microsonic

EVERY THING ULTRA SONIC

Extract from our online catalogue:

mic ultrasonic sensors

Current to: 2023-11-13

microsonic GmbH / Phoenixseestraße 7 / 44263 Dortmund / Germany / **T** +49 231 975151-0 / **F** +49 231 975151-51 / **E** info@microsonic.de

These completely metal mic sensors are available in two device designs with five different detection ranges.

HIGHLIGHTS

- M30 housing and M12 circular connector in metal design › for harsh usage conditions
- Automatic synchronisation › for simultaneous operation of up to ten sensors in close quarters
- UL Listed to Canadian and US safety standards

BASICS

- 1 switching output in pnp variant
- Analogue output 4–20 mA and 0–10 V › with automatic switching between current and voltage outputs
- 5 detection ranges with a measurement range of 30 mm to 8 m
- microsonic Teach-in on pin 5
- 0.18 mm to 2.4 mm resolution
- Temperature compensation
- 9–30 V operating voltage
- LinkControl › for configuration of sensors from a PC

Description

This very solid construction

is fully made of metal from the M30 housing to the M12 circular connector. Since the sensors do not contain any operating elements or signal lamps, they are especially suited for application under extreme ambient conditions with high mechanical loads for housing and plug connector. The sensors are available in five detection ranges and cover a measuring range of 30 mm up to 8 m.

M12 metal circular connector (left) and operation under rough conditions (right)

Two output levels

are available for all five detection ranges:

1 pnp switching output

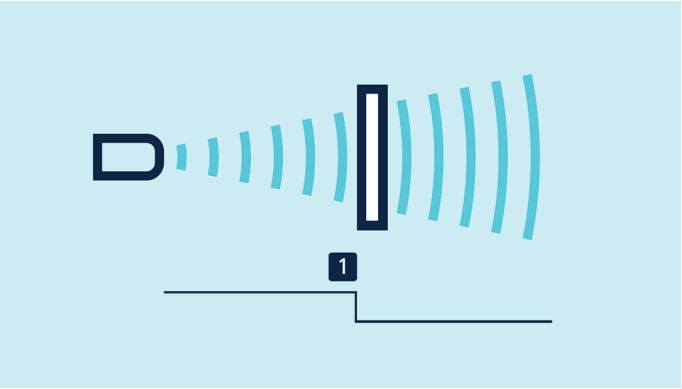
1 analogue output 4–20 mA and 0–10 V

Sensors with switching output have three operating modes:

- Single switching point
- Two-way reflective barrier
- Window mode

Teach-in of a single switching point

- Place object to be detected (1) at the desired distance
- Apply $+U_B$ to pin 5 for about 3 seconds
- Then apply $+U_B$ to pin 5 again for about 1 seconds

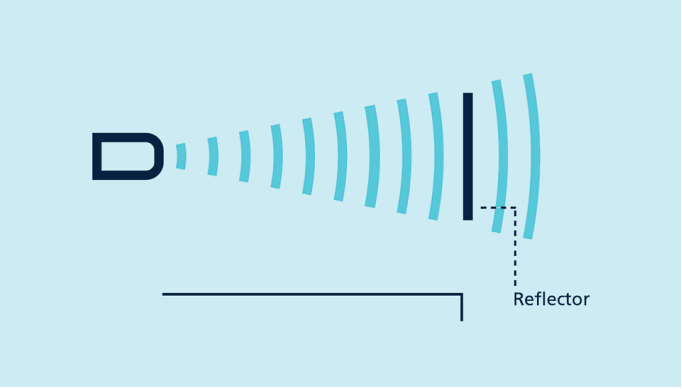


Teach-in of a switching point

Teach-in of a two-way reflective barrier with a fixed reflector

› Apply +U_B to pin 5 for about 3 seconds

› Then apply +U_B to pin 5 again for about 10 seconds



Teach-in of a two-way reflective barrier

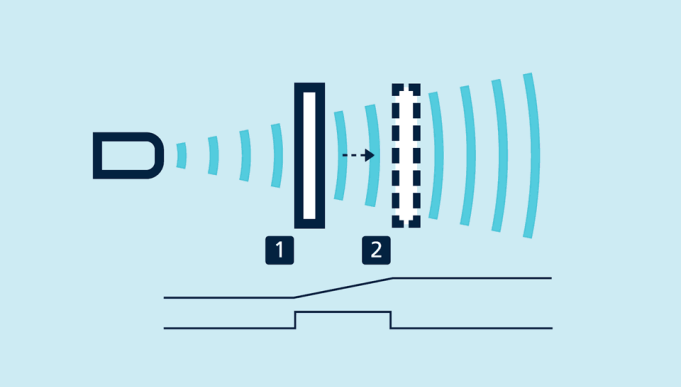
For configuration of a window

› Place object at the near edge of the window (1)

› Apply +U_B to pin 5 for about 3 seconds

› Then move the object to the far edge of the window (2)

› Then apply +U_B to pin 5 again for about 1 seconds



Teach-in of an analogue characteristic or a window with two switching points

NCC/NOC

and rising/falling analogue characteristic curve can also be set via pin 5.

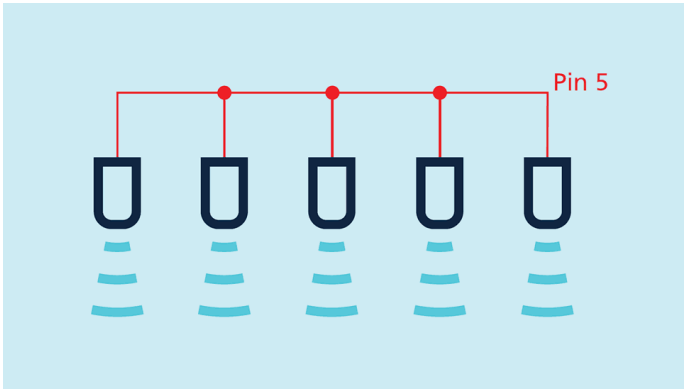
LinkControl

optionally permits the extensive parameterisation of mic sensors. The LCA-2 **LinkControl adapter** , which is available as an accessory, can be used to connect mic sensors to the PC.

Sensor connected to the PC via LCA-2 for programming

Synchronisation

permits the simultaneous use of multiple mic sensors in an application. To avoid mutual interference, the sensors can be synchronised with one another. To do this, all the sensors are electrically connected on pin 5.

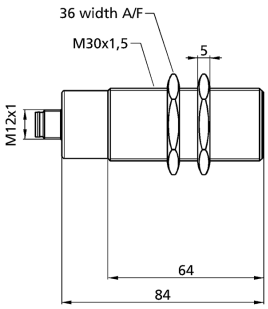


Synchronisation using pin 5

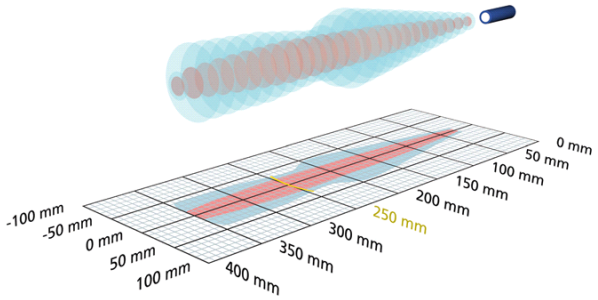
If more than 10 sensors need to be synchronised, this can be carried out with the **SyncBox1** , which is available as an accessory.

mic-25/D/M

scale drawing



detection zone



1 x pnp

350 mm

measuring range	30 - 350 mm
design	cylindrical M30
operating mode	proximity switch/reflective mode reflective barrier window mode
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	320 kHz
blind zone	30 mm
operating range	250 mm
maximum range	350 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-25/D/M

outputs	
output 1	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	3 mm
switching frequency	25 Hz
response time	32 ms
delay prior to availability	< 390 ms

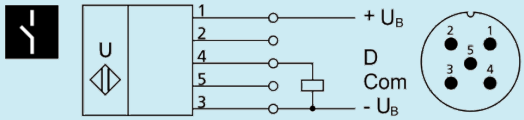
inputs	
input 1	com input teach-in input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	200 g
further versions	cable connection (on request)

technical features/characteristics	
temperature compensation	yes
controls	com input control input
scope for settings	Teach-in via com input on pin 5 LCA-2 with LinkControl
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-25/D/M

pin assignment



order no.	**mic-25/D/M**

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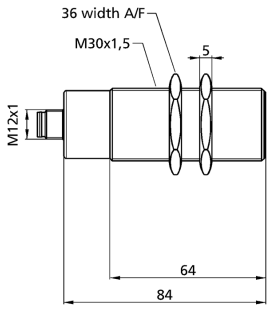
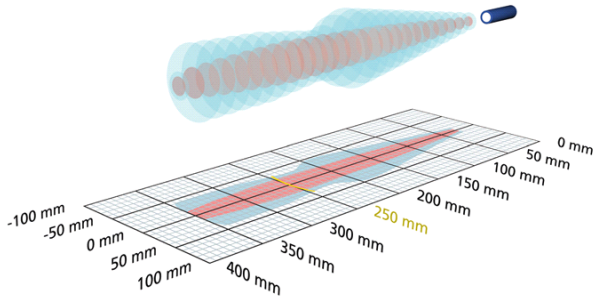
mic-25/IU/M

scale drawing



detection zone



1 x analogue 4-20 mA + 0-10 V

350 mm

measuring range	30 - 350 mm
design	cylindrical M30
operating mode	analogue distance measurements
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	320 kHz
blind zone	30 mm
operating range	250 mm
maximum range	350 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-25/IU/M

outputs	
output 1	analogue output current: 4-20 mA / voltage: 0-10 V (at $U_B \geq 15$ V), short-circuit-proof switchable rising/falling
response time	32 ms
delay prior to availability	< 390 ms

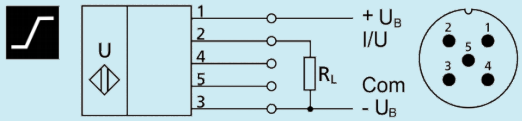
inputs	
input 1	com input teach-in input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	200 g
further versions	cable connection (on request)

technical features/characteristics	
temperature compensation	yes
controls	com input control input
scope for settings	Teach-in via com input on pin 5 LCA-2 with LinkControl
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-25/IU/M

pin assignment



order no.	**mic-25/IU/M**

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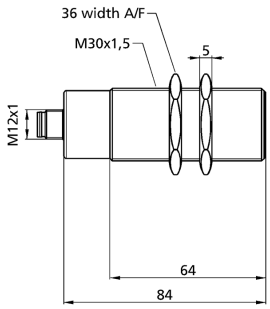
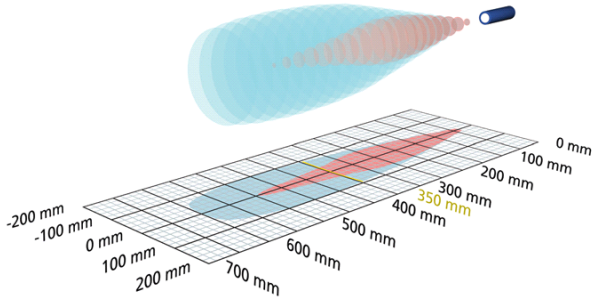
mic-35/D/M

scale drawing



detection zone



1 x pnp

600 mm

measuring range	65 - 600 mm
design	cylindrical M30
operating mode	proximity switch/reflective mode reflective barrier window mode
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	400 kHz
blind zone	65 mm
operating range	350 mm
maximum range	600 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-35/D/M

outputs	
output 1	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	5 mm
switching frequency	12 Hz
response time	64 ms
delay prior to availability	< 420 ms

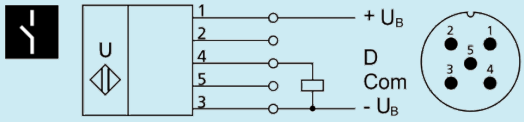
inputs	
input 1	com input teach-in input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	200 g
further versions	cable connection (on request)
further versions	mic-35/D/M/K6

technical features/characteristics	
temperature compensation	yes
controls	com input control input
scope for settings	Teach-in via com input on pin 5 LCA-2 with LinkControl
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-35/D/M

pin assignment



order no.	**mic-35/D/M**

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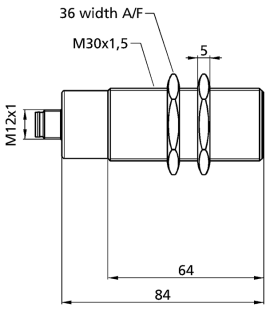
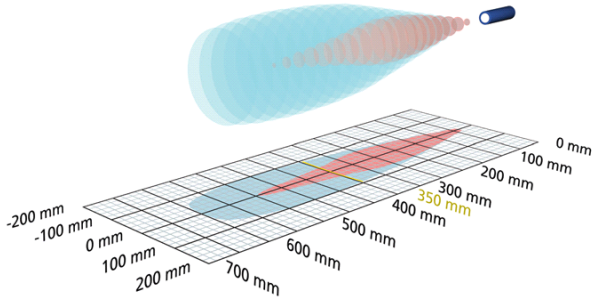
mic-35/D/M/K6

scale drawing



detection zone



1 x pnp

600 mm

measuring range	65 - 600 mm
design	cylindrical M30
operating mode	proximity switch/reflective mode reflective barrier window mode
particularities	cable connection

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	400 kHz
blind zone	65 mm
operating range	350 mm
maximum range	600 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	6 m PVC cable, 5 x 0.25 mm²

mic-35/D/M/K6

outputs	
output 1	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	5 mm
switching frequency	8 Hz
response time	64 ms
delay prior to availability	< 420 ms

inputs	
input 1	com input teach-in input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	355 g

technical features/characteristics	
temperature compensation	yes
controls	com input control input
scope for settings	Teach-in via com input on pin 5 LCA-2 with LinkControl
Synchronisation	yes
multiplex	no
indicators	no
particularities	cable connection

order no.	**mic-35/D/M/K6**

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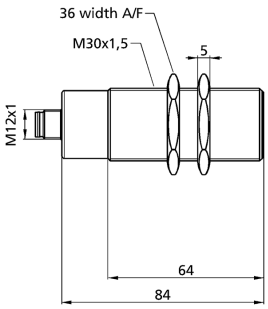
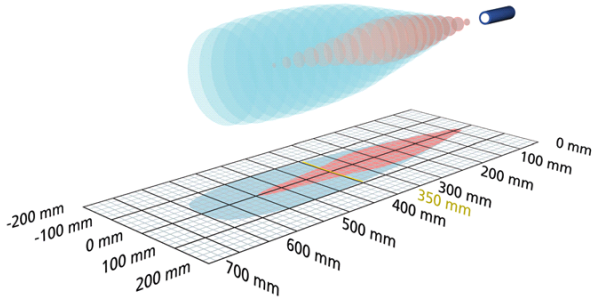
mic-35/DD/M

scale drawing



detection zone



2 x pnp

600 mm

measuring range	65 - 600 mm
design	cylindrical M30
operating mode	proximity switch/reflective mode window mode
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	400 kHz
blind zone	65 mm
operating range	350 mm
maximum range	600 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-35/DD/M

outputs	
output 1	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
output 2	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	5 mm
switching frequency	8 Hz
response time	70 ms
delay prior to availability	< 300 ms

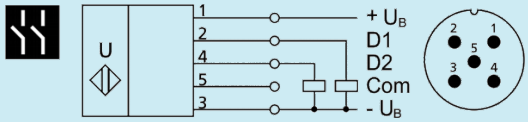
inputs	
input 1	com input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	140 g
further versions	cable connection (on request)

technical features/characteristics	
temperature compensation	yes
controls	com input
scope for settings	LCA-2 with LinkCopy or LinkControl software
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-35/DD/M

pin assignment



order no.	**mic-35/DD/M**

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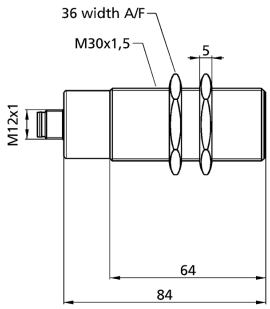
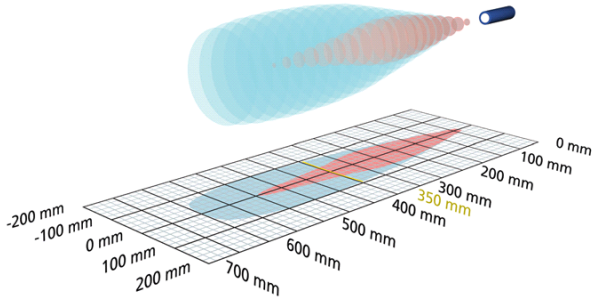
mic-35/IU/M

scale drawing



detection zone



1 x analogue 4-20 mA + 0-10 V

600 mm

measuring range	65 - 600 mm
design	cylindrical M30
operating mode	analogue distance measurements
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	400 kHz
blind zone	65 mm
operating range	350 mm
maximum range	600 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-35/IU/M

outputs	
output 1	analogue output current: 4-20 mA / voltage: 0-10 V (at $U_B \geq 15$ V), short-circuit-proof switchable rising/falling
response time	64 ms
delay prior to availability	< 420 ms

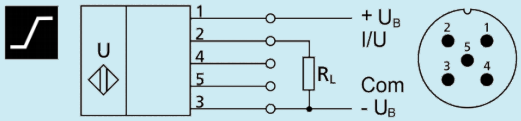
inputs	
input 1	com input teach-in input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	200 g
further versions	cable connection (on request)

technical features/characteristics	
temperature compensation	yes
controls	com input control input
scope for settings	Teach-in via com input on pin 5 LCA-2 with LinkControl
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-35/IU/M

pin assignment



order no.	**mic-35/IU/M**

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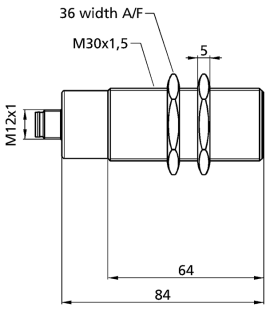
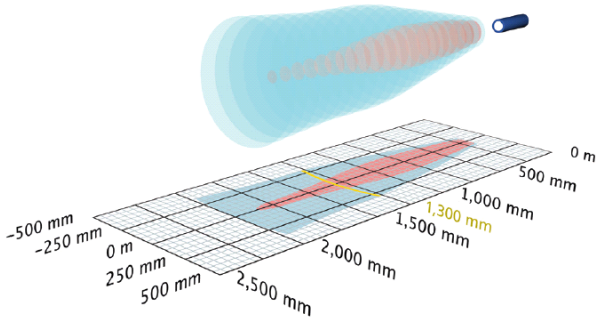
mic-130/D/M

scale drawing



detection zone



1 x pnp

2,000 mm

measuring range	200 - 2.000 mm
design	cylindrical M30
operating mode	proximity switch/reflective mode reflective barrier window mode
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	200 kHz
blind zone	200 mm
operating range	1,300 mm
maximum range	2,000 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-130/D/M

outputs	
output 1	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	20 mm
switching frequency	8 Hz
response time	92 ms
delay prior to availability	< 440 ms

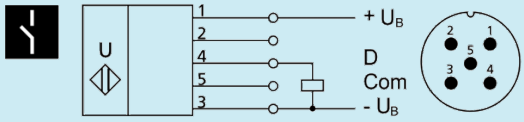
inputs	
input 1	com input teach-in input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	200 g
further versions	cable connection (on request)

technical features/characteristics	
temperature compensation	yes
controls	com input control input
scope for settings	Teach-in via com input on pin 5 LCA-2 with LinkControl
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-130/D/M

pin assignment



order no.	**mic-130/D/M**

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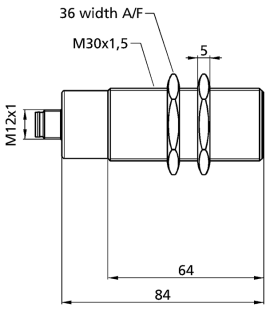
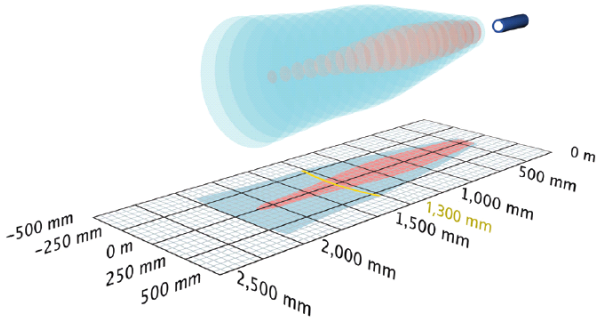
mic-130/DD/M

scale drawing



detection zone



2 x pnp

2,000 mm

measuring range	200 - 2.000 mm
design	cylindrical M30
operating mode	proximity switch/reflective mode window mode
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	200 kHz
blind zone	200 mm
operating range	1,300 mm
maximum range	2,000 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-130/DD/M

outputs	
output 1	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
output 2	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	20 mm
switching frequency	6 Hz
response time	110 ms
delay prior to availability	< 300 ms

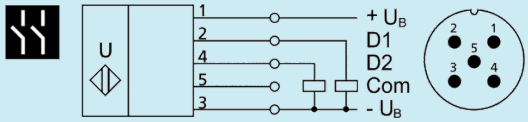
inputs	
input 1	com input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	140 g
further versions	cable connection (on request)

technical features/characteristics	
temperature compensation	yes
controls	com input
scope for settings	LCA-2 with LinkCopy or LinkControl software
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-130/DD/M

pin assignment



order no.	**mic-130/DD/M**

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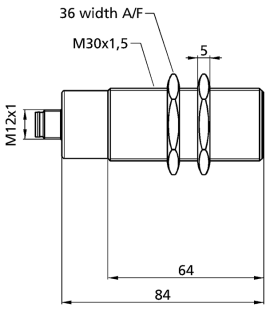
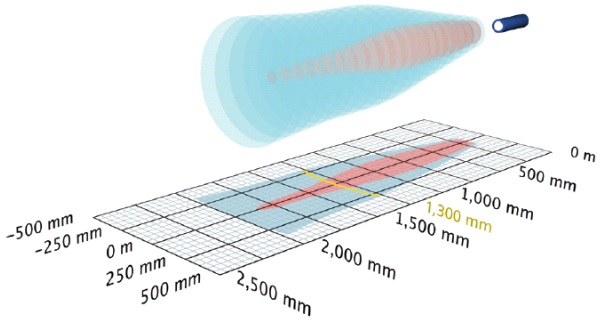
mic-130/IU/M

scale drawing



detection zone



1 x analogue 4-20 mA + 0-10 V

2,000 mm

measuring range	200 - 2.000 mm
design	cylindrical M30
operating mode	analogue distance measurements
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	200 kHz
blind zone	200 mm
operating range	1,300 mm
maximum range	2,000 mm
resolution	0.18 mm to 0.57 mm, depending on the analogue window
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-130/IU/M

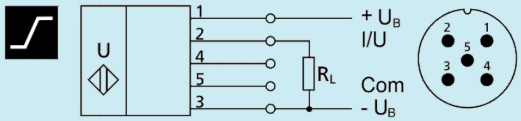
outputs	
output 1	analogue output current: 4-20 mA / voltage: 0-10 V (at $U_B \geq 15$ V), short-circuit-proof switchable rising/falling
response time	92 ms
delay prior to availability	< 440 ms

inputs	
input 1	com input teach-in input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	200 g
further versions	cable connection (on request)

technical features/characteristics	
temperature compensation	yes
controls	com input control input
scope for settings	Teach-in via com input on pin 5 LCA-2 with LinkControl
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-130/IU/M

pin assignment	
	
order no.	**mic-130/IU/M**

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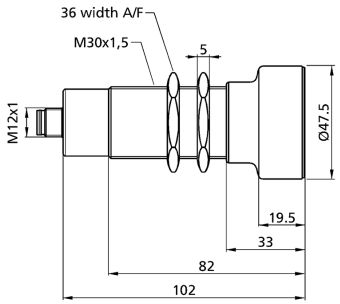
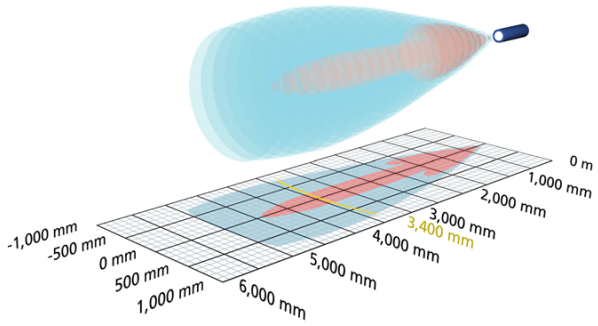
mic-340/D/M

scale drawing



detection zone



1 x pnp

5,000 mm

measuring range	350 - 5.000 mm
design	cylindrical M30
operating mode	proximity switch/reflective mode reflective barrier window mode
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	120 kHz
blind zone	350 mm
operating range	3,400 mm
maximum range	5,000 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-340/D/M

outputs	
output 1	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	50 mm
switching frequency	4 Hz
response time	172 ms
delay prior to availability	< 530 ms

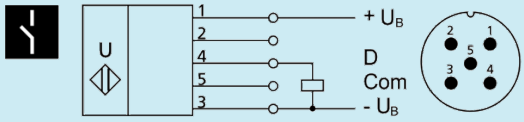
inputs	
input 1	com input teach-in input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	260 g
further versions	cable connection (on request)

technical features/characteristics	
temperature compensation	yes
controls	com input control input
scope for settings	Teach-in via com input on pin 5 LCA-2 with LinkControl
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-340/D/M

pin assignment



order no.	**mic-340/D/M**

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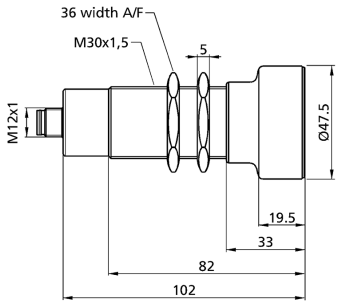
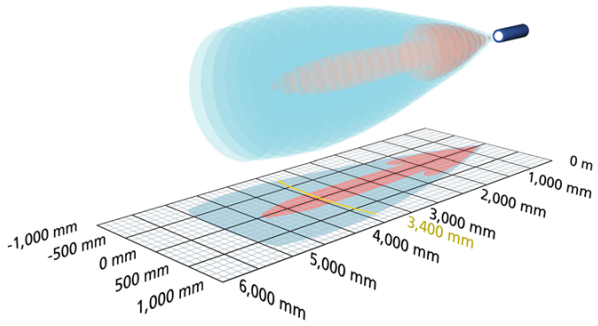
mic-340/DD/M

scale drawing



detection zone



2 x pnp

5,000 mm

measuring range	350 - 5.000 mm
design	cylindrical M30
operating mode	proximity switch/reflective mode window mode
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	120 kHz
blind zone	350 mm
operating range	3,400 mm
maximum range	5,000 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-340/DD/M

outputs	
output 1	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
output 2	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	50 mm
switching frequency	3 Hz
response time	180 ms
delay prior to availability	< 380 ms

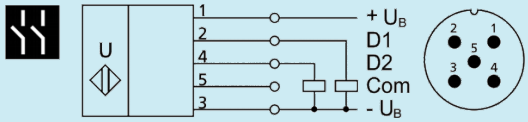
inputs	
input 1	com input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	270 g

technical features/characteristics	
temperature compensation	yes
controls	com input
scope for settings	LCA-2 with LinkCopy or LinkControl software
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-340/DD/M

pin assignment



order no.	**mic-340/DD/M**

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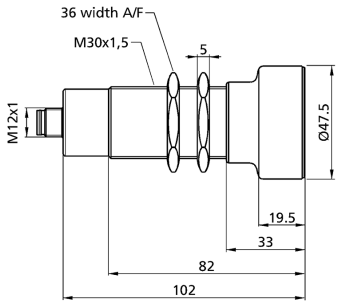
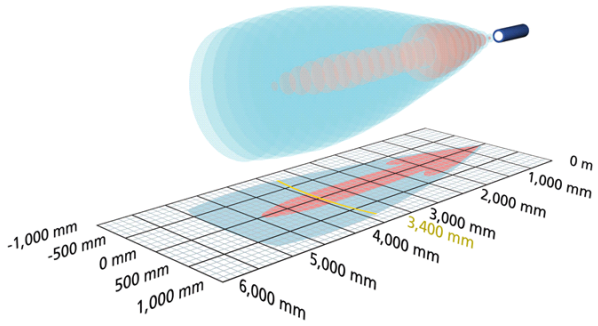
mic-340/IU/M

scale drawing



detection zone



1 x analogue 4-20 mA + 0-10 V

5,000 mm

measuring range	350 - 5.000 mm
design	cylindrical M30
operating mode	analogue distance measurements
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	120 kHz
blind zone	350 mm
operating range	3,400 mm
maximum range	5,000 mm
resolution	0.18 mm to 1.5 mm, depending on the analogue window
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-340/IU/M

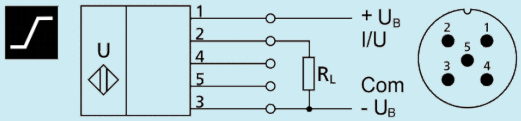
outputs	
output 1	analogue output current: 4-20 mA / voltage: 0-10 V (at $U_B \geq 15$ V), short-circuit-proof switchable rising/falling
response time	172 ms
delay prior to availability	< 530 ms

inputs	
input 1	com input teach-in input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	260 g
further versions	cable connection (on request)

technical features/characteristics	
temperature compensation	yes
controls	com input control input
scope for settings	Teach-in via com input on pin 5 LCA-2 with LinkControl
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-340/IU/M

pin assignment	
	
order no.	**mic-340/IU/M**

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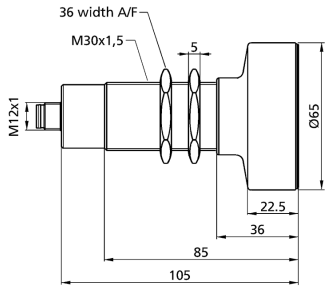
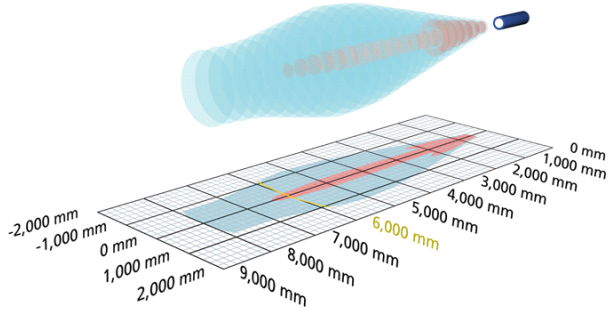
mic-600/D/M

scale drawing



detection zone



1 x pnp

8,000 mm

measuring range	600 - 8.000 mm
design	cylindrical M30
operating mode	proximity switch/reflective mode reflective barrier window mode
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	80 kHz
blind zone	600 mm
operating range	6,000 mm
maximum range	8,000 mm
resolution	0.18 mm
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-600/D/M

outputs	
output 1	switching output pnp: I_{max} = 200 mA (U_B-2V) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	100 mm
switching frequency	3 Hz
response time	240 ms
delay prior to availability	< 600 ms

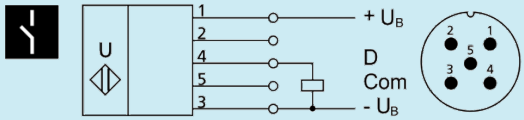
inputs	
input 1	com input teach-in input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	320 g
further versions	cable connection (on request)

technical features/characteristics	
temperature compensation	yes
controls	com input control input
scope for settings	Teach-in via com input on pin 5 LCA-2 with LinkControl
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-600/D/M

pin assignment



order no.	**mic-600/D/M**

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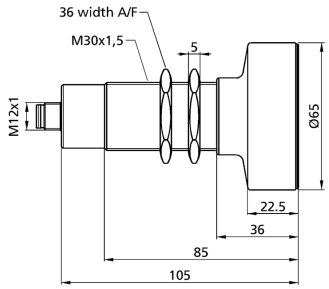
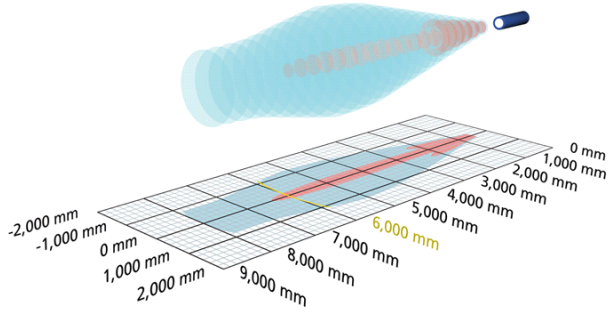
mic-600/IU/M

scale drawing



detection zone



1 x analogue 4-20 mA + 0-10 V

8,000 mm

measuring range	600 - 8.000 mm
design	cylindrical M30
operating mode	analogue distance measurements
particularities	metal plug for harsh operational conditions

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	80 kHz
blind zone	600 mm
operating range	6,000 mm
maximum range	8,000 mm
resolution	0.18 mm to 2.4 mm, depending on the analogue window
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)

electrical data

operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 55 mA
type of connection	5-pin M12 initiator plug

mic-600/IU/M

outputs	
output 1	analogue output current: 4-20 mA / voltage: 0-10 V (at $U_B \geq 15$ V), short-circuit-proof switchable rising/falling
response time	240 ms
delay prior to availability	< 600 ms

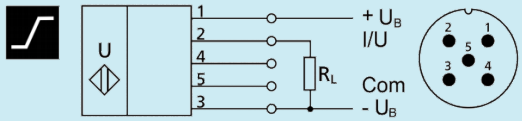
inputs	
input 1	com input teach-in input

housing	
material	brass sleeve, nickel-plated, plastic parts, PBT
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	320 g
further versions	cable connection (on request)

technical features/characteristics	
temperature compensation	yes
controls	com input control input
scope for settings	Teach-in via com input on pin 5 LCA-2 with LinkControl
Synchronisation	yes
multiplex	no
indicators	no
particularities	metal plug for harsh operational conditions

mic-600/IU/M

pin assignment



order no.	**mic-600/IU/M**

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