Recommandations for use of positioner SRD991 supplied with Natural Gas

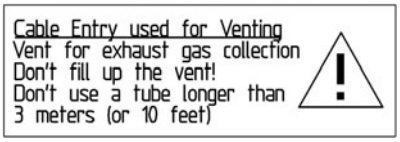
This instruction is an assistance for using the special version SRD991 – ECEP EP0212 positioner supplied with Natural Gas. Further information to the product refer to the standard documents Master Instruction and Product Specification Sheet.

Device description and connection

The SRD991 standard version blows the exhaust air to atmosphere via venting in the rear of positioner.

With this special version of the SRD991 ECEP0212, supplied with Natural Gas, the venting in the rear of positioner is tight sealed, and the "exhaust of air" (gas) is made via an adapter connection in place of a cable gland. This "exhaust air" (gas) must be collected and be led to a safe area.

The connections are marked with labels:



In case of single-acting positioner the output Y2 is also sealed with a stainless steel plug.

- ❒ Installation and basic adjustment of the equipment (autostart) must be done with compressed air (not gas). Further information for mounting and setup of device see standard Master Instruction.
- ❒ The device and also the cable gland must be absolutely close / sealed.
- ❒ The hose end or tube end must be led into a safe area, far away from the positioner.
- ❒ After running of the equipment with natural gas the cover may not be opened any longer and an access to parameters and settings is only possible via communication (HART / FOUNDATION Fieldbus / PROFIBUS / FoxCom).
- ❒ All valid regulations (e.g. ATEX) are to be considered.

❒ Consider also the following Installation guidelines:

Installation guidelines acc. to IEC 1081

The following should be considered for pneumatic instruments driven by associated gas:

1) The pneumatic instruments should be installed in enclosures with a minimum degree of protection of IP54, according to IEC 529, with one common venting arrangement into the open air.
For a group of instruments, dedicated common enclosures should be applied.

Field transmitters, valves and other remote instruments could be excluded from the above requirements as appropriate, although the enclosure could in themselves comply with the above degree of protection.

2) If the instrument enclosures referred to in 1) above are installed in a shelter or building, the vent should be extended outside the building. (Exceptions could be made it the building is ventilated with air and the ventilation flow rate is high enough to dilute the released gas below the lower explosive limit (LEL).)

3) The diameter of the vent pipes for the enclosures defined in 1) above, should be at least 15 mm but in any case lage enough to avoid any build-up of back pressure of more than 100 Pa (Pascal) at the maximum release rates of the sum of the individually installed pneumatic instruments that have a common vent.
For single instruments the diameter for the vent pipes may be smaller.
NOTE - 100 Pa will introduce an error of not more than 0.1 % on standard signals of 100 kPa and a loading of not more than 100 Pa for the instrument enclosures.
The defined back pressure limitation should be decreased for those instruments which operate at a much lower signal rating than 100 kPa.

4) The outlets of vents should be protected against obstruction e.g. by rain, ice formation, solid substances and condensate.

5) Adequate measures shall be taken to avoid harmful effects of lightning strokes at the vent, where appropriate.
NOTE - The amount of released gas is normally small so that gas flares are not required.

6) The enclosures should be made of an electrically conductive material to avoid the accumulation of static electric charges.

7) All parts of the enclosure, including the internal framework, should be bounded and grounded.
NOTE - Doors of the enclosures should be fitted with electrically conductive braiding across the hinges, as appropriate.

8) The volume of the enclosures should be made as small as possible to limit the amount of released gas when opening the doors.

9) The enclosures should have a label with the following notice:

THIS ENCLOSURE CONTAINS FLAMMABLE GAS; ANY SOURCE OF IGNITION IS STRICTLY FORBIDDEN IN ITS VICINITY.

10) Where appropriate, gas detection devices may be used to monitor the possible presence on an air/gas mixture inside the enclosure.

11) Provisions may be considered for flushing the enclosures and the associated piping, in order to create a safe area before opening the doors of the enclosure.
NOTE - When nitrogen is used for the purging, one should be aware of the dangers of being in the vicinity of the released nitrogen.

12) Provisions should be made to isolate the instruments from the associated gas supply with valves in order to enable safe replacement on any instruments as necessary.

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