

**Fine dust sensor / particulate sensor,  
on-wall sensor and measuring transducer, with multi-range switching  
and active output**

Maintenance-free on-wall sensor **AERASGARD® APS-SD** with active output, in an impact-resistant plastic housing with quick-locking screws, for measuring the fine-dust content (0...500 µg/m³). The measuring transducer converts the measured values into a standard signal of 0-10V.

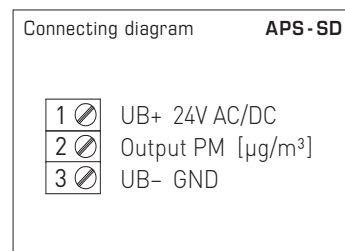
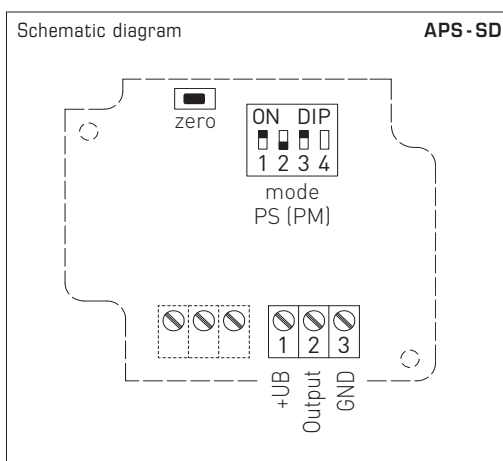
The sensor is used in offices, hotels, convention centres, apartments, shops, etc. and is used for evaluation of the indoor climate. This enables energy-saving, demand-based room ventilation, thereby reducing operating costs and improving well-being. One sensor for every 30m² of room area is recommended.

An optical **fine dust sensor** precisely detects **particulate (PM)** of the size category 0.3 to 10 micrometres. The sensor is factory-calibrated.

**TECHNICAL DATA**

|                        |                                                                                                                                                                                             |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power supply:          | 24 V AC / DC (± 10%)                                                                                                                                                                        |
| Power consumption:     | typical < 1.5 W / 24 V DC; < 2.9 VA / 24 V AC                                                                                                                                               |
| Output:                | 0-10 V                                                                                                                                                                                      |
| <b>FINE DUST (PM)</b>  |                                                                                                                                                                                             |
| Sensor (PM):           | optical <b>particulate sensor (PM = particulate matter), fine-dust sensor with laser- and soiling-resistant technology</b>                                                                  |
| Measuring range:       | multi-range switching (selectable via DIP switches)<br>0...50, 0...100, 0...300 or 0...500 µg/m³                                                                                            |
| Particle size:         | <b>PM 2.5</b> (0.3...2.5 µm); <b>PM 10</b> (0.3...10 µm)                                                                                                                                    |
| Accuracy:              | typical ± 10 µg/m³ (± 10% of the measured value) for PM 2.5<br>typical ± 25 µg/m³ (± 25% of the measured value) for PM 10                                                                   |
| Long-term stability:   | ± 1.25 µg/m³ (± 1.25% of measured value/year)                                                                                                                                               |
| Service life:          | > 10 years                                                                                                                                                                                  |
| Response time:         | < 2 minutes                                                                                                                                                                                 |
| Warm-up time:          | approx. 1 hour                                                                                                                                                                              |
| Ambient temperature:   | 0...+50 °C                                                                                                                                                                                  |
| Permitted humidity:    | 0...95% RH (non-precipitating air)                                                                                                                                                          |
| Housing:               | plastic, UV-resistant, polyamide material, 30% glass-globe reinforced, with quick-locking screws (slotted/Phillips head combination) colour traffic white (similar to RAL 9016)             |
| Housing dimensions:    | 126 x 90 x 50 mm (Tyr 2)                                                                                                                                                                    |
| Cable connection:      | <b>cable gland</b> plastic (M 16 x 1.5; with strain relief, exchangeable, max. inner diameter 10.4 mm) <b>or</b> <b>M12 connector</b> according to DIN EN 61076-2-101 (optional on request) |
| Electrical connection: | 0.14–1.5 mm², via screw terminals                                                                                                                                                           |
| Process connection:    | via screws                                                                                                                                                                                  |
| Protection class:      | III (according to EN 60 730)                                                                                                                                                                |
| Safety class:          | <b>IP 30</b> (according to EN 60 529)                                                                                                                                                       |
| Standards:             | CE-conformity according to EMC Directive 2014 / 30 / EU                                                                                                                                     |

| DIP switch                            | APS-SD                         |              |
|---------------------------------------|--------------------------------|--------------|
| <b>Fine dust (PM) Measuring range</b> | <b>DIP 1</b>                   | <b>DIP 2</b> |
| 0...50 µg/m³                          | OFF                            | OFF          |
| 0...100 µg/m³ (default)               | <b>ON</b>                      | OFF          |
| 0...300 µg/m³                         | OFF                            | <b>ON</b>    |
| 0...500 µg/m³                         | <b>ON</b>                      | <b>ON</b>    |
| <b>Fine dust (PM) Particle size</b>   | <b>DIP 3</b>                   |              |
| PM 2.5 (default)                      | <b>ON</b>                      |              |
| PM 10                                 | OFF                            |              |
| Note:                                 | <b>DIP 4</b> is not assigned ! |              |





S+S REGELTECHNIK

AERASGARD® APS-SD

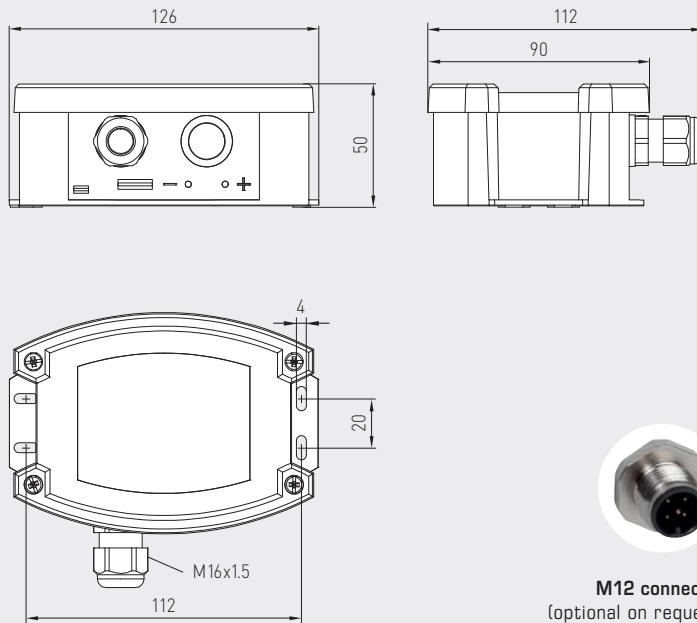
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Dimensional drawing

APS-SD

APS-SD



M12 connector  
(optional on request)



| AERASGARD® APS-SD                                                               |                                                                     |                                                                                         |        |                    |          |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------|--------------------|----------|
| On-wall fine dust sensor / fine dust sensor / particulate sensor (PM), Standard |                                                                     |                                                                                         |        |                    |          |
| Type / WG02                                                                     | Measuring Range                                                     | Particle size                                                                           | Output | Item No.           | Price    |
| APS-SD                                                                          | (switchable)                                                        | (switchable)                                                                            |        |                    |          |
| APS-SD-U                                                                        | 0... 50 µg/m³<br>0... 100 µg/m³<br>0... 300 µg/m³<br>0... 500 µg/m³ | PM 2.5<br>PM 10                                                                         | 0-10V  | 1501-7130-1001-000 | 456,31 € |
| Optional:                                                                       |                                                                     | Cable connection with <b>M12 connector</b> according to DIN EN 61076-2-101 (on request) |        |                    |          |
| <b>Note:</b>                                                                    |                                                                     | This unit <b>must not</b> be used as safety-relevant device!                            |        |                    |          |