

# S305QAL

## Dust Emissions Monitor for CEMS



\* pending

# S305QAL

- Simple one sided installation, just one small process coupling
- No alignments required, therefore no measurement accuracy issues due to poor alignment.
- Easily adaptable air-purge option
- Easy to commission
- Local display with status indication
- Not affected by vibrations
- Reliable and durable
- Low maintenance costs, no time consuming cleaning operations
- Flow velocity compensation 3 – 40 m/s
- Certified for official regulation monitoring
- No need for consumable spare parts
- Lowest certified range 0 - 7.5 mg/m<sup>3</sup>



## Inductive Electrification

S305QAL is designed for measuring Total Suspended Particles (TSP) in the airflow inside pipes and ducts and stacks.

When moving particles pass nearby or hit the probe, a signal is induced. Inductive Electrification Technology is based on the Triboelectric AC signal and it minimizes the influence of sensor contamination, temperature drift and velocity changes at a detection limit as low as 0.01 mg/m<sup>3</sup>.

## S305QAL is approved for plants operating under the below regulations:

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- EC Directive 2000/76 Waste incineration
- LCPD – Directive 2001/80/EC for large combustion plants
- EC Directive 2010/75 Industrial Emissions
- EC Directive 2015/2193 (Medium Combustion Plants) Germany: 27th BImSchV, the 30th BImSchV or the 44th BImSchV
- S305QAL is compliant with EN 15267-1,2,3 and EN 14181, EN 13284-2:

Waste incineration

Power generation

Filtration plants

Cement

Pharmaceutical

Steel

Chemical

Wood



### Conformity of S305QAL to EN 15267-3:2007

- Certification ranges: 0 ... 7.5 mg/m<sup>3</sup>, 0 ... 15 mg/m<sup>3</sup>, 0 ... 100 mg/m<sup>3</sup>
- Flow rates in the range from 3 - 40 m/s
- Can be networked via RS485 (Modbus RTU) interface compliant to VDI 4201



### Installation, commissioning, and calibration of S305QAL against gravimetric sampling

- One sided installation and no mechanical alignments or adjustment
- IP 66 protected, therefore no weather protection needed (-20 to 50 °C).
- Auto Setup function gives instant usable range settings
- Power supply can be 100 - 230 VAC or 24 VDC
- Local- and remote setup possibilities via RS485



### The periodic control of the S305QAL during its ongoing operation

- Automatic Zero and Span check, requires no manual actions.

### Maintenance

- Only cleaning of the probe to be performed
- No further adjustments necessary

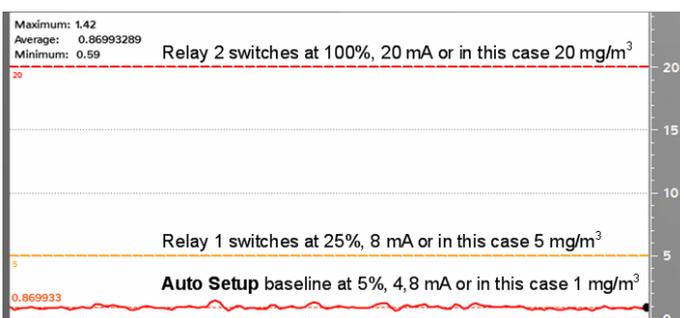


### Annual Surveillance Test (AST)

- Annual checking the variability and the validity of the calibration function

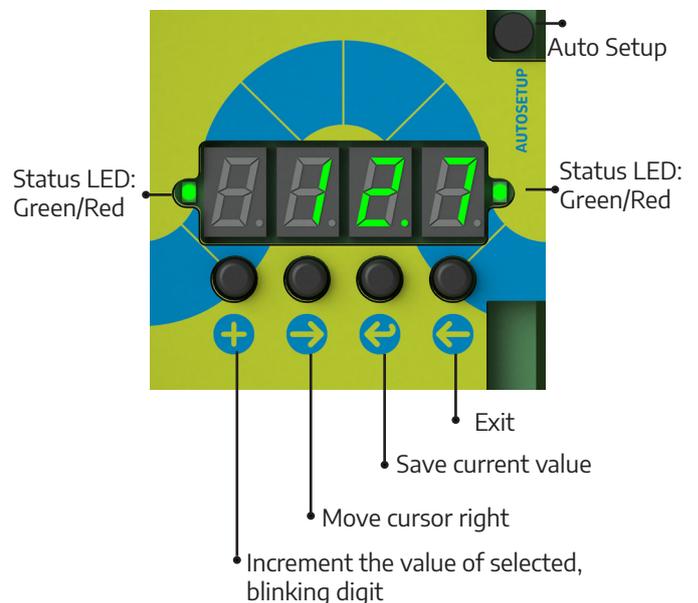
## Sintrol's Unique Auto Setup Function

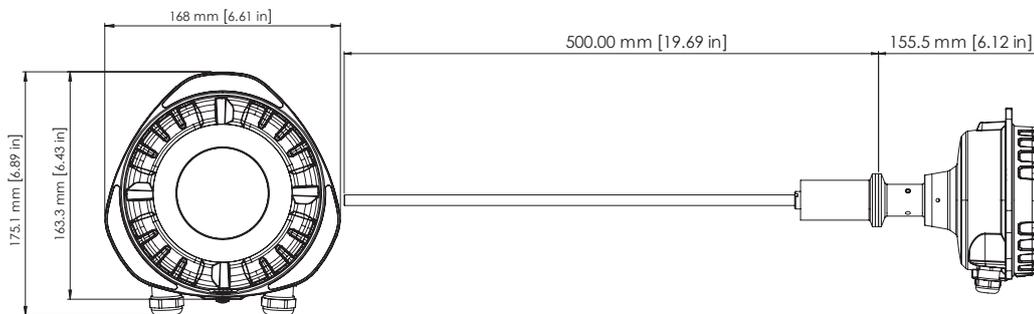
The Auto Setup function is a unique Sintrol Dust Monitor feature which allows for a simple, user friendly setup. During the Auto Setup procedure, which is done in normal process conditions, the dust monitor will automatically adapt to the process conditions and set the measuring range and alarms accordingly. At normal conditions the instrument will show green light and the mA output is set to 5 % of range.



## Local Display and User Interface

The S305 equipped with a local user interface for set-up and adjusting the instrument. The operator can see the actual measurement values on the 4- digit display in mA, % or mg/m<sup>3</sup>. With the 4-button interface the operator can navigate and change the most important operating parameters. Next to the display, is a button to start the Auto Setup procedure.





|                                 |  |
|---------------------------------|--|
| <b>Product Name</b>             | <b>S305QAL PC901026</b>  |
| Measured objects                | Total Suspended Particles (TSP)  |
| Measurement principle           | Inductive Electrification  |
| Measurement range               | Detection limit 0,01 mg/m <sup>3</sup><br>Certification ranges: 0 ... 7.5 mg/m <sup>3</sup> , 0 ... 15 mg/m <sup>3</sup> , 0 ... 100 mg/m <sup>3</sup>   |
| Ingress protection              | IP66   |
| Power supply requirements       | 24 V DC ±10 %<br>100 ... 240 V AC ±10 %, 50 / 60 Hz  |
| Power consumption               | Up to 10 W DC / AC   |
| Output signals                  | 2 × Independent SPDT dry contact relays, max. 30 V DC / 5 A or 240 V AC / 5 A, cos = 1<br>Isolated active 4 ... 20 mA output loop, max. loop resistance 250 Ω                                  |
| Communication interface         | 2 × Serial communication RS-485<br>USB<br>DustTool Software  |
| Communication protocol          | Modbus RTU (with RS-485) Compliant with VDI 4201<br>Sintrol network (with USB, RF and RS-485)  |
| <b>Physical characteristics</b> |  |
| Enclosure                       | Aluminium  |
| Wetted parts                    | Probe: Stainless steel (316L) Coated probes optional<br>Insulation: Polyphenylene sulfide (Ryton R-4)  |
| Weight                          | 1.5 kg (3.3 lb)  |
| <b>Ambient conditions</b>       |  |
| Temperature                     | -20 ... 50 °C (-4 ... 122 °F)  |
| Humidity                        | Max. 95 % relative humidity (non-condensing)   |
| <b>Process conditions</b>       |  |
| Temperature                     | Max. 300 °C (572 °F), optionally up to 700 °C (1292 °F)<br>Max. 250 °C (482 °F) with Teflon-coated probe   |
| Pressure                        | Max. 600 kPa (87 psi) in temperatures up to 300 °C (572 °F)<br>Max. 300 kPa (43 psi) in temperatures from 300 °C (572 °F) to 700 °C (1292 °F) when high-temperature process connection is used |
| Flow velocity                   | Min. 3 m/s (9.84 ft/s), max. tested 40 m/s (131.23 ft/s)   |

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# SINTROL GROUP

## OFFICES

**FINLAND**  
WORLD-  
WIDE

Helsinki  
Tel. +358 9 5617 360  
info@sintrol.com  
www.sintrol.fi  
www.sintrol.com

**UKRAINE**  
Subsidiary

Kiev city  
Tel. +380 442803392  
ua@sintrol.com

**INDIA**  
Representative  
Office

New Delhi  
Tel. +91 9811676061  
india@sintrol.com

**CHINA**  
Representative  
Office

Beijing  
Tel. +86 1 87888681  
china@sintrol.com  
cn.sintrol.com

**JAPAN**  
Representative  
Office

Tokyo  
Tel. +81 90 8585 1301  
japan@sintrol.com

