



# INDUCTIVE SENSORS ULTRA MINI

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# INDUCTIVE SENSORS ULTRA MINI

## 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>N</b>	NPN	<b>CAN</b>	CAN-bus interface
<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 ULTRA MINI

## 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 ULTRA MINI

<b>Mounting</b>	shielded
<b>Operating voltage <math>U_b</math></b>	10 ... 30V DC
<b>Ripple voltage <math>U_b</math></b>	$\leq 10\%$
<b>Voltage drop <math>U_d</math></b>	$\leq 1V$
<b>Max. load current</b>	200mA
<b>Off-state current <math>I_0</math></b>	$\leq 10mA$
<b>Residual current <math>I_r</math></b>	$\leq 10\mu A$
<b>Max. switching frequency <math>f</math></b>	2000Hz
<b>Hysteresis H</b>	$\leq 15\%$
<b>Repeatability R</b>	$\leq 1\%$
<b>Operating temperature <math>T_a</math></b>	-25°C ... +70°C
<b>Temperature drift</b>	$\leq 10\%$
<b>Protection class</b>	IP67
<b>EMV-standard</b>	according to EN 60947-5-2
<b>Switching state</b>	LED yellow
<b>Housing material</b>	stainless steel
<b>Front cap</b>	POM
<b>Connection</b>	2m cable PUR 3 x 0,15mm <sup>2</sup>

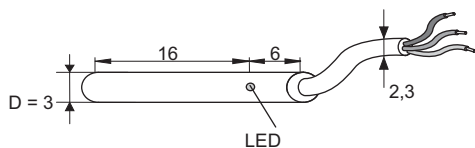


Other cable lengths as requested.

## Selection chart

Article number	Designation	Output signal	Switching distance
08317803010	<b>KJ0,6-G3EB22-DPS</b>	PNP	0,6mm
08313030081	<b>SJ0,8-G3EB22-DPS</b>	PNP	0,8mm
08313030082	<b>SJ0,8-G3EB22-DPÖ</b>	PNP	0,8mm
08313030083	<b>SJ0,8-G3EB22-DNS</b>	NPN	0,8mm
08313030084	<b>SJ0,8-G3EB22-DNÖ</b>	NPN	0,8mm

## Dimensions





# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER M4

### General data

Mounting	shielded
Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 1V$
Max. load current	200mA
Off-state current $I_o$	$\leq 10mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	2000Hz
Hysteresis $H$	$< 15\%$
Repeatability $R$	$\leq 1\%$
Operating temperature $T_a$	$-25^\circ C \dots +70^\circ C$
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED yellow
Housing material	stainless steel
Front cap	POM
Connection	2m cable PUR 3 x 0,15mm <sup>2</sup>

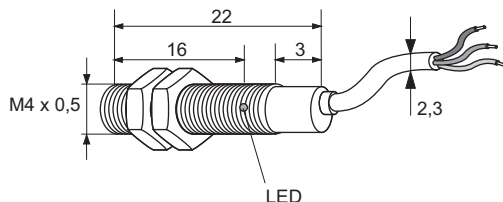


Other cable lengths as requested.

### Selection chart

Article number	Designation	Output signal	Switching distance
08317801210	<b>KJ0,6-M4EB-DPS</b>	PNP	0,6mm
08313040085	<b>SJ0,8-M4EB22-DPS</b>	PNP	0,8mm
08313040086	<b>SJ0,8-M4EB22-DPÖ</b>	PNP	0,8mm
08313040087	<b>SJ0,8-M4EB22-DNS</b>	NPN	0,8mm
08313040088	<b>SJ0,8-M4EB22-DNÖ</b>	NPN	0,8mm

### Dimensions



all data in mm



# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER G4

### General data

Mounting	shielded
Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 1V$
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	$\leq 1\%$
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED yellow
Housing material	stainless steel
Front cap	POM



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

### Selection chart

Article number	Designation standard	Output signal	Connection	Switching distance	Drawing (next page)
08317801010	<b>KJ0,8-G4EB25-DPS</b>	PNP	2m cable PUR 3 x 0,15mm <sup>2</sup>	0,8mm	A
08317801110	<b>KJ0,8-G4EB25-DNS</b>	NPN	2m cable PUR 3 x 0,15mm <sup>2</sup>	0,8mm	A
08317801064	<b>KJ0,8-G4EB38-DPS-V1</b>	PNP	connector M8 3-pole	0,8mm	A1
08316801164	<b>KJ0,8-G4EB38-DNS-V1</b>	NPN	connector M8 3-pole	0,8mm	A1
08313040120	<b>SJ1-G4EB25-DPÖ</b>	PNP	2m cable PUR 3 x 0,15mm <sup>2</sup>	1mm	A
08313040130	<b>SJ1-G4EB25-DNS</b>	NPN	2m cable PUR 3 x 0,15mm <sup>2</sup>	1mm	A
08313040140	<b>SJ1-G4EB25-DNÖ</b>	NPN	2m cable PUR 3 x 0,15mm <sup>2</sup>	1mm	A
08313040131	<b>SJ1-G4EB40-DNS-V1</b>	NPN	connector M8 3-pole	1mm	A1
08313040141	<b>SJ1-G4EB40-DNÖ-V1</b>	NPN	connector M8 3-pole	1mm	A1
08313040161	<b>SJ0,8-G4EB36-DPS-V3</b>	PNP	connector M5 4-pole	0,8mm	B
<b>Designation angled</b>					
08313040112	<b>SJ1W-G4EB30-DPS</b>	PNP	2m cable PUR 3 x 0,15mm <sup>2</sup>	1mm	C
08313040113	<b>SJ1W-G4EB40-DPS-V1</b>	PNP	connector M8 3-pole	1mm	C1
<b>Designation double switching distance</b>					
08313041510	<b>SJ1,5-G4EB25-DPS</b>	PNP	2m cable PUR 3 x 0,15mm <sup>2</sup>	1,5mm	A
08313041530	<b>SJ1,5-G4EB25-DNS</b>	NPN	2m cable PUR 3 x 0,15mm <sup>2</sup>	1,5mm	A
08313041511	<b>SJ1,5-G4EB40-DPS-V1</b>	PNP	connector M8 3-pole	1,5mm	A1
08313041531	<b>SJ1,5-G4EB40-DNS-V1</b>	NPN	connector M8 3-pole	1,5mm	A1

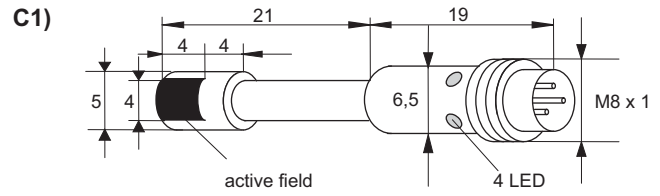
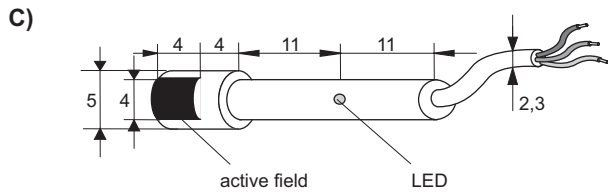
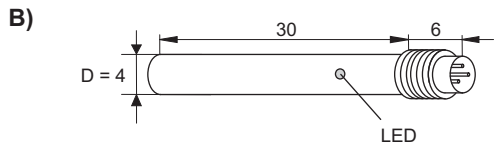
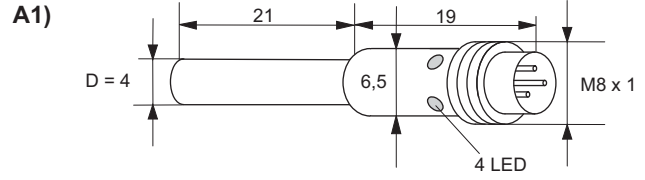
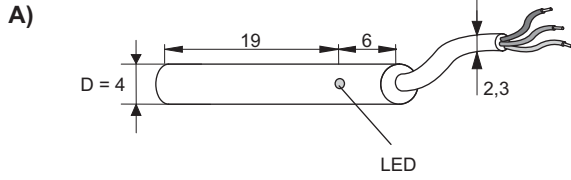
Other cable lengths and output configurations on request.



# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER G4

### Dimensions



all data in mm



# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER M5

### General data

Mounting	shielded
Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 1V$
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	$\leq 1\%$
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED yellow
Housing material	stainless steel
Front cap	POM (except SJ0,8... PCP)



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

### Selection chart

Article number	Designation standard	Output signal	Switching distance	Connection	Drawing (next page)
08313050124	<b>SJ0,8-M5EB28-DPÖ</b>	PNP	0,8mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313050144	<b>SJ0,8-M5EB28-DNÖ</b>	NPN	0,8mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08310000023	<b>KJ0,8-M5EB25-DPS</b>	PNP	0,8mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	B
08317802110	<b>KJ0,8-M5EB25-DNS</b>	NPN	0,8mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	B
08317802064	<b>KJ0,8-M5EB38-DPS-V1</b>	PNP	0,8mm	connector M8 3-pole	B1
08317802464	<b>KJ0,8-M5EB38-DPÖ-V1</b>	PNP	0,8mm	connector M8 3-pole	B1
08313050111	<b>SJ1-M5EB40-DPS-V1</b>	PNP	1mm	connector M8 3-pole	B1
08313050161	<b>SJ0,8-M5EB36-DPS-V3</b>	PNP	0,8mm	connector M5 4-pole	C
	<b>Designation angled</b>				
08313050112	<b>SJ1W-M5EB30-DPS</b>	PNP	1mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	D
	<b>Designation double switching distance</b>				
08313051590	<b>SJ1,5-M5EB25-DPS</b>	PNP	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	B
08313051597	<b>SJ1,5-M5EB40-DPS-V1</b>	PNP	1,5mm	connector M8 3-pole	B1

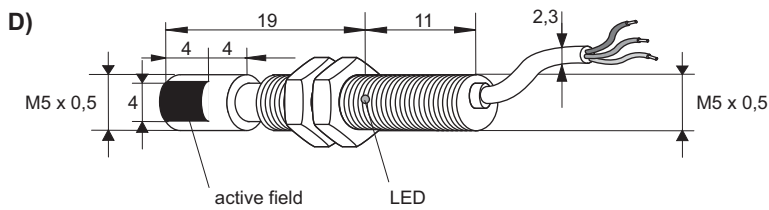
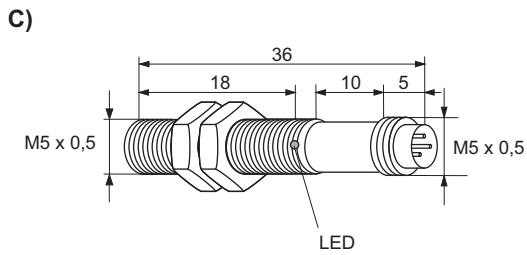
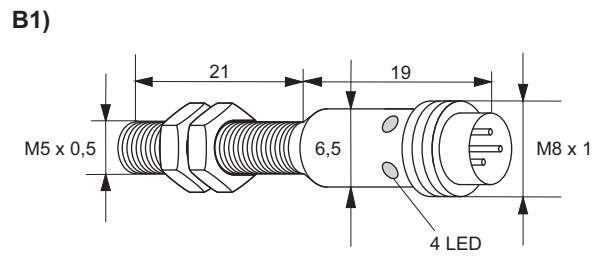
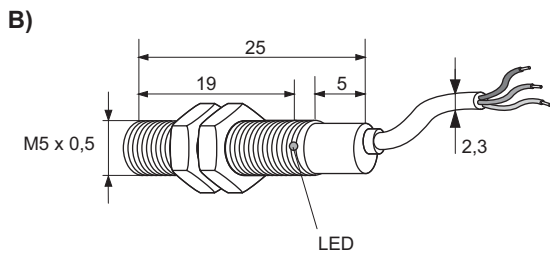
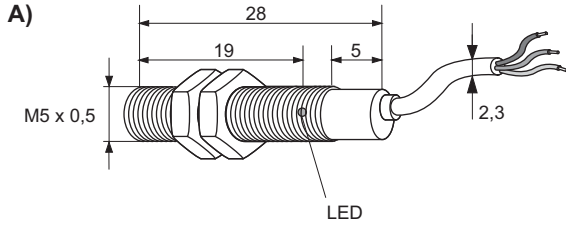
Other cable lengths and output configurations as requested.



# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER M5

### Dimensions



all data in mm



# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER G5

### General data

Mounting	shielded
Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 1V$
Max. load current	200mA
Off-state current $I_0$	$\leq 10mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	2000Hz
Switching distance	1,5mm
Hysteresis H	$\leq 15\%$
Repeatability R	$\leq 1\%$
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED yellow
Housing material	stainless steel
Front cap	POM
Connection	2m cable PVC 3 x 0,15mm <sup>2</sup>

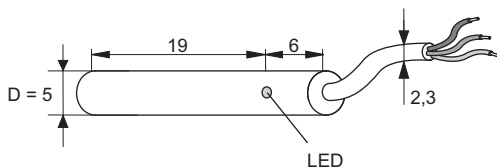


Other cable lengths as requested.

### Selection chart

Article number	Designation	Output signal
08313050151	<b>SJ1,5-G5EB25-DPS</b>	PNP
08313050152	<b>SJ1,5-G5EB25-DPÖ</b>	PNP
08313050153	<b>SJ1,5-G5EB25-DNS</b>	NPN
08313050154	<b>SJ1,5-G5EB25-DNÖ</b>	NPN

### Dimensions



all data in mm



# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER G6,5

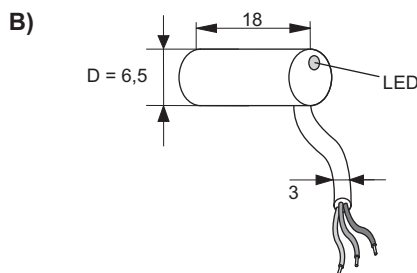
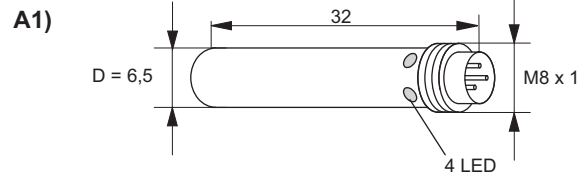
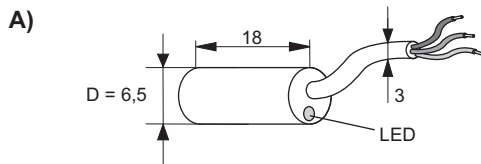
### General data

Mounting	shielded
Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 1V$
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	$\leq 1\%$
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED yellow
Housing material	stainless steel
Front cap	POM



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

### Dimensions



all data in mm



# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER G6,5

### Selection chart

Article number	Designation standard	Output signal	Switching distance	Connection	Drawing (previous page)
08313650151	<b>SJ1,5-G6,5EB18-DPS</b>	PNP	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313650152	<b>SJ1,5-G6,5EB18-DPÖ</b>	PNP	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313650153	<b>SJ1,5-G6,5EB18-DNS</b>	NPN	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313650154	<b>SJ1,5-G6,5EB18-DNÖ</b>	NPN	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313651511	<b>SJ1,5-G6,5EB32-DPS-V1</b>	PNP	1,5mm	connector M8 3-pole	A1
08313651521	<b>SJ1,5-G6,5EB32-DPÖ-V1</b>	PNP	1,5mm	connector M8 3-pole	A1
08313651531	<b>SJ1,5-G6,5EB32-DNS-V1</b>	NPN	1,5mm	connector M8 3-pole	A1
08313651541	<b>SJ1,5-G6,5EB32-DNÖ-V1</b>	NPN	1,5mm	connector M8 3-pole	A1
08313650210	<b>SJ2-G6,5EB18-DPS</b>	PNP	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313650220	<b>SJ2-G6,5EB18-DPÖ</b>	PNP	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313650230	<b>SJ2-G6,5EB18-DNS</b>	NPN	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313650240	<b>SJ2-G6,5EB18-DNÖ</b>	NPN	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313651211	<b>SJ2-G6,5EB32-DPS-V1</b>	PNP	2mm	connector M8 3-pole	A1
08313651221	<b>SJ2-G6,5EB32-DPÖ-V1</b>	PNP	2mm	connector M8 3-pole	A1
08313651231	<b>SJ2-G6,5EB32-DNS-V1</b>	NPN	2mm	connector M8 3-pole	A1
08313651241	<b>SJ2-G6,5EB32-DNÖ-V1</b>	NPN	2mm	connector M8 3-pole	A1
08313650310	<b>SJ3-G6,5EB18-DPS</b>	PNP	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313650320	<b>SJ3-G6,5EB18-DPÖ</b>	PNP	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313650330	<b>SJ3-G6,5EB18-DNS</b>	NPN	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313650340	<b>SJ3-G6,5EB18-DNÖ</b>	NPN	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313651311	<b>SJ3-G6,5EB32-DPS-V1</b>	PNP	3mm	connector M8 3-pole	A1
08313651321	<b>SJ3-G6,5EB32-DPÖ-V1</b>	PNP	3mm	connector M8 3-pole	A1
08313651331	<b>SJ3-G6,5EB32-DNS-V1</b>	NPN	3mm	connector M8 3-pole	A1
08313651341	<b>SJ3-G6,5EB32-DNÖ-V1</b>	NPN	3mm	connector M8 3-pole	A1
	<b>Designation angled</b>				
08313650155	<b>SJ1,5-G6,5EB18-DPS-W</b>	PNP	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	B
08313650212	<b>SJ2-G6,5EB18-DPS-W</b>	PNP	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	B
08313650312	<b>SJ3-G6,5EB18-DPS-W</b>	PNP	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	B

Other cable lengths as requested.



# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER M8

### General data

Mounting	shielded
Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 1V$
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	$\leq 1\%$
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED yellow
Housing material	stainless steel
Front cap	POM



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

### Selection chart

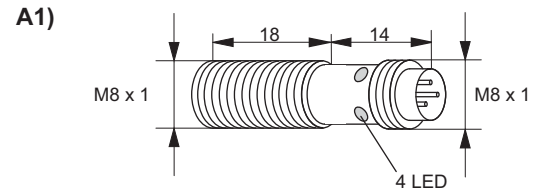
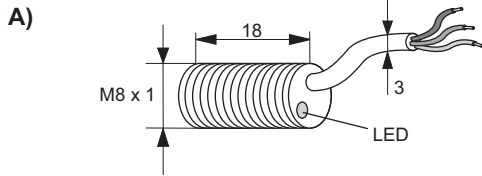
Article number	Designation standard	Output signal	Switching distance	Connection	Drawing (next page)
08313080151	SJ1,5-M8EB18-DPS	PNP	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313080152	SJ1,5-M8EB18-DPÖ	PNP	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313080153	SJ1,5-M8EB18-DNS	NPN	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313080154	SJ1,5-M8EB18-DNÖ	NPN	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08310000027	KJ1,5-M8EB30-DPS-V1	PNP	1,5mm	connector M8 3-pole	A1
08310000482	KJ1,5-M8EB30-DPÖ-V1	PNP	1,5mm	connector M8 3-pole	A1
08313080157	SJ1,5-M8EB32-DNS-V1	NPN	1,5mm	connector M8 3-pole	A1
08313080158	SJ1,5-M8EB32-DNÖ-V1	NPN	1,5mm	connector M8 3-pole	A1
08313080210	SJ2-M8EB18-DPS	PNP	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313080220	SJ2-M8EB18-DPÖ	PNP	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313080230	SJ2-M8EB18-DNS	NPN	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313080240	SJ2-M8EB18-DNÖ	NPN	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313080211	SJ2-M8EB32-DPS-V1	PNP	2mm	connector M8 3-pole	A1
08313080221	SJ2-M8EB32-DPÖ-V1	PNP	2mm	connector M8 3-pole	A1
08313080231	SJ2-M8EB32-DNS-V1	NPN	2mm	connector M8 3-pole	A1
08313080241	SJ2-M8EB32-DNÖ-V1	NPN	2mm	connector M8 3-pole	A1
08313080310	SJ3-M8EB18-DPS	PNP	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313080320	SJ3-M8EB18-DPÖ	PNP	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313080330	SJ3-M8EB18-DNS	NPN	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313080340	SJ3-M8EB18-DNÖ	NPN	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313080311	SJ3-M8EB32-DPS-V1	PNP	3mm	connector M8 3-pole	A1
08313080321	SJ3-M8EB32-DPÖ-V1	PNP	3mm	connector M8 3-pole	A1
08313080331	SJ3-M8EB32-DNS-V1	NPN	3mm	connector M8 3-pole	A1
08313080341	SJ3-M8EB32-DNÖ-V1	NPN	3mm	connector M8 3-pole	A1



# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER M8

### Dimensions



with two M8 screw nuts each

all data in mm



# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER G8

### General data

<b>Mounting</b>	shielded
<b>Operating voltage <math>U_b</math></b>	10 ... 30V DC
<b>Ripple voltage <math>U_b</math></b>	$\leq 10\%$
<b>Voltage drop <math>U_d</math></b>	$\leq 1V$
<b>Max. load current</b>	200mA
<b>Off-state current <math>I_0</math></b>	$\leq 10mA$
<b>Residual current <math>I_r</math></b>	$\leq 10\mu A$
<b>Max. switching frequency <math>f</math></b>	2000Hz
<b>Hysteresis H</b>	$\leq 15\%$
<b>Repeatability R</b>	$\leq 1\%$
<b>Operating temperature <math>T_a</math></b>	-25°C ... +70°C
<b>Temperature drift</b>	$\leq 10\%$
<b>Protection class</b>	IP67
<b>EMV-standard</b>	according to EN 60947-5-2
<b>Switching state</b>	LED yellow
<b>Housing material</b>	Stainless steel
<b>Front cap</b>	POM



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

### Selection chart

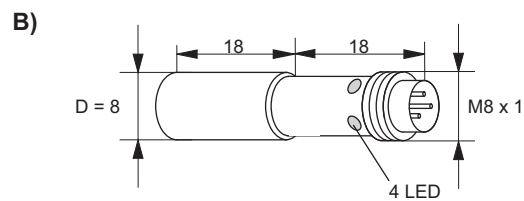
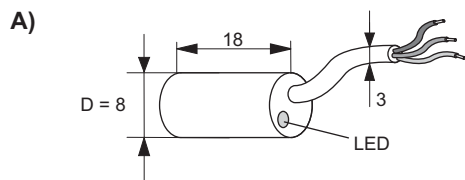
Article number	Designation standard	Output signal	Switching distance	Connection	Drawing (next page)
08313680151	<b>SJ1,5-G8EB18-DPS</b>	PNP	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680152	<b>SJ1,5-G8EB18-DPÖ</b>	PNP	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680153	<b>SJ1,5-G8EB18-DNS</b>	NPN	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680154	<b>SJ1,5-G8EB18-DNÖ</b>	NPN	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680155	<b>SJ1,5-G8EB32-DPS-V1</b>	PNP	1,5mm	connector M8 3-pole	A1
08313680156	<b>SJ1,5-G8EB32-DPÖ-V1</b>	PNP	1,5mm	connector M8 3-pole	A1
08313680157	<b>SJ1,5-G8EB32-DNS-V1</b>	NPN	1,5mm	connector M8 3-pole	A1
08313680158	<b>SJ1,5-G8EB32-DNÖ-V1</b>	NPN	1,5mm	connector M8 3-pole	A1
08313680210	<b>SJ2-G8EB18-DPS</b>	PNP	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680220	<b>SJ2-G8EB18-DPÖ</b>	PNP	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680230	<b>SJ2-G8EB18-DNS</b>	NPN	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680240	<b>SJ2-G8EB18-DNÖ</b>	NPN	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680211	<b>SJ2-G8EB32-DPS-V1</b>	PNP	2mm	connector M8 3-pole	A1
08313680221	<b>SJ2-G8EB32-DPÖ-V1</b>	PNP	2mm	connector M8 3-pole	A1
08313680231	<b>SJ2-G8EB32-DNS-V1</b>	NPN	2mm	connector M8 3-pole	A1
08313680241	<b>SJ2-G8EB32-DNÖ-V1</b>	NPN	2mm	connector M8 3-pole	A1
08313680310	<b>SJ3-G8EB18-DPS</b>	PNP	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680320	<b>SJ3-G8EB18-DPÖ</b>	PNP	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680330	<b>SJ3-G8EB18-DNS</b>	NPN	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680340	<b>SJ3-G8EB18-DNÖ</b>	NPN	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313680311	<b>SJ3-G8EB32-DPS-V1</b>	PNP	3mm	connector M8 3-pole	A1
08313680321	<b>SJ3-G8EB32-DPÖ-V1</b>	PNP	3mm	connector M8 3-pole	A1
08313680331	<b>SJ3-G8EB32-DNS-V1</b>	NPN	3mm	connector M8 3-pole	A1
08313680341	<b>SJ3-G8EB32-DNÖ-V1</b>	NPN	3mm	connector M8 3-pole	A1



# INDUCTIVE SENSORS ULTRA MINI

## CYLINDER G8

### Dimensions



all data in mm



# INDUCTIVE SENSORS ULTRA MINI

## SQUARE Q5

### General data

Mounting	shielded
Operating voltage $U_b$	10 ... 30V DC
Ripple voltage $U_b$	$\leq 10\%$
Voltage drop $U_d$	$\leq 1V$
Max. load current	200mA
Off-state current $I_o$	$\leq 10mA$
Residual current $I_r$	$\leq 10\mu A$
Max. switching frequency $f$	2000Hz
Hysteresis H	$\leq 15\%$
Repeatability R	$\leq 1\%$
Operating temperature $T_a$	-25°C ... +70°C
Temperature drift	$\leq 10\%$
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED yellow
Housing material	brass, nickel-plated
Front cap	POM
Connection	2m cable PVC 3 x 0,15mm <sup>2</sup>

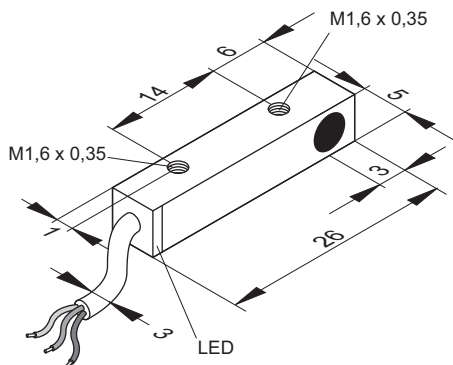


Other cable lengths as requested.

### Selection chart

Article number	Designation	Output signal
08313550110	SJ1-Q5MB26-DPS	PNP
08313550120	SJ1-Q5MB26-DPÖ	PNP
08313550130	SJ1-Q5MB26-DNS	NPN
08313550140	SJ1-Q5MB26-DNÖ	NPN

### Dimensions



all data in mm



# INDUCTIVE SENSORS ULTRA MINI

## SQUARE Q8

### General data

<b>Mounting</b>	shielded
<b>Operating voltage <math>U_b</math></b>	10 ... 30V DC
<b>Ripple voltage <math>U_r</math></b>	$\leq 10\%$
<b>Voltage drop <math>U_d</math></b>	$\leq 1V$
<b>Max. load current</b>	200mA
<b>Off-state current <math>I_0</math></b>	$\leq 10mA$
<b>Residual current <math>I_r</math></b>	$\leq 10\mu A$
<b>Max. switching frequency <math>f</math></b>	2000Hz
<b>Hysteresis <math>H</math></b>	$\leq 15\%$
<b>Repeatability <math>R</math></b>	$\leq 1\%$
<b>Operating temperature <math>T_a</math></b>	-25°C ... +70°C
<b>Temperature drift</b>	$\leq 10\%$
<b>Protection class</b>	IP67
<b>EMV-standard</b>	according to EN 60947-5-2
<b>Switching state</b>	LED yellow
<b>Housing material</b>	brass, nickel-plated
<b>Front cap</b>	POM



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

### Dimensions

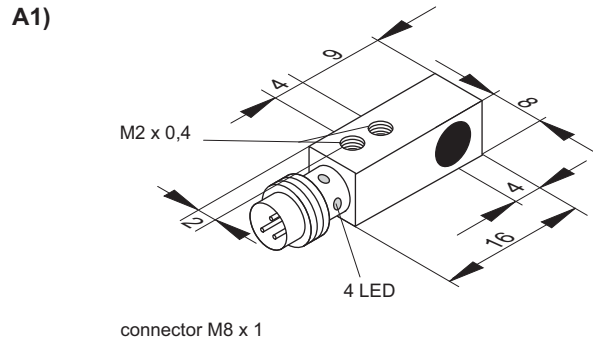
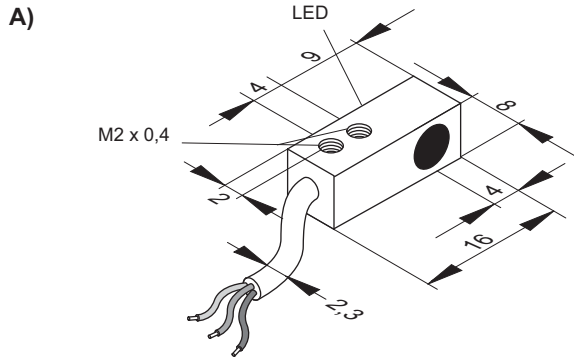
Article number	Designation standard	Output signal	Switching distance	Connection	Drawing (next page)
08313880151	<b>SJ1,5-Q8MB16-DPS</b>	PNP	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880152	<b>SJ1,5-Q8MB16-DPÖ</b>	PNP	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880153	<b>SJ1,5-Q8MB16-DNS</b>	NPN	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880154	<b>SJ1,5-Q8MB16-DNÖ</b>	NPN	1,5mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880155	<b>SJ1,5-Q8MB28-DPS-V1</b>	PNP	1,5mm	connector M8 3-pole	A1
08313880156	<b>SJ1,5-Q8MB28-DPÖ-V1</b>	PNP	1,5mm	connector M8 3-pole	A1
08313880157	<b>SJ1,5-Q8MB28-DNS-V1</b>	NPN	1,5mm	connector M8 3-pole	A1
08313880158	<b>SJ1,5-Q8MB28-DNÖ-V1</b>	NPN	1,5mm	connector M8 3-pole	A1
08313880210	<b>SJ2-Q8MB16-DPS</b>	PNP	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880220	<b>SJ2-Q8MB16-DPÖ</b>	PNP	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880230	<b>SJ2-Q8MB16-DNS</b>	NPN	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880240	<b>SJ2-Q8MB16-DNÖ</b>	NPN	2mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880211	<b>SJ2-Q8MB28-DPS-V1</b>	PNP	2mm	connector M8 3-pole	A1
08313880221	<b>SJ2-Q8MB28-DPÖ-V1</b>	PNP	2mm	connector M8 3-pole	A1
08313880231	<b>SJ2-Q8MB28-DNS-V1</b>	NPN	2mm	connector M8 3-pole	A1
08313880241	<b>SJ2-Q8MB28-DNÖ-V1</b>	NPN	2mm	connector M8 3-pole	A1
08313880310	<b>SJ3-Q8MB16-DPS</b>	PNP	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880320	<b>SJ3-Q8MB16-DPÖ</b>	PNP	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880330	<b>SJ3-Q8MB16-DNS</b>	NPN	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880340	<b>SJ3-Q8MB16-DNÖ</b>	NPN	3mm	2m cable PUR 3 x 0,15mm <sup>2</sup>	A
08313880311	<b>SJ3-Q8MB28-DPS-V1</b>	PNP	3mm	connector M8 3-pole	A1
08313880321	<b>SJ3-Q8MB28-DPÖ-V1</b>	PNP	3mm	connector M8 3-pole	A1
08313880331	<b>SJ3-Q8MB28-DNS-V1</b>	NPN	3mm	connector M8 3-pole	A1
08313880341	<b>SJ3-Q8MB28-DNÖ-V1</b>	NPN	3mm	connector M8 3-pole	A1



# INDUCTIVE SENSORS ULTRA MINI

## SQUARE Q8

### Dimensions



all data in mm