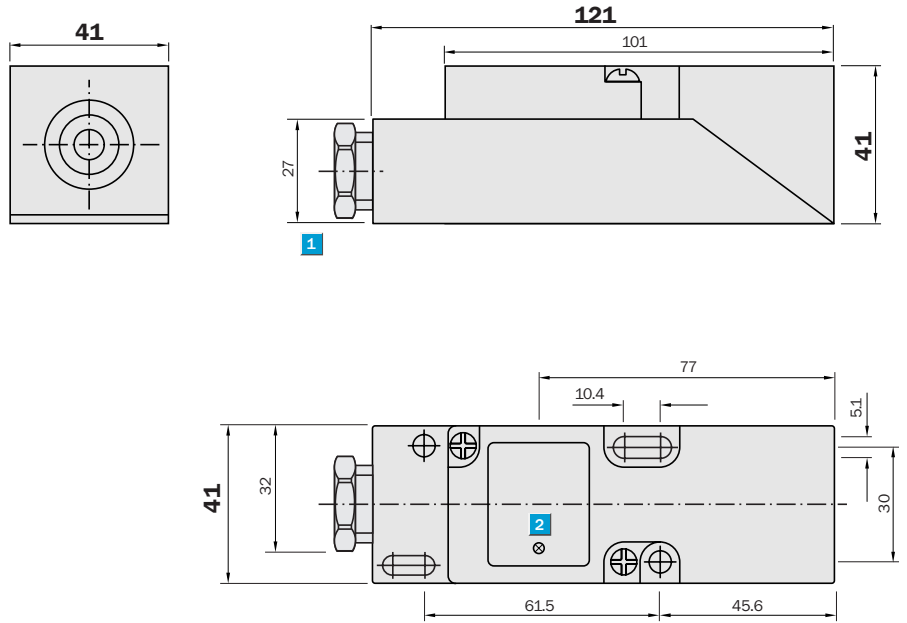


**Sensing range**  
15 / 20 mm

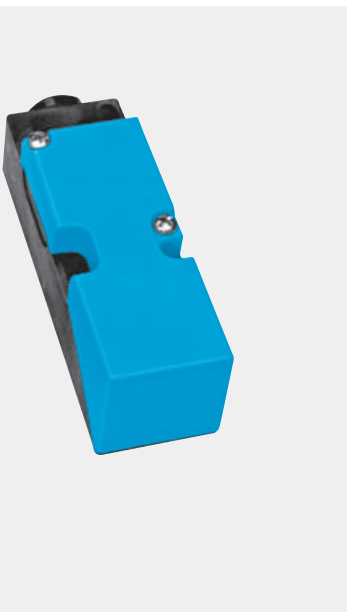
Inductive sensor

- Variable switching zone
- Programmable NO/NC function
- Short-circuit protection (pulsed)
- Terminal
- Enclosure rating IP 65

**Dimensional drawing**



- 1 Connection
- 2 Display LED

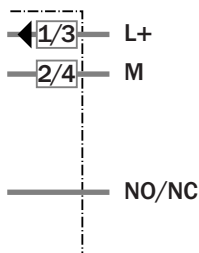


**Connection type**

- IQ40-15BPP-KKO
- IQ40-20NPP-KKO



Terminal M20 x 1.5



Technical data		IQ40-	15BPP -KKO	20NPP -KKO								
<b>Sensing range <math>S_n</math></b>	20 mm											
	15 mm											
<b>Electrical configuration</b>	DC 3-wire											
<b>Supply voltage <math>V_s</math></b>	DC 10 ... 36 V											
Voltage drop $V_d$	$\leq 2.5 V^{1)}$											
Power consumption	$\leq 15 mA^{2)}$											
<b>Continuous current <math>I_a</math></b>	$\leq 250 mA$											
Time delay before availability $t_v$	$\leq 4 ms$											
Hysteresis H, of $s_r$	1 ... 15 %											
Repeatability R	$\leq 10 \% (U_b \text{ and } T_a \text{ constant})^{3)}$											
Temperature drift, of $s_r$	$\pm 10 \%$											
EMC	According to EN 60947-5-2											
<b>Switching output</b>	PNP											
<b>Output function</b>	Programmable											
<b>Installation</b>	Non-flush											
	Flush											
<b>Connection type</b>	Cable gland, terminal M20 x 1.5											
Enclosure rating	IP 65 <sup>4)</sup>											
<b>VDE protection class</b>	<input type="checkbox"/>											
Max. switching frequency	300 Hz											
Dimensions	40 x 40 x 121 mm <sup>5)</sup>											
<b>Short circuit protection</b>	<input checked="" type="checkbox"/> <sup>6)</sup>											
<b>Reverse polarity protection</b>	<input checked="" type="checkbox"/>											
<b>Power-up pulse suppression</b>	<input checked="" type="checkbox"/>											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient operating temperature $T_a$	-25 °C ... +80 °C											
Housing material	Plastic											

<sup>1)</sup> at  $I_a$  max and  $U_b$  24 V  
<sup>2)</sup> without load

<sup>3)</sup> of  $s_r$   
<sup>4)</sup> according to EN 60529

<sup>5)</sup> width x height x depth  
<sup>6)</sup> (pulsed)

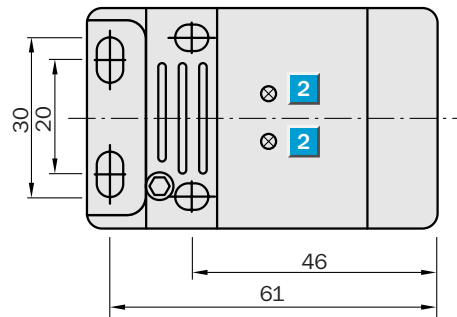
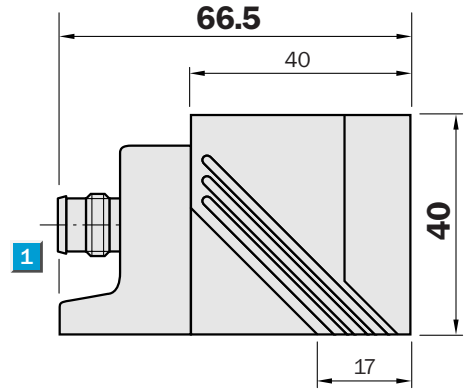
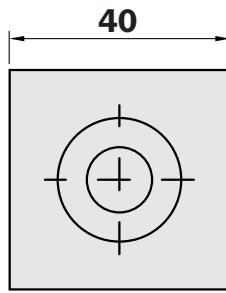
Order information	
Type	Order no.
IQ40-15BPP-KKO	7 900 219
IQ40-20NPP-KKO	7 900 221

**Sensing range**  
15 / 35 mm

Inductive sensor

- Variable switching zone
- NO output function
- Short-circuit protection (pulsed)
- Enclosure rating IP 67
- LED status-and function indicator

**Dimensional drawing**

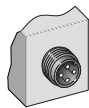


- 1 Connection
- 2 Display LED

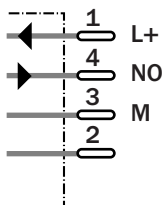


**Connection type**

- IQ40-15BPS-KCO
- IQ40-35NPS-KCO



M12, 4-pin



**See chapter Accessories**

Connector, M12, 4-pin


Technical data		IQ40-	15BPS-KCO	35NPS-KCO								
<b>Sensing range S<sub>n</sub></b>	35 mm											
	15 mm											
<b>Supply voltage V<sub>s</sub></b>	DC 10 ... 36 V											
Voltage drop V <sub>d</sub>	≤ 2.5 V <sup>1)</sup>											
Power consumption	≤ 15 mA <sup>2)</sup>											
<b>Continuous current I<sub>a</sub></b>	≤ 250 mA											
Time delay before availability t <sub>v</sub>	≤ 4 ms											
Hysteresis H, of s <sub>r</sub>	1 ... 15 %											
Repeatability R	≤ 10 % (U <sub>b</sub> and T <sub>a</sub> constant) <sup>3)</sup>											
Temperature drift, of s <sub>r</sub>	± 10 %											
EMC	According to EN 60947-5-2											
<b>Switching output</b>	PNP											
<b>Output function</b>	Normally open											
<b>Installation</b>	Non-flush											
	Flush											
<b>Connection type</b>	Connector, M12, 4-pin											
Enclosure rating	IP 67 <sup>4)</sup>											
<b>VDE protection class</b>	□											
Max. switching frequency	100 Hz											
	300 Hz											
Dimensions	40 x 40 x 66.5 mm <sup>5)</sup>											
<b>Short circuit protection</b>	✓ <sup>6)</sup>											
<b>Reverse polarity protection</b>	✓											
<b>Power-up pulse suppression</b>	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient operating temperature T <sub>a</sub>	-25 °C ... +70 °C											
Housing material	Plastic											

<sup>1)</sup> at I<sub>a</sub> max and U<sub>b</sub> 24 V  
<sup>2)</sup> without load

<sup>3)</sup> of s<sub>r</sub>  
<sup>4)</sup> according to EN 60529

<sup>5)</sup> width x height x depth  
<sup>6)</sup> (pulsed)

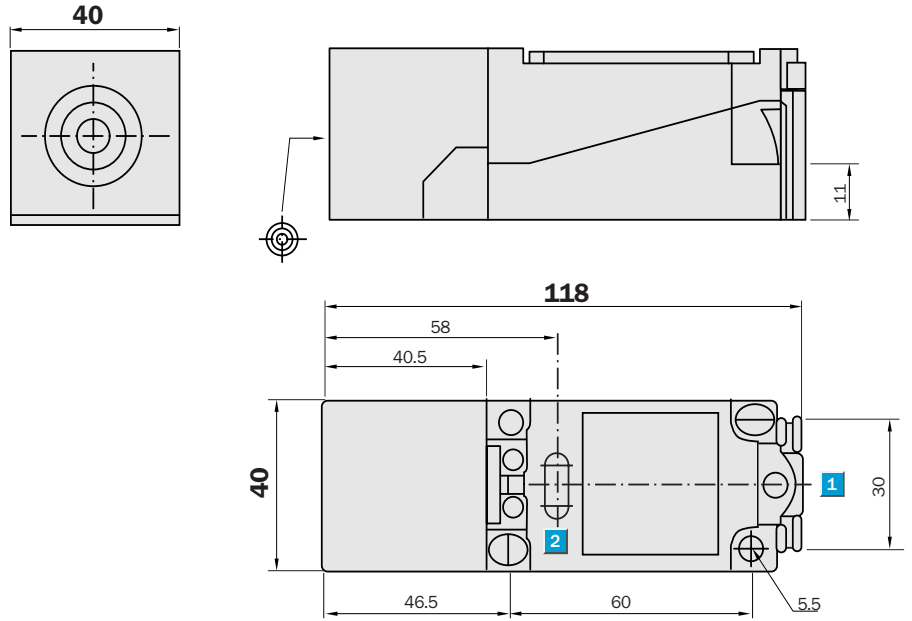
Order information	
Type	Order no.
IQ40-15BPS-KCO	7 900 223
IQ40-35NPS-KCO	7 900 224

 **Sensing range**  
15 / 20 mm

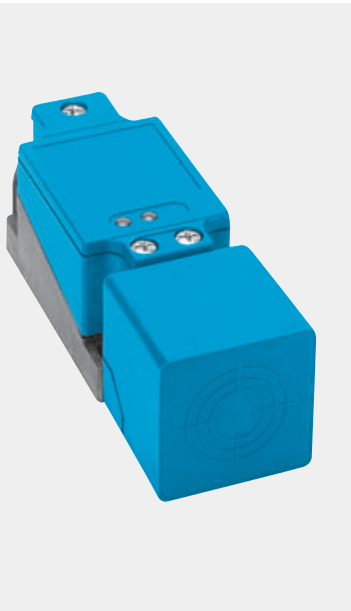
Inductive sensor

- Variable switching zone
- Short-circuit protection (pulsed)
- Terminal
- Enclosure rating IP 68
- Switching status LED, yellow
- Operating voltage status LED, green

Dimensional drawing



- 1 Connection
- 2 Display LED

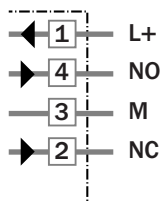


Connection type

- IQ40-15BPP-KK1
- IQ40-15NPP-KK1



Terminal M20 x 1.5



Technical data		IQ40-	15BPP -KK1	15NPP -KK1								
<b>Sensing range S<sub>n</sub></b>	20 mm											
	15 mm											
<b>Electrical configuration</b>	DC 4-wire											
<b>Supply voltage V<sub>s</sub></b>	DC 10 ... 60 V											
Voltage drop V <sub>d</sub>	≤ 2.8 V <sup>1)</sup>											
Power consumption	≤ 10 mA <sup>2)</sup>											
<b>Continuous current I<sub>a</sub></b>	≤ 200 mA											
Temperature drift, of s <sub>r</sub>	± 10 %											
EMC	According to EN 60947-5-2											
<b>Switching output</b>	PNP											
<b>Output function</b>	Complementary											
<b>Installation</b>	Non-flush											
	Flush											
<b>Connection type</b>	Cable gland, terminal M20 x 1.5											
Enclosure rating	IP 68 <sup>3)</sup>											
<b>VDE protection class</b>	□											
Max. switching frequency	150 Hz											
Dimensions	40 x 40 x 118 mm <sup>4)</sup>											
<b>Short circuit protection</b>	✓ <sup>5)</sup>											
<b>Reverse polarity protection</b>	✓											
<b>Power-up pulse suppression</b>	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient operating temperature T <sub>a</sub>	-25 °C ... +70 °C											
Housing material	Plastic, PBT											


<sup>1)</sup> at I<sub>a</sub> max and U<sub>b</sub> 60 V

<sup>2)</sup> without load

<sup>3)</sup> according to EN 60529

<sup>4)</sup> width x height x depth  
<sup>5)</sup> (pulsed)

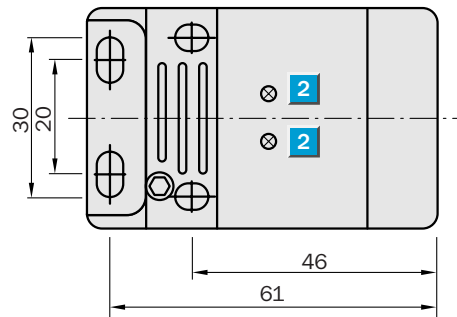
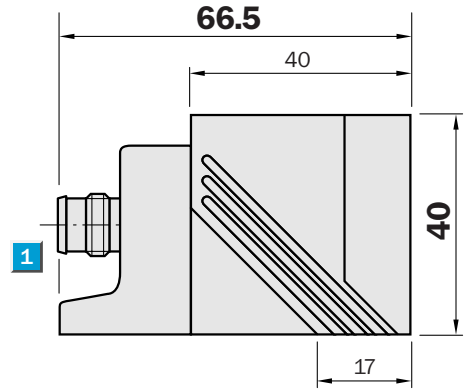
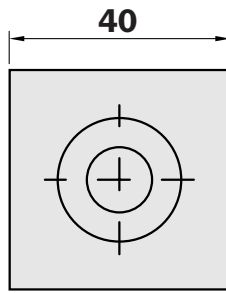
Order information	
Type	Order no.
IQ40-15BPP-KK1	6 025 814
IQ40-15NPP-KK1	6 026 815

 **Sensing range**  
20 / 35 mm

Inductive sensor

- Variable switching zone
- Complementary output function
- Short-circuit protection (pulsed)
- Enclosure rating IP 67
- LED status-and function indicator

**Dimensional drawing**

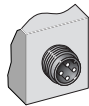


- 1 Connection
- 2 Display LED

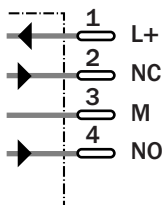


**Connection type**

- IQ40-20BPP-KCK
- IQ40-35NPP-KCK



M12, 4-pin



**See chapter Accessories**

Connector, M12, 4-pin

Technical data		IQ40-	20BPP -KCK	35NPP -KCK								
<b>Sensing range S<sub>n</sub></b>	35 mm											
	20 mm											
<b>Electrical configuration</b>	DC 4-wire											
<b>Supply voltage V<sub>s</sub></b>	DC 10 ... 36 V											
Voltage drop V <sub>d</sub>	≤ 2.5 V <sup>1)</sup>											
Power consumption	≤ 15 mA <sup>2)</sup>											
<b>Continuous current I<sub>a</sub></b>	≤ 250 mA											
Time delay before availability t <sub>v</sub>	≤ 4 ms											
Hysteresis H, of s <sub>r</sub>	1 ... 15 %											
Repeatability R	≤ 10 % (U <sub>b</sub> and T <sub>a</sub> constant) <sup>3)</sup>											
Temperature drift, of s <sub>r</sub>	± 10 %											
EMC	According to EN 60947-5-2											
<b>Switching output</b>	PNP											
<b>Output function</b>	Complementary											
<b>Installation</b>	Non-flush											
	Flush											
<b>Connection type</b>	Connector, M12, 4-pin											
Enclosure rating	IP 67 <sup>4)</sup>											
<b>VDE protection class</b>	<input type="checkbox"/>											
Max. switching frequency	100 Hz											
Dimensions	40 x 40 x 66.5 mm <sup>5)</sup>											
<b>Short circuit protection</b>	✓ <sup>6)</sup>											
<b>Reverse polarity protection</b>	✓											
<b>Power-up pulse suppression</b>	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient operating temperature T <sub>a</sub>	-25 °C ... +70 °C											
Housing material	Plastic											

<sup>1)</sup> at I<sub>a</sub> max and U<sub>b</sub> 24 V  
<sup>2)</sup> without load

<sup>3)</sup> of s<sub>r</sub>  
<sup>4)</sup> according to EN 60529

<sup>5)</sup> width x height x depth  
<sup>6)</sup> (pulsed)

Order information	
Type	Order no.
IQ40-20BPP-KCK	6 012 014
IQ40-35NPP-KCK	6 012 015

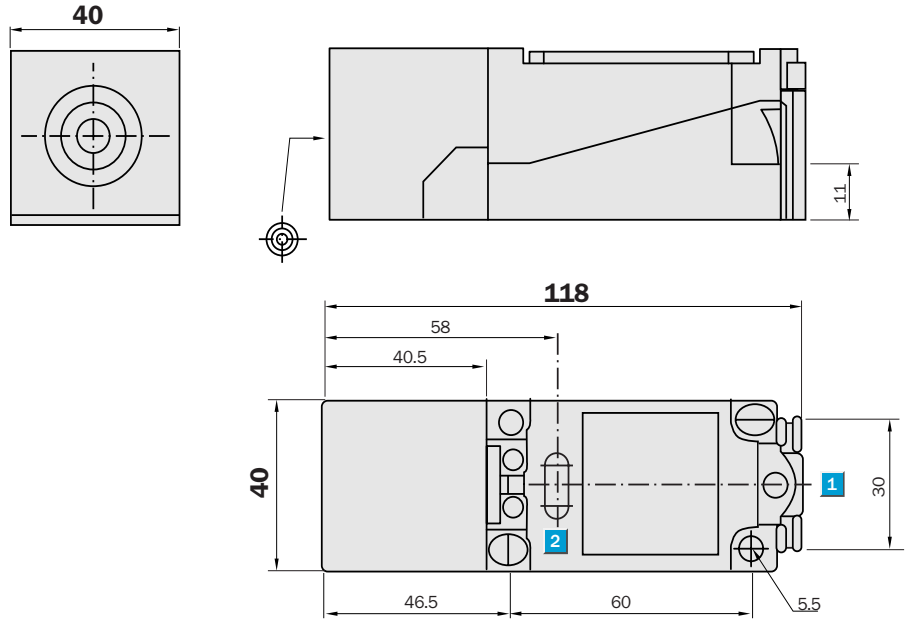


**Sensing range**  
**15 mm**

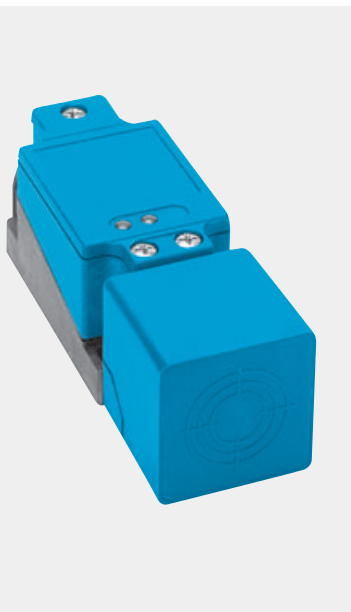
Inductive sensor

- Variable switching zone
- Broad supply voltage range in DC
- Switching output: NO/NC
- Enclosure rating IP 68
- Terminal connection

**Dimensional drawing**

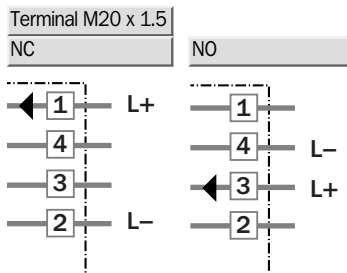


- 1 Connection
- 2 Display LED



**Connection type**

IQ40-15BDP-KK1



Technical data		IQ40-	15BDP-KK1										
<b>Sensing range S<sub>n</sub></b>	15 mm												
<b>Electrical configuration</b>	DC 2-wire												
<b>Supply voltage V<sub>s</sub></b>	DC 5 ... 60 V												
Voltage drop V <sub>d</sub>	≤ 5 V <sup>1)</sup>												
<b>Continuous current I<sub>a</sub></b>	≤ 200 mA												
Residual current	≤ 1 mA												
Temperature drift, of s <sub>r</sub>	± 10 %												
EMC	According to EN 60947-5-2												
<b>Output function</b>	Programmable												
<b>Installation</b>	Flush												
<b>Connection type</b>	Cable gland, terminal M20 x 1.5												
Enclosure rating	IP 68 <sup>2)</sup>												
<b>VDE protection class</b>	□												
Max. switching frequency	400 Hz												
Dimensions	40 x 40 x 118 mm <sup>3)</sup>												
<b>Short circuit protection</b>	✓ <sup>4)</sup>												
<b>Reverse polarity protection</b>	✓												
<b>Power-up pulse suppression</b>	✓												
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm												
Ambient operating temperature T <sub>a</sub>	-25 °C ... +70 °C												
Housing material	Plastic, PBT												
<sup>1)</sup> at I <sub>a</sub> max and U <sub>b</sub> 60 V	<sup>2)</sup> according to EN 60529			<sup>3)</sup> width x height x depth								<sup>4)</sup> (pulsed)	

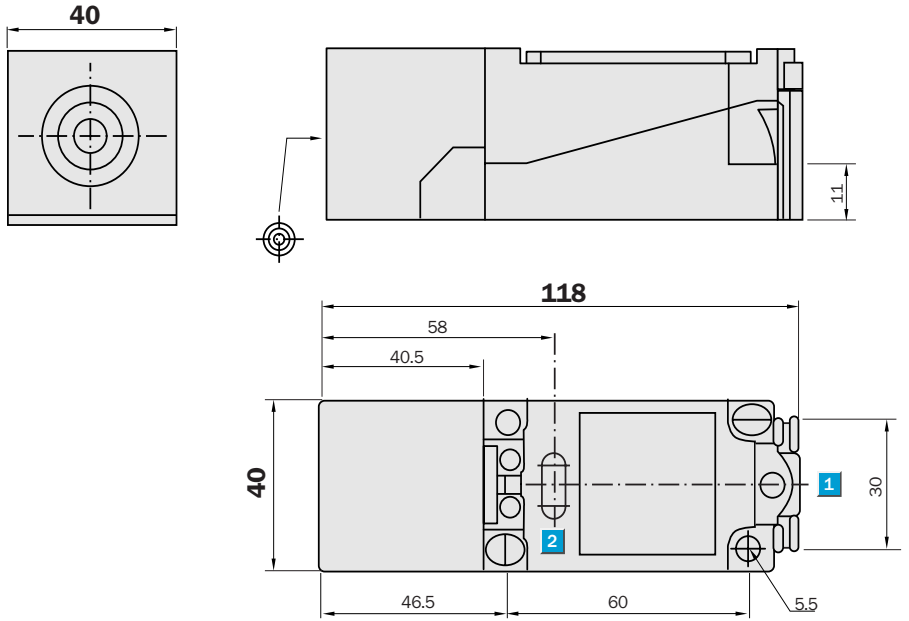
Order information	
<b>Type</b>	<b>Order no.</b>
IQ40-15BDP-KK1	6 025 817

**Sensing range**  
**15 mm**

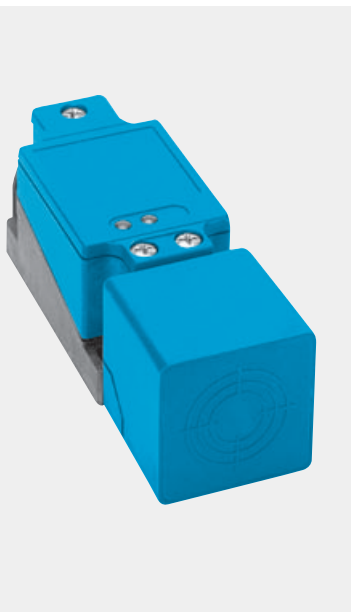
Inductive sensor

- Variable switching zone
- Broad supply voltage range in AC
- Switching output: NO/NC
- Enclosure rating IP 68
- Terminal connection

**Dimensional drawing**

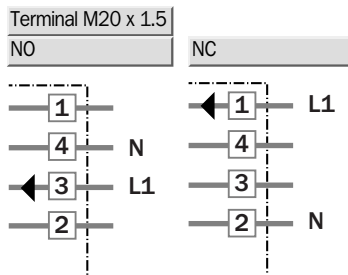


- 1 Connection
- 2 Display LED



**Connection type**

IQ40-15BAP-KK1



Technical data		IQ40-	15BAP-KK1										
<b>Sensing range <math>S_n</math></b>	15 mm												
<b>Electrical configuration</b>	AC 2-wire												
<b>Supply voltage <math>V_s</math></b>	AC 20 ... 253 V												
Voltage drop $V_d$	≤ 12 V												
<b>Continuous current <math>I_a</math></b>	≤ 500 mA												
Short duration current $I_k$	3 A (20 ms/0.1 Hz)												
Residual current	≤ 1.95 mA												
Temperature drift, of $s_r$	± 10 %												
EMC	According to EN 60947-5-2												
<b>Switching output</b>	PNP												
<b>Output function</b>	Programmable												
<b>Installation</b>	Flush												
<b>Connection type</b>	Cable gland, terminal M20 x 1.5												
Enclosure rating	IP 68 <sup>1)</sup>												
<b>VDE protection class</b>	□												
Max. switching frequency	20 Hz												
Dimensions	40 x 40 x 118 mm <sup>2)</sup>												
<b>Short circuit protection</b>	✓ <sup>3)</sup>												
<b>Reverse polarity protection</b>	✓												
<b>Power-up pulse suppression</b>	✓												
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm												
Ambient operating temperature $T_a$	-25 °C ... +70 °C												
Housing material	Plastic, PBT												

<sup>1)</sup> according to EN 60529      <sup>2)</sup> width x height x depth      <sup>3)</sup> (pulsed)

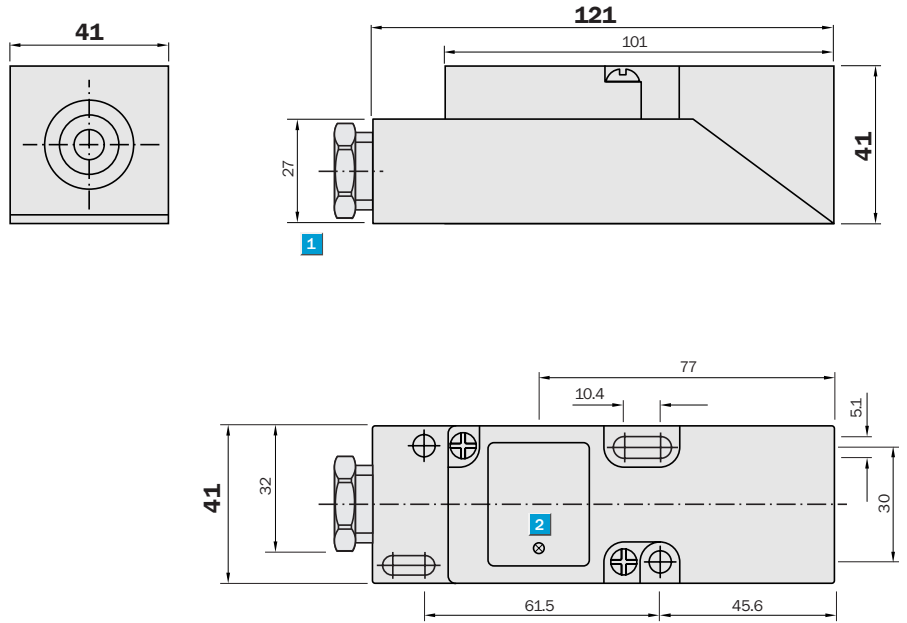
Order information	
Type	Order no.
IQ40-15BAP-KK1	6 025 816

**Sensing range**  
20 mm

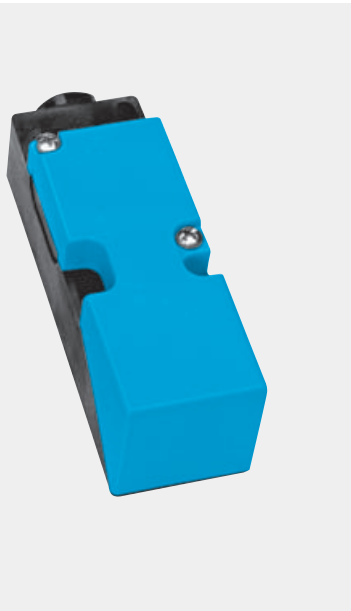
Inductive sensor

- Variable switching zone
- Broad supply voltage range in AC and DC
- Programmable switching output: NO or NC
- Enclosure rating IP 65
- Terminal connection

Dimensional drawing



- 1 Connection
- 2 Display LED

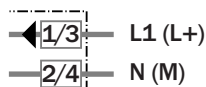


Connection type

- IQ40-15BUP-KKO
- IQ40-20NUP-KKO



Terminal M20 x 1.5



Technical data		IQ40-	15BUP-KKO	20NUP-KKO									
<b>Sensing range <math>S_n</math></b>	20 mm												
	15 mm												
<b>Electrical configuration</b>	AC/DC 2-wire												
<b>Supply voltage <math>V_s</math></b>	AC/DC 20 ... 250 V												
Voltage drop $V_d$ AC/DC	$\leq 6.5$ V/ $\leq 6$ V												
<b>Continuous current <math>I_a</math></b>	$\leq 350$ mA AC (... + 50 °C)												
	$\leq 250$ mA AC (... + 80 °C)												
	$\leq 100$ mA DC												
Short duration current $I_k$	2.2 A (20 ms/0.5 Hz)												
Min. load current	$> 5$ mA												
Residual current	$\leq 2.5$ mA (250 V AC)												
	$\leq 1.3$ mA (110 V AC)												
	$\leq 0.8$ mA (24 V DC)												
Time delay before availability $t_v$	$\leq 8$ ms												
Hysteresis H, of $s_r$	1 ... 15 %												
Repeatability R	$\leq 10$ % ( $U_b$ and $T_a$ constant) <sup>1)</sup>												
Temperature drift, of $s_r$	$\pm 10$ %												
EMC	According to EN 60947-5-2												
<b>Output function</b>	Programmable												
<b>Installation</b>	Non-flush												
	Flush												
<b>Connection type</b>	Cable gland, terminal M20 x 1.5												
Enclosure rating	IP 65 <sup>2)</sup>												
<b>VDE protection class</b>	<input type="checkbox"/>												
Max. switching frequency AC/DC	20 Hz / 55 Hz												
Dimensions	40 x 40 x 121 mm <sup>3)</sup>												
<b>Wire-break protection</b>	-												
<b>Short circuit protection</b>	-												
<b>Reverse polarity protection</b>	-												
<b>Power-up pulse suppression</b>	✓												
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm												
Ambient operating temperature $T_a$	-25 °C ... +80 °C												
Housing material	Plastic												

<sup>1)</sup> of  $s_r$

<sup>2)</sup> according to EN 60529

<sup>3)</sup> width x height x depth

Order information	
Type	Order no.
IQ40-15BUP-KKO	7 902 136
IQ40-20NUP-KKO	7 902 137