

SWITCHING ULTRASONIC SENSORS

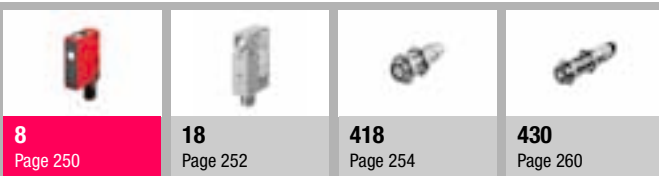
Part description Part No.:	Operating range [mm] <input type="checkbox"/> ¹⁾	Operating voltage	Ultrasonic frequency	Switching frequency	Output	Switching
Ultrasonic throughbeam sensors		▶ = Transmitter ◀ = Receiver				
▶ LSSU 8 - S12 500 38914 ◀ LSEU 8 / 24 - S12 500 38915	<input type="text" value="0"/> <input type="text" value="800"/>	20 ... 30VDC	300kHz	250Hz	1 PNP 1 NPN	Object detected
Ultrasonic retro-reflective sensors						
RKU 8 / 24 - 400 - S12 500 38913	<input type="text" value="0"/> <input type="text" value="400"/>	20 ... 30VDC	300kHz	8Hz	1 PNP 1 NPN	Object detected/ not detected reversible
Ultrasonic scanners with background suppression						
HRTU 8 / 24 - 400 - S12 500 38912	<input type="text" value="50"/> <input type="text" value="400"/>	20 ... 30VDC	300kHz	8Hz	1 PNP 1 NPN	Object detected/ not detected reversible

1) Over complete temperature range, measurement object ≥ 20x20mm²

We reserve the right to make changes • US_8_GB.fm

Accessories / connection cables More accessories can be found from **page 364** onwards

Part No.	Designation	Features
a 501 04543	K - D M12W - 4P - 2m - PVC	Connection cable 2000mm, M12 angular, 4-pin, PVC
b 501 04542	K - D M12A - 4P - 2m - PVC	Connection cable 2000mm, M12 axial, 4-pin, PVC
c 501 04545	K - D M12W - 4P - 5m - PVC	Connection cable 5000mm, M12 angular, 4-pin, PVC
d 501 04544	K - D M12A - 4P - 5m - PVC	Connection cable 5000mm, M12 axial, 4-pin, PVC
e 501 04558	K - D M12W - 5P - 5m - PVC	Connection cable 5000mm, M12 angular, 5-pin, PVC
f 501 04557	K - D M12A - 5P - 5m - PVC	Connection cable 5000mm, M12 axial, 5-pin, PVC



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8 Series
Ultrasonic sensors



Connection	Repeatability	Option	Accessories
M12 connector		1, 4	a, b, c, d
M12 connector	± 1 mm	2, 3	e, f
M12 connector	± 1 mm	2, 3	e, f



Optical Sensor ABCs

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- Connection types Page 414
- Outputs Page 414

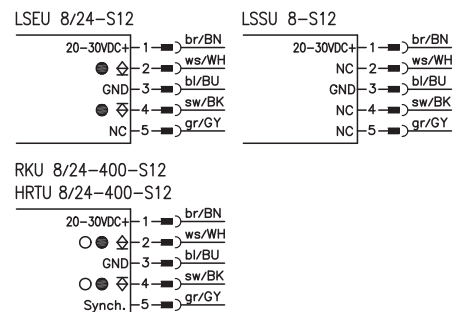
Options

- 1 Sensitivity adjustment via step switch
- 2 Teach-in via step switch
- 3 Synchronisation input
- 4 UL approval

Other 8 Series products:

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	Throughbeam sensors LSR 8, LSRL 8	42
	Retro-reflective sensors PRK 8, PRKL 8	44
	Diffuse reflection scanners RTR 8, VRTR 8, HRTR 8, HRTL 8	46
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Electrical connection



SWITCHING ULTRASONIC SENSORS

Part description Part No.:	Operating range [mm] <input type="checkbox"/> ¹⁾	Operating voltage	Ultrasonic frequency	Switching frequency	Output	Switching
Ultrasonic throughbeam sensors		▶ = Transmitter ◀ = Receiver				
LSSU 18 - S12 501 03365 LSEU 18 / 24 - S12 501 03364	<input type="text" value="0"/> <input type="text" value="650"/>	10 ... 30VDC	300kHz	100Hz	1 PNP 1 NPN	Object detected
LSSU 18.52 - S12 501 08348 LSEU 18 / 4.52 - S12 501 08347	<input type="text" value="0"/> <input type="text" value="500"/>	10 ... 30VDC	300kHz	200Hz	1 PNP	Object detected

1) Over complete temperature range, measurement object $\geq 20 \times 20 \text{mm}^2$

Accessories / connection cables

More accessories can be found from **page 364** onwards

Part No.	Designation	Features
a 501 04556	K - D M12W - 5P - 2m - PVC	Connection cable 2000mm, M12 angular, 5-pin, PVC
b 501 04555	K - D M12A - 5P - 2m - PVC	Connection cable 2000mm, M12 axial, 5-pin, PVC
c 501 04558	K - D M12W - 5P - 5m - PVC	Connection cable 5000mm, M12 angular, 5-pin, PVC
d 501 04557	K - D M12A - 5P - 5m - PVC	Connection cable 5000mm, M12 axial, 5-pin, PVC
e 501 04577	K - D M12W - 5P - 5m - FAB	Connection cable 5000mm, M12 angular, 5-pin, Food+Bev.
f 501 04576	K - D M12A - 5P - 5m - FAB	Connection cable 5000mm, M12 axial, 5-pin, Food+Bev.



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18 Series
Ultrasonic sensors



Standard Sensors

Measuring Sensors

Ultrasonic Sensors

Forked Sensors

Special Sensors

Fibre Optic Sensors

Light Curtains

Protective Sensors

Ex Sensors

AS-interface Sensors

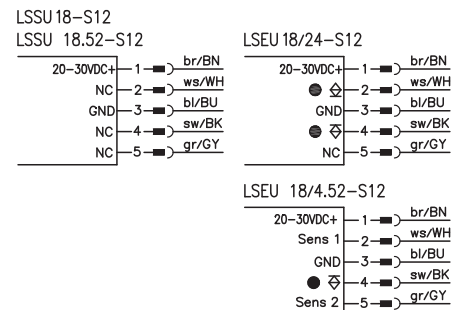
Connection	Repeatability	Option	Accessories
M12 connector		1, 3, 5, 7	a, b, c, d
M12 connector		2, 4, 6, 7	e, f



Optical Sensor ABCs

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- Outputs Page 414

Electrical connection



Options

- 1 Sensitivity adjustment via step switch
- 2 Sensitivity adjustment via Sens 1 and Sens 2 control inputs
- 3 IP 65 metal housing
- 4 IP 67/IP 69K stainless steel housing with Teflon-coated ultrasonic transducer
- 5 Bottle counting in the air conveyor
- 6 Chemical resistance/environmental test acc. to ECOLAB and CleanProof+
- 7 UL approval

Other 18 Series products:

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	Retro-reflective sensors RK 18. PRK 18	54
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SWITCHING ULTRASONIC SENSORS

Part description Part No.:	Operating range [mm] <input type="checkbox"/> 1)	Operating voltage	Ultrasonic frequency	Switching frequency	Output	Switching
Ultrasonic retro-reflective sensors, short construction						
RKU 418 RM/P - 5020 - 200 - S12 500 38637	<input type="checkbox"/> 0 ... 200	20 ... 30VDC	400kHz	10Hz	1 PNP	Object detected
RKU 418 WM/P - 5020 - 200 - S12 500 38638	<input type="checkbox"/> 0 ... 200	20 ... 30VDC	400kHz	10Hz	1 PNP	Object detected
RKU 418 RM/P - 3020 - 700 - S12 500 38641	<input type="text" value="0"/> <input type="text" value="700"/>	20 ... 30VDC	200kHz	5Hz	1 PNP	Object detected
RKU 418 WM/P - 3020 - 700 - S12 500 38642	<input type="text" value="0"/> <input type="text" value="700"/>	20 ... 30VDC	200kHz	5Hz	1 PNP	Object detected

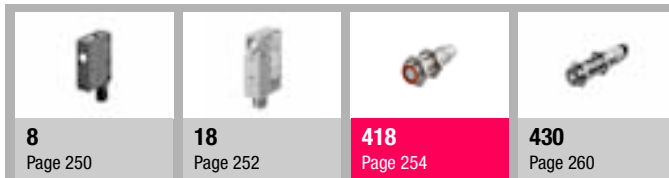
1) Over complete temperature range, measurement object ≥ 20x20mm²

We reserve the right to make changes • US_418_1_GB.fm

Accessories / connection cables

More accessories can be found from **page 364** onwards

Part No.	Designation	Features
a 501 04543	K - D M12W - 4P - 2m - PVC	Connection cable 2000mm, M12 angular, 4-pin, PVC
b 501 04542	K - D M12A - 4P - 2m - PVC	Connection cable 2000mm, M12 axial, 4-pin, PVC
c 501 04545	K - D M12W - 4P - 5m - PVC	Connection cable 5000mm, M12 angular, 4-pin, PVC
d 501 04544	K - D M12A - 4P - 5m - PVC	Connection cable 5000mm, M12 axial, 4-pin, PVC
e 501 04547	K - D M12W - 4P - 10m - PVC	Connection cable 10000mm, M12 angular, 4-pin, PVC
f 501 04546	K - D M12A - 4P - 10m - PVC	Connection cable 10000mm, M12 axial, 4-pin, PVC



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418 Series
Ultrasonic sensors



Standard Sensors

Measuring Sensors

Ultrasonic Sensors

Forked Sensors

Special Sensors

Fibre Optic Sensors

Light Curtains

Protective Sensors

Ex Sensors

AS-interface Sensors

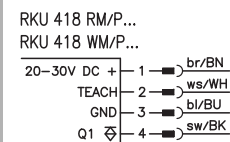
Connection	Repeatability	Option	Accessories
M12 connector		1, 2	a, b, c, d, e, f
M12 connector		1, 2	a, b, c, d, e, f
M12 connector		1, 2	a, b, c, d, e, f
M12 connector		1, 2	a, b, c, d, e, f



Optical Sensor ABCs

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Electrical connection



Dimensioned drawing for short construction at www.leuze.de.

Options

- 1 Teach-in via teach input
- 2 UL approval

Other 418 Series products:

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www.leuze.de/ultrasonics/

SWITCHING ULTRASONIC SENSORS

Part description Part No.:	Operating range ¹⁾ [mm] <input type="checkbox"/>	Operating voltage	Ultrasonic frequency	Switching frequency	Output	Switching
Ultrasonic scanners with background suppression, short construction						
HRTU 418 RM/P - 5020 - 200 - S12 500 38635	<input type="checkbox"/> 30 ... 200	20 ... 30VDC	400kHz	10Hz	1 PNP	Object detected
HRTU 418 WM/P - 5020 - 200 - S12 500 38636	<input type="checkbox"/> 30 ... 200	20 ... 30VDC	400kHz	10Hz	1 PNP	Object detected
HRTU 418 RM/P - 5220 - 400 - S12 501 09016	<input type="checkbox"/> 25 400	20 ... 30VDC	300kHz	10Hz	2 PNP	Object detected
HRTU 418 WM/P - 5220 - 400 - S12 501 09017	<input type="checkbox"/> 25 400	20 ... 30VDC	300kHz	10Hz	2 PNP	Object detected
HRTU 418 RM/P - 3020 - 700 - S12 500 38639	<input type="checkbox"/> 100 700	20 ... 30VDC	200kHz	5Hz	1 PNP	Object detected
HRTU 418 WM/P - 3020 - 700 - S12 500 38640	<input type="checkbox"/> 100 700	20 ... 30VDC	200kHz	5Hz	1 PNP	Object detected
HRTU 418 RM/P - 5220 - 700 - S12 501 09018	<input type="checkbox"/> 50 700	20 ... 30VDC	200kHz	5Hz	2 PNP	Object detected
HRTU 418 WM/P - 5220 - 700 - S12 501 09019	<input type="checkbox"/> 50 700	20 ... 30VDC	200kHz	5Hz	2 PNP	Object detected

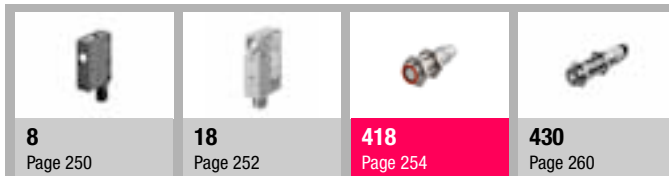
1) Over complete temperature range, measurement object $\geq 20 \times 20 \text{mm}^2$

We reserve the right to make changes • US_418_2_GB.fm

Accessories / connection cables

More accessories can be found from **page 364** onwards

Part No.	Designation	Features
a 501 04543	K - D M12W - 4P - 2m - PVC	Connection cable 2000mm, M12 angular, 4-pin, PVC
b 501 04542	K - D M12A - 4P - 2m - PVC	Connection cable 2000mm, M12 axial, 4-pin, PVC
c 501 04545	K - D M12W - 4P - 5m - PVC	Connection cable 5000mm, M12 angular, 4-pin, PVC
d 501 04544	K - D M12A - 4P - 5m - PVC	Connection cable 5000mm, M12 axial, 4-pin, PVC
e 501 04558	K - D M12W - 5P - 5m - PVC	Connection cable 5000mm, M12 angular, 5-pin, PVC
f 501 04557	K - D M12A - 5P - 5m - PVC	Connection cable 5000mm, M12 axial, 5-pin, PVC



418 Series
Ultrasonic sensors



Standard Sensors

Measuring Sensors

Ultrasonic Sensors

Forked Sensors

Special Sensors

Fibre Optic Sensors

Light Curtains

Protective Sensors

Ex Sensors

AS-interface Sensors

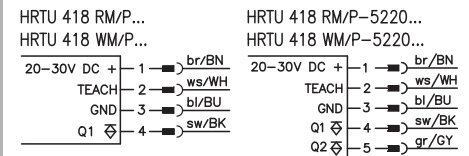
Connection	Repeatability	Option	Accessories
M12 connector	± 1 mm	1, 2	a, b, c, d
M12 connector	± 1 mm	1, 2	a, b, c, d
M12 connector	± 1 mm	1, 2	e, f
M12 connector	± 1 mm	1, 2	e, f
M12 connector	± 1 mm	1, 2	a, b, c, d
M12 connector	± 1 mm	1, 2	a, b, c, d
M12 connector	± 1 mm	1, 2	e, f
M12 connector	± 1 mm	1, 2	e, f



Optical Sensor ABCs

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- Connection types Page 414
- Outputs Page 414

Electrical connection



Dimensioned drawing for short construction at www.leuze.com.

Options

- 1 Teach-in via teach input
- 2 UL approval

Other 418 Series products:

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www.leuze.de/ultrasonics/

SWITCHING ULTRASONIC SENSORS

Part description Part No.:	Operating range [mm] <input type="checkbox"/>	Operating voltage	Ultrasonic frequency	Switching frequency	Output	Switching
Ultrasonic scanners with background suppression, long construction						
HRTU 418 M/P - 5010 - 300 - S12 500 36257	<input type="checkbox"/> 50 ... 300 ¹⁾	20 ... 30VDC	400kHz	5Hz	1 PNP	Object detected
HRTU 418 M/P - 3010 - 1000 - S12 500 36258	<input type="checkbox"/> 150 ... 1000 ¹⁾	20 ... 30VDC	200kHz	4Hz	1 PNP	Object detected

1) Over complete temperature range, measurement object $\geq 10 \times 10 \text{mm}^2$

Accessories / connection cables

More accessories can be found from **page 364** onwards

Part No.	Designation	Features
a 501 04543	K - D M12W - 4P - 2m - PVC	Connection cable 2000mm, M12 angular, 4-pin, PVC
b 501 04542	K - D M12A - 4P - 2m - PVC	Connection cable 2000mm, M12 axial, 4-pin, PVC
c 501 04545	K - D M12W - 4P - 5m - PVC	Connection cable 5000mm, M12 angular, 4-pin, PVC
d 501 04544	K - D M12A - 4P - 5m - PVC	Connection cable 5000mm, M12 axial, 4-pin, PVC
e 501 04547	K - D M12W - 4P - 10m - PVC	Connection cable 10000mm, M12 angular, 4-pin, PVC
f 501 04546	K - D M12A - 4P - 10m - PVC	Connection cable 10000mm, M12 axial, 4-pin, PVC



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418 Series
Ultrasonic sensors



Standard Sensors

Measuring Sensors

Ultrasonic Sensors

Forked Sensors

Special Sensors

Fibre Optic Sensors

Light Curtains

Protective Sensors

Ex Sensors

AS-interface Sensors

Connection	Repeatability	Option	Accessories
M12 connector	± 1 mm	1, 2, 3, 4	a, b, c, d, e, f
M12 connector	± 2 mm	1, 2, 3, 4	a, b, c, d, e, f

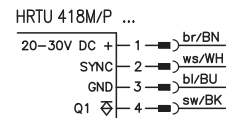


Dimensioned drawing see measuring sensors on page 232.

Optical Sensor ABCs

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Electrical connection



Options

- 1 Configurable via programming unit and software
- 2 Sensor synchronisation via SYNC input
- 3 Configurable multiplex operation
- 4 UL approval

Other 418 Series products:

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SWITCHING ULTRASONIC SENSORS

Part description Part No.:	Operating range [mm] <input type="checkbox"/>	Operating voltage	Ultrasonic frequency	Switching frequency	Output	Switching
Ultrasonic scanners						
VRTU 430 M/P - 5110 - 300 - S12 500 36261	<input type="checkbox"/> 60 ... 300 ¹⁾	20 ... 30VDC	400kHz	8Hz	2 PNP	Object detected
VRTU 430 M/P - 3110 - 1300 - S12 500 36262	<input type="checkbox"/> 200 ... 1300 ¹⁾	20 ... 30VDC	200kHz	4Hz	2 PNP	Object detected
VRTU 430 M/P - 2110 - 3000 - S12 500 36263	<input type="checkbox"/> 400 3000 ²⁾	20 ... 30VDC	120kHz	2Hz	2 PNP	Object detected
VRTU 430 M/P - 1110 - 6000 - S12 500 36264	<input type="checkbox"/> 600 6000 ³⁾	20 ... 30VDC	80kHz	1Hz	2 PNP	Object detected

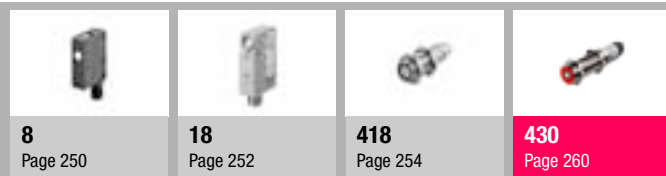
- 1) Over complete temperature range, measurement object $\geq 10 \times 10 \text{ mm}^2$
 2) Over complete temperature range, measurement object $\geq 50 \times 50 \text{ mm}^2$
 3) Over complete temperature range, measurement object $\geq 100 \times 100 \text{ mm}^2$



The **dimensioned drawing** for these sensors can be found with the **measuring sensors** on **page 236**.

We reserve the right to make changes • US_430_GB.fm

Accessories / connection cables		More accessories can be found from page 364 onwards	
Part No.	Designation	Features	
a 501 04556	K - D M12W - 5P - 2m - PVC	Connection cable 2000mm, M12 angular, 5-pin, PVC	
b 501 04555	K - D M12A - 5P - 2m - PVC	Connection cable 2000mm, M12 axial, 5-pin, PVC	
c 501 04558	K - D M12W - 5P - 5m - PVC	Connection cable 5000mm, M12 angular, 5-pin, PVC	
d 501 04557	K - D M12A - 5P - 5m - PVC	Connection cable 5000mm, M12 axial, 5-pin, PVC	
e 501 04560	K - D M12W - 5P - 10m - PVC	Connection cable 10000mm, M12 angular, 5-pin, PVC	
f 501 04559	K - D M12A - 5P - 10m - PVC	Connection cable 10000mm, M12 axial, 5-pin, PVC	



430 Series
Ultrasonic sensors



Standard Sensors

Measuring Sensors

Ultrasonic Sensors

Forked Sensors

Special Sensors

Fibre Optic Sensors

Light Curtains

Protective Sensors

Ex Sensors

AS-interface Sensors

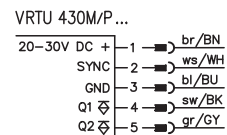
Connection	Repeatability	Option	Accessories
M12 connector	± 0.45mm	1, 2, 3, 4	a, b, c, d, e, f
M12 connector	± 2mm	1, 2, 3, 4	a, b, c, d, e, f
M12 connector	± 5mm	1, 2, 3, 4	a, b, c, d, e, f
M12 connector	± 9mm	1, 2, 3, 4	a, b, c, d, e, f



Optical Sensor ABCs

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Electrical connection



Options

- 1 Configurable via programming unit and software
- 2 Sensor synchronisation via SYNC input
- 3 Configurable multiplex operation
- 4 UL approval

Other 430 Series products:

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