive Cylinder DC	KJ6-M12MN50-DPS	08317821200	9982-1200	15
Inductive Cylinder DC	KJ6-M12MN50-DPÖ	08317821600	9982-1600	15
Inductive Cylinder DC	KJ6-M12MN50-DNS	08317821300	9982-1300	15
Inductive Cylinder DC	KJ6-M12MN50-DNÖ	08317821700	9982-1700	15
Inductive Cylinder DC	KJ6-M12MN50-DPS-V1	08310000736		11
Inductive Cylinder DC	KJ6-M12MN50-DPS-V2	0831xxxxxxx		11
Inductive Cylinder DC	KJ6-M12MN60-DPS-V2	08317821250	9982-1250	15
Inductive Cylinder DC	KJ6-M12MN60-DPÖ-V2	08317821650	9982-1650	15
Inductive Cylinder DC	KJ6-M12MN60-DNS-V2	08317821350		15
Inductive Cylinder DC	KJ6-M12MN60-DNÖ-V2	08317821750	9982-1750	15





## INDUCTIVE SENSORS CYLINDER DC

### PRODUCT OVERVIEW

Product group	Designation	Article number	Matchcode	Page
Inductive Cylinder DC	KJ6-M12MN50-DPA	0831xxxxxxx		15
Inductive Cylinder DC	KJ6-M12MN50-DNA	0831xxxxxxx		15
Inductive Cylinder DC	KJ6-M12MN60-DPA-V2	0831xxxxxxx		15
Inductive Cylinder DC	KJ6-M12MN60-DNA-V2	08310001176		15
Inductive Cylinder DC	KJ8-M18MB40-DPS	08317844900	9984-4900	17
Inductive Cylinder DC	KJ8-M18MN35-DPS	08317842200	9984-2200	17
Inductive Cylinder DC	KJ8-M18MN40-DPS	08317644200	9964-4200	19
Inductive Cylinder DC	KJ8-M18MB60-DPS	08317643900	9964-3900	21
Inductive Cylinder DC	KJ8-M18MN40-DPÖ	08317644600	9964-4600	19
Inductive Cylinder DC	KJ8-M18MB60-DPÖ	0831xxxxxxx		21
Inductive Cylinder DC	KJ8-M18MB40-DNS	08317844800		17
Inductive Cylinder DC	KJ8-M18MN35-DNS	08317842300	9984-2300	17
Inductive Cylinder DC	KJ8-M18MN40-DNS	08317644300	9964-4300	19
Inductive Cylinder DC	KJ8-M18MB60-DNS	0831xxxxxxx		21
Inductive Cylinder DC	KJ8-M18MN40-DNÖ	08317644700	9964-4700	19
Inductive Cylinder DC	KJ8-M18MB60-DNÖ	0831xxxxxxx		21
Inductive Cylinder DC	KJ8-M18MB50-DPS-V2	08317844950	9984-4950	17
Inductive Cylinder DC	KJ8-M18MN50-DPS-V2	08317842265	9984-2265	17
Inductive Cylinder DC	KJ8-M18MN65-DPS-V2	08317644265	9964-4265	19
Inductive Cylinder DC	KJ8-M18MB75-DPS-V2	08317643965	9964-3965	21
Inductive Cylinder DC	KJ8-M18MN65-DPÖ-V2	08317644665	9964-4665	19
Inductive Cylinder DC	KJ8-M18MB75-DPÖ-V2	0831xxxxxxx		21
Inductive Cylinder DC	KJ8-M18MB50-DNS-V2	08317844850		17
Inductive Cylinder DC	KJ8-M18MN50-DNS-V2	08317842365	9984-2365	17
Inductive Cylinder DC	KJ8-M18MN65-DNS-V2	08317644365	9964-4365	19
Inductive Cylinder DC	KJ8-M18MB75-DNS-V2	08310000525		21
Inductive Cylinder DC	KJ8-M18MN65-DNÖ-V2	08317644765	9964-4765	19
Inductive Cylinder DC	KJ8-M18MB75-DNÖ-V2	0831xxxxxxx		21
Inductive Cylinder DC	KJ8-M18MN60-DPA	08317646300	9964-6300	19
Inductive Cylinder DC	KJ8-M18MB60-DPA	0831xxxxxxx		21
Inductive Cylinder DC	KJ8-M18MN60-DNA	0831xxxxxxx		19
Inductive Cylinder DC	KJ8-M18MB75-DPA-V2	08310000919		21
Inductive Cylinder DC	KJ10-G20KN-DPÖ	08310020051		23
Inductive Cylinder DC	KJ10-G20KN-DPA	08310000503		23
Inductive Cylinder DC	KJ10-G20KN-DPS	08310537100		23
Inductive Cylinder DC	KJ10-M30MB35-DPS	08317862000	9986-2000	24
Inductive Cylinder DC	KJ10-M30MB40-DPS	08317664000	9966-4000	26
Inductive Cylinder DC	KJ10-M30MB40-DPÖ	08317664400	9966-4400	26
Inductive Cylinder DC	KJ10-M30MB35-DNS	08317862100	9986-2100	24
Inductive Cylinder DC	KJ10-M30MB40-DNS	08317664100	9966-4100	26
Inductive Cylinder DC	KJ10-M30MB40-DNÖ	08317664500	9966-4500	26
Inductive Cylinder DC	KJ10-M30MB50-DPS-V2	08317862065	9986-2065	24
Inductive Cylinder DC	KJ10-M30MB75-DPS-V2	08317664065	9966-4065	26
Inductive Cylinder DC	KJ10-M30MB75-DPÖ-V2	08317664465	9966-4465	26
Inductive Cylinder DC	KJ10-M30MB50-DNS-V2	08317862165	9986-2165	24
Inductive Cylinder DC	KJ10-M30MB75-DNS-V2	08317664165	9966-4165	26
Inductive Cylinder DC	KJ10-M30MB60-DNÖ-V2	08317664565	9966-4565	26



# INDUCTIVE SENSORS CYLINDER DC

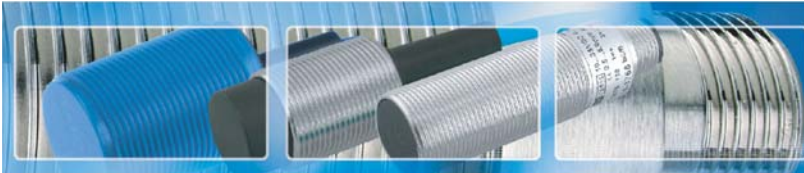
## PRODUCT OVERVIEW

Product group	Designation	Article number	Matchcode	Page
Inductive Cylinder DC	KJ10-M30MB60-DPA	08317666200	9966-6200	26
Inductive Cylinder DC	KJ10-M30MB80-DPA-V2	08317666265	9966-6265	26
Inductive Cylinder DC	KJ12-M18MN60-DPS	0831xxxxxxx		21
Inductive Cylinder DC	KJ12-M18MN60-DPÖ	0831xxxxxxx		21
Inductive Cylinder DC	KJ12-M18MN60-DNS	0831xxxxxxx		21
Inductive Cylinder DC	KJ12-M18MN60-DNÖ	0831xxxxxxx		21
Inductive Cylinder DC	KJ12-M18MN75-DPS-V2	0831xxxxxxx		21
Inductive Cylinder DC	KJ12-M18MN75-DPÖ-V2	0831xxxxxxx		21
Inductive Cylinder DC	KJ12-M18MN75-DNS-V2	0831xxxxxxx		21
Inductive Cylinder DC	KJ12-M18MN75-DNÖ-V2	0831xxxxxxx		21
Inductive Cylinder DC	KJ12-M18MN60-DPA	0831xxxxxxx		21
Inductive Cylinder DC	KJ12-M18MN75-DPA-V2	0831xxxxxxx		21
Inductive Cylinder DC	KJ15-M30MN35-DPS	08317862200	9986-2200	24
Inductive Cylinder DC	KJ15-M30MN40-DPS	08317664200	9966-4200	26
Inductive Cylinder DC	KJ15-M30MB60-DPS	08317663900	9966-3900	28
Inductive Cylinder DC	KJ15-M30MN40-DPÖ	08317664600	9966-4600	26
Inductive Cylinder DC	KJ15-M30MB60-DPÖ	0831xxxxxxx		28
Inductive Cylinder DC	KJ15-M30MN35-DNS	08317862300	9986-2300	24
Inductive Cylinder DC	KJ15-M30MN40-DNS	08317664300	9966-4300	26
Inductive Cylinder DC	KJ15-M30MB60-DNS	0831xxxxxxx		28
Inductive Cylinder DC	KJ15-M30MN40-DNÖ	08317664700	9966-4700	26
Inductive Cylinder DC	KJ15-M30MB60-DNÖ	0831xxxxxxx		28
Inductive Cylinder DC	KJ15-M30MN50-DPS-V2	08317862265	9986-2265	24
Inductive Cylinder DC	KJ15-M30MN75-DPS-V2	08317664265	9966-4265	26
Inductive Cylinder DC	KJ15-M30MB75-DPS-V2	08317663965	9966-3965	28
Inductive Cylinder DC	KJ15-M30MN75-DPÖ-V2	08317664665	9966-4665	26
Inductive Cylinder DC	KJ15-M30MB75-DPÖ-V2	0831xxxxxxx		60
Inductive Cylinder DC	KJ15-M30MN50-DNS-V2	08317862365	9986-2365	24
Inductive Cylinder DC	KJ15-M30MN75-DNS-V2	08317664365	9966-4365	26
Inductive Cylinder DC	KJ15-M30MB75-DNS-V2	0831xxxxxxx		28
Inductive Cylinder DC	KJ15-M30MN75-DNÖ-V2	08317664765	9966-4765	26
Inductive Cylinder DC	KJ15-M30MB75-DNÖ-V2	0831xxxxxxx		28
Inductive Cylinder DC	KJ15-M30MN60-DPA	08317666300	9966-6300	26
Inductive Cylinder DC	KJ15-M30MN80-DPA-V2	08317666365	9966-6365	26
Inductive Cylinder DC	KJ20-G34KN-DPS	08310000485		30
Inductive Cylinder DC	KJ20-G34KN-DPÖ	08310000622		30
Inductive Cylinder DC	KJ20-G34KN-DPA	08310000450		30
Inductive Cylinder DC	KJ30-M30MN60-DPS	08310000762		28
Inductive Cylinder DC	KJ30-M30MN60-DPÖ	0831xxxxxxx		28
Inductive Cylinder DC	KJ30-M30MN60-DNS	0831xxxxxxx		28
Inductive Cylinder DC	KJ30-M30MN60-DNÖ	0831xxxxxxx		28
Inductive Cylinder DC	KJ30-M30MN75-DPS-V2	08310000717		28
Inductive Cylinder DC	KJ30-M30MN75-DPÖ-V2	0831xxxxxxx		28
Inductive Cylinder DC	KJ30-M30MN75-DNS-V2	0831xxxxxxx		28
Inductive Cylinder DC	KJ30-M30MN75-DNÖ-V2	0831xxxxxxx		28



## TABLE OF CONTENT

<b>ATEX Certificate</b>	
Explosion-proof sensors from Pulsotronic	2
<b>Designation code</b>	
How to read sensor designations	3
<b>Circuit diagrams</b>	
Connection according to EN 60947-5-6	4
<b>Sensors</b>	
Cylinder M8	5
Cylinder M12	7
Cylinder M18	9
Cylinder M30	11
<b>Sensors</b>	
All sensors at a glance	13



## INDUCTIVE SENSORS NAMUR

### ATEX CERTIFICATE

#### IBExU Institut für Sicherheitstechnik GmbH An-Institut der TU Bergakademie Freiberg

[1] **Mitteilung über die Anerkennung der  
Qualitätssicherung Produktion**

gemäß Richtlinie 94/9/EG, Anhang IV

[2] Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung  
in explosionsgefährdeten Bereichen, **Richtlinie 94/9/EG**

[3] Mitteilungsnummer: **IBExU07ATEX Q011**

[4] Produktkategorie: Namur Näherungsschalter,  
Elektrische Geräte der Gerätegruppe II, Kategorie 1 G D  
Zündschutzart: ia

[5] Hersteller: Pulsotronic GmbH & Co. KG

[6] Anschrift: Neue Schichtstraße 14 b  
09366 Niederdorf  
Deutschland

[7] Fertigungsstätte: siehe [5]

[8] IBExU Institut für Sicherheitstechnik GmbH, BENANNT STELLE Nr. 0637 nach Artikel 9 der  
Richtlinie 94/9/EG des Europäischen Parlamentes und des Rates vom 23. März 1994, bestätigt  
dem Hersteller, dass er an der unter [7] aufgeführten Fertigungsstätte ein  
Qualitätssicherungssystem für die Herstellung, Endabnahme und Prüfung der unter [4]  
genannten Produktkategorie unterhält, das dem Anhang IV dieser Richtlinie genügt.


[9] Diese Mitteilung basiert auf dem Auditbericht Nr. IB-07-3-224 vom 12.09.2007. Sie ist gültig bis  
31.08.2010. Diese Mitteilung kann zurückgezogen werden, wenn der Hersteller die  
Anforderungen des Anhangs IV nicht mehr erfüllt. Die Ergebnisse des Überwachungsaudits des  
Qualitätssicherungssystems sind Bestandteil dieser Mitteilung.

[10] Gemäß Artikel 10 (1) der Richtlinie 94/9/EG ist hinter der CE-Kennzeichnung die Kenn-Nummer  
0637 von IBExU als die benannte Stelle anzugeben, die in der Produktionsüberwachungsphase  
tätig wird.

IBExU Institut für Sicherheitstechnik GmbH  
Fuchsmühlenweg 7 - 09599 Freiberg, Deutschland  
☎ +49 (0) 3731 3805.0 ☎ +49 (0) 3731 23650

Zertifizierungsstelle  
-Explosionsschutz-

Im Auftrag

  
(Dr. Lösch)



- Siegel -  
(Kenn-Nr. 0637)

Freiberg, 12.09.2007

Bescheinigungen ohne  
Unterschrift und ohne Siegel  
haben keine Gültigkeit.  
Bescheinigungen dürfen nur  
unverändert weiterverbreitet  
werden.

Seite 1 von 1  
IBExU07ATEX Q011



# INDUCTIVE SENSORS NAMUR

## DESIGNATION CODE

Example: **K J 10 - M 30 M B 45 - D P S - V1 - X0000**

1	2	3	4	5	6	7	8	9	10	11	12

### 1 = Working principle

<b>A</b>	Acoustic		
<b>B</b>	Acceleration sensor		
<b>C</b>	Capacitive		
<b>D</b>	Strain gauge sensor		
<b>H</b>	Hall-effect		
<b>J</b>	Inductive	<b>JR</b>	Inductive ring
		<b>JF</b>	Inductive surface
		<b>JG</b>	Inductive slot
		<b>JD</b>	Metalface
<b>M</b>	Magnetoresistive		
<b>N</b>	Inclination sensor		
<b>R</b>	Reed-contact		
<b>W</b>	Angle sensor		

### 2 = Switching distance / range

### 3 = Design

<b>D</b>	Ring housing
<b>G</b>	Cylindrical housing without thread
<b>M</b>	Cylindrical housing with metrical thread
<b>Q</b>	Square housing

### 4 = Housing diameter / edge length

### 5 = Housing material

<b>A</b>	Aluminium
<b>E</b>	Stainless steel
<b>K</b>	Plastic
<b>M</b>	Brass, nickel plated
<b>T</b>	PTFE

### 6 = Installation

<b>B</b>	Shielded
<b>N</b>	Non shielded

### 7 = Tube length

### 8 = Operating voltage

<b>AZ</b>	AC alternating current voltage
<b>D</b>	DC direct current voltage
<b>VZ</b>	AC/DC all voltages

### 9 = Type of output signal

<b>AN</b>	Analog	<b>ANI</b>	Current output
		<b>ANU</b>	Voltage output
<b>CAN</b>	CAN-bus interface		
<b>N</b>	NPN		
<b>NA</b>	Namur		
<b>P</b>	PNP		
<b>Z</b>	Two wire		

### 10 = Function

<b>A</b>	Changeover
<b>I</b>	Impulse output
<b>Ö</b>	N.C.
<b>S</b>	N.O.
<b>U</b>	Switchable

### 11 = Connection

<b>V1</b>	M8 screw-/snap-in
<b>V2</b>	M12 metal
<b>V2/1</b>	M12 plastic
<b>V3</b>	M5 metal
<b>V4</b>	Amphenol Tuchel
<b>V6</b>	Brad Harrison
<b>V7</b>	Valve connector type A
<b>V8</b>	M8 snap-in only
<b>V9</b>	Torson
<b>V10</b>	Valve connector type C
<b>V11</b>	AC connector 1/2" UNF
<b>V12</b>	M18 plastic
<b>VE</b>	Euchner connector
<b>RS232</b>	Data interface
<b>PG</b>	Thread joint PG
<b>Mxx</b>	Thread joint metrical

others as requested

### 12 = Additional marks

<b>AM</b>	Sensing face in centre
<b>FE</b>	Reduction 1 to steel / iron
<b>HT</b>	High temperature
<b>NF</b>	Reduction 1 to nonferrous metal
<b>SF</b>	Weld field immune
<b>T</b>	Enlarged temperature range
<b>W</b>	Angled sensing face / angled cable exit
<b>X</b>	Customized design with detailed description



# INDUCTIVE SENSORS NAMUR

## CIRCUIT DIAGRAMS

Circuit diagram for	Cable / clamp connection	Connector V1 ... V9
DPS DC PNP N.O.		
DPÖ DC PNP N.C.		
DPA DC PNP changeover		
DPU DC NO/NC switchable		
DNS DC NPN N.O.		
DNÖ DC NPN N.C.		
DNA DC NPN changeover		
DNU DC NO/NC switchable		
NA Namur EN 60947-5-6		
DZS DC two-wire N.O.		
DZÖ DC two-wire N.C.		
AZS/VZS AC/DC two-wire N.O.		
AZÖ/VZÖ AC/DC two-wire N.C.		
Analog		



# INDUCTIVE SENSORS NAMUR

## CYLINDER M8

### General data

<b>ATEX-Certificate (only brass housing)</b>	II 1 GD EEx ia IIC T6 T 85°C	
<b>Operating voltage <math>U_b</math></b>	nom. 8,2V DC Ri 1K	
<b>Ripple voltage <math>U_b</math></b>	≤ 5%	
<b>Reverse voltage protection</b>	yes	
<b>Load current alive</b>	< 1,1mA	
<b>Load current dead</b>	> 2,2mA	
<b>Hysteresis H</b>	see control unit	
<b>Repeatability R</b>	≤ 10%	
<b>Operating temperature <math>T_a</math></b>	-25°C ... +60°C (high temperature max. +125°C)	
<b>Temperature drift</b>	≤ 10%	
<b>Protection class</b>	IP67	
<b>Necessity of control unit</b>	yes	
<b>EMV-standard</b>	according to EN 60947-5-6	
<b>Housing material</b>	ATEX:	brass, nickel-plated
	High temperature:	Arnite
	Plastic:	Trogamid T
<b>Front cap</b>	PCP (brass housing)	



The drawings of these sensors are shown on the following page.

### Selection chart brass

Article number	Designation switching distance 1mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317320100	<b>KJ1-M8MB30-NA</b>	2000Hz	shielded	2m cable PVC 2 x 0,14mm <sup>2</sup>	A
08317320165	<b>KJ1-M8MB50-NA-V2</b>	2000Hz	shielded	connector M12 4-pole	B
	Designation switching distance 2mm				
08317320200	<b>KJ2-M8MN30-NA</b>	1000Hz	non shielded	2m cable PVC 2 x 0,14mm <sup>2</sup>	C
08317320265	<b>KJ2-M8MN50-NA- V2</b>	1000Hz	non shielded	connector M12 4-pole	D

### Selection chart plastic

Article number	Designation switching distance 2mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317321600	<b>KJ2-M8KN30-NA</b>	1000Hz	non shielded	2m cable PVC 2 x 0,14mm <sup>2</sup>	A

### Selection chart high temperature

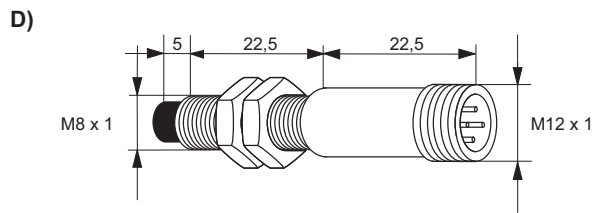
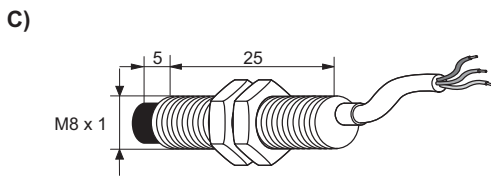
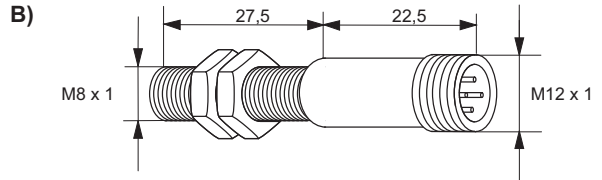
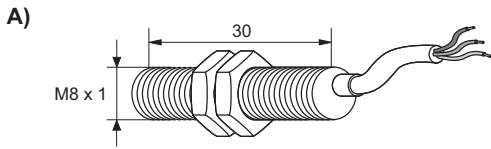
Article number	Designation switching distance 2mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317321632	<b>KJ2-M8KN30-NA-HT</b>	1000Hz	non shielded	5m cable PTFE 2 x 0,25mm <sup>2</sup>	A

Other cable lengths as requested.



# CYLINDER M8

## Dimensions



all data in mm

**p-u-l-s-o-n-i-c**  
Pulsotronic GmbH & Co. KG

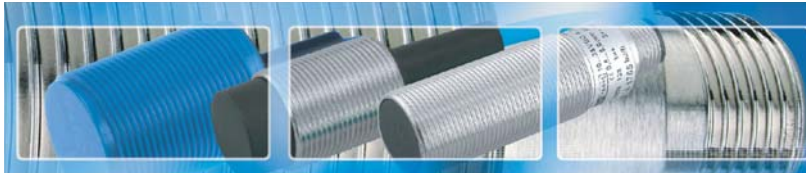
Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!





# INDUCTIVE SENSORS NAMUR

## CYLINDER M12

### General data

<b>ATEX-Certificate (only brass housing)</b>	II 1 GD EEx ia IIC T6 T 85°C	
<b>Operating voltage <math>U_b</math></b>	nom. 8,2V DC Ri 1K	
<b>Ripple voltage <math>U_b</math></b>	≤ 5%	
<b>Reverse voltage protection</b>	yes	
<b>Load current alive</b>	< 1,1mA	
<b>Load current dead</b>	> 2,2mA	
<b>Hysteresis H</b>	see control unit	
<b>Repeatability R</b>	≤ 10%	
<b>Operating temperature <math>T_a</math></b>	-25°C ... +60°C (high temperature max. +125°C)	
<b>Temperature drift</b>	≤ 10%	
<b>Protection class</b>	IP67	
<b>Necessity of control unit</b>	yes	
<b>EMV-standard</b>	according to EN 60947-5-6	
<b>Housing material</b>	ATEX:	brass, nickel-plated
	High temperature:	Arnite
	Plastic:	Trogamid T
<b>Front cap</b>	PCP (brass housing)	



The drawings of these sensors are shown on the following page.

### Selection chart brass

Article number	Designation switching distance 2mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317320300	<b>KJ2-M12MB30-NA</b>	2000Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
08317320365	<b>KJ2-M12MB55-NA-V2</b>	2000Hz	shielded	connector M12 4-pole	B
	<b>Designation switching distance 4mm</b>				
08317320400	<b>KJ4-M12MN30-NA</b>	1000Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	C
08317320465	<b>KJ4-M12MN50-NA-V2</b>	1000Hz	non shielded	connector M12 4-pole	D

### Selection chart plastic

Article number	Designation switching distance 2mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
083173211000	<b>KJ2-M12KB30-NA</b>	2000Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
	<b>Designation switching distance 4mm</b>				
08317321000	<b>KJ4-M12KN30-NA</b>	1000Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A

Other cable lengths as requested.



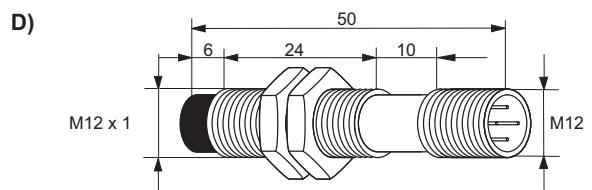
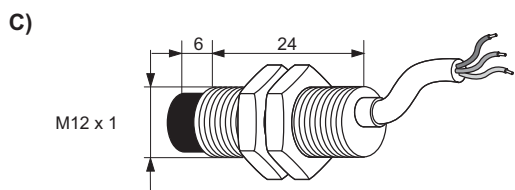
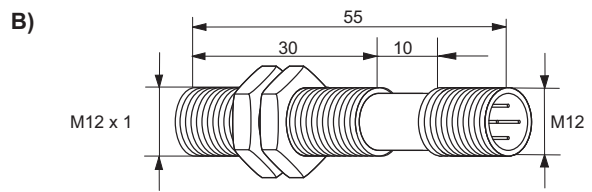
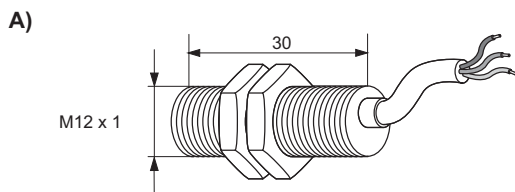
## CYLINDER M12

### Selection chart high temperature

Article number	Designation switching distance 4mm	Max. switching frequency	Mounting	Connection	Drawing
08317321032	<b>KJ4-M12KN30-NA-HT</b>	1000Hz	non shielded	5m cable PTFE 2 x 0,25mm <sup>2</sup>	A

Other cable lengths as requested.

### Dimensions



all data in mm



## CYLINDER M18

### General data

ATEX-Certificate (only brass housing)	II 1 GD EEx ia IIC T6 T 85°C
Operating voltage $U_b$	nom. 8,2V DC Ri 1K
Ripple voltage $U_b$	$\leq 5\%$
Reverse voltage protection	yes
Load current alive	$< 1,1\text{mA}$
Load current dead	$> 2,2\text{mA}$
Hysteresis H	see control unit
Repeatability R	$\leq 10\%$
Operating temperature $T_a$	$-25^\circ\text{C} \dots +60^\circ\text{C}$
Temperature drift	$\leq 10\%$
Protection class	IP67
Necessity of control unit	yes
EMV-standard	according to EN 60947-5-6
Housing material	ATEX: brass, nickel-plated Plastic: Trogamid T
Front cap	PCP (brass housing)



The drawings of these sensors are shown on the following page.

### Selection chart brass

Article number	Designation switching distance 5mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317320500	<b>KJ5-M18MB30-NA</b>	1000Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
08317320565	<b>KJ5-M18MB50-NA-V2</b>	1000Hz	shielded	connector M12 4-pole	B
	Designation switching distance 8mm				
08317320600	<b>KJ8-M18MN30-NA</b>	500Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	C
08317320665	<b>KJ8-M18MN50-NA-V2</b>	500Hz	non shielded	connector M12 4-pole	D

### Selection chart plastic

Article number	Designation switching distance 5mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317321300	<b>KJ5-M18KB30-NA</b>	1000Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
	Designation switching distance 8mm				
08317321200	<b>KJ8-M18KN30-NA</b>	500Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A

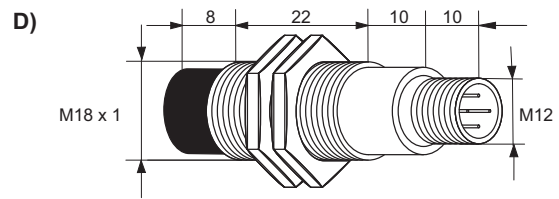
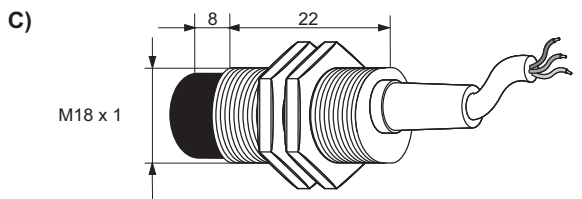
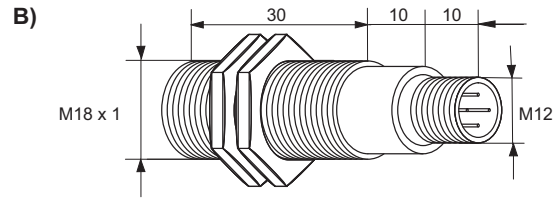
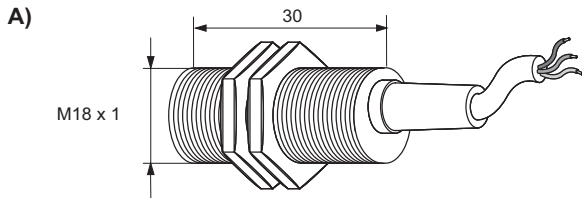
Other cable lengths as requested.



# INDUCTIVE SENSORS NAMUR

## CYLINDER M18

### Dimensions



all data in mm



# INDUCTIVE SENSORS NAMUR

## CYLINDER M30

### General data

<b>ATEX-Certificate (only brass housing)</b>	II 1 GD EEx ia IIC T6 T 85°C
<b>Operating voltage <math>U_b</math></b>	nom. 8,2V DC Ri 1K
<b>Ripple voltage <math>U_b</math></b>	≤ 5%
<b>Reverse voltage protection</b>	yes
<b>Load current alive</b>	< 1,1mA
<b>Load current dead</b>	> 2,2mA
<b>Hysteresis H</b>	see control unit
<b>Repeatability R</b>	≤ 10%
<b>Operating temperature <math>T_a</math></b>	-25°C ... +60°C
<b>Temperature drift</b>	≤ 10%
<b>Protection class</b>	IP67
<b>Necessity of control unit</b>	yes
<b>EMV-standard</b>	according to EN 60947-5-6
<b>Housing material</b>	ATEX: brass, nickel-plated Plastic: Trogamid T
<b>Front cap</b>	PCP (brass housing)



The drawings of these sensors are shown on the following page.

### Selection chart brass

Article number	Designation switching distance 10mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317320700	<b>KJ10-M30MB40-NA</b>	500Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
08317320765	<b>KJ10-M30MB60-NA-V2</b>	500Hz	shielded	connector M12 4-pole	B
	<b>Designation switching distance 15mm</b>				
08317320800	<b>KJ15-M30MN40-NA</b>	300Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	C
08317320865	<b>KJ15-M30MN60-NA-V2</b>	300Hz	non shielded	connector M12 4-pole	D

### Auswahltabelle Kunststoff

Article number	Designation switching distance 10mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317321500	<b>KJ10-M30KB40-NA</b>	500Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
	<b>Designation switching distance 15mm</b>				
08317321400	<b>KJ15-M30KN40-NA</b>	300Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A

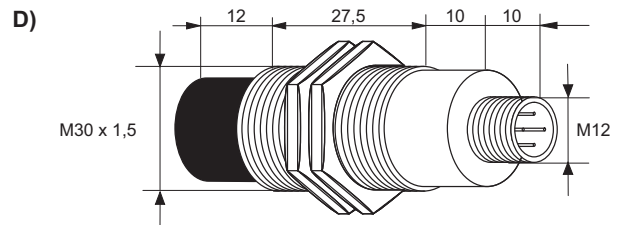
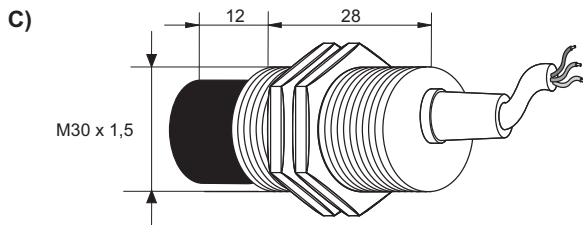
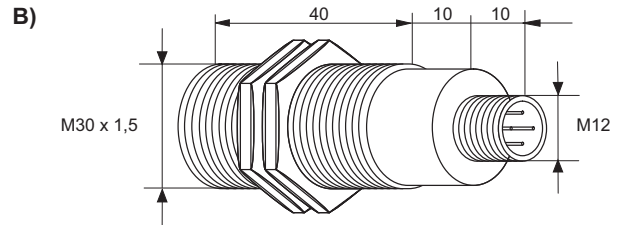
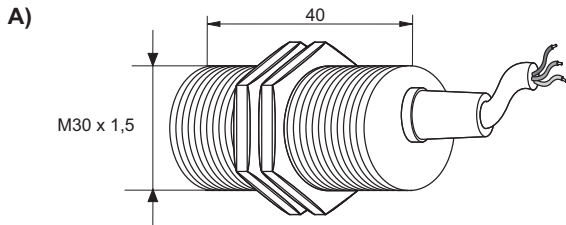
Other cable lengths as requested.



# INDUCTIVE SENSORS NAMUR

## CYLINDER M30

### Dimensions



all data in mm

**p-u-l-s-o-t-r-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

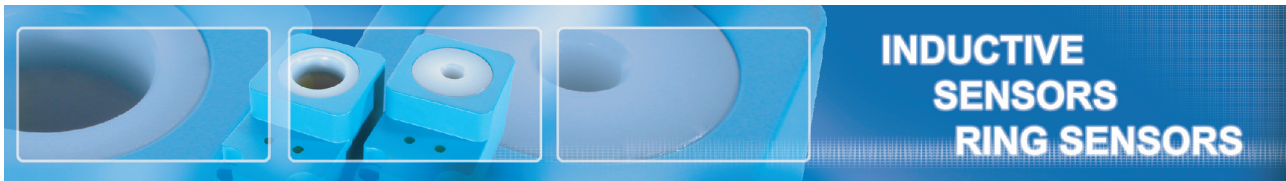
✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!



## PRODUCT OVERVIEW

Product group	Designation	Article number	Matchcode	Page
Inductive Namur	KJ1-M8MB30-NA	08317320100	9932-0100	5
Inductive Namur	KJ1-M8MB50-NA-V2	08317320165	9932-0165	5
Inductive Namur	KJ2-M8KN30-NA	08317321600	9932-1600	5
Inductive Namur	KJ2-M8MN30-NA	08317320200	9932-0200	5
Inductive Namur	KJ2-M8KN30-NA-HT	08317321632	9932-1632	5
Inductive Namur	KJ2-M8MN50-NA-V2	08317320265	9932-0265	5
Inductive Namur	KJ2-M12KB30 NA	08317321100	9932-1100	7
Inductive Namur	KJ2-M12MB30-NA	08317320300	9932-0300	7
Inductive Namur	KJ2-M12MB55-NA-V2	08317320365	9932-0365	7
Inductive Namur	KJ4-M12KN30-NA	08317321000	9932-1000	7
Inductive Namur	KJ4-M12MN30-NA	08317320400	9932-0400	7
Inductive Namur	KJ4-M12KN30-NA-HT	08317321032	9932-1032	8
Inductive Namur	KJ4-M12MN50-NA-V2	08317320465	9932-0465	7
Inductive Namur	KJ5-M18KB30-NA	08317321300	9932-1300	9
Inductive Namur	KJ5-M18MB30-NA	08317320500	9932-0500	9
Inductive Namur	KJ5-M18MB50-NA-V2	08317320565	9932-0565	9
Inductive Namur	KJ8-M18KN30-NA	08317321200	9932-1200	9
Inductive Namur	KJ8-M18MN30-NA	08317320600	9932-0600	9
Inductive Namur	KJ8-M18MN50-NA-V2	08317320665	9932-0665	9
Inductive Namur	KJ10-M30KB40-NA	08317321500	9932-1500	11
Inductive Namur	KJ10-M30MB40-NA	08317320700	9932-0700	11
Inductive Namur	KJ10-M30MB60-NA-V2	08317320765	9932-0765	11
Inductive Namur	KJ15-M30KN40-NA	08317321400	9932-1400	11
Inductive Namur	KJ15-M30MN40-NA	08317320800	9932-0800	11
Inductive Namur	KJ15-M30MN60-NA-V2	08317320865	9932-0865	11



## TABLE OF CONTENT

### Designation code

How to read sensor designations	3
---------------------------------	---

### Circuit diagrams

Connection according to EN 60947-5-2	4
--------------------------------------	---

### Functional description

Operating mode of ring sensors	5
--------------------------------	---

### Applications

Application areas of ring sensors	6
-----------------------------------	---

### Sensors

Normal sensitivity (static principle)	7
High sensitivity (dynamic principle)	10
Analog	13

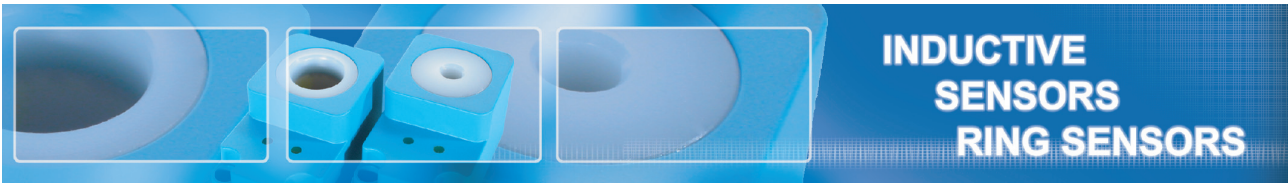
### Control unit

Control unit for ring sensors	15
-------------------------------	----

### Accessories

Connectors	16
Terminating cable	16





## NOTES

---





# INDUCTIVE SENSORS RING SENSORS

## DESIGNATION CODE

Example: **K J 10 - M 30 M B 45 - D P S - V1 - X0000**

┆
┆
┆
┆
┆
┆
┆
┆
┆
┆
┆
┆
┆

1
2
3
4
5
6
7
8
9
10
11
12

### 1 = Working principle

<b>A</b>	Acoustic		
<b>B</b>	Acceleration sensor		
<b>C</b>	Capacitive		
<b>D</b>	Strain gauge sensor		
<b>H</b>	Hall-effect		
<b>J</b>	Inductive	<b>JR</b>	Inductive ring
		<b>JF</b>	Inductive surface
		<b>JG</b>	Inductive slot
		<b>JD</b>	Metalface
<b>M</b>	Magneto-resistive		
<b>N</b>	Inclination sensor		
<b>R</b>	Reed-contact		
<b>W</b>	Angle sensor		

### 2 = Switching distance / range

### 3 = Design

<b>D</b>	Ring housing
<b>G</b>	Cylindrical housing without thread
<b>M</b>	Cylindrical housing with metrical thread
<b>Q</b>	Square housing

### 4 = Housing diameter / edge length

### 5 = Housing material

<b>A</b>	Aluminium
<b>E</b>	Stainless steel
<b>K</b>	Plastic
<b>M</b>	Brass, nickel plated
<b>T</b>	PTFE

### 6 = Installation

<b>B</b>	Shielded
<b>N</b>	Non shielded

### 7 = Tube length

### 8 = Operating voltage

<b>AZ</b>	AC alternating current voltage
<b>D</b>	DC direct current voltage
<b>VZ</b>	AC/DC all voltages

### 9 = Type of output signal

<b>AN</b>	Analog	<b>ANI</b>	Current output
		<b>ANU</b>	Voltage output
<b>CAN</b>	CAN-bus interface		
<b>N</b>	NPN		
<b>NA</b>	Namur		
<b>P</b>	PNP		
<b>Z</b>	Two wire		

### 10 = Function

<b>A</b>	Changeover
<b>I</b>	Impulse output
<b>Ö</b>	N.C.
<b>S</b>	N.O.
<b>U</b>	Switchable

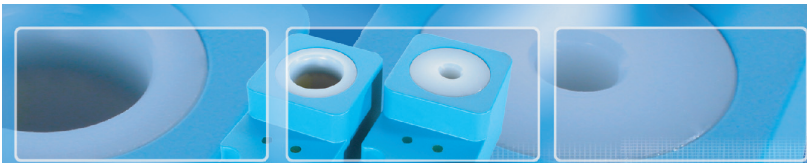
### 11 = Connection

<b>V1</b>	M8 screw-/snap-in
<b>V2</b>	M12 metal
<b>V2/1</b>	M12 plastic
<b>V3</b>	M5 metal
<b>V4</b>	Amphenol Tuchel
<b>V6</b>	Brad Harrison
<b>V7</b>	Valve connector type A
<b>V8</b>	M8 snap-in only
<b>V9</b>	Torson
<b>V10</b>	Valve connector type C
<b>V11</b>	AC connector 1/2" UNF
<b>V12</b>	M18 plastic
<b>VE</b>	Euchner connector
<b>RS232</b>	Data interface
<b>PG</b>	Thread joint PG
<b>Mxx</b>	Thread joint metrical

others as requested

### 12 = Additional marks

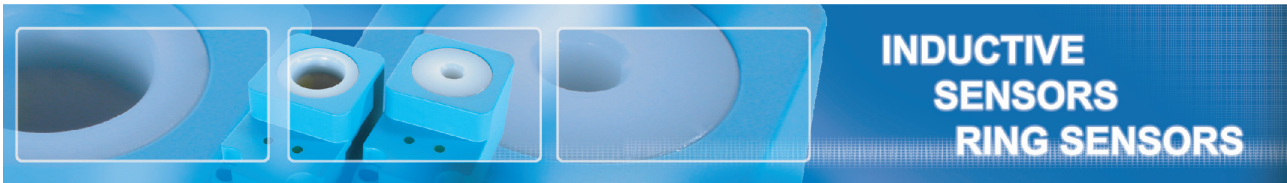
<b>AM</b>	Sensing face in centre
<b>FE</b>	Reduction 1 to steel / iron
<b>HT</b>	High temperature
<b>NF</b>	Reduction 1 to nonferrous metal
<b>SF</b>	Weld field immune
<b>T</b>	Enlarged temperature range
<b>W</b>	Angled sensing face / angled cable exit
<b>X</b>	Customized design with detailed description



# INDUCTIVE SENSORS RING SENSORS

## CIRCUIT DIAGRAMS

Circuit diagram for	Cable / clamp connection	Connector V1 ... V9
DPS DC PNP N.O.		
DPÖ DC PNP N.C.		
DPA DC PNP changeover		
DPU DC NO/NC switchable		
DNS DC NPN N.O.		
DNÖ DC NPN N.C.		
DNA DC NPN changeover		
DNU DC NO/NC switchable		
NA Namur EN 60947-5-6		
DZS DC two-wire N.O.		
DZÖ DC two-wire N.C.		
AZS/VZS AC/DC two-wire N.O.		
AZÖ/VZÖ AC/DC two-wire N.C.		
Analog		



## FUNCTIONAL DESCRIPTION

Ring sensors use the energy variations in a resonant circuit caused by eddy current losses in conductive materials. Thus they detect all types of conductive material. Ring sensors from Pulsotronic are used for object counting tasks, wire gauge measuring, wire break control or for presence check. The product range of Pulsotronic comprehends digital and analog ring sensors.

An oscillator in the sensor excites a high-frequency, electromagnetic alternating field. Due to the axially symmetric coil arrangement an almost homogeneous field is realised. The ferrite core and the sensor housing concentrate the field lines of the alternating field in the center of the ring. Metal entering in the sensor causes eddy currents that withdraw energy from the field. This leads to a damping and a voltage fluctuation in the sensor. The electronics in the sensor evaluates this variation.

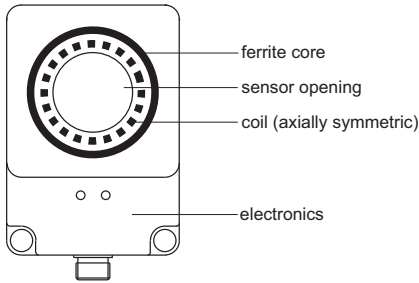


Illustration 1: front view ring sensor

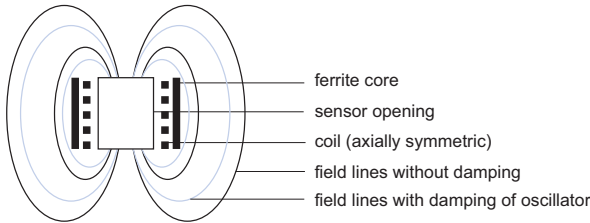


Illustration 2: course of field lines in the sensor (top view ring sensor)

### Digital ring sensors

Digital ring sensors are classified into static sensors (normal sensitivity) and dynamic sensors (high sensitivity). As long as metal is situated in the sensor, the static sensor excites a permanent signal. Only when metal is removed from the sensor the signal deactivates. Static sensors detect moving and non moving objects. Dynamic sensors only excite a short pulse when metal is detected. They only detect moving objects.

### Analog ring sensors

Like static sensors analog sensors excite a permanent signal which depends on the dimension and the position of the metallic object in the sensor. The bigger the metallic object, the bigger the output voltage of the sensor.

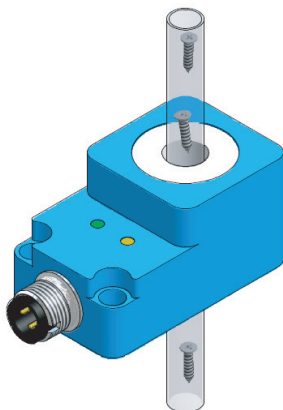
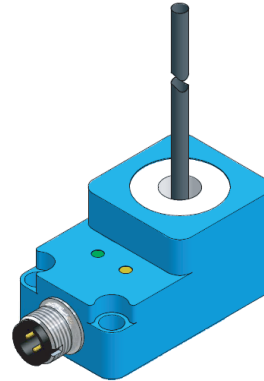


## INDUCTIVE SENSORS RING SENSORS

### APPLICATIONS

#### Wire break control

For this type of applications static sensors are used. The oscillator in the sensor excites a high-frequency alternating field. The wire passes through the sensor and withdraws energy from the resonant circuit. As long as the wire is moved through the sensor without interruption the sensor excites a constant signal because the damping of the oscillator is not alternating. A wire break leads to a damping of the oscillator. The sensor switches due to the voltage fluctuation.

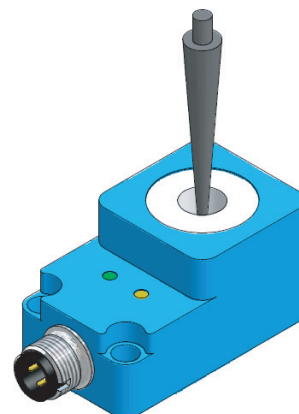


#### Object counting, presence check

In the sensor is a high-frequency alternating field. When a metallic object passes the sensor it withdraws energy from the field and leads to a voltage fluctuation in the oscillator. When the object quits the sensor, the oscillator takes its' normal value until the next object causes a new damping. Thus for example the ejection of stamping parts can be monitored. Ring sensors detect free-falling products as well as products being led in a tube through the sensor. The user can detect and count metallic objects. Ring sensors detect metallic contamination in non-metallic materials (e.g. synthetic granules). As moving parts are detected, dynamic and static sensors can be applied.

#### Wire gauge measuring, object identification

The wire passes through the sensor and withdraws energy from the resonant circuit. The degree of the energy loss depends on the dimension of the wire. The thicker the wire, the bigger the loss of energy and the bigger the voltage fluctuation in the sensor. The value of the voltage fluctuation provides information about the quantity of material in the field. By this it is possible to detect also other metallic objects. Depending on the size and the material of the object the sensor provides an according output voltage. Thus the user can make the distinction between different products. A possible application is a sorting device for small parts.

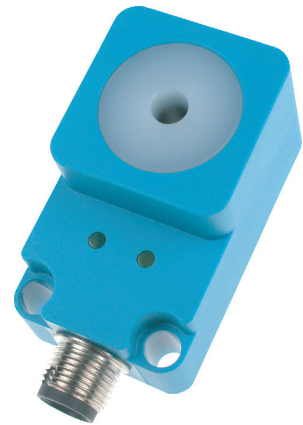


# INDUCTIVE SENSORS RING SENSORS

## NORMAL SENSITIVITY (STATIC PRINCIPLE)

### General data

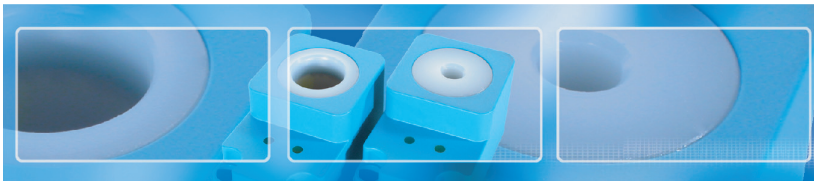
<b>Mounting</b>	non shielded
<b>Operating voltage <math>U_b</math></b>	10 ... 30V DC (KJR-D100FAN... 18 - 30V DC)
<b>Ripple voltage <math>U_b</math></b>	≤ 10%
<b>Voltage drop <math>U_d</math></b>	≤ 2,4V
<b>Max. load current</b>	≤ 200mA (KJR-Q130... ≤ 50mA)
<b>Off-state current <math>I_0</math></b>	KJR-D6... to KJR-D100...: ≤ 15mA KJR-D130... to KJR-D300...: ≤ 10mA
<b>Residual current</b>	≤ 10µA
<b>Hysteresis H</b>	≤ 15%
<b>Operating temperature <math>T_a</math></b>	-25°C ... +70°C
<b>Sensitivity over temp. range</b>	see sensitivity
<b>Protection class</b>	IP54
<b>EMV-standard</b>	according to EN 60947-5-2
<b>Switching state</b>	LED
<b>Housing material</b>	KJR-D6... to KJR-D30: Ultramid B3EG3 KJR-D50... to KJR-D300: Aluminium
<b>Connection</b>	connector M12 4-pole



### Selection chart

Article number	Designation	Output signal	Sensitivity	Max. switching frequency f	Drawing (next page)
08310000982	KJR-D6KN-DPA-V2	PNP	FE-ball D=1,5mm	600Hz	A + D
08310000983	KJR-D6KN-DNA-V2	NPN	FE-ball D=1,5mm	600Hz	A + D
08310000984	KJR-D10KN-DPA-V2	PNP	FE-ball D=1,8mm	600Hz	B + D
08310000985	KJR-D10KN-DNA-V2	NPN	FE-ball D=1,8mm	600Hz	B + D
08310000986	KJR-D15-KN-DPA-V2	PNP	FE-ball D=2,4mm	500Hz	C + D
08310000987	KJR-D15-KN-DNA-V2	NPN	FE-ball D=2,4mm	500Hz	C + D
08310000988	KJR-D20KN-DPA-V2	PNP	FE-ball D=3,0mm	400Hz	E + G
08310000989	KJR-D20KN-DNA-V2	NPN	FE-ball D=3,0mm	400Hz	E + G
08310000990	KJR-D30KN-DPA-V2	PNP	FE-ball D=4,0mm	300Hz	F + G
08310000991	KJR-D30KN-DNA-V2	NPN	FE-ball D=4,0mm	300Hz	F + G
08317050665	KJR-D50FAN-DPA-V2	PNP	FE-ball D=3,0mm	500Hz	H
08317050265	KJR-D50FAN-DNA-V2	NPN	FE-ball D=3,0mm	500Hz	H
08317080565	KJR-D100AN-DPA-V2	PNP	FE-ball D=6,0mm	500Hz	I
08317080150	KJR-D100AN-DNA-V2	NPN	FE-ball D=6,0mm	500Hz	I
08317080365	KJR-D100FAN-DPA-V2	PNP	FE-ball D=8,0mm	500Hz	J
08317080465	KJR-D100FAN-DNA-V2	NPN	FE-ball D=8,0mm	500Hz	J
08417090659	KJR-Q130AN-DPA-VE	PNP	FE-ball D=12,0mm	300Hz	K
08317090159	KJR-Q130AN-DNA-VE	NPN	FE-ball D=12,0mm	300Hz	K
08317160665	KJR-D200AN-DPA-V2	PNP	FE-ball D=15,0mm	300Hz	L
08317160165	KJR-D200AN-DNA-V2	NPN	FE-ball D=15,0mm	300Hz	L
08317070665	KJR-D300AN-DPA-V2	PNP	FE-ball D=30,0mm	300Hz	M
08317071165	KJR-D300AN-DNA-V2	NPN	FE-ball D=30,0mm	300Hz	M

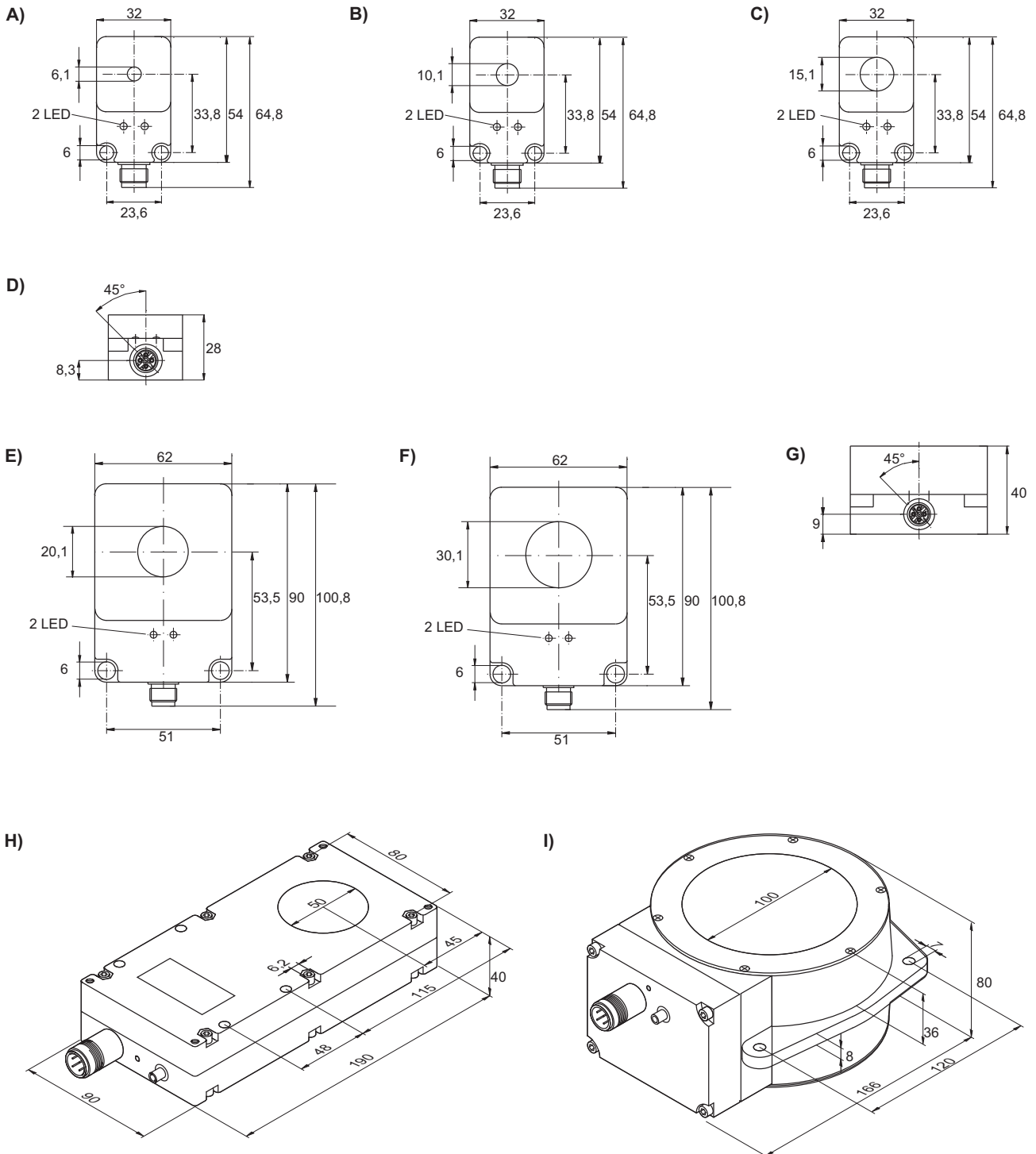
Control unit and accessories on pages 15 and 16.



# INDUCTIVE SENSORS RING SENSORS

## NORMAL SENSITIVITY (STATIC PRINCIPLE)

### Dimensions



all data in mm

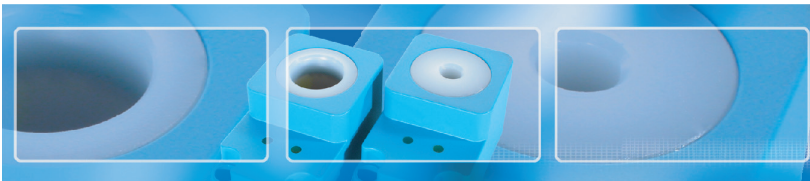
**p-u-l-s-o-t-r-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!

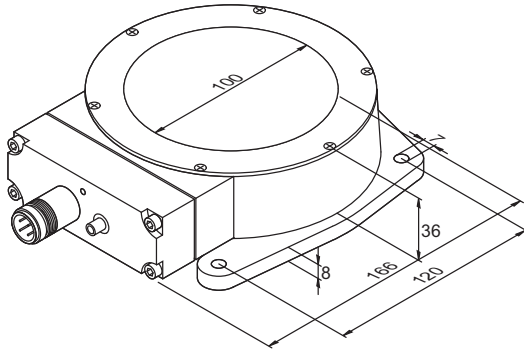


# INDUCTIVE SENSORS RING SENSORS

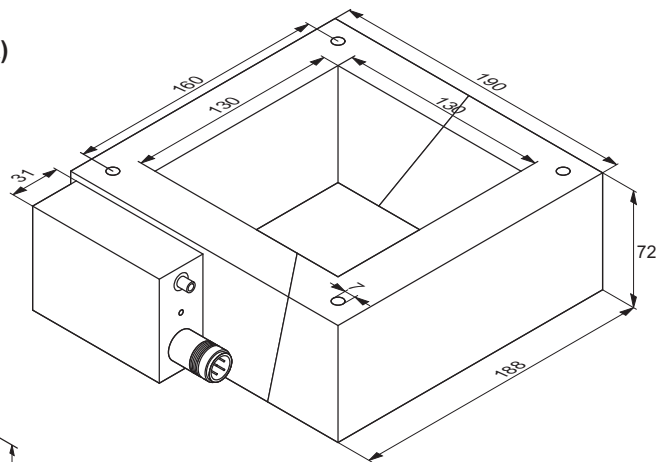
## NORMAL SENSITIVITY (STATIC PRINCIPLE)

### Dimensions

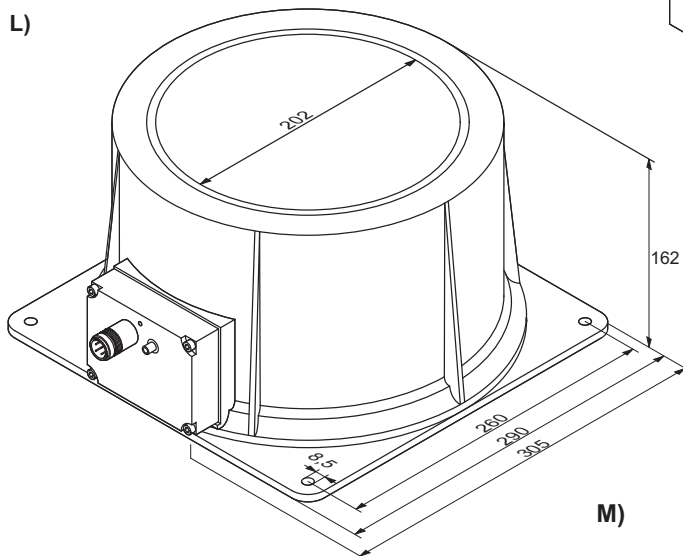
J)



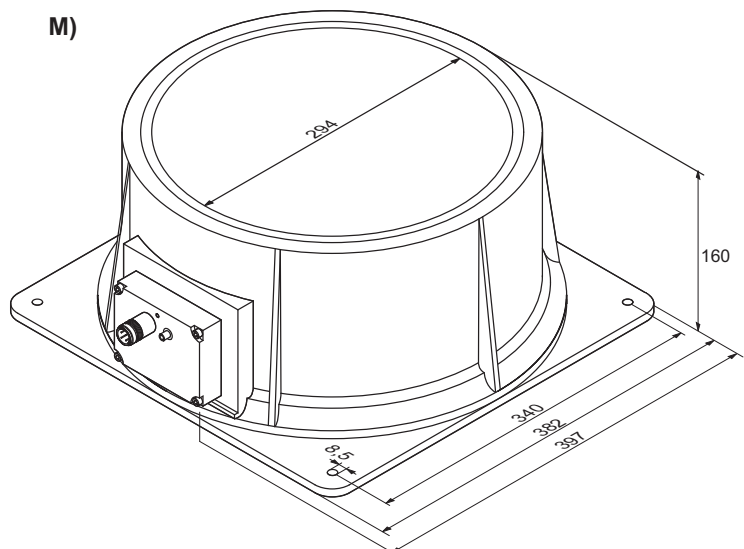
K)



L)



M)



all data in mm



# INDUCTIVE SENSORS RING SENSORS

## HIGH SENSITIVITY (DYNAMIC PRINCIPLE)

### General data

<b>Mounting</b>	non shielded
<b>Operating voltage <math>U_b</math></b>	11 ... 30V DC
<b>Ripple voltage <math>U_b</math></b>	$\leq 10\%$
<b>Voltage drop <math>U_d</math></b>	$\leq 2,4V$
<b>Max. load current</b>	KJR-D6... to KJR-D30: $\leq 200mA$ KJR-D50... to KJR-D300: $\leq 50mA$
<b>Off-state current <math>I_o</math></b>	KJR-D6... to KJR-D30: $\leq 15mA$ KJR-D50... to KJR-D300: $\leq 25mA$
<b>Hysteresis H</b>	$\leq 15\%$
<b>Operating temperature <math>T_a</math></b>	$-25^\circ C \dots +70^\circ C$
<b>Sensitivity over temp. range</b>	see sensitivity
<b>Protection class</b>	IP54
<b>EMV-standard</b>	according to EN 60947-5-2
<b>Switching state</b>	LED
<b>Housing material</b>	KJR-D6... to KJR-D30: Ultramid B3EG3 KJR-D50... to KJR-D300: Aluminium
<b>Connection</b>	connector M12 4-pole



### Selection chart

Article number	Designation	Output signal	Sensitivity * = adjustable	Max. switching frequency	Residual current	Drawing (next page)
08310001003	KJR-D6KN-DPIA-V2	PNP	FE-ball D=0,4mm	10Hz	10µA	A + D
08310001008	KJR-D6KN-DNIA-V2	NPN	FE-ball D=0,4mm	10Hz	10µA	A + D
08310001004	KJR-D10KN-DPIA-V2	PNP	FE-ball D=0,5mm	10Hz	10µA	B + D
08310001009	KJR-D10KN-DNIA-V2	NPN	FE-ball D=0,5mm	10Hz	10µA	B + D
08310001005	KJR-D15-KN-DPIA-V2	PNP	FE-ball D=0,6mm	10Hz	10µA	C + D
08310001010	KJR-D15-KN-DNIA-V2	NPN	FE-ball D=0,6mm	10Hz	10µA	C + D
08310001006	KJR-D20KN-DPIA-V2	PNP	FE-ball D=0,7mm	10Hz	10µA	E + G
08310001011	KJR-D20KN-DNIA-V2	NPN	FE-ball D=0,7mm	10Hz	10µA	E + G
08310001007	KJR-D30KN-DPIA-V2	PNP	FE-ball D=1,0mm	10Hz	10µA	F + G
08310001012	KJR-D30KN-DNIA-V2	NPN	FE-ball D=1,0mm	10Hz	10µA	F + G
08317010865	KJR-D50FAN-DPIA-V2	PNP	FE-ball D=0,6mm*	100Hz	50µA	H
08317010765	KJR-D50AN-DNIA-V2	NPN	FE-ball D=0,6mm*	100Hz	50µA	H
08317010265	KJR-D50FAN-DNIA-V2	PNP	FE-ball D=1,0mm*	100Hz	50µA	I
08317110065	KJR-D70AN-DNIA-V2	NPN	FE-ball D=1,0mm*	100Hz	50µA	J
08317000265	KJR-D100AN-DPIA-V2	PNP	FE-ball D=1,3mm*	100Hz	50µA	K
08317000165	KJR-D100AN-DNIA-V2	NPN	FE-ball D=1,3mm*	100Hz	50µA	K
08317090359	KJR-Q130AN-DNIA-VE	PNP	FE-ball D=5,0mm	100Hz	500µA	L
08317030265	KJR-D200AN-DPIA-V2	NPN	FE-ball D=3,0mm	100Hz	50µA	M
08317030165	KJR-D200AN-DNIA-V2	PNP	FE-ball D=3,0mm	100Hz	50µA	M
08317090259	KJR-Q290AN-DNIA-VE	NPN	FE-ball D=12,0mm	100Hz	500µA	N
08317040265	KJR-D300AN-DPIA-V2	PNP	FE-ball D=4,0mm	100Hz	50µA	O
08317040165	KJR-D300AN-DNIA-V2	NPN	FE-ball D=4,0mm	100Hz	50µA	O

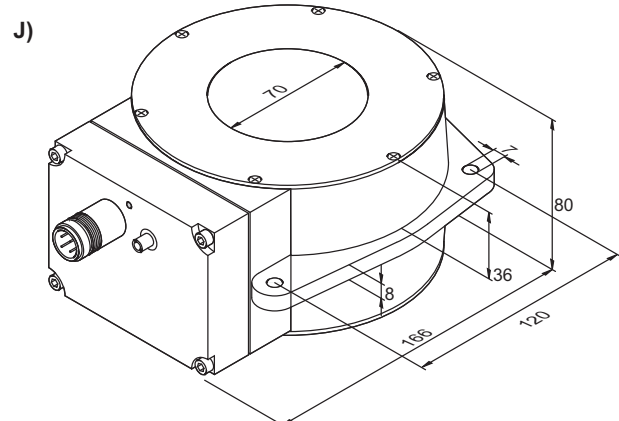
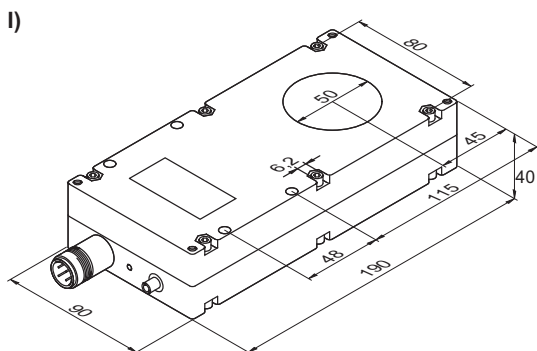
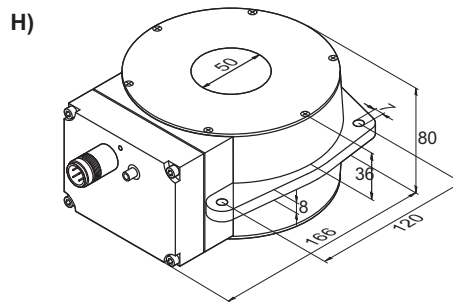
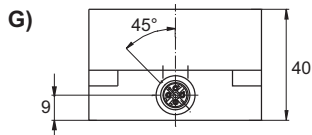
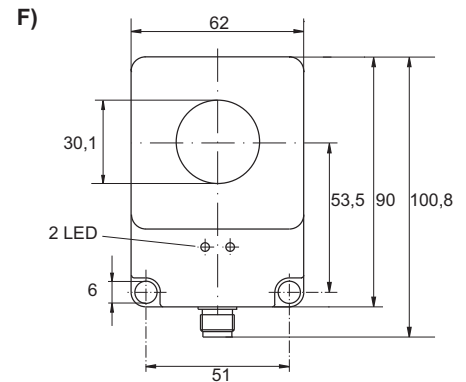
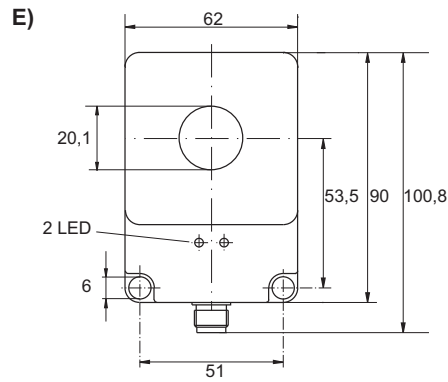
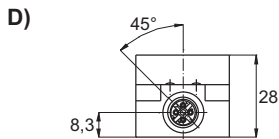
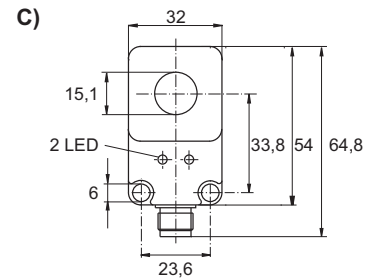
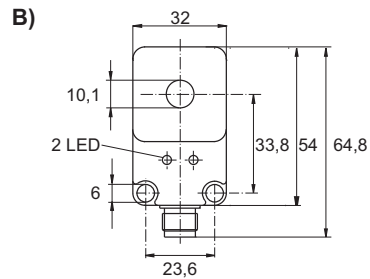
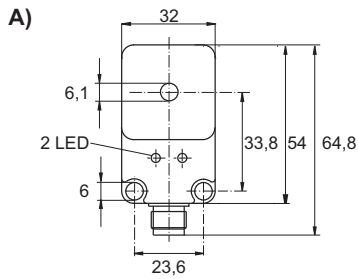
Control unit and accessories on pages 15 and 16.



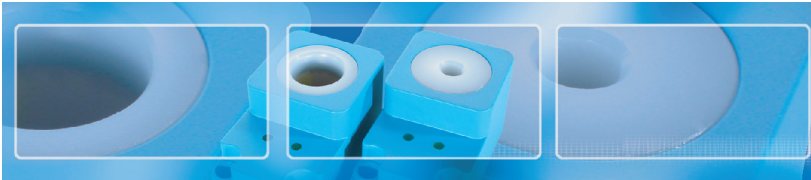
# INDUCTIVE SENSORS RING SENSORS

## HIGH SENSITIVITY (DYNAMIC PRINCIPLE)

### Dimensions



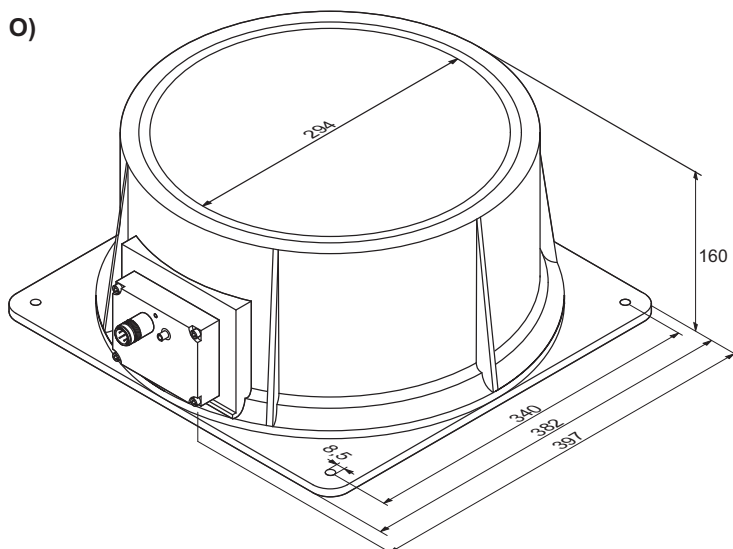
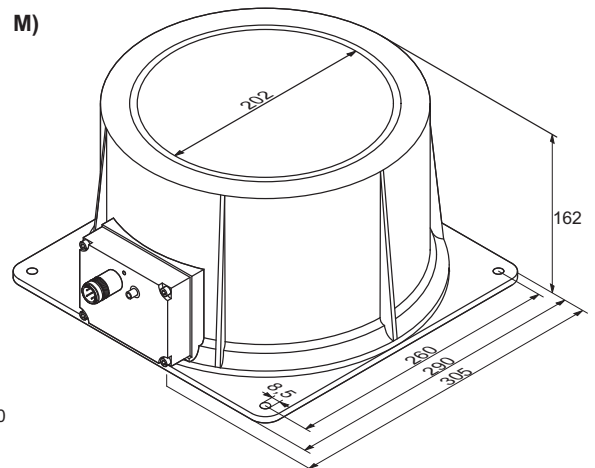
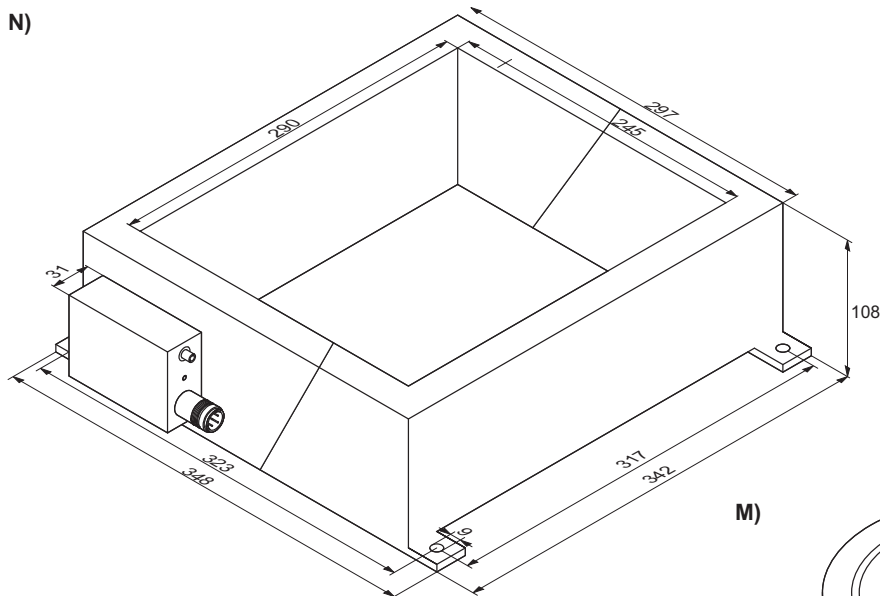
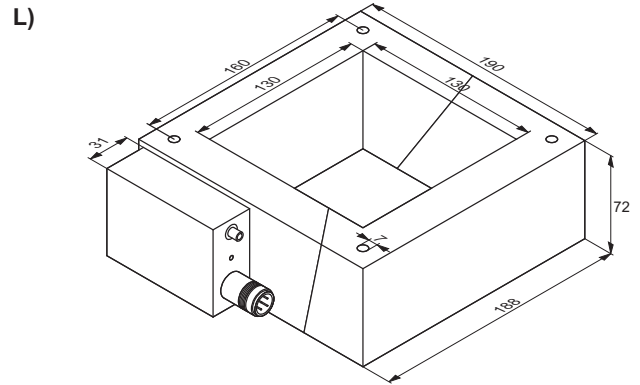
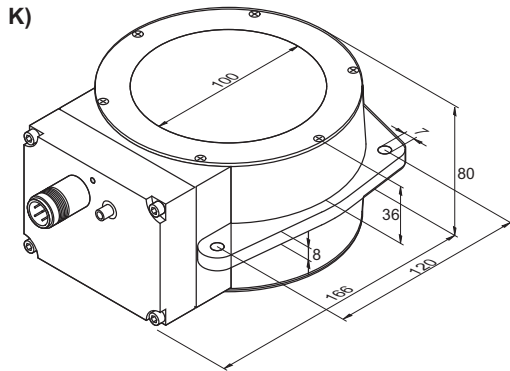
all data in mm



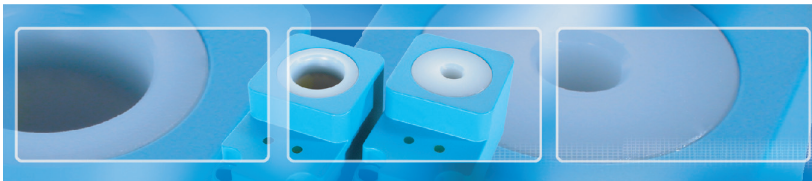
# INDUCTIVE SENSORS RING SENSORS

## HIGH SENSITIVITY (DYNAMIC PRINCIPLE)

### Dimensions



all data in mm



# INDUCTIVE SENSORS RING SENSORS

## ANALOG

### General data

<b>Mounting</b>	non shielded
<b>Output signal</b>	0 ... 10V analog
<b>Operating voltage <math>U_b</math></b>	15 ... 30V DC
<b>Load Resistor <math>R_L</math></b>	> 1kOhm
<b>Linearity</b>	$\leq \pm 5\%$
<b>Repeat accuracy</b>	$\leq 5\%$
<b>Off-state current <math>I_0</math></b>	$\leq 10\text{mA}$
<b>Operating temperature <math>T_a</math></b>	$-25^\circ\text{C} \dots +70^\circ\text{C}$
<b>Sensitivity over temp. range</b>	$\leq \pm 5\%$
<b>Protection class</b>	IP54
<b>EMV-standard</b>	according to EN 60947-5-2
<b>Switching state</b>	LED
<b>Housing material</b>	Ultramid B3EG3
<b>Connection</b>	connector M12 4-pole

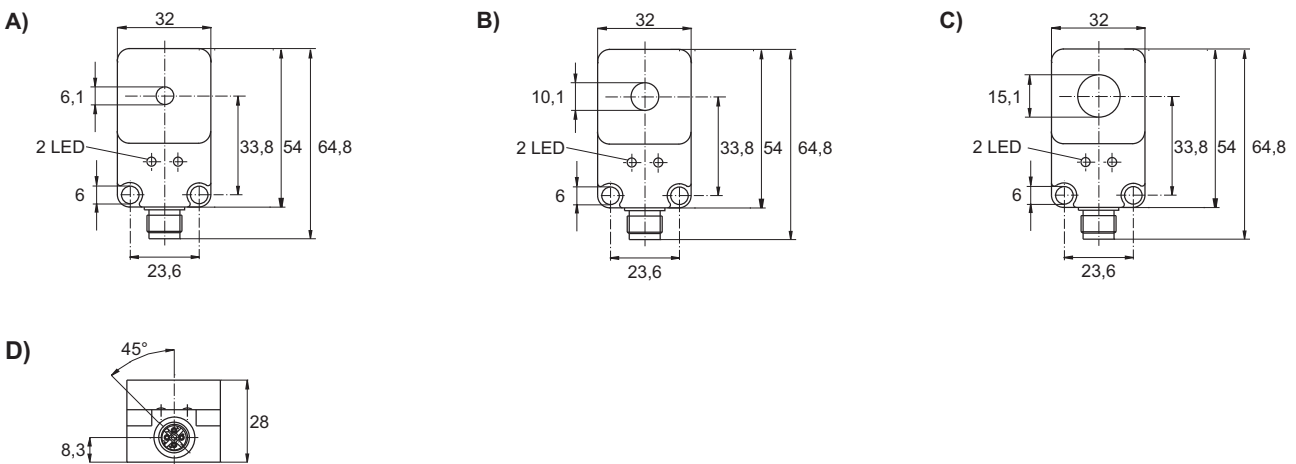


### Selection chart

Article number	Designation	Sensitivity	Max. switching frequency f	Drawing
08310000894	<b>KJR-D6KN-ANU-V2</b>	FE-stick D=0,3 - 4,0mm	100Hz	A + D
08310000895	<b>KJR-D10KN-ANU-V2</b>	FE-stick D=0,3 - 6,0mm	100Hz	B + D
08310000896	<b>KJR-D15-KN-ANU-V2</b>	FE-stick D=0,5 - 8,0mm	80Hz	C + D
08310000897	<b>KJR-D20KN-ANU-V2</b>	FE-stick D=0,5 - 15,0mm	80Hz	E (next page)
08310000898	<b>KJR-D30KN-ANU-V2</b>	FE-ball D=1,0 - 20,0mm	80Hz	F (next page)

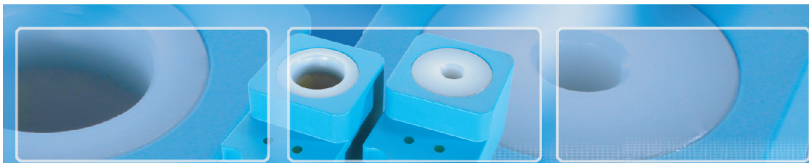
Control unit and accessories on pages 15 and 16.

### Dimensions



all data in mm

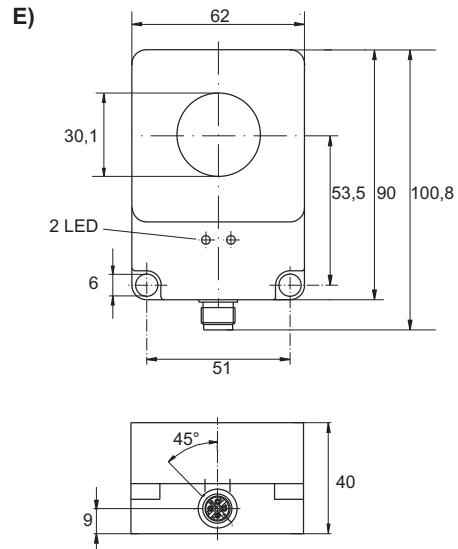
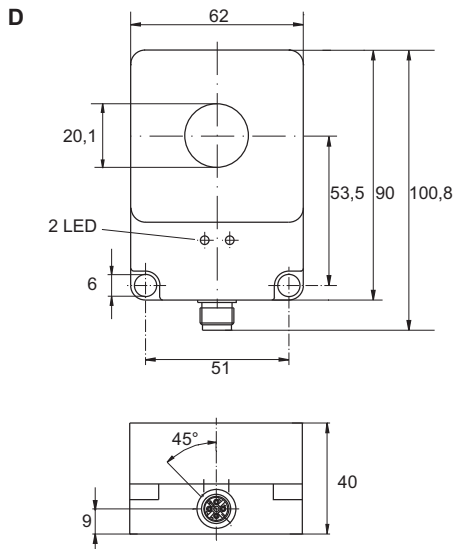
<b>p-u-l-s-o-t-r-o-n-i-c</b> Pulsotronic GmbH & Co. KG	Neue Schichtstraße 14b D-09366 Niederdorf	+49 (0) 37296 / 930 - 200 +49 (0) 37296 / 930 - 280	info@pulsotronic.de www.pulsotronic.de	subject to modifications!
---	--	--	---	------------------------------



# INDUCTIVE SENSORS RING SENSORS

## ANALOG

### Dimensions



all data in mm

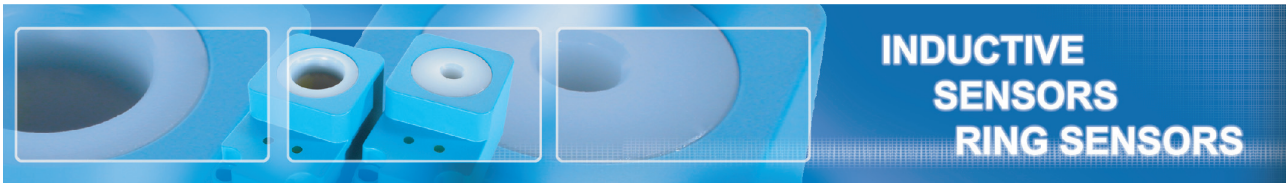
**p-u-l-s-o-t-r-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!

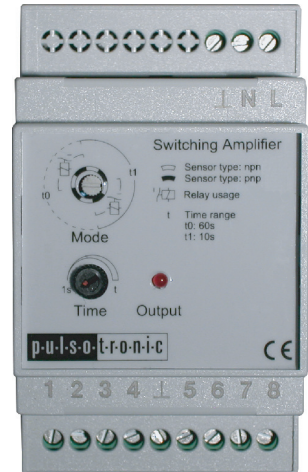


## CONTROL UNIT FOR RING SENSORS

### Functional description

This control unit can be operated with all sensors from the KJR series. The device serves for evaluating the signals of the sensor and at the same time provides the operating voltage for the sensor. It has been rated especially for mounting on a 35mm top hat rail. The control unit can be operated with all switching sensors with 24V operating voltage.

If the connected sensor excites a signal, it will be collected and lengthened on the adjusted period by the control unit. When during that time another signal is excited, it will be lengthened on the adjusted period again. After that the signal is output via a relay and a transistor output. The active switching state is indicated by an LED. The device can be operated with 24V direct current or alternatively with line voltage. All outputs provide short circuit protection as well as overload protection. All voltage inputs are protected against reverse polarity.

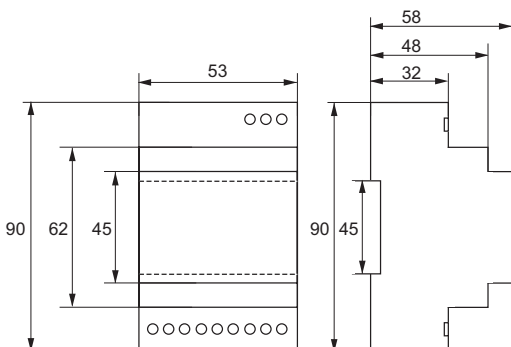


### Technical data

	Control unit for ring sensors 230V AC / 24V DC	Control unit for ring sensors 230V AC / 24V DC
Article number	08349005011	08349005013
Supply voltage	230V DC, 50/60Hz or 24V DC	115V, 50/60Hz or 24V DC
Sensor supply	24V DC, max. 80mA*	
Transistor output	1 x NPN, 1 x PNP, 25mA open collector*	
Relay output	1 potential-free changer, max. 250 V AC, 5A	
Switching time per pulse	1 ... 10 / 1 ... 60s (adjustable)	
Operating temperature	-10°C ... +50°C	
Storage temperature	-10°C ... +60°C	
Protection class	IP20	
Housing material	Polycarbonat (UL 94V-0)	

\* Overload and short circuit protected.

### Dimensions, operation



The period for a switching pulse can be adjusted via a potentiometer. The user chooses among two time domains. The selection of the time domain is realised via a rotary coding switch. Via this switch the user also defines if the relay shall be activated or if the connected sensor is NPN or PNP switching.

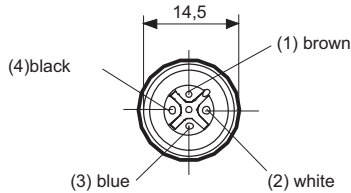
all data in mm



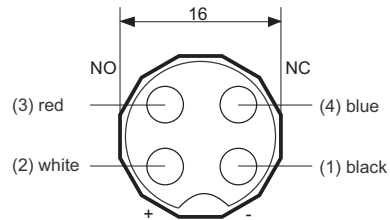
# INDUCTIVE SENSORS RING SENSORS

## ACCESSORIES

### Connectors



Connector M12, 4 pole

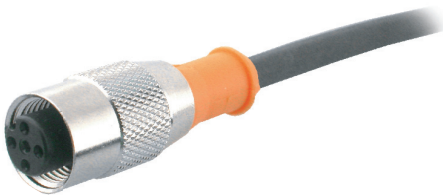


SD4K (Euchner)

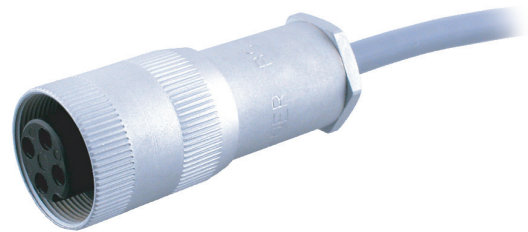
The sensors in this catalogue are mostly listed in design with connector M12, 4-pole.  
Optionally the sensors are also available with connector SD4K (Euchner) for the same price.

### Terminating cable

	2m connecting cable	5m connecting cable
Article number M12 4-pole	44505125310	44505125312
Article number SD4K (Euchner)	4455120200	44505120202



M12 4-pole



SD4K (Euchner)

all data in mm



## TABLE OF CONTENT

<b>Designation code</b>	
How to read sensor designations	3
<b>Circuit diagrams</b>	
Connection according to EN 60947-5-2	4
<b>Sensors</b>	
Cylinder G6,5	5
Cylinder M8	7
Square Q8	9
Cylinder M12	11
Square Q12	13
Cylinder M18	15
Cylinder G20	17
Cylinder M30	19
Cylinder G34	21

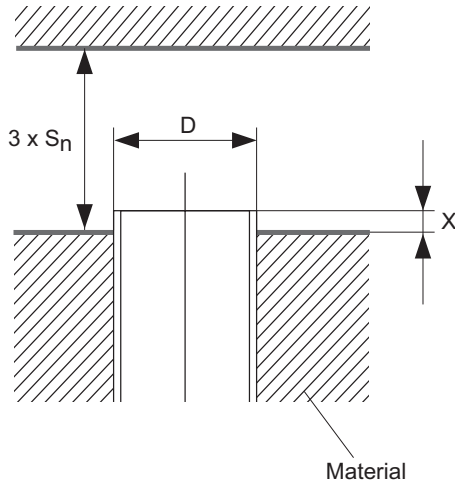




# INDUCTIVE SENSORS XXL

## MOUNTING

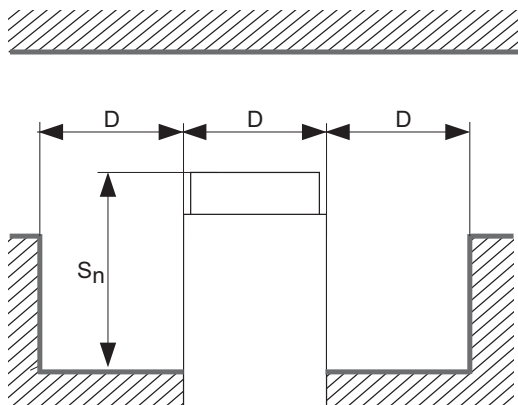
### Quasi-flush mounting



The sensors in this catalogue must not be mounted flush into conductive materials, but have to protrude by X. Flush mounting in non-conductive materials is allowed.

Steel	$X = 0,2D$
Other metals	$X = 0,1D$
Other material	$X = 0$

### Non-flush mounting



$S_n$  = Switching distance  
 $D$  = Diameter of the sensors



# INDUCTIVE SENSORS XXL

## DESIGNATION CODE

Example: **K J 10 - M 30 M B 45 - D P S - V1 - X0000**

1	2	3	4	5	6	7	8	9	10	11	12

### 1 = Working principle

<b>A</b>	Acoustic		
<b>B</b>	Acceleration sensor		
<b>C</b>	Capacitive		
<b>D</b>	Strain gauge sensor		
<b>H</b>	Hall-effect		
<b>J</b>	Inductive	<b>JR</b>	Inductive ring
		<b>JF</b>	Inductive surface
		<b>JG</b>	Inductive slot
		<b>JD</b>	Metalface
<b>M</b>	Magneto-resistive		
<b>N</b>	Inclination sensor		
<b>R</b>	Reed-contact		
<b>W</b>	Angle sensor		

### 2 = Switching distance / range

### 3 = Design

<b>D</b>	Ring housing
<b>G</b>	Cylindrical housing without thread
<b>M</b>	Cylindrical housing with metrical thread
<b>Q</b>	Square housing

### 4 = Housing diameter / edge length

### 5 = Housing material

<b>A</b>	Aluminium
<b>E</b>	Stainless steel
<b>K</b>	Plastic
<b>M</b>	Brass, nickel plated
<b>T</b>	PTFE

### 6 = Installation

<b>B</b>	Shielded
<b>N</b>	Non shielded

### 7 = Tube length

### 8 = Operating voltage

<b>AZ</b>	AC alternating current voltage
<b>D</b>	DC direct current voltage
<b>VZ</b>	AC/DC all voltages

### 9 = Type of output signal

<b>AN</b>	Analog	<b>ANI</b>	Current output
		<b>ANU</b>	Voltage output
<b>CAN</b>	CAN-bus interface		
<b>N</b>	NPN		
<b>NA</b>	Namur		
<b>P</b>	PNP		
<b>Z</b>	Two wire		

### 10 = Function

<b>A</b>	Changeover
<b>I</b>	Impulse output
<b>Ö</b>	N.C.
<b>S</b>	N.O.
<b>U</b>	Switchable

### 11 = Connection

<b>V1</b>	M8 screw-/snap-in
<b>V2</b>	M12 metal
<b>V2/1</b>	M12 plastic
<b>V3</b>	M5 metal
<b>V4</b>	Amphenol Tuchel
<b>V6</b>	Brad Harrison
<b>V7</b>	Valve connector type A
<b>V8</b>	M8 snap-in only
<b>V9</b>	Torson
<b>V10</b>	Valve connector type C
<b>V11</b>	AC connector 1/2" UNF
<b>V12</b>	M18 plastic
<b>VE</b>	Euchner connector
<b>RS232</b>	Data interface
<b>PG</b>	Thread joint PG
<b>Mxx</b>	Thread joint metrical

others as requested

### 12 = Additional marks

<b>AM</b>	Sensing face in centre
<b>FE</b>	Reduction 1 to steel / iron
<b>HT</b>	High temperature
<b>NF</b>	Reduction 1 to nonferrous metal
<b>SF</b>	Weld field immune
<b>T</b>	Enlarged temperature range
<b>W</b>	Angled sensing face / angled cable exit
<b>X</b>	Customized design with detailed description



# INDUCTIVE SENSORS XXL

## CIRCUIT DIAGRAMS

Circuit diagram for	Cable / clamp connection	Connector V1 ... V9
DPS DC PNP N.O.		
DPO DC PNP N.C.		
DPA DC PNP changeover		
DPU DC NO/NC switchable		
DNS DC NPN N.O.		
DNÖ DC NPN N.C.		
DNA DC NPN changeover		
DNU DC NO/NC switchable		
NA Namur EN 60947-5-6		
DZS DC two-wire N.O.		
DZÖ DC two-wire N.C.		
AZS/VZS AC/DC two-wire N.O.		
AZÖ/VZÖ AC/DC two-wire N.C.		
Analog		



## INDUCTIVE SENSORS XXL

### CYLINDER G6,5

#### General data

Operating voltage $U_b$	10V ... 30V DC
Ripple voltage of $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 1V$
Max. load current	200mA
Off-state current $I_0$	$\leq 10mA$
Residual current	$\leq 10\mu A$
Max. switching frequency $f$	1000Hz
Hysteresis $H$	$\leq 15\%$ (Sr)
Repeatability $R$	$\leq 2\%$ (Sr)
Operating temperature $T_a$	$-25^\circ C \dots +70^\circ C$
Temperature drift	$\leq 10\%$ (Sr)
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	brass, nickel-plated
Front cap	POM



The drawings of these sensors are shown on the following page.

#### Selection chart

Article number	Designation switching distance 3mm	Mounting	Output signal	Connection	Drawing (next page)
08313650317	<b>SJ3-G6,5MB45-DPS</b>	shielded	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08313650327	<b>SJ3-G6,5MB45-DPÖ</b>	shielded	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08313650337	<b>SJ3-G6,5MB45-DNS</b>	shielded	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08313650347	<b>SJ3-G6,5MB45-DNÖ</b>	shielded	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08313036511	<b>SJ3-G6,5MB60-DPS-V1</b>	shielded	PNP	connector M8 3-pole	A1
08313036521	<b>SJ3-G6,5MB60-DPÖ-V1</b>	shielded	PNP	connector M8 3-pole	A1
08313036531	<b>SJ3-G6,5MB60-DNS-V1</b>	shielded	NPN	connector M8 3-pole	A1
08313036541	<b>SJ3-G6,5MB60-DNÖ-V1</b>	shielded	NPN	connector M8 3-pole	A1

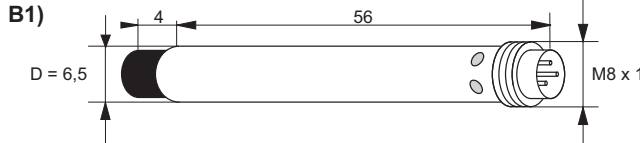
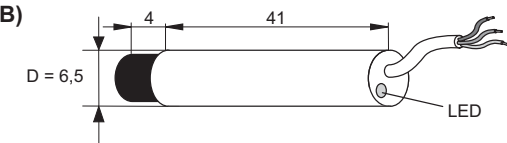
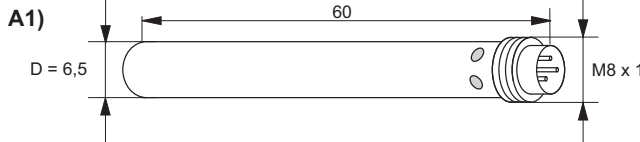
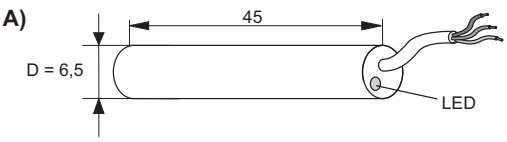
	Designation switching distance 6mm				
08313650617	<b>SJ6-G6,5MN45-DPS</b>	non shielded	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08313650627	<b>SJ6-G6,5MN45-DPÖ</b>	non shielded	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08313650637	<b>SJ6-G6,5MN45-DNS</b>	non shielded	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08313650647	<b>SJ6-G6,5MN45-DNÖ</b>	non shielded	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08313066511	<b>SJ6-G6,5MN60-DPS-V1</b>	non shielded	PNP	connector M8 3-pole	B1
08313066521	<b>SJ6-G6,5MN60-DPÖ-V1</b>	non shielded	PNP	connector M8 3-pole	B1
08313066531	<b>SJ6-G6,5MN60-DNS-V1</b>	non shielded	NPN	connector M8 3-pole	B1
08313066541	<b>SJ6-G6,5MN60-DNÖ-V1</b>	non shielded	NPN	connector M8 3-pole	B1

Other cable lengths as requested.



# CYLINDER G6,5

## Dimensions



all data in mm

**p-u-l-s-o-t-r-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!



# INDUCTIVE SENSORS XXL

## CYLINDER M8

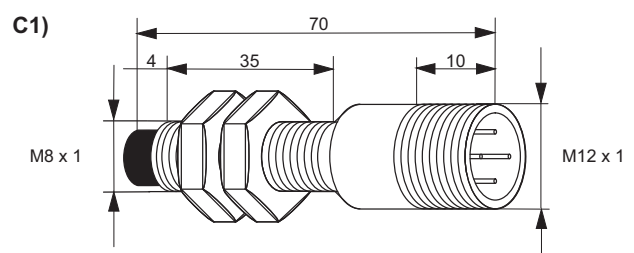
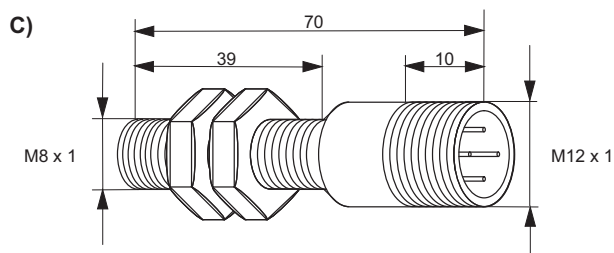
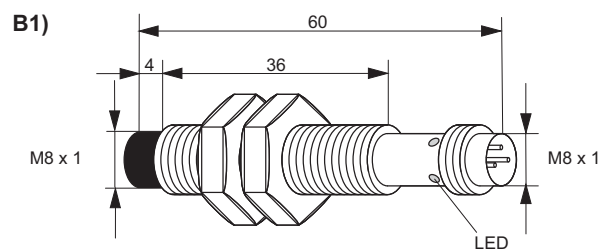
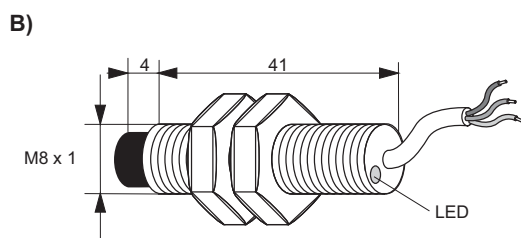
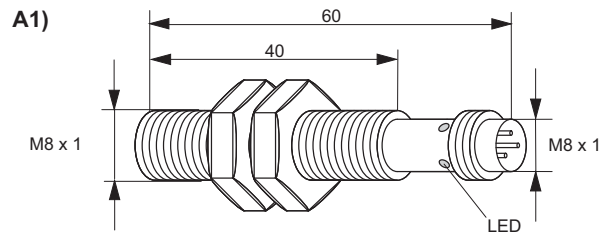
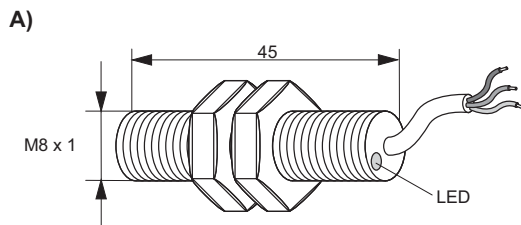
### General data

Operating voltage $U_b$	10V ... 30V DC
Ripple voltage of $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 1V$
Max. load current	200mA
Off-state current $I_o$	$\leq 10mA$
Residual current	$\leq 10\mu A$
Max. switching frequency $f$	1000Hz
Hysteresis $H$	$\leq 15\%$ (Sr)
Repeatability $R$	$\leq 2\%$ (Sr)
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$ (Sr)
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	brass, nickel-plated (except for KJ3-M8EB... stainless steel)
Front cap	KJ3... PA 6.6 KJ6... POM SJ6... POM



The selection chart of these sensors is shown on the following page.

### Dimensions



all data in mm



## CYLINDER M8

### Selection chart

Article number	Designation switching distance 3mm	Mounting	Output signal	Connection	Drawing (next page)
08317815000	<b>KJ3-M8MB45-DPS</b>	shielded	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08317815400	<b>KJ3-M8MB45-DPÖ</b>	shielded	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08317815100	<b>KJ3-M8MB45-DNS</b>	shielded	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08317815500	<b>KJ3-M8MB45-DNÖ</b>	shielded	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08317815064	<b>KJ3-M8EB60-DPS-V1</b>	shielded	PNP	connector M8 3-pole	A1
08317815464	<b>KJ3-M8EB60-DPÖ-V1</b>	shielded	PNP	connector M8 3-pole	A1
08310001155	<b>KJ3-M8EB60-DNS-V1</b>	shielded	NPN	connector M8 3-pole	A1
08317815564	<b>KJ3-M8EB60-DNÖ-V1</b>	shielded	NPN	connector M8 3-pole	A1
08317815065	<b>KJ3-M8MB70-DPS-V2</b>	shielded	PNP	connector M12 4-pole	C
08313030822	<b>SJ3-M8MB70-DPÖ-V2</b>	shielded	PNP	connector M12 4-pole	C
08313030832	<b>SJ3-M8MB70-DNS-V2</b>	shielded	NPN	connector M12 4-pole	C
08313030842	<b>SJ3-M8MB70-DNÖ-V2</b>	shielded	NPN	connector M12 4-pole	C

	Designation switching distance 6mm				
08317815200	<b>KJ6-M8MN45-DPS</b>	non shielded	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08317815600	<b>SJ6-M8MN45-DPÖ</b>	non shielded	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08317815300	<b>KJ6-M8MN45-DNS</b>	non shielded	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08313080647	<b>SJ6-M8MN45-DNÖ</b>	non shielded	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08317815264	<b>KJ6-M8MN60-DPS-V1</b>	non shielded	PNP	connector M8 3-pole	B1
08313060821	<b>SJ6-M8MN60-DPÖ-V1</b>	non shielded	PNP	connector M8 3-pole	B1
08313060831	<b>SJ6-M8MN60-DNS-V1</b>	non shielded	NPN	connector M8 3-pole	B1
08313060841	<b>SJ6-M8MN60-DNÖ-V1</b>	non shielded	NPN	connector M8 3-pole	B1
08317815265	<b>KJ6-M8MN70-DPS-V2</b>	non shielded	PNP	connector M12 4-pole	D
08313060822	<b>SJ6-M8MN70-DPÖ-V2</b>	non shielded	PNP	connector M12 4-pole	D
08317815365	<b>KJ6-M8MN70-DNS-V2</b>	non shielded	NPN	connector M12 4-pole	D
08313060842	<b>SJ6-M8MN70-DNÖ-V2</b>	non shielded	NPN	connector M12 4-pole	D

Other cable lengths as requested.



# INDUCTIVE SENSORS XXL

## SQUARE Q8

### General data

Mounting	shielded
Operating voltage $U_b$	10V ... 30V DC
Ripple voltage of $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 1V$
Max. load current	200mA
Off-state current $I_o$	$\leq 10mA$
Residual current	$\leq 10\mu A$
Max. switching frequency $f$	1000Hz
Switching distance	3mm
Hysteresis $H$	$\leq 15\%$ (Sr)
Repeatability $R$	$\leq 2\%$ (Sr)
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$ (Sr)
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	brass, nickel-plated
Front cap	POM



The drawings of these sensors are shown on the following page.

### Selection chart

Article number	Designation	Output signal	Connection	Drawing (next page)
08317612000	KJ3-Q8MB40-DPS	PNP	2m cable PVC 3 x 015mm <sup>2</sup>	A
08313880327	SJ3-Q8MB40-DPÖ	PNP	2m cable PVC 3 x 015mm <sup>2</sup>	A
08317612100	KJ3-Q8MB40-DNS	NPN	2m cable PVC 3 x 015mm <sup>2</sup>	A
08313880342	SJ3-Q8MB40-DNÖ	NPN	2m cable PVC 3 x 015mm <sup>2</sup>	A
08317612064	KJ3-Q8MB60-DPS-V1	PNP	connector M8 3-pole	A1
08313880321	SJ3-Q8MB60-DPÖ-V1	PNP	connector M8 3-pole	A1
08317612164	KJ3-Q8MB60-DNS-V1	NPN	connector M8 3-pole	A1
08313880341	SJ3-Q8MB60-DNÖ-V1	NPN	connector M8 3-pole	A1
08313880318	SJ3-Q8MB40-DPS-AM	PNP	2m cable PVC 3 x 015mm <sup>2</sup>	B
08313880328	SJ3-Q8MB40-DPÖ-AM	PNP	2m cable PVC 3 x 015mm <sup>2</sup>	B
08313880338	SJ3-Q8MB40-DNS-AM	NPN	2m cable PVC 3 x 015mm <sup>2</sup>	B
08313880348	SJ3-Q8MB40-DNÖ-AM	NPN	2m cable PVC 3 x 015mm <sup>2</sup>	B
08313880317	SJ3-Q8MB60-DPS-V1-AM	PNP	connector M8 3-pole	B1
08313038827	SJ3-Q8MB60-DPÖ-V1-AM	PNP	connector M8 3-pole	B1
08313880337	SJ3-Q8MB60-DNS-V1-AM	NPN	connector M8 3-pole	B1
08313880347	SJ3-Q8MB60-DNÖ-V1-AM	NPN	connector M8 3-pole	B1

Other cable lengths as requested.

AM - active field in center.

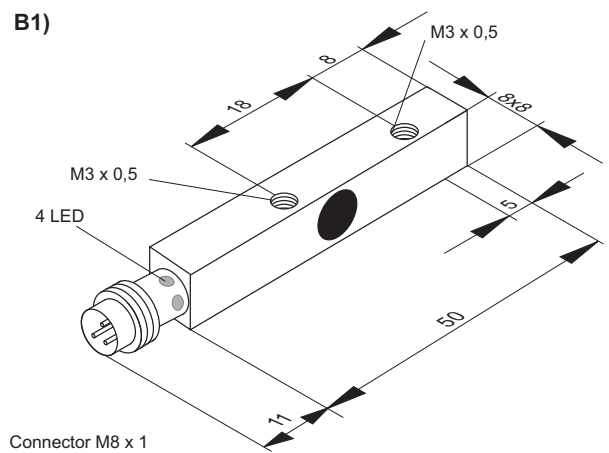
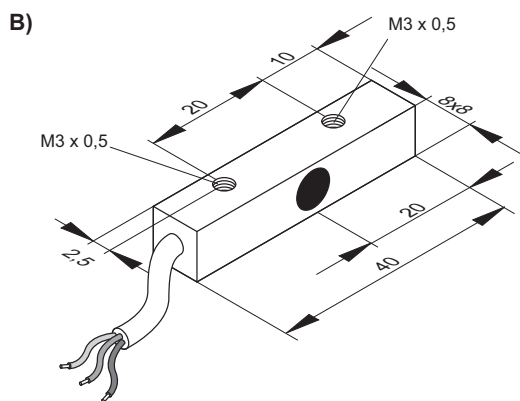
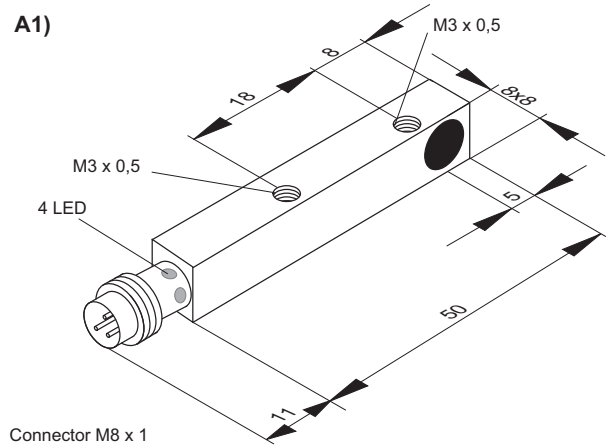
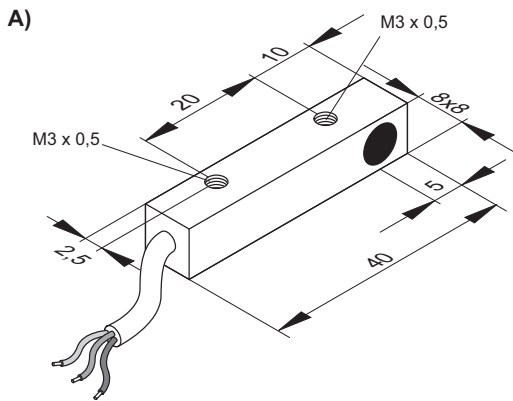




# INDUCTIVE SENSORS XXL

## SQUARE Q8

### Dimensions



all data in mm



# INDUCTIVE SENSORS XXL

## CYLINDER M12

### General data

Operating voltage $U_b$	10V ... 30V DC
Ripple voltage of $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 1V$
Max. load current	200mA
Off-state current $I_0$	$\leq 10mA$
Residual current	$\leq 10\mu A$
Max. switching frequency $f$	KJ6... 1000Hz SJ6... 1000Hz KJ10... 500Hz SJ10... 500Hz
Switching distance	3mm
Hysteresis $H$	$\leq 15\%$ (Sr)
Repeatability $R$	$\leq 2\%$ (Sr)
Operating temperature $T_a$	$-25^\circ C \dots +70^\circ C$
Temperature drift	$\leq 10\%$ (Sr)
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	brass, nickel-plated
Front cap	KJ6... POM SJ6... POM KJ10... PBT SJ10... PBT



The drawings of these sensors are shown on the following page.

### Selection chart

Article number	Designation switching distance 6mm	Mounting	Output signal	Connection	Drawing (next page)
08317825000	KJ6-M12MB50-DPS	shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313120627	SJ6-M12MB50-DPÖ	shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317825100	KJ6-M12MB50-DNS	shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313120647	SJ6-M12MB50-DNÖ	shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317825065	KJ6-M12MB68-DPS-V2	shielded	PNP	connector M12 4-pole	A1
08313061222	SJ6-M12MB68-DPÖ-V2	shielded	PNP	connector M12 4-pole	A1
08317825165	KJ6-M12MB68-DNS-V2	shielded	NPN	connector M12 4-pole	A1
08317825565	SJ6-M12MB68-DNÖ-V2	shielded	NPN	connector M12 4-pole	A1

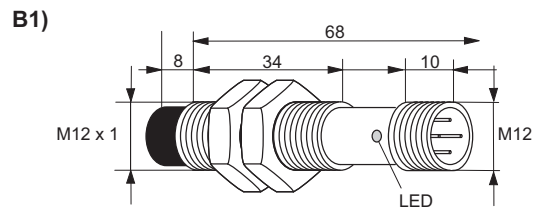
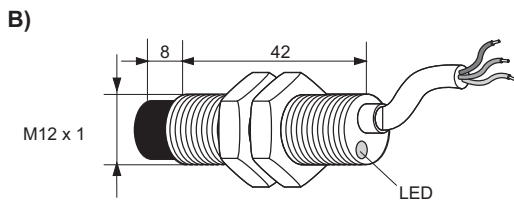
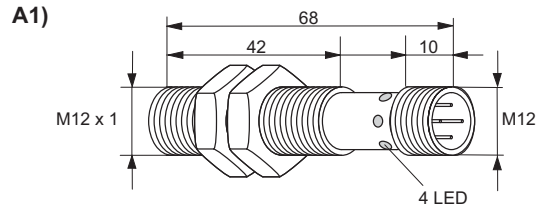
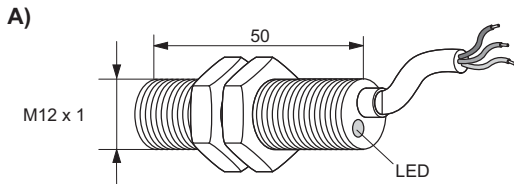
	Designation switching distance 10mm				
08317825200	KJ10-M12MN50-DPS	non shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08313121027	KJ10-M12MN50-DPÖ	non shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08317825300	KJ10-M12MN50-DNS	non shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08313121047	KJ10-M12MN50-DNÖ	non shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08317825265	KJ10-M12MN68-DPS-V2	non shielded	PNP	connector M12 4-pole	B1
08313101222	KJ10-M12MN68-DPÖ-V2	non shielded	PNP	connector M12 4-pole	B1
08313101232	KJ10-M12MN68-DNS-V2	non shielded	NPN	connector M12 4-pole	B1
08313101242	KJ10-M12MN68-DNÖ-V2	non shielded	NPN	connector M12 4-pole	B1



# INDUCTIVE SENSORS XXL

## CYLINDER M12

### Dimensions



all data in mm



# INDUCTIVE SENSORS XXL

## SQUARE Q12

### General data

<b>Mounting</b>	shielded
<b>Operating voltage <math>U_b</math></b>	10V ... 30V DC
<b>Ripple voltage of <math>U_b</math></b>	$\leq 10\%$
<b>Voltage drop <math>U_d</math></b>	$\leq 2V$
<b>Max. load current</b>	200mA
<b>Off-state current <math>I_o</math></b>	$\leq 10mA$
<b>Residual current</b>	$\leq 10\mu A$
<b>Max. switching frequency <math>f</math></b>	1000Hz
<b>Switching distance</b>	6mm
<b>Hysteresis <math>H</math></b>	$\leq 15\%$ (Sr)
<b>Repeatability <math>R</math></b>	$\leq 2\%$ (Sr)
<b>Operating temperature <math>T_a</math></b>	-25°C ... +70°C
<b>Temperature drift</b>	$\leq 10\%$ (Sr)
<b>Protection class</b>	IP67
<b>EMV-standard</b>	according to IEC 60947-5-2
<b>Switchung state</b>	LED
<b>Housing material</b>	brass, nickel-plated
<b>Front cap</b>	POM



The drawings of these sensors are shown on the following page.

### Auswahltabelle

Article number	Designation	Output signal	Connection	Drawing (next page)
08313620617	<b>SJ6-Q12MB50-DPS</b>	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08313620627	<b>SJ6-Q12MB50-DPÖ</b>	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08313620637	<b>SJ6-Q12MB50-DNS</b>	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08313620647	<b>SJ6-Q12MB50-DNÖ</b>	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	A
08313661211	<b>SJ6-Q12MB60-DPS-V1</b>	PNP	connector M8 3-pole	A1
08313661221	<b>SJ6-Q12MB60-DPÖ-V1</b>	PNP	connector M8 3-pole	A1
08313661231	<b>SJ6-Q12MB60-DNS-V1</b>	NPN	connector M8 3-pole	A1
08313661241	<b>SJ6-Q12MB60-DNÖ-V1</b>	NPN	connector M8 3-pole	A1
08313620618	<b>SJ6-Q12MB50-DPS-AM</b>	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08313620628	<b>SJ6-Q12MB50-DPÖ-AM</b>	PNP	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08313620638	<b>SJ6-Q12MB50-DNS-AM</b>	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08313620648	<b>SJ6-Q12MB50-DNÖ-AM</b>	NPN	2m cable PVC 3 x 0,15mm <sup>2</sup>	B
08313661217	<b>SJ6-Q12MB60-DPS-V1-AM</b>	PNP	connector M8 3-pole	B1
08313661227	<b>SJ6-Q12MB60-DPÖ-V1-AM</b>	PNP	connector M8 3-pole	B1
08313661237	<b>SJ6-Q12MB60-DNS-V1-AM</b>	NPN	connector M8 3-pole	B1
08313661247	<b>SJ6-Q12MB60-DNÖ-V1-AM</b>	NPN	connector M8 3-pole	B1

Other cable lengths as requested.

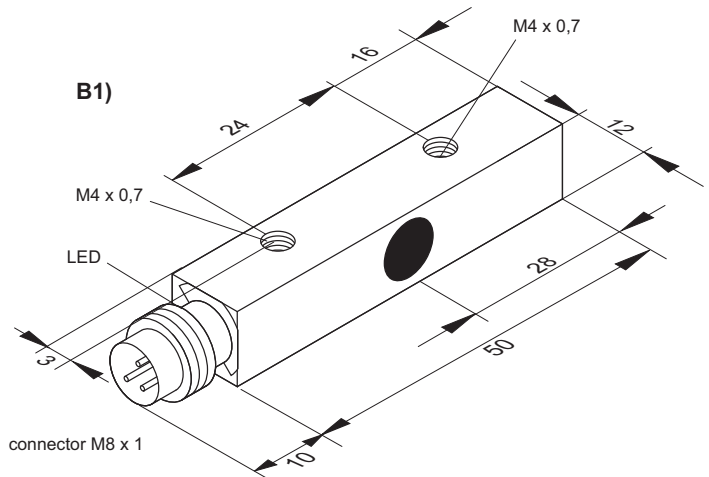
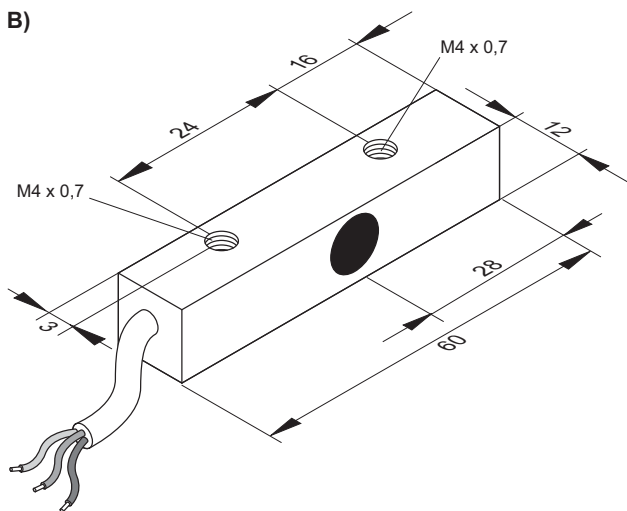
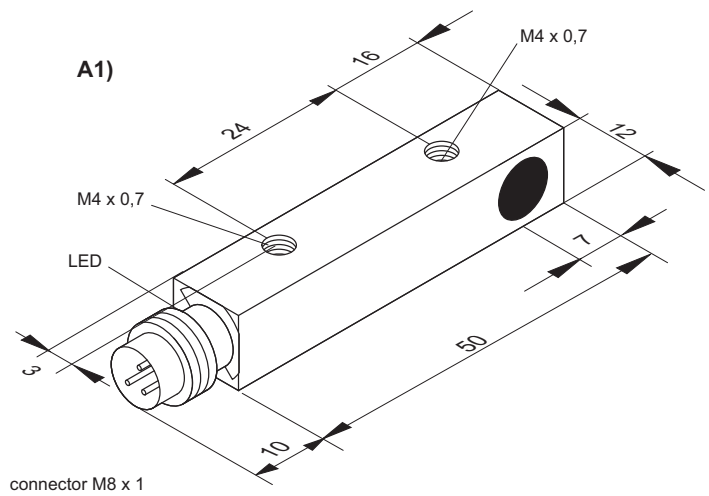
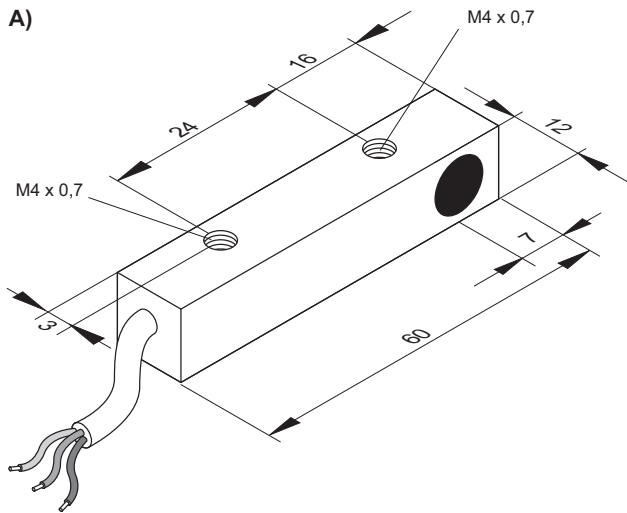
AM - active field in center.



# INDUCTIVE SENSORS XXL

## SQUARE Q12

### Dimensions



all data in mm



## CYLINDER M18

### General data

Operating voltage $U_b$	10V ... 30V DC
Ripple voltage of $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2V$
Max. load current	200mA
Off-state current $I_0$	$\leq 10mA$
Residual current	$\leq 50\mu A$
Max. switching frequency $f$	KJ12... 300Hz SJ12... 300Hz KJ20... 100Hz SJ20... 100Hz
Hysteresis $H$	$\leq 15\%$ (Sr)
Repeatability $R$	$\leq 2\%$ (Sr)
Operating temperature $T_a$	$-25^\circ C \dots +70^\circ C$
Temperature drift	$\leq 10\%$ (Sr)
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	brass, nickel-plated
Front cap	PBT



The drawings of these sensors are shown on the next page.

### Selection chart

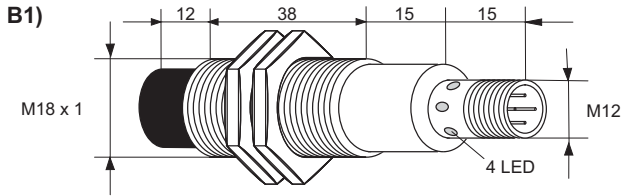
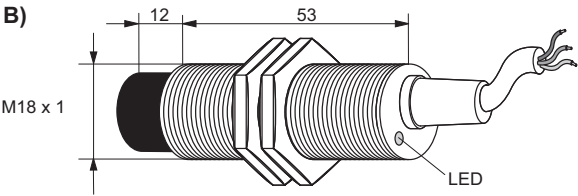
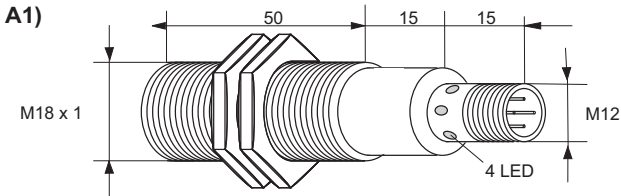
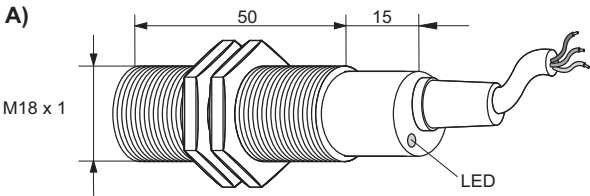
Article number	Designation switching distance 12mm	Mounting	Output signal	Connection	Drawing (next page)
08317845000	KJ12-M18MB65-DPS	shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313181227	SJ12-M18MB65-DPÖ	shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317845100	KJ12-M18MB65-DNS	shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313181247	SJ12-M18MB65-DNÖ	shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08317845065	KJ12-M18MB76-DPS-V2	shielded	PNP	connector M12 4-pole	A1
08313121822	SJ12-M18MB76-DPÖ-V2	shielded	PNP	connector M12 4-pole	A1
08313121832	SJ12-M18MB76-DNS-V2	shielded	NPN	connector M12 4-pole	A1
08313121842	SJ12-M18MB76-DNÖ-V2	shielded	NPN	connector M12 4-pole	A1
	<b>Designation switching distance 20mm</b>				
08317845200	KJ20-M18MN65-DPS	non shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08313182027	SJ20-M18MN65-DPÖ	non shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08317845300	KJ20-M18MN65-DNS	non shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08313182047	SJ20-M18MN65-DNÖ	non shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	B
08317845265	KJ20-M18MN76-DPS-V2	non shielded	PNP	connector M12 4-pole	B1
08313201822	SJ20-M18MN76-DPÖ-V2	non shielded	PNP	connector M12 4-pole	B1
08317845365	KJ20-M18MN76-DNS-V2	non shielded	NPN	connector M12 4-pole	B1
08313201842	SJ20-M18MN76-DNÖ-V2	non shielded	NPN	connector M12 4-pole	B1

Other cable lengths as requested.



# CYLINDER M18

## Dimensions



all data in mm

**p-u-l-s-o-n-i-c**  
Pulsotronic GmbH & Co. KG

Neue Schichtstraße 14b  
D-09366 Niederdorf

☎ +49 (0) 37296 / 930 - 200  
☎ +49 (0) 37296 / 930 - 280

✉ info@pulsotronic.de  
www.pulsotronic.de

subject to  
modifications!



# INDUCTIVE SENSORS XXL

## CYLINDER G20

### General data

Operating voltage $U_b$	10V ... 30V DC
Ripple voltage of $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2V$
Max. load current	200mA
Off-state current $I_o$	$\leq 10mA$
Residual current	$\leq 10\mu A$
Max. switching frequency $f$	SJ12... 300Hz SJ20... 100Hz
Hysteresis $H$	$\leq 15\%$ (Sr)
Repeatability $R$	$\leq 2\%$ (Sr)
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$ (Sr)
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	polycarbonate



The drawings of these sensors are shown on the next page.

### Selection chart

Article number	Designation switching distance 12mm	Mounting	Output signal	Connection	Drawing (next page)
08313201217	<b>SJ12-G20KB80-DPS</b>	shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313201227	<b>SJ12-G20KB80-DPÖ</b>	shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313201237	<b>SJ12-G20KB80-DNS</b>	shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313201247	<b>SJ12-G20KB80-DNÖ</b>	shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313122012	<b>SJ12-G20KB92-DPS-V2/1</b>	shielded	PNP	connector M12 4-pole	B
08313122022	<b>SJ12-G20KB92-DPÖ-V2/1</b>	shielded	PNP	connector M12 4-pole	B
08313122032	<b>SJ12-G20KB92-DNS-V2/1</b>	shielded	NPN	connector M12 4-pole	B
08313122042	<b>SJ12-G20KB92-DNÖ-V2/1</b>	shielded	NPN	connector M12 4-pole	B
	<b>Designation switching distance 20mm</b>				
08313202017	<b>SJ20-G20KN80-DPS</b>	non shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313202027	<b>SJ20-G20KN80-DPÖ</b>	non shielded	PNP	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313202037	<b>SJ20-G20KN80-DNS</b>	non shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313202047	<b>SJ20-G20KN80-DNÖ</b>	non shielded	NPN	2m cable PVC 3 x 0,34mm <sup>2</sup>	A
08313202012	<b>SJ20-G20KN92-DPS-V2/1</b>	non shielded	PNP	connector M12 4-pole	B
08313202022	<b>SJ20-G20KN92-DPÖ-V2/1</b>	non shielded	PNP	connector M12 4-pole	B
08313202032	<b>SJ20-G20KN92-DNS-V2/1</b>	non shielded	NPN	connector M12 4-pole	B
08313202042	<b>SJ20-G20KN92-DNÖ-V2/1</b>	non shielded	NPN	connector M12 4-pole	B

Other cable lengths as requested.

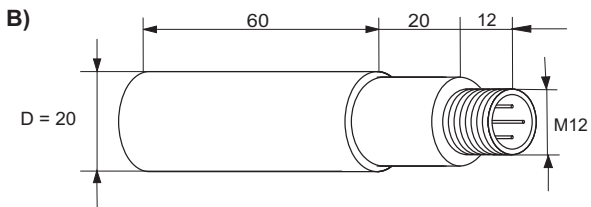
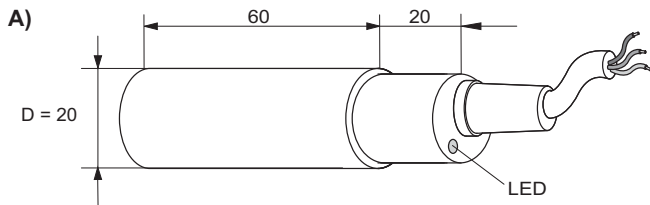




# INDUCTIVE SENSORS XXL

## CYLINDER G20

### Dimensions



all data in mm



# INDUCTIVE SENSORS XXL

## CYLINDER M30

### General data

Operating voltage $U_b$	10V ... 30V DC
Ripple voltage of $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2V$
Max. load current	200mA
Off-state current $I_0$	$\leq 10mA$
Residual current	$\leq 50\mu A$
Max. switching frequency $f$	KJ22... 300Hz SJ22... 300Hz KJ40... 100Hz SJ40... 100Hz
Hysteresis $H$	$\leq 15\%$ (Sr)
Repeatability $R$	$\leq 2\%$ (Sr)
Operating temperature $T_a$	$-25^\circ C \dots +70^\circ C$
Temperature drift	$\leq 10\%$ (Sr)
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	brass, nickel-plated
Front cap	PBT



The drawings of these sensors are shown on the following page.

### Selection chart

Article number	Designation switching distance 22mm	Mounting	Output signal	Connection	Drawing (next page)
08317865000	KJ22-M30MB65-DPS	shielded	PNP	2m cable PVC 3 x 0,5mm <sup>2</sup>	A
08317865400	KJ22-M30MB65-DPÖ	shielded	PNP	2m cable PVC 3 x 0,5mm <sup>2</sup>	A
08317865100	KJ22-M30MB65-DNS	shielded	NPN	2m cable PVC 3 x 0,5mm <sup>2</sup>	A
08313302247	SJ22-M30MB65-DNÖ	shielded	NPN	2m cable PVC 3 x 0,5mm <sup>2</sup>	A
08317865065	KJ22-M30MB80-DPS-V2	shielded	PNP	connector M12 4-pole	A1
08313223022	SJ22-M30MB80-DPÖ-V2	shielded	PNP	connector M12 4-pole	A1
08313223032	SJ22-M30MB80-DNS-V2	shielded	NPN	connector M12 4-pole	A1
08323223042	SJ22-M30MB80-DNÖ-V2	shielded	NPN	connector M12 4-pole	A1
	Designation switching distance 40mm				
08317865200	KJ40-M30MN80-DPS	non shielded	PNP	2m cable PVC 3 x 0,5mm <sup>2</sup>	B
08313304027	SJ40-M30MN80-DPÖ	non shielded	PNP	2m cable PVC 3 x 0,5mm <sup>2</sup>	B
08317865300	KJ40-M30MN80-DNS	non shielded	NPN	2m cable PVC 3 x 0,5mm <sup>2</sup>	B
08313304047	SJ40-M30MN80-DNÖ	non shielded	NPN	2m cable PVC 3 x 0,5mm <sup>2</sup>	B
08317865265	KJ40-M30MN95-DPS-V2	non shielded	PNP	connector M12 4-pole	B1
08313403022	SJ40-M30MN95-DPÖ-V2	non shielded	PNP	connector M12 4-pole	B1
08317865365	SJ40-M30MN95-DNS-V2	non shielded	NPN	connector M12 4-pole	B1
08313403042	SJ40-M30MN95-DNÖ-V2	non shielded	NPN	connector M12 4-pole	B1

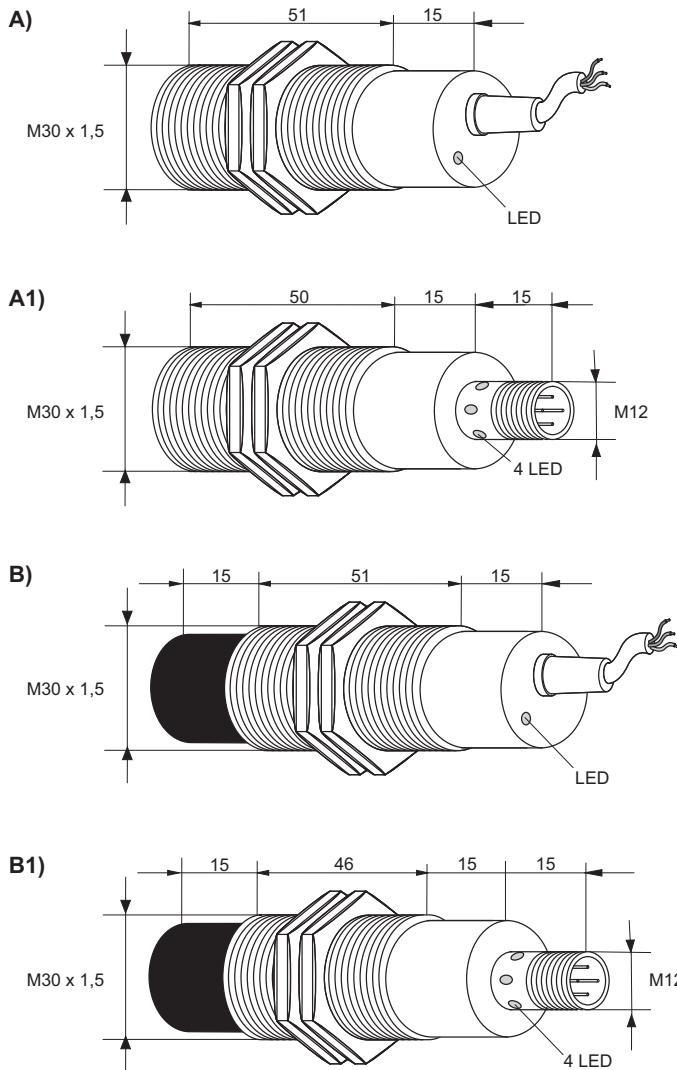
Other cable lengths as requested.



# INDUCTIVE SENSORS XXL

## CYLINDER M30

### Dimensions



all data in mm



# INDUCTIVE SENSORS XXL

## CYLINDER G34

### General data

Operating voltage $U_b$	10V ... 30V DC
Ripple voltage of $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 2V$
Max. load current	200mA
Off-state current $I_o$	$\leq 10mA$
Residual current	$\leq 10\mu A$
Max. switching frequency $f$	SJ22... 300Hz SJ40... 100Hz
Hysteresis $H$	$\leq 15\%$ (Sr)
Repeatability $R$	$\leq 2\%$ (Sr)
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$ (Sr)
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	polycarbonate

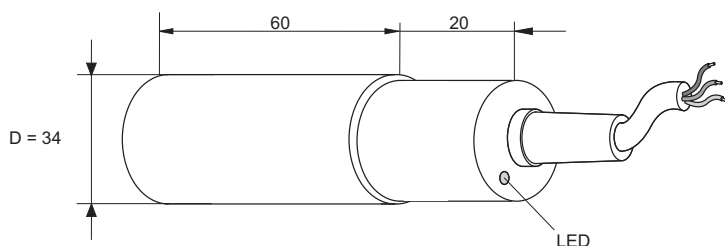


### Selection chart

Article number	Designation switching distance 22mm	Mounting	Output signal	Connection	Drawing (next page)
08313342217	<b>SJ22-G34KB80-DPS</b>	shielded	PNP	2m cable PVC 3 x 0,5mm <sup>2</sup>	A
08313342227	<b>SJ22-G34KB80-DPÖ</b>	shielded	PNP	2m cable PVC 3 x 0,5mm <sup>2</sup>	A
08313342237	<b>SJ22-G34KB80-DNS</b>	shielded	NPN	2m cable PVC 3 x 0,5mm <sup>2</sup>	A
08313342247	<b>SJ22-G34KB80-DNÖ</b>	shielded	NPN	2m cable PVC 3 x 0,5mm <sup>2</sup>	A
	Designation switching distance 40mm				
08313344017	<b>SJ40-G34KN80-DPS</b>	non shielded	PNP	2m cable PVC 3 x 0,5mm <sup>2</sup>	A
08313344027	<b>SJ40-G34KN80-DPÖ</b>	non shielded	PNP	2m cable PVC 3 x 0,5mm <sup>2</sup>	A
08313344037	<b>SJ40-G34KN80-DNS</b>	non shielded	NPN	2m cable PVC 3 x 0,5mm <sup>2</sup>	A
08313344047	<b>SJ40-G34KN80-DNÖ</b>	non shielded	NPN	2m cable PVC 3 x 0,5mm <sup>2</sup>	A

Other cable lengths as requested.

### Dimensions



all data in mm



# INDUCTIVE SENSORS XXL

## NOTES

---



## NOTES

---



# INDUCTIVE SENSORS XXL

## NOTES

---