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ULTRASONIC SENSORS

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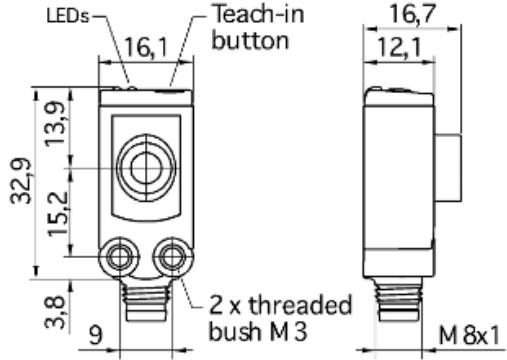
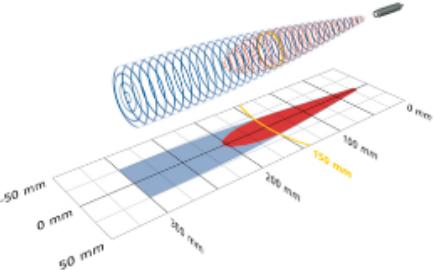

Extract from our online catalogue:

sk s ultrasonic sensors

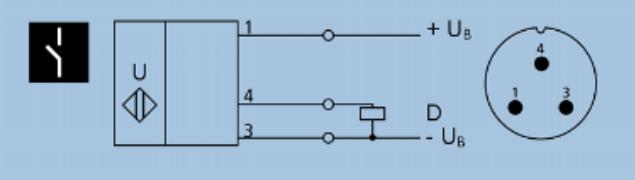
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skt-15/D

scale drawing	detection zone
	
 1 x pnp	 250 mm
operating range	20 - 150 mm
design	cuboidal
operating mode	proximity switch/reflective mode reflective barrier window mode
particularities	minimum cuboidal design narrow sound field
ultrasonic -specific	
means of measurement	echo propagation time measurement
transducer frequency	380 kHz
blind zone	20 mm
operating range	150 mm
maximum range	250 mm
angle of beam spread	please see graphics detection zone
resolution/sampling rate	0.10 mm
reproducibility	± 0.15 %
accuracy	temperature drift 0.17 %/K
electrical data	
operating voltage U_B	20 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 30 mA
type of connection	3-pin M8 initiator plug

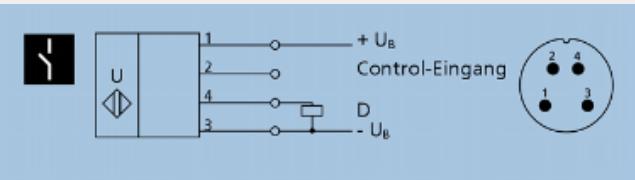
skS-15/D

outputs	
output 1	switching output pnp: $I_{max} = 200 \text{ mA}$ ($U_B - 2V$) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	2.0 mm
switching frequency	25 Hz
response time	32 ms
delay prior to availability	< 300 ms
housing	
material	ABS
ultrasonic transducer	polyurethane foam, epoxy resin with glass contents
class of protection to EN 60529	IP 67
operating temperature	-25°C to +70°C
storage temperature	-40°C to +85°C
weight	8 g
technical features/characteristics	
temperature compensation	no
controls	1 push-button
scope for settings	Teach-in via push-button
synchronization	no
multiplex	no
indicators	1 x LED green: working, 1 x LED yellow: switch status
particularities	minimum cuboidal design narrow sound field
documentation (download)	
pin assignment	

skt-15/CD

scale drawing	detection zone
<p>Front view dimensions: height 32.9, top width 16.1, top thickness 13.9, bottom thickness 9, side width 15.2, side thickness 3.8. Side view dimensions: side width 16.7, side thickness 12.1. Threaded bush: M 8x1.</p>	<p>3D detection zone diagram showing a cylindrical sound field with a red cone at the end representing the detection range. The diagram includes a coordinate system with axes from -50 to 250 mm.</p>
<p>1 x pnp</p>	<p>250 mm</p>
operating range	20 - 150 mm
design	cuboidal
operating mode	proximity switch/reflective mode reflective barrier window mode
particularities	minimum cuboidal design narrow sound field
ultrasonic -specific	
means of measurement	echo propagation time measurement
transducer frequency	380 kHz
blind zone	20 mm
operating range	150 mm
maximum range	250 mm
angle of beam spread	please see graphics detection zone
resolution/sampling rate	0.10 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)
electrical data	
operating voltage U_B	20 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 30 mA
type of connection	4-pin M8 initiator plug

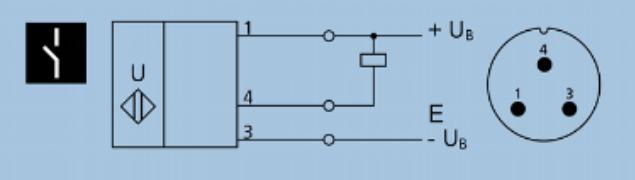
sk-15/CD

outputs	
output 1	switching output pnp: $I_{max} = 200 \text{ mA}$ ($U_B - 2V$) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	2.0 mm
switching frequency	25 Hz
response time	32 ms
delay prior to availability	< 300 ms
inputs	
input 1	com input
housing	
material	ABS
ultrasonic transducer	polyurethane foam, epoxy resin with glass contents
class of protection to EN 60529	IP 67
operating temperature	-25°C to +70°C
storage temperature	-40°C to +85°C
weight	8 g
technical features/characteristics	
temperature compensation	yes
controls	1 push-button
scope for settings	Teach-in via push-button
synchronization	no
multiplex	no
indicators	1 x LED green: working, 1 x LED yellow: switch status
particularities	minimum cuboidal design narrow sound field
documentation (download)	
pin assignment	

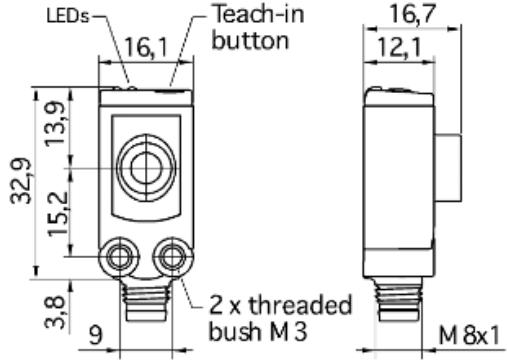
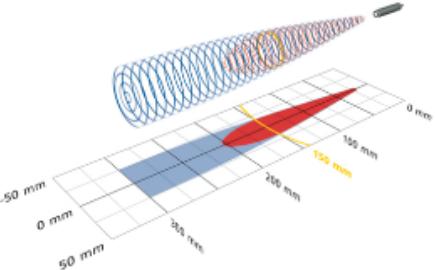
skt-15/E

scale drawing	detection zone
<p>Front view dimensions: height 32.9, top width 16.1, top thickness 13.9, bottom thickness 9, side width 15.2, side thickness 3.8. Side view dimension: side thickness 3.8. Bottom view dimension: side thickness 3.8, threaded bush M 8x1.</p>	<p>3D detection zone diagram showing a cylindrical sound field with a red cone at the end. The diagram includes a coordinate system with axes from -50 to 250 mm along the beam axis and +/- 50 mm perpendicular to it. A blue shaded area indicates the detection zone.</p>
<p>1 x npn</p>	<p>250 mm</p>
operating range	20 - 150 mm
design	cuboidal
operating mode	proximity switch/reflective mode reflective barrier window mode
particularities	minimum cuboidal design narrow sound field
ultrasonic -specific	
means of measurement	echo propagation time measurement
transducer frequency	380 kHz
blind zone	20 mm
operating range	150 mm
maximum range	250 mm
angle of beam spread	please see graphics detection zone
resolution/sampling rate	0.10 mm
reproducibility	± 0.15 %
accuracy	temperature drift 0.17 %/K
electrical data	
operating voltage U_B	20 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 30 mA
type of connection	3-pin M8 initiator plug

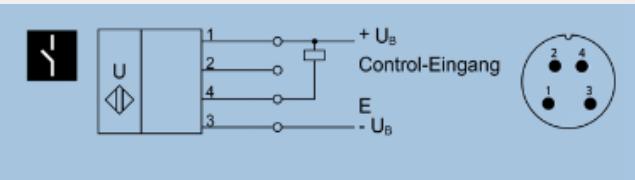
skS-15/E

outputs	
output 1	switching output npn: $I_{max} = 200 \text{ mA}$ ($-U_B + 2V$) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	2.0 mm
switching frequency	25 Hz
response time	32 ms
delay prior to availability	< 300 ms
housing	
material	ABS
ultrasonic transducer	polyurethane foam, epoxy resin with glass contents
class of protection to EN 60529	IP 67
operating temperature	-25°C to +70°C
storage temperature	-40°C to +85°C
weight	8 g
technical features/characteristics	
temperature compensation	no
controls	1 push-button
scope for settings	Teach-in via push-button
synchronization	no
multiplex	no
indicators	1 x LED green: working, 1 x LED yellow: switch status
particularities	minimum cuboidal design narrow sound field
documentation (download)	
pin assignment	

skS-15/CE

scale drawing	detection zone
	
 1 x npn	 250 mm
operating range	20 - 150 mm
design	cuboidal
operating mode	proximity switch/reflective mode reflective barrier window mode
particularities	minimum cuboidal design narrow sound field
ultrasonic -specific	
means of measurement	echo propagation time measurement
transducer frequency	380 kHz
blind zone	20 mm
operating range	150 mm
maximum range	250 mm
angle of beam spread	please see graphics detection zone
resolution/sampling rate	0.10 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)
electrical data	
operating voltage U_B	20 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 30 mA
type of connection	4-pin M8 initiator plug

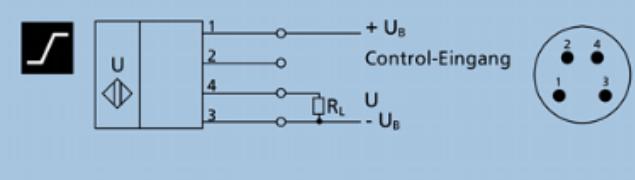
sk-15/CE

outputs	
output 1	switching output npn: $I_{max} = 200 \text{ mA}$ ($-U_B + 2V$) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	2.0 mm
switching frequency	25 Hz
response time	32 ms
delay prior to availability	< 300 ms
inputs	
input 1	com input
housing	
material	ABS
ultrasonic transducer	polyurethane foam, epoxy resin with glass contents
class of protection to EN 60529	IP 67
operating temperature	-25°C to +70°C
storage temperature	-40°C to +85°C
weight	8 g
technical features/characteristics	
temperature compensation	yes
controls	1 push-button
scope for settings	Teach-in via push-button
synchronization	no
multiplex	no
indicators	1 x LED green: working, 1 x LED yellow: switch status
particularities	minimum cuboidal design narrow sound field
documentation (download)	
pin assignment	

skS-15/CU

scale drawing	detection zone
<p>Front view dimensions: height 32.9, top width 16.1, top thickness 13.9, bottom thickness 9, bottom height 3.8. Side view dimensions: side width 16.7, side thickness 12.1. Bottom part: 2 x threaded bush M 3, M 8x1.</p>	<p>Detection zone: 250 mm. The diagram shows a blue cone representing the sound field and a red rectangular volume representing the detection zone, both centered along the beam axis.</p>
1 x analogue 0-10 V	250 mm
operating range	20 - 150 mm
design	cuboidal
operating mode	analogue distance measurements
particularities	minimum cuboidal design narrow sound field
ultrasonic -specific	
means of measurement	echo propagation time measurement
transducer frequency	380 kHz
blind zone	20 mm
operating range	150 mm
maximum range	250 mm
angle of beam spread	please see graphics detection zone
resolution/sampling rate	0.10 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)
electrical data	
operating voltage U_B	15 V bis 30 V DC, verpolfest
voltage ripple	± 10 %
no-load current consumption	≤ 30 mA
type of connection	4-pin M8 initiator plug

sk-15/CU

outputs	
output 1	analogue output voltage: 0-10 V, short-circuit-proof switchable rising/falling
response time	24 ms
delay prior to availability	< 300 ms
inputs	
input 1	com input
housing	
material	ABS
ultrasonic transducer	polyurethane foam, epoxy resin with glass contents
class of protection to EN 60529	IP 67
operating temperature	-25°C to +70°C
storage temperature	-40°C to +85°C
weight	8 g
technical features/characteristics	
temperature compensation	yes
controls	1 push-button
scope for settings	Teach-in via push-button
synchronization	ja, über externen Taktgenerator
multiplex	no
indicators	1 x LED green: working, 1 x LED yellow: switch status
particularities	minimum cuboidal design narrow sound field
documentation (download)	
pin assignment	

skt-15/CI

scale drawing	detection zone
<p>Front view dimensions: height 32.9, top width 16.1, top thickness 13.9, bottom width 15.2, bottom thickness 3.8, side height 9, side width 16.7, side thickness 12.1, and a threaded bush M 8x1.</p>	<p>3D diagram of the detection zone showing a cuboidal volume with a red cone at the front face. The cone has a radius of 250 mm and extends 150 mm into the depth. The detection zone is labeled from -50 mm to 50 mm along the depth axis.</p>
1 x analogue 4-20 mA	250 mm
operating range	20 - 150 mm
design	cuboidal
operating mode	analogue distance measurements
particularities	minimum cuboidal design narrow sound field
ultrasonic -specific	
means of measurement	echo propagation time measurement
transducer frequency	380 kHz
blind zone	20 mm
operating range	150 mm
maximum range	250 mm
angle of beam spread	please see graphics detection zone
resolution/sampling rate	0.10 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)
electrical data	
operating voltage U_B	15 V bis 30 V DC, verpolfest
voltage ripple	± 10 %
no-load current consumption	≤ 30 mA
type of connection	4-pin M8 initiator plug

sk-15/CI

outputs	
output 1	analogue output current: 4-20 mA switchable rising/falling
response time	24 ms
delay prior to availability	< 300 ms
inputs	
input 1	com input
housing	
material	ABS
ultrasonic transducer	polyurethane foam, epoxy resin with glass contents
class of protection to EN 60529	IP 67
operating temperature	-25°C to +70°C
storage temperature	-40°C to +85°C
weight	8 g
technical features/characteristics	
temperature compensation	yes
controls	1 push-button
scope for settings	Teach-in via push-button
synchronization	ja, über externen Taktgenerator
multiplex	no
indicators	1 x LED green: working, 1 x LED yellow: switch status
particularities	minimum cuboidal design narrow sound field
documentation (download)	
pin assignment	