



UP56-214118

UP56

LEVEL SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|-------------|----------|
| UP56-214118 | 6041693 |

Other models and accessories → www.sick.com/UP56



Detailed technical data

Features

| | |
|---------------------------------------|-----------------------------------|
| Medium | Fluids, bulk solids |
| Measurement | Switch, Continuous |
| Measuring range in tank | 350 mm ... 3,400 mm |
| Measuring range immersion tube | 350 mm ... 8,000 mm |
| Process pressure | 0 bar ... 6 bar Gauge pressure |
| Process temperature | -25 °C ... +70 °C |

Performance

| | |
|-----------------------------------|------------------------|
| Accuracy of sensor element | ≤ 2 % ¹⁾ |
| Reproducibility | ± 0.15 % ¹⁾ |
| Resolution | ≤ 0.18 mm |
| Response time | ≤ 240 ms ²⁾ |
| MTTF | > 100 years |
| Display | ✓ |

¹⁾ From the full scale value.

²⁾ Recovery time 32 ms ... 180 ms according to EMC EN 60947-5-7.

Electronics

| | |
|--------------------------|--|
| Supply voltage | 9 V DC ... 30 V DC ¹⁾ |
| Residual ripple | ± 10 % |
| Power consumption | ≤ 80 mA ²⁾ |
| Protection class | III |
| Connection type | Round connector M12 x 1, 5-pin |
| Output signal | 1 x PNP + 4 mA ... 20 mA / 0 V ... 10 V ^{3) 4)} |

¹⁾ Reverse-polarity protected.

²⁾ At 24 V DC without output load.

³⁾ Short-circuit protected, reversible.

⁴⁾ Automatic switching between voltage and current outputs dependet on load 4 mA ... 20 mA: RL ≤ 100 / at 9 V ≤ U_B ≤ 20 V; RL ≤ 500/ at U_B ≥ 20 V; 0 V ... 10 V: RL ≥ 100 k/ at U_B ≥ 15 V, short-circuit protected.

| | |
|---------------------------------------|--------------------|
| Hysteresis | 50 mm |
| Output current | 200 mA |
| Time delay before availability | ≤ 300 ms |
| Enclosure rating | IP67 |
| Ultrasonic frequency | 120 kHz |
| Ultrasonic transducer | PTFE coating, FFKM |

1) Reverse-polarity protected.

2) At 24 V DC without output load.

3) Short-circuit protected, reversible.

4) Automatic switching between voltage and current outputs dependent on load 4 mA ... 20 mA: RL ≤ 100 / at 9 V ≤ UB ≤ 20 V; RL ≤ 500 / at UB ≥ 20 V; 0 V ... 10 V: RL ≥ 100 k / at UB ≥ 15 V, short-circuit protected.

Mechanics

| | |
|---------------------------|---------------------------------------|
| Process connection | G 2 A PN 6 |
| Housing material | Stainless steel 1.4571, PBT, TPU, FKM |
| Housing design | Standard |
| Weight | 1,200 g |

Ambient data

| | |
|--------------------------------------|---------------------------------|
| Ambient operating temperature | -25 °C ... +70 °C ¹⁾ |
| Ambient temperature, storage | -40 °C ... +85 °C |

1) Temperature compensation at -25 °C ... +50 °C, can be switched off.

Classifications

| | |
|-----------------------|----------|
| ECLASS 5.0 | 27200506 |
| ECLASS 5.1.4 | 27200506 |
| ECLASS 6.0 | 27200506 |
| ECLASS 6.2 | 27200506 |
| ECLASS 7.0 | 27200506 |
| ECLASS 8.0 | 27200506 |
| ECLASS 8.1 | 27200506 |
| ECLASS 9.0 | 27200506 |
| ECLASS 10.0 | 27200506 |
| ECLASS 11.0 | 27200506 |
| ECLASS 12.0 | 27200506 |
| ETIM 5.0 | EC001447 |
| ETIM 6.0 | EC001447 |
| ETIM 7.0 | EC001447 |
| ETIM 8.0 | EC001447 |
| UNSPSC 16.0901 | 41111950 |

Type code

Coverage
1 30 ... 250 mm

| | |
|---|---------------------|
| 2 | 85 ... 350 mm |
| 3 | 200 mm ... 1,300 mm |
| 4 | 350 mm ... 3,400 mm |
| 6 | 65 ... 700 mm |

Connectivity

| | |
|---|--------------------------------|
| 1 | M12 round connector x 1, 5-pin |
| 2 | M12 round connector x 1, 4-pin |

Process connection / Housing

| | |
|---|--|
| 1 | G thread, stainless steel 1.4571 / plastic PBT, TPU, with display |
| 2 | G thread, stainless steel 1.4571 / stainless steel 1.4571, without display |
| 4 | GF connection D40, PTFE / plastic PP without display |
| 5 | GF connection D40, PTFE / plastic PP without display / short design (Mini) |
| 7 | G thread, PVDF / plastic PBT, TBU, with display |
| A | NPT thread, stainless steel 1.4571 / plastic PBT, TPU, with display |
| B | NPT thread, stainless steel 1.4571 / stainless steel 1.4571, without display |
| C | NPT thread, PVDF / plastic PBT, TPU, with display |

Output function

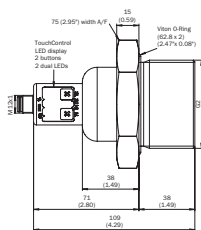
| | |
|---|--|
| 2 | 2 x PNP transistor output |
| 4 | 2 x NPN transistor output |
| 5 | Push-pull: PNP/NPN; IO-Link 1.1 (process data, diagnostics, parameterization, data repository) |
| 6 | Analog, current output |
| 8 | Analog, current and voltage output + 1 PNP transistor output |

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Not all variants of the type code can be combined!

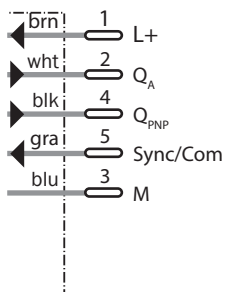
[Dimensional drawing](#) (Dimensions in mm (inch))

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Connection diagram

1 x PNP + 4 mA ... 20 mA / 0 V ... 10 V



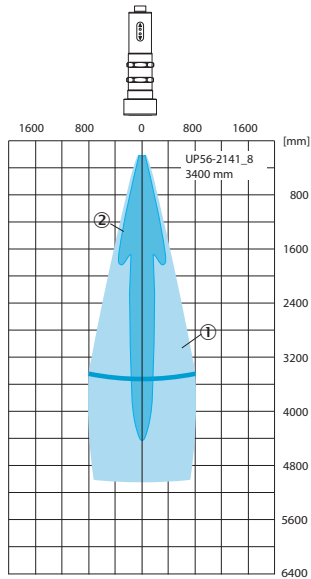
Connection type

Male connector M12, 5-pin



Scanning range



If the following destinations are located in the radiation cone, reliable detection is guaranteed.






- ① Example object: aligned plate 500 mm x 500 mm
- ② Pipe diameter 10 mm

Recommended accessories

Other models and accessories → www.sick.com/UP56

| | Brief description | Type | Part no. |
|---|--|------------------------|----------|
| Cloning modules | | | |
|  | Tool for visualization, configuration and cloning, 3-digit LED display, supply voltage: DV 9 V ... 30 V | Connect+ adapter (CPA) | 6037782 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 5-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-020UB5XLEAX | 2095617 |

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 5-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones | YF2A15-020VB5XLEAX | 2096239 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 5-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-050UB5XLEAX | 2095618 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 5-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones | YF2A15-050VB5XLEAX | 2096240 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 10 m, 5-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-100UB5XLEAX | 2095619 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 10 m, 5-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones | YF2A15-100VB5XLEAX | 2096241 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 5-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YG2A15-020UB5XLEAX | 2095772 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 5-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones | YG2A15-020VB5XLEAX | 2096215 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 5-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YG2A15-050UB5XLEAX | 2095773 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 5-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones | YG2A15-050VB5XLEAX | 2096216 |

| | Brief description | Type | Part no. |
|---|---|---------------------------|----------------|
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 10 m, 5-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | <p>YG2A15-100UB5XLEAX</p> | <p>2095774</p> |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 10 m, 5-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones | <p>YG2A15-100VB5XLEAX</p> | <p>2096217</p> |

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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