UD18-22CC241

UD18

ULTRASONIC SENSORS
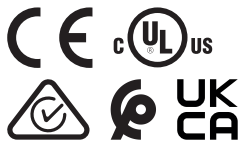
SICK
Sensor Intelligence.

UD18-22CC241 | UD18

ULTRASONIC SENSORS

Ordering information

Type	part no.
UD18-22CC241	6058911

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

Detailed technical data

Features

Installation distance	20 mm ... 60 mm, 40 mm ± 3 mm (default setting)
Target	Natural objects
Resolution	1 material layer
Response time	2.5 ms [1]
Switching frequency	250 Hz
Output time	2 ms, trigger mode: < 0.5 ms [1]
Ultrasonic frequency (typical)	400 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]
Blind zone	7 mm ... 7 mm (from sender and receiver)
Permissible angle deviation	± 45 ° perpendicular to material layer
Detectable material	Paper with grammages: 20 g/m² ... 2,000 g/m² Plastic sheets and foils: ≤ 0.4 mm Self-adhesive films, metal sheets: ≤ 0.3 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

Digital output	
Number	2 [1] [2]
Type	NPN
Function	Q_1: switching output double layer, Q_2: switching output single / no layer, normally closed
Maximum output current I_A	≤ 200 mA
Control input	3 x

[1] Outputs Q_1 and Q_2 short-circuit protected.

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

Electronics

Supply voltage U_B	DC 20 V … 30 V [1]
Power consumption	≤ 1.5 W [2]
Initialization time	< 750 ms
Display	2 x LED
Enclosure rating	IP65
Protection class	III

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

Mechanics

Dimensions (W x H x D)	18 mm x 18 mm x 63.2 mm
Design	Cylindrical
Sending axis	Straight
Housing material	Metal (Nickel-plated brass, PBT/PA, ultrasonic transducer: polyurethane foam, glass epoxy resin)
Weight	130 g
Thread size	M18 x 1
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

Ambient data

Ambient temperature, operation	+5 °C … +60 °C
Ambient temperature, storage	–40 °C … +85 °C

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓

Classifications

ECLASS 5.0	27270804
ECLASS 5.1.4	27270804
ECLASS 6.0	27270804
ECLASS 6.2	27270804
ECLASS 7.0	27270804
ECLASS 8.0	27270804
ECLASS 8.1	27270804
ECLASS 9.0	27270804
ECLASS 10.0	27270804
ECLASS 11.0	27270804

ECLASS 12.0	27272806
ETIM 5.0	EC001846
ETIM 6.0	EC001846
ETIM 7.0	EC001846
ETIM 8.0	EC001846
UNSPSC 16.0901	41111960

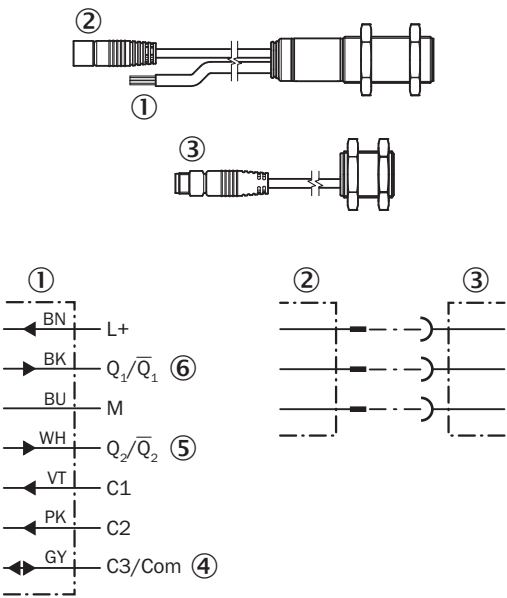## Dimensional drawing, sensor
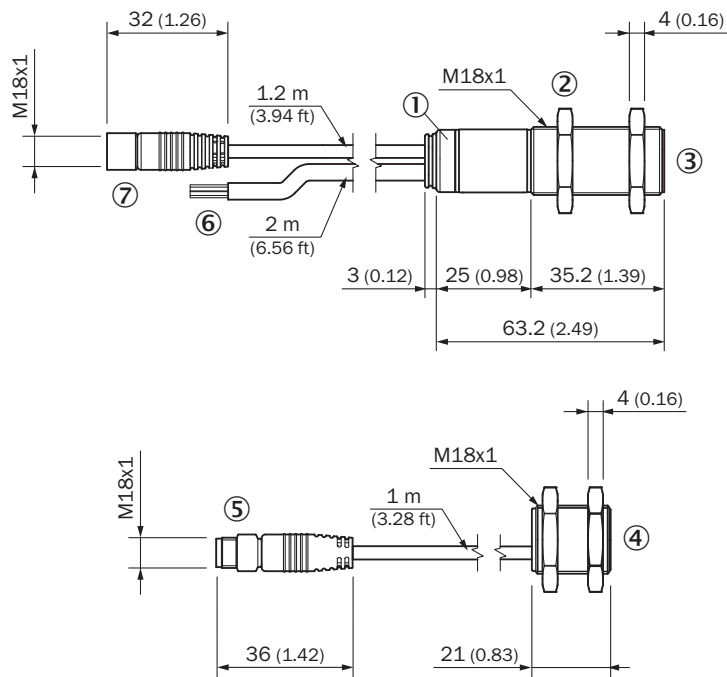
Dimensions in mm (inch)
① LED status indicator
② Fixing nuts, width 24 mm
③ receiver with evaluation unit
④ sender
⑤ plug M8x1, 3-pin, for connection with the receiver
⑥ supply voltage and controls connection cable
⑦ female connector M8x1, 3-pin, for connection with the sender

Connection diagram

① connection cable for supply voltage and controls, with control inputs C1, C2, C3 and digital 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

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Mounting plate for M18 sensors • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Without mounting hardware • **Suitable for:** GR18, V180-2, V18, W15, Z1, Z2	BEF-WG-M18	5321870
programming devices			
	• **Product segment:** Integration modules and adapters • **Product family:** Cloning modules • **Description:** 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."

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