

Technical Data Lambda Probe LS2-KA / LS2-KAF

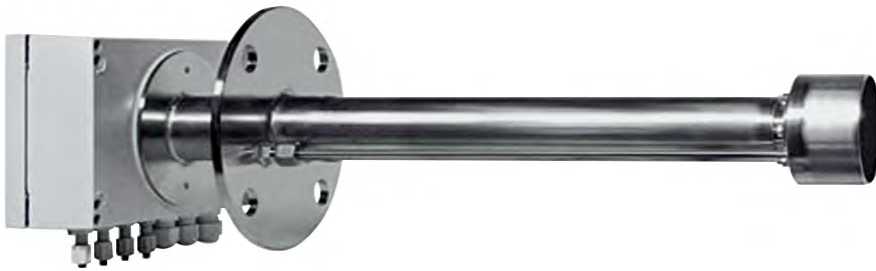


Fig. 1 Combination Probe KS1D-KA



Fig. 2 Combination Probe KS1D-KAF

The hose connections for calibration (air or test gas) for semi-automatic calibration.

Installation depth X	KS1D-KA (AF)	LS2-KA (AF)	KS1-KA (AF)
500 mm / 19.69 " in	Type 656R2030/A (/AF)	Type 650R2030/A (/AF)	Type 656R1030/A (/AF)
1,000 mm / 39.37 " in	Type 656R2031/A (/AF)	Type 650R2031/A (/AF)	Type 656R1031/A (/AF)
1,500 mm / 59.06 " in	Type 656R2032/A (/AF)	Type 650R2032/A (/AF)	Type 656R1032/A (/AF)

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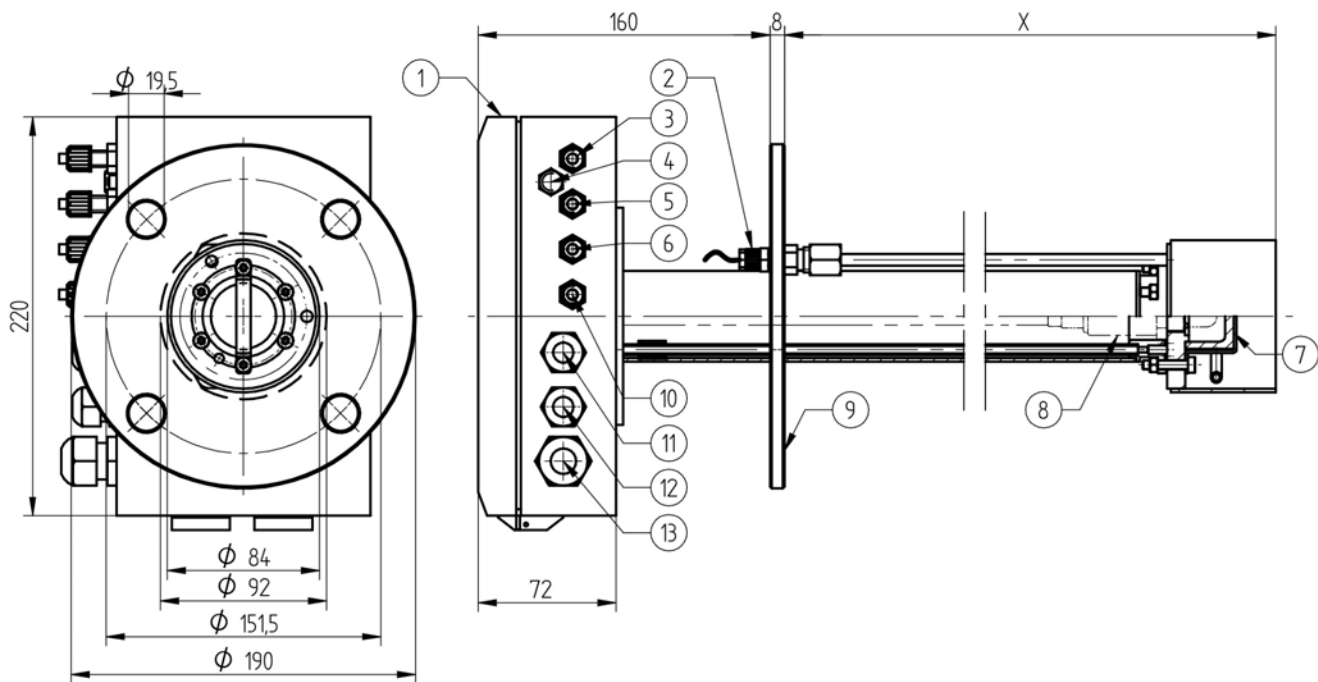


Fig. 3 Probe LS2-K with purge unit

No.	Description
1	Probe connection box (PCB)
2	Hose connection 4/6 mm / 0.16/0.24 " in "Purge filter outside" from solenoid valve unit – Instrument air (pre-pressure 6 bar)
3	Hose connection 4/6 mm / 0.16/0.24 " in „calibration gas" (pre-pressure 0.3 bar) Instrument air for offset calibration or test gas (example 2 Vol.% O ₂ in N ₂)
4	Outlet of reference air
5	Hose connection 4/6 mm „reference air" from solenoid valve unit – Instrument air (pre-pressure 0.3 bar) – Air consumption approx. 10 l/h
6	Hose connection 4/6 mm / 0.16/0.24 " in „Purge filter internal side" from solenoid valve unit – Instrument air (pre-pressure 3 bar)
7	Filter resolution 20 µm
8	Sensor
9	Flange DN80PN6 (Deviant flange thickness 8 mm)
10	Hose connection 4/6 mm / 0.16/0.24 " in „pressure sensor" from solenoid valve unit
11	Cable gland input M16 – Reserve
12	Cable gland input M16 – Probe heating
13	Cable gland input M20 - Absolute pressure sensor, differential pressure sensor probe signals

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Technical Data		
Measurement range	0 ... 21 vol.% O ₂ with restriction 18 ... 21 vol. % O ₂	
Measurement accuracy	± 5 % of the measured value not better than ± 0.2 vol. %	
Drift/month	max. 2 % of the measured value or 0.1 vol. % O ₂	
Pressure influence of the measuring gas	-1,6 mV/100 mbar change	
Typical probe voltage output	0.01 ... 21 vol. % O ₂ 150 ... -12 mV	
Probe internal resistance R _I in air 20 °C/68 °F and 13 V heating voltage	≤ 100 Ω	
Probe voltage in air 20 °C/68 °F n new state and 13 V heating voltage	0 ... -20 mV	
Supply voltage measurement cell heating	11 ... 16 VDC; polarity changes cyclically	
Heat output at 13 V in steady state condition	approx. 18 W	
Heating current at 13 V in steady state condition	approx. 1.4 A	
Insulation resistance between heating and probe connection	> 30 MΩ	
Calibration	Semi automatic calibration with air or test-gas (max 0.3 bar) fully automatic calibration (optional)	
Pneumatic connections	Reference air → instrument air primary pressure 0.3 bar Calibration air → instrument air primary pressure 0.3 bar or test-gas	
Operating condition		
Mounting position	Horizontal via vertical to horizontal	
Mounting / measuring gas extraction device	Directly in exhaust gas channel/ in situ	
Lifetime (typical)	≥ 5 years for light fuel oil and natural gas	
Permissible fuels	Gaseous hydrocarbons natural gas L/H fuel oil EL/S coal special fuels on request	
Environmental conditions		
Probe head	permissible flue gas temperature	≤ 450 °C / 842 °F type LS2-KA ≤ 200 °C / 392 °F type KLS-KAF
Operation	permissible temperature	< 100 °C / 212 °F at the cable gland < 100 °C / 212 °F at the connecting cable
Storage	permissible temperature	-20 ... +60 °C / -4 ... +140 °F
Degree of protection	DIN EN 40050	IP65

NOTICE

The limits of the technical data must be strictly adhered to.

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Order Information

Lambda Probe LS2-KA for measurement of oxygen (O₂)

- Application for high dust loads up to 1,500 mg/m³
- For semi automatic calibration
- Incl. hose connectors for testgas and dedusting operation
- Electronic connection on screw terminals, IP65
- Flue gas temperature max. 450 °C / 842 °F

Description / Type	Order no.
Lambda Probe LS2-KA semi automatically calibration and dedusting operation immersion depth from flange 500 mm / 19.69" in	650R2130/A
Lambda Probe LS2-KA semi automatically calibration and dedusting operation immersion depth from flange 1,000 mm / 39.37" in	650R2131/A
Lambda Probe LS2-KA semi automatically calibration and dedusting operation immersion depth from flange 1,500 mm / 59.06" in	650R2132/A

Additional required: Lambda Transmitter LT2, configured for LS2 in application
 "semi automatically calibration and dedusting operation"
 Order no. 657R102 / LS2 / 4KA / ...

 Counter flange, order no. 657R3506 / R3507

 Flange gasket, order no. 657R3542

 Pneumatic box 24 VDC for controlling of the purge device, order no. 650R2080
 Cyclic control is performed by LT2 (parameterizable).

Lambda Probe LS2-KAF for measurement of oxygen (O₂)

- Application for high dust loads up to 2,000 mg/m³
- For semi automatic calibration
- Incl. hose connectors for testgas and dedusting operation
- Electronic connection on screw terminals, IP65
- Flue gas temperature max. 200 °C / 392 °F

Description / Type	Order No.
Lambda Probe LS2-KAF, semi automatically calibration and purging, incl. filter fleece (filter disk), immersion depth from flange 500 mm / 19.69" in	650R2130/AF
Lambda Probe LS2-KAF, semi automatically calibration and purging, incl. filter fleece (filter disk), immersion depth from flange 1,000 mm / 39.37" in	650R2131/AF
Lambda Probe LS2-KAF semi automatically calibration and purging, incl. filter fleece (filter disk), immersion depth from flange 1,500 mm / 59.06" in	650R2132/AF

Additional required: Lambda-Transmitter LT2, configured for LS2 in application
 "semi automatically calibration and dedusting operation"
 Order no. 657R102 / LS2 / 4KA / ...

 Counter flange, order no. 657R3506 / R3507

 Flange gasket, order no. 657R3542

 Pneumatic box 24 VDC for controlling of the purge device, order no. 650R2080
 Cyclic control is performed by LT2 (parameterizable).

The information in this publication is subject to technical changes.



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