# PARTICULATE CONCENTRATION SENSOR

## PM1, PM2.5 and PM10

- Simultaneous determination of PM1, PM2.5 and PM10
- Monitoring of fine dust in
  - production areas (workshops, factories, etc.)
  - indoor air quality monitoring in offices
  - outdoor air monitoring
  - Integration into the meteorological station
- Wide operating ambient conditions: -20...60 °C, 0...99% RH
- Output RS485 Modbus-RTU

The fine dust sensor is an optical sensor for the continuous measurement and monitoring of the concentration of three particle sizes: PM1, PM2.5 and PM10 simultaneously. The determination of particulate concentration is based on the light scatter measurement method.

### Technical specifications

| PN | PRPMA3100 | |
|---|---|---|
| Output | RS485 | |
| Protocol | Modbus RTU | |
| Sampling frequency | From 5 min to 24 h | |
| Particular matter | Measuring method | Light scattering measurement |
| | Measurement range | 0...1000µg/m³ |
| | Sensitivity | PM1&2.5: 0...100 µg/m$^3$: ±5µm+5%; 100...1000 µg/m$^3$: ±10 %<br>PM10: 0...100 µg/m$^3$: ±25µm, 100...1000 µg/m$^3$: ±25 % |
| General information | Enclosure | Polycarbonate and polyamide |
| | Response Time | 1s |
| | Stability | <±1% |
| | Accuracy | ±10% |
| | Resolution | 1µg/m³ |
| | Weight | 0.4 kg |
| | Dimensions | 81 x 45 x 148 mm |
| | Protection grade | IP65 |
| | Operative limits | -20…60°C; 0...99% RH% |
| | Compatibility | Alpha-Log |
| | Power supply | 5...35 V DC |

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