



JES-301E1

Ex Gas Sampling Probe



JCT
Analysentechnik

Gas Sampling Probes

Heated Sample Lines

Sample Gas Coolers

Condensate Treatment

Accessories

Gas Conditioning Systems

Sample Gas Converters

Images are representative

APPLICATION

- 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
- Low temperature status contact (intrinsically safe)
- Various options and upgrades
- Wide range of accessories

TECHNICAL DATA

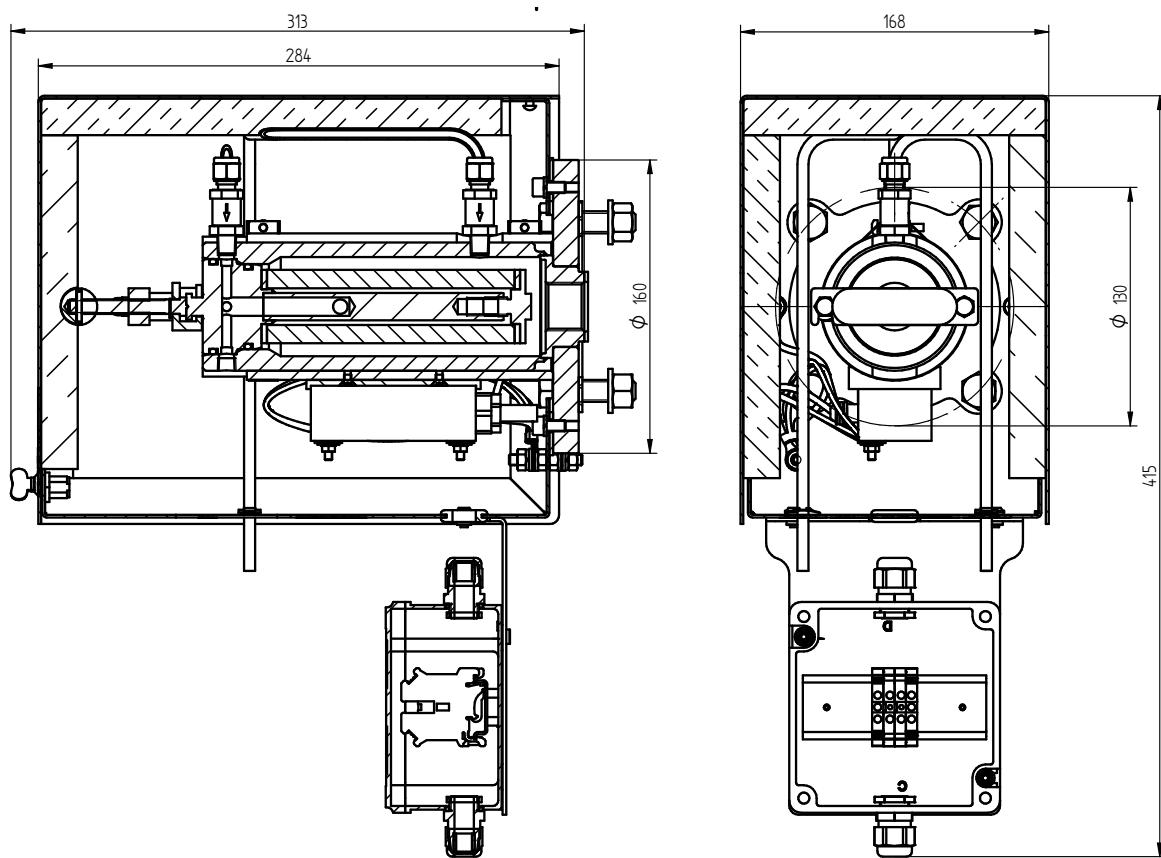
Model

JES-301E1

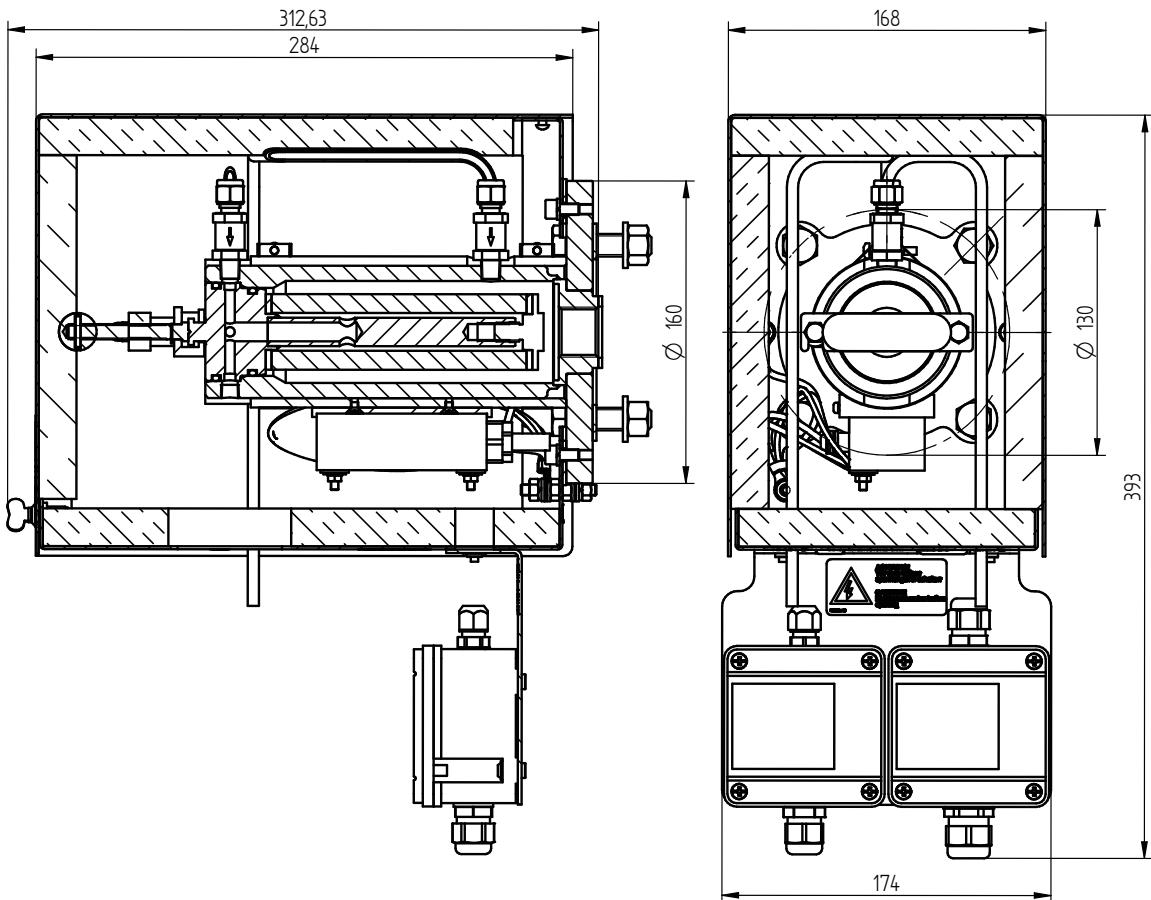
Description		Stationary explosion proof gas sampling probe for Ex-zone 1, 2, 21 or 22
Operation		
Temperature		max. 120°C
Operating pressure		max. 2 bara (max. 7 bara optional)
Flow rate		bis zu 600 NL/h, depending on application
Mounting position		5° to 15° incline (recommended)
Heating-up time		approx. 180 min
Operating range		0°C to 55°C
Ambient temperature		-10°C to 55°C
Mounting position		torsion angle max. 45°
Flow rate (back purging)		approx. 4 Nm ³ /h @ 4 bar, 5 Nm ³ /h @ 6 bar
Construction		
Dimensions over all (W x H x D)		168 x 415 x 316 mm models with low temperature contact: 174 x 393 x 313 mm
Dimensions connection box (W x H x D)		115 x 115 x 64 mm models with low temperature contact: 85 x 85 x 55 mm (2 pcs.)
Filter element		2 µm ceramic or 0,2 µm ceramic coated
Active filter surface		170 cm ²
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		G 3/4" 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: Ex II 2 G Ex d IIC T3 / Ex II 2 D Ex tD A21 IP65 T200°C connection box: Ex II 2 G Ex e II T6/T5 / Ex II 2 D Ex tD A21 IP66 T80°C/T95°C connection box 1 low temperature contact: Ex II 2 G Ex eb IIC T6/T5 Gb / Ex II 2 D Ex tb IIIC T80°C/T95°C Db connection box 2 low temperature contact: Ex II 2 G Ex ia ib IIC T6 Gb / Ex II 2 D Ex tb IIIC T80°C Db
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 to 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 to 4 mm ²
Low temperature contact (option)		Intrinsically safe, NT = 75°C (NO at AT), max. 60 VAC, 1A, min. 5 VDC / 1 mA cable gland M16 x 1,5
Fusing		external, on installation site

DIMENSIONS

Dimensions in mm



Models with low temperature contact



ORDER CODE

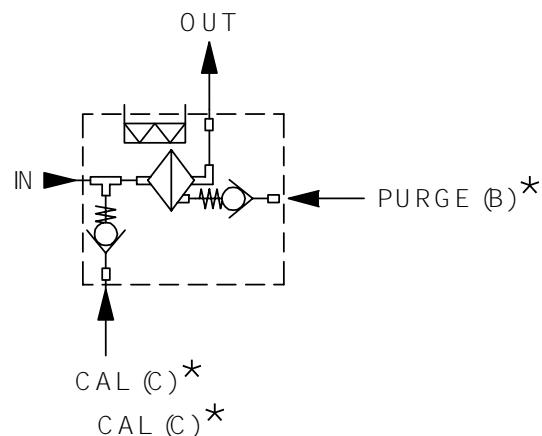
Part No.	Model			Filter				Options		Flange		Power supply		Ex-zone	
		Heated to 120°C	2 µm ceramic	0,2 µm ceramic coated	Back purge port *1	Calibration port *1	self-limited	Weather protection housing	DN65/PN6	2" ANSI	115 to 230 VAC 50/60Hz	Ex-zone 1, 2, 21 or 22			
35.00400	JES-301E1S	X	X				X	X	X		X		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	

Models with low temperature contact

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	Low temperature contact	DN65/PN6	2" ANSI	115 to 230 VAC 50/60Hz	Ex-zone 1, 2, 21 or 22		
35.00401	JES-301E1OS	X	X				X	X	X	X		X		X	
35.00403	JES-301E1BOS	X		X	X		X	X	X	X		X		X	
35.00415	JES-301E1COS	X	X			X	X	X	X	X			X		X
35.00407	JES-301E1BCOS	X		X	X	X	X	X	X	X			X		X
35.00413	JES-301E1OSZ	X	X				X	X	X		X		X		X
35.00405	JES-301E1BOSZ	X		X	X		X	X	X		X		X		X
35.00417	JES-301E1COSZ	X	X			X	X	X	X		X		X		X
35.00419	JES-301E1BCOSZ	X		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

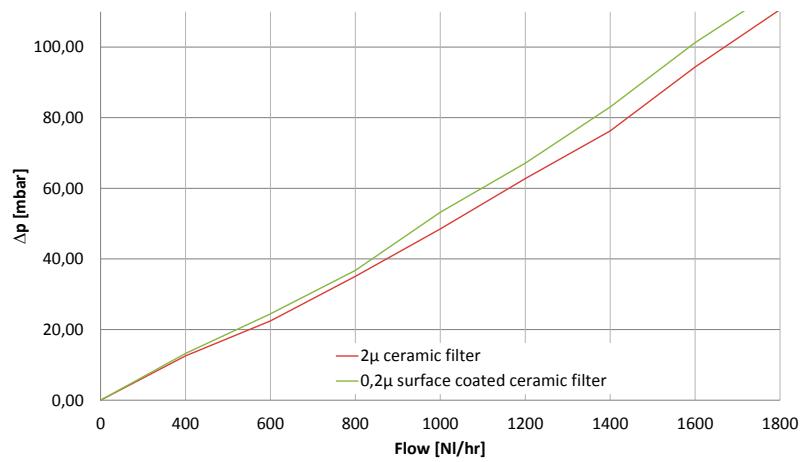
GAS FLOW DIAGRAM



*not included in all models

PRESSURE CHARACTERISTICS

**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, e.g. solenoid valves, controllers and air accumulators.

Please refer to this separate product data sheet for further information:

- **Upgrade Options for JES-301E1 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 separate 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

Gas Sampling **Probes**



Heated Sample **Lines**



Sample Gas **Coolers**



Gas Conditioning **Systems**



NOx **Converter**



and **solutions** for

