UD18-22DC221

UD18

ULTRASONIC SENSORS

Ordering information

Type	Part no.
UD18-22DC221	6058914

Other models and accessories ➔ www.sick.com/UD18

CE

Detailed technical data

Performance

Resolution	1 material layer
Response time	5.5 ms [1]
Switching frequency	100 Hz
Output time	5 ms, trigger mode: < 0.5 ms [1]
Ultrasonic frequency (typical)	200 kHz
Additional function	3 selectable sensitivity levels, teach-in of up to 4 individual sensitivity level, sensitivity level changeover during operation, set parameters via Connect+ Software [2]
Installation distance	30 mm ... 70 mm, 50 mm ± 3 mm (default setting)
Blind zone	7 mm from sender and receiver
Permissible angle deviation	± 45 ° perpendicular to material layer
Detectable material	Paper with grammages: 100 g/m² ... 2,000 g/m² Metal-laminated sheets and films: ≤ 5 mm Self-adhesive films, metal sheets: ≤ 2 mm Corrugated cardboard: single wall F, N and G flute sizes Washi Wafer PCB

[1] Set parameters via Connect+ Software.

[2] Functions may vary depending on sensor type.

Interfaces

Switching output	2 x PNP (200 mA) [1] [2] [3]
Control input	3 x

[1] Switching outputs Q_1 and Q_2 short-circuit protected.

[2] Q_1: switching output double layer, Q_2: switching output single / no layer, normally closed.

[3] PNP: Active = Vs - (< 2 V) / Inactive = 0 V;
NPN: Active ≤ 2 V / Inactive = Vs.

Mechanics/electronics

Supply voltage V_s	DC 20 V ... 30 V [1]
Power consumption	≤ 1.5 W [2]
Initialization time	< 300 ms
Design	Cylindrical

[1] Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

[2] Without load.

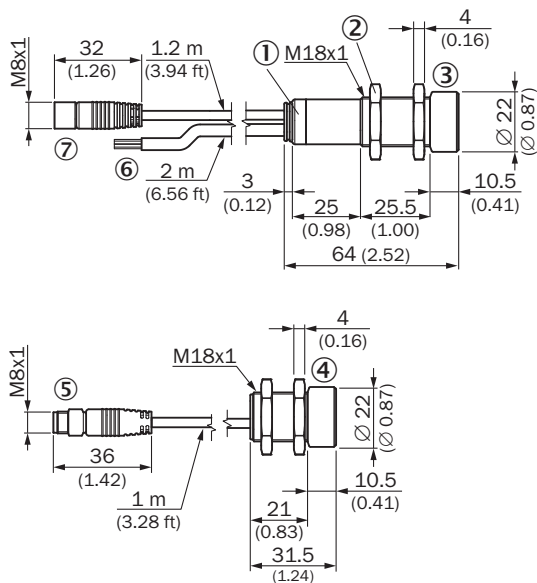| Housing material	Nickel-plated brass PBT PA Ultrasonic transducer: polyurethane foam, glass epoxy resin
Connection type	Connection cable with open end: 7 x 0,25 mm², 2 m, PUR Sender: connection cable to receiver with M8 male connector, 3-pin, 1 m, PUR Receiver: connection cable to sender with M8 female connector, 3-pin, 1.2 m, PUR
Indication	2 x LED
Weight	160 g
Sending axis	Straight

[1] Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.
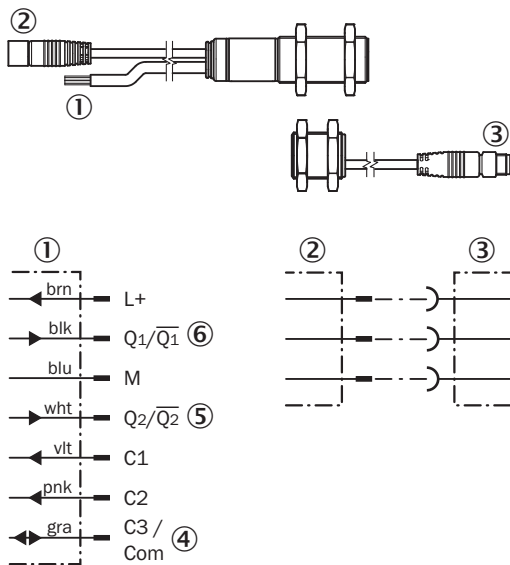
[2] Without load.

Ambient data

Enclosure rating	IP 65
Protection class	III
Ambient temperature	Operation: +5 °C ... +60 °C Storage: –40 °C ... +85 °C

Dimensional drawing (Dimensions in mm (inch))

① LED status indicator
② Mounting nuts, SW 24 mm
③ Receiver with evaluation unit
④ Sender
⑤ Plug M8x1, 3-pin, for connection with the receiver
⑥ Supply voltage and controls connection cable
⑦ Female connector M8x1, 3-pin, for connection with the sender

Connection diagram

① Connection cable for supply voltage and controls, with control inputs C1, C2, C3 and switching output Q1, Q2
② Female connector M8x1, 3-pin, for connection with the sender
③ Plug M8x1, 3-pin, for connection with the receiver
④ Communication via Connect+ adapter (CPA)
⑤ No material/single layer
⑥ Double layer

Connection ①:
Wire	Signal
brn	L+
blk	Q1/Q̄1 ⑥
blu	M
wht	Q2/Q̄2 ⑤
vlt	C1
pnk	C2
gra	C3 / Com ④

Recommended accessories

Other models and accessories ➜ www.sick.com/UD18

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate H for universal clamp bracket, steel, zinc coated, universal clamp and mounting hardware included	BEF-KHS-H01	2022465
Mounting brackets and mounting plates			
	Mounting plate for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M18	5321870
	Mounting bracket, M18 thread, steel, zinc coated, without mounting hardware	BEF-WN-M18	5308446
Terminal and alignment brackets			
	Mounting bracket with ball-and-socket, plastic, mounting hardware included	BEF-WN-M18-ST02	5312973
	Clamping block for round sensors M18, with fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KHF-M18	2051482
Programming and configuration tools			

Brief description	Type	Part no.
Tool for visualization, configuration and cloning, 3-digit LED display, supply voltage: DV 9 V … 30 V	Connect+ adapter (CPA)	6037782

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com

SICK
Sensor Intelligence.