

JES-301E1 Ex Gas Sampling Probe



APPLICATIONS

- Representative continuous gas sampling in processes containing dust and humidity
- Installation in Ex-zone 1, 2 or 21, 22
- Extractive gas analysis
- Emission (CEMS) and process monitoring
- Removal of dust from the sample gas

BENEFITS

- No condensation or chemical reactions of sample gas
- Convenient filter replacement
- Low maintenance
- Safe unattended operation
- Easy start-up
- Even for high dust concentrations
- Reliable protection of the analyzer system

FEATURES

- Homogeneous heating without cold spots
- Large active filter surface
- Filtration from outside to inside
- Filter element change without tools
- Different material of filter elements
- Self limiting PTC heater
- Weather protection housing
- Various options and upgrades
- Wide range of accessories



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Analysentechnik
GmbH

Gas Sampling Probes

Heated Sample Lines

Sample Gas Coolers

Condensate
Treatment

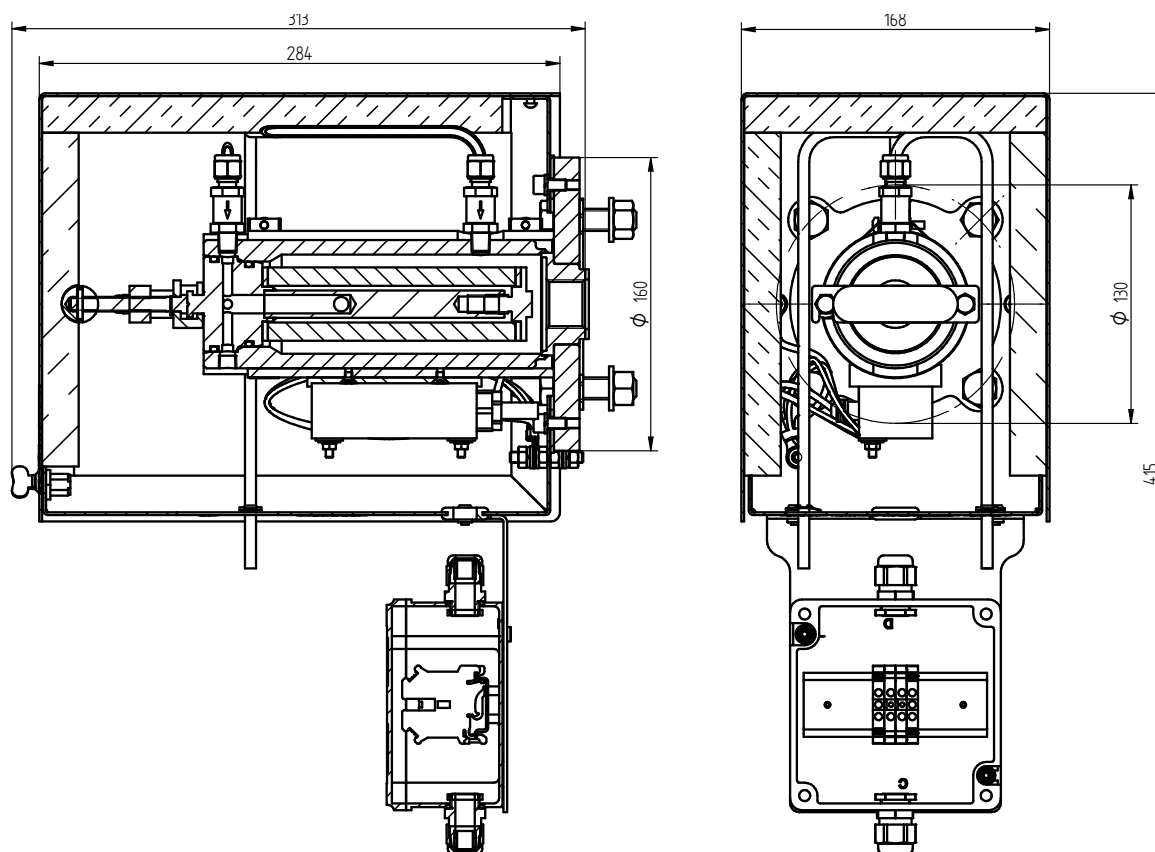
Accessories

Gas Conditioning
Systems

Sample Gas
Converters



DIMENSIONS



All dimensions in mm

ORDER CODES

Part No.	Model	Filter				Options			Flange		Power supply	Ex Zone
		Heated to 120°C	2 µm ceramic	0,2 µm ceramic coated	Back purge port *1	Calibration port *1	self-limited	Weather protection housing	DN65/PN6	2" ANSI	115 - 230 VAC 50/60Hz	Ex zone 1, 2, 21 or 22
35.00400	JES-301E1S	X	X				X	X	X		X	X
35.00402	JES-301E1BS	X		X	X		X	X	X		X	X
35.00404	JES-301E1CS	X	X			X	X	X	X		X	X
35.00406	JES-301E1BCS	X		X	X	X	X	X	X		X	X
35.00442	JES-301E1SZ	X	X				X	X		X	X	X
35.00433	JES-301E1BSZ	X		X	X		X	X		X	X	X
35.00427	JES-301E1CSZ	X	X			X	X	X		X	X	X
35.00421	JES-301E1BCSZ	X		X	X	X	X	X		X	X	X

Scope of delivery: sampling probe, mounting material, flange gasket, gasket for sampling pipe, operating manual
 *1...with non-return valve

TECHNICAL DATA

Model





JES-301E1

Description	Stationary explosion proof gas sampling probe for Ex-zone 1, 2, 21 or 22
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Operation

Temperature	max. 120°C
Operating pressure	max. 2 bara (max. 7 bara optional)
Flow rate	bis zu 600 NI/h, depending on application
Mounting position	5°-15° incline (recommended)
Heating-up time	approx. 180 min
Operating range	0°C....55°C
Ambient temperature	-10°C....55°C
Mounting position	torsion angle max. 45°
Flow rate (back purging)	approx. 4 Nm³/h @ 4 bar, 5 Nm³/h @ 6 bar

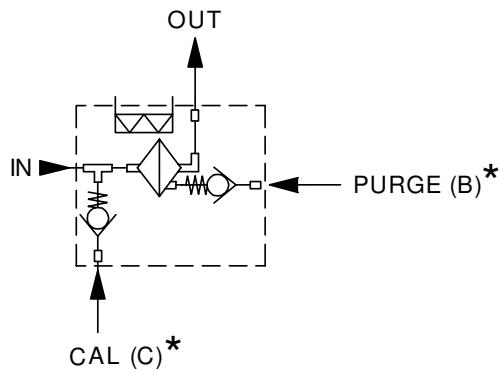
Construction

Dimensions over all (W x H x D)	168 x 415 x 316 mm
Dimensions connection box (W x H x D)	115 x 115 x 64 mm
Filter element	2 µm ceramic or 0,2 µm ceramic coated
Active filter surface	170 cm²
Mounting flange	DN 65, PN6; form A according to EN 1092-1; SS316L or 2" ANSI 150 lbs; according to ASME B16.5
Sample gas inlet	G3/4" female thread
Sample gas outlet	1/8"NPT female thread
Calibration gas connection (option)	pipe 6 mm, SS316
Back purge connection (option)	pipe 6 mm, SS316
Gas wetted materials	SS316L, ceramic, Viton®
Heating element	PTC, self limiting
Protection class	heating: IP68 probe: IP43 connection box: IP66/67
Type of protection	heating:  II 2 G Ex d IIC T3 /  II 2 D Ex tD A21 IP65 T200°C connection box:  II 2 G Ex em II T6/T5/T4 /  II 2 D Ex tD A21 IP66 T80°C, T95°C
Weight	ca. 11 kg
Weather protection housing	SS304, thermal insulated, colour stainless steel natural
Approvals / signs	heating: PTB 02 ATEX 1116X ; IECEx PTB 07.0055X connection box: PTB 99 ATEX 3103 ; LCIE 02 ATEX 6240 ; IECEx PTB 06.0026 / CE

Electrics

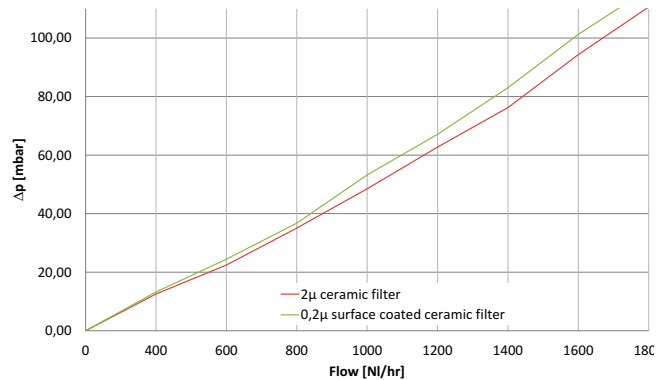
Power supply	115...230 VAC 50/60 Hz
Power consumption	approx. 80 W
Inrush current	approx. 2 A
On-time	100 %
Electrical connection	Cable gland M20 x 1,5 / screw type terminals, clamping range 0,2....4 mm²
Fusing	external, on installation site

GAS FLOW DIAGRAM



*... not included in all models

Pressure characteristics in dependence of the gas flow (for new filter element and 20°C)



UPGRADE OPTIONS AND ACCESSORIES

Put together a sampling probe exactly according to your requirements by choosing additional moduls, eg. heater elements, solenoid valves, controllers and air accumulators. Please, refer to this separte product data sheet for further information:

• Upgrade Options for JES-301 Ex Gas Sampling Probes

Filter elements in various materials

Dilution units

Additional heater elements

PT100 temperature sensor

Back purge control valves

Ball valves for sample gas inlets and outlets

Air accumulators

GRP-ATEX instrument enclosure

JCT Analysentechnik GmbH offers a wide range of accessories. Please, refer to separte data sheets for further information:

• JER Sampling Pipes and JHD Pre-Filters

Sampling pipes in various materials and lengths

In-Situ pre-filter in various materials

Extension pipes in various materials

• JES-301KE1 Back Purge Control Unit

• JES-301 Accessories

Flange adapters

Accessories for gas connections

Accessories for heated sample lines

JCT Analysentechnik GmbH

Werner Heisenberg-Straße 4 A-2700 Wiener Neustadt
Tel. +43 (0) 2622 / 87201 Fax +43 (0) 2622 / 872011
E-Mail: sales@jct.at Web: www.jct.at

