



JCT

Analysentechnik
GmbH

Gas Sampling Probes

Heated Sample Lines

Sample Gas Coolers

Condensate
Treatment

Accessories

Gas Conditioning
Systems

Sample Gas
Converters

MADE IN AUSTRIA



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JES-301KE1

Back Purge Control Unit for Ex-Zone 1



APPLICATION

- Extractive gas analysis
- Emission and process monitoring in Ex-area zone 1
- Control of automatic back purge of explosion proof JCT gas sample probes series JES-301
- Applications with high dust concentrations
- For regular cleaning of probe filter, filter chamber and possible pre-filter
- In robust weatherproof stainless steel housing
- For wall mounting
- Lockable housing
- Integrated pressure regulator for inert gas or compressed air
- 2 explosion-proof solenoid valves (safety shut off valve and clocked back purge valve)
- Manual shut off ball valve in the inlet
- External PLC (programmable logic controller) with adjustable interval for back purge cycles and status contact for mounting in explosion-free area as option

BENEFITS



- For in and outdoor mounting suitable
- For direct connection to inert gas or pressure air network
- No entry of purge gas into sample gas possible
- Protection against unauthorised access
- Fully programmed two stage back purge program (option PLC)
- Save operation due to status message (option PLC)
- Easy adjustment of the back purge cycles by connection of only one cable (option PLC)

FEATURES

TECHNICAL DATA

Model

JES-301KE1

Description	back purge control unit for ex-zone 1
Operation	
Flow rate	ca. 4 Nm ³ /h at 5 bara, 5 Nm ³ /h at 7 bara
Ambient temperature / humidity	-30°C....+55°C / <95 % RF, non-condensing
Operating pressure	4...7 bara
Gas for back purge	inert gas or Instrument air according to ISO 8573-1 Class 1.2.1
Purge gas consumption per back purge cycle	approx. 54 l at 6 bara
Place of installation	ex-zone 1, max. 5 m away from gas sampling probe
Construction	
Dimensions over all (W x H x D)	364 x 245 x 170 mm
Installation	wall mounting
Weight	ca. 6,5 kg
Housing, colour	SS304 stainless steel, natural
Back purge gas wetted materials	PVDF, SS316, PA, brass, Viton®
Connections back purge gas In / Out	stainless steel fitting 6 mm (1/4" as option)
Approvals / signs	solenoid valves:  II 1/2 G EEx m II T3 resp. II 1/2 G EEx em II T3 connection box:  II G Exe II T6 T5 T4 / CE
Electrics	
Power supply	230 VAC 50 Hz / 115 VAC 60 Hz / 24 VAC / 24 VDC
Electrical connection	screw terminals max. 2,5 mm ²
Electrical fuse protection	external on installation site
Protection class	IP 65 (EN 60529)
Kabelverschraubung	M20 x 1,5, clamping range 6 - 13 mm

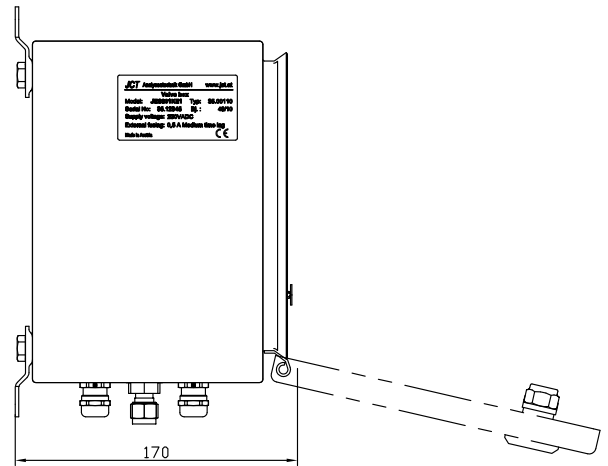
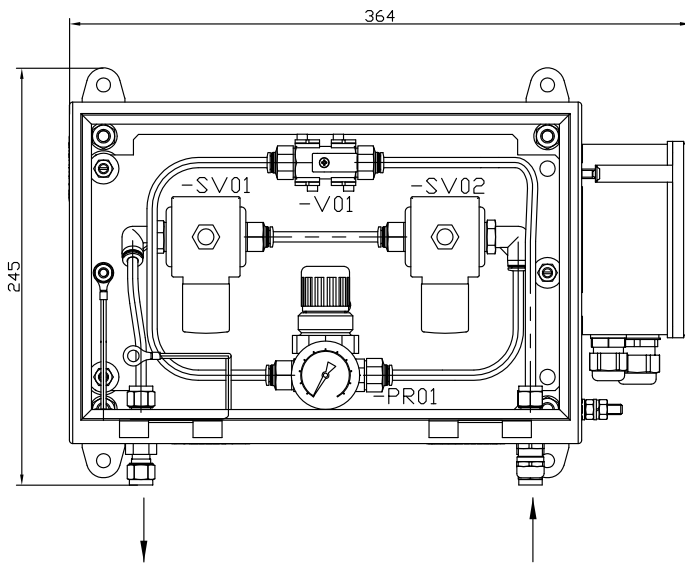
Model

External PLC (optional)

Description	programmable logic controller for back purge program
Operation	
Ambient temperature	0....55°C
Place of installation	explosion free area
Back purge cycle	2-stage, fully programmed
Interval time adjustable [hr]	2 / 4 / 8 / 12 / 24
Construction	
Dimensions over all (W x H x D)	72 x 90 x 55 mm
Installation	rail mounting
Weight	approx. 190 g
Approvals / signs	CE
Electrics	
Power supply	85....253 VAC/DC 47....63 Hz or 24 VAC 47....63 Hz or 24 VDC
Electrical connection	screw terminals 1,5....2,5 mm ²
Electrical fuse protection	external on installation site
Protection class	IP 20 (EN 60529)
Status relay	volt free contact
Switching capacity relay	max. 250 VAC / 5 A; min. 12 VDC 2,5 mA

DIMENSIONS

JES-301KE1

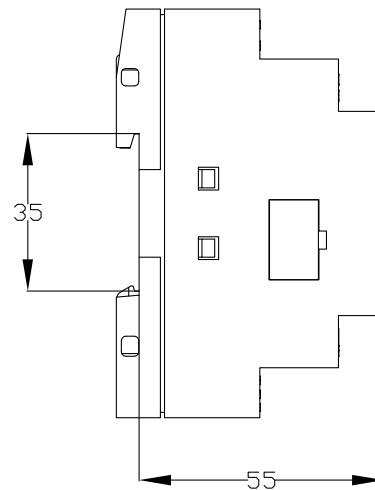
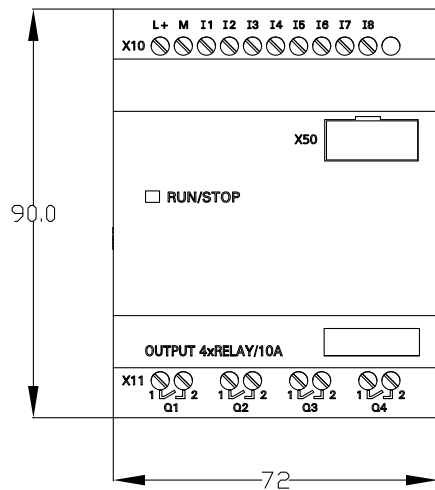


Dimensions in mm

-V01	Shut off ball valve
-PR01	Inert gas-/pressure air pressure regulator

-SV01	Clocked back purge valve
-SV02	Safety shut off valve

External PLC for mounting in safe area (option)

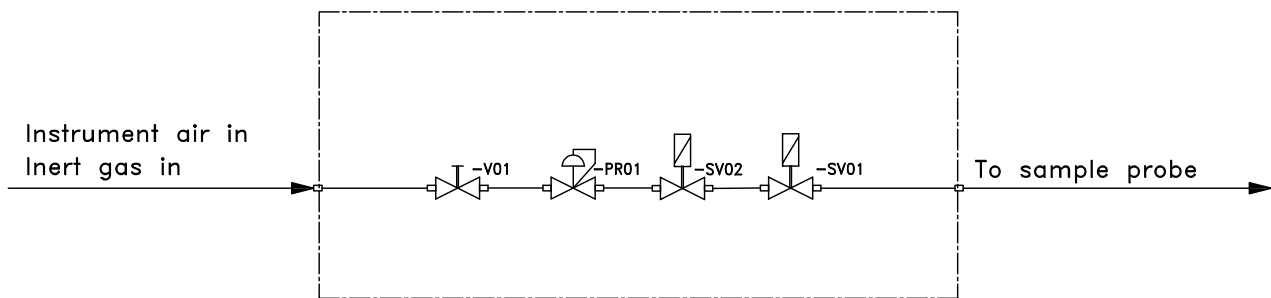


Dimensions in mm

L+, M	Power supply
I1 - I5	Interval time I1=2 / I2=4 / I3=8 / I4=12 / I5=24h

Q1, Q2	Control solenoid valve
Q3	Status contact

GAS FLOW DIAGRAM



-V01	Shut off ball valve	-SV01	Clocked back purge valve
-PR01	Inert gas-/pressure air pressure regulator	-SV02	Safety shut off valve

ORDER CODES

Part number Description

35.00110	JES-301KE1, 230 VADC, incl. 2 explosion-proof solenoid valves, explosion-proof connection box, pressure regulator and ball valve, fully tubed and wired, connction stainless steel fitting 6 mm
35.00111	JES-301KE1, 24 VADC, incl. 2 explosion-proof solenoid valves, explosion-proof connection box, pressure regulator and ball valve, fully tubed and wired, connction stainless steel fitting 6 mm
35.00112	JES-301KE1, 120 VADC, incl. 2 explosion-proof solenoid valves, explosion-proof connection box, pressure regulator and ball valve, fully tubed and wired, connction stainless steel fitting 6 mm
35.00113	JES-301KE1, 110 VADC, incl. 2 explosion-proof solenoid valves, explosion-proof connection box, pressure regulator and ball valve, fully tubed and wired, connction stainless steel fitting 6 mm
35.90300	External PLC (programmable logic controller) for mounting in explosion free area, back purge cycle programmed, for control of both solenoid valves, with status contact
35.00991	Option connections in- and outlet for 1/4" tube / hose instead of 6 mm

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 seperate product data sheet for further information:

• Upgrade Options for JES-301 Ex Gas Sampling Probes

Back purge control valves

Back purge reduction valve

Unheated air accumulators

Heated air accumulators

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