

Stainless Steel Housing for SRD991 and SRI990



Special design for offshore application, for aggressive environment like in fertilizer plant and for food and beverage industries.

Positioner made of a rugged stainless steel housing and a extensive choice of electronic board from the SRI990 or from the SRD991.

The Stainless Housing can also contain the position feedback as stand alone unit, or only the potentiometer for a remote mounting solution.

MAIN FEATURES

Rugged and compact design and operation.

Intelligent

- Auto-start with self-calibration
- Self diagnostics, status- and diagnostic messages
- Easy local operation with three key pads
- Multi-Lingual full text grafical LCD, or LEDs
- VALcare™ (FDT software) for valve diagnostics and predictive maintenance

- with communication:
HART, FOUNDATION Fieldbus H1,
PROFIBUS-PA, FoxCom or

- without communication:
4-20mA input

Additional equipments:

- Binary in and outputs
- Position feedback 4-20mA

Accessories:

- Gauge for supply air and outputs
- Pressures sensors for outputs

FOXBORO
ECKARDT

FUNCTIONAL SPECIFICATIONS

Only the functional specifications regarding the air supply, air output and air consumption are modified. For all other functional specification please refer you to the related PSS.

Refer you to the functional specifications of the SRD991 in the PSS EVE0105 and of the SRI990 in the PSS EVE0107.

Positioners SRD991/SRI990 Stainless Steel are in standard equipped with a high air output spool valve amplifier for the double acting version. This allows to move large actuators quickly without need of external volume booster. This positioner can be use as single or as double acting indifferently. Because of the high air output of the version with spool valve, it is not recommended to mount this positioner with very small actuators. For small size actuators single acting prefer the single acting version of the stainless steel housing

Supply

Supply air pressure (single acting) . . . 1.4 ... 6 bar (20...90psig)

Supply air pressure (spool valve) . . . 1.4 ... 8.6 bar (20...129psig)

Use of filter regulator before the positioner is always recommended to keep constant the air supply pressure and set a pressure compatible with the actuator maximum pressure.

Output to actuator 0 to ~100%of supply air pressure (up to 5.5 bar at 6 bar supply air pressure)

Air supply ¹⁾ according to ISO 8573-1
 Solid particle size and density class 2
 Oil rate class 3

Air output In/h

Spool valve (at max. deviation) . . .38 Nm³/h @ 5 bar (spool valve is standard amplifier in double acting version)

Single acting (at max. deviation) . .7.5 Nm³/h @ 6 bar

Air consumption (steady state) for control application (throttling valve)

Spool valve Appr. 0.4 Nm³/h @ 5 bar

Single acting. Appr. 0.19 Nm³/h @ 5 bar

Air consumption (steady state) for PST application (ON/OFF valve) – “Low bleed”

Single acting. 0.198 Nm³/h @ 6 bar

Spool valve / double acting 0.198 Nm³/h @ 6 bar

Potentiometer unit for remote mounting (SRI990-TXMS7xxx-YHZ)

This unit is made of a casing with inside only a heavy duty potentiometer. This unit has to be connected to a SRI990 mounted separated on a more "safe" enviroment. Such kind of remote mounting is specially design for high vibration valve, high enviromental Temperature, or high magnetic field.

Position Feedback 4 - 20 mA stand alone unit (SRI990-TXQS7xxx-YZ)

Position feedback can be ordered as an option built-in in the analog valve Positioner SRI990 - B or CxQ or as a seperated unit like an independant pure electrical positioner transmitter SRI990 - TxxQ

PHYSICAL SPECIFICATIONS

Mounting

Attachment to stroke actuators for casting yoke or for pillar yoke acc. to IEC 534-6 (NAMUR):
with attachment kit EBZG-H6 (Stainless Steel Mounting bracket)

Stroke range

- with standard feedback lever (EBZG-A) 8 ... 70 mm
- with extended feedback lever (EBZG-B) 60 .. 120 mm
- with extended feedback lever (EBZG-A1) 110 .. 260 mm

Bigger stroke can be realized with specific lever.

All feedback lever in Stainless Steel

Attachment to rotary actuators acc. to VDI/VDE 3845:
with attachment kit EBZG-R (made of Stainless Steel)

For other actuator types, please refer you to our wide range of attachment kit TI EVE 0011A

Materials

Attachment kits Stainless steel

Pneumatic diaphragms Silicone (suitable for use in the colour- and lacquer industry)

Overall casing Stainless steel , 1.25 mm; 1.4404 / 316

Ingress protection IP 66 acc. to EN 60529

Impact resistance >7 Joule acc. to EN 50014

Seals VMQ (silicone)

Weight

Double acting. approx. 3.5 kg

Pneumatic connection

Pneumatic connection . . . ¼-18NPT on manifold prepared for gauges (gauges as option)
or G1/4 on manifold prepared for gauges (gauges as option)

The selection between ¼ - 18 NPT or G1/4 is made by the model code (letter -Y or -R)

Electrical Connection

Line entry. 1 cable gland M20 x1.5 (1/2-14 NPT with adapter)

2 cable glands M20 x1.5 (1/2-14 NPT with adapter) in case of option

Cable diameter 6 to 12mm (0.24 to 0.47 in)

Screw terminals 2 terminals for input, 4 terminals for additional inputs / outputs

Wire cross section 0.3 to 2.5mm² (AWG 22-14)

Test sockets for options and communicator connection

Ambient conditions

Operating conditions acc. to IEC654-1
The device can be operated at a class Dx location

Ambient temperature:

Operation -40 ... 80 °C
Transport and storage . . . -45 ... 80 °C
Storage conditions acc. to IEC 60721-3-1: 1K5; 1B1; 1C2; 1S3; 1M2

In case temperature rise above 80°C due to exposition at sun may we recommend use of appropriate sun shade.

Indicators: (inside temperature of overall stainless steel box)

LCD (visible) ¹⁾ -25 ... 70 °C
LEDs -40 ... 80 °C

Relative humidity up to 100%

Electromagnetic compatibility EMC

See relative CE certification

SAFETY REQUIREMENTS

CE label

For the SRI990 see PSS EVE0107, for the SRD991 see PSS EVE0105

Safety

For the SRI990 see PSS EVE0107, for the SRD991 see PSS EVE0105

Electrical classification ⁵⁾

For SRD991 based positioner:

Type of protection ATEX “**Intrinsically Safe**”
Type AI 638. II 2G EEx ia IIB/IIC,
II 2 G EEx ib IIB/IIC
Certificate of Conformity. PTB 00 ATEX 2128

For SRI990 based positioner:

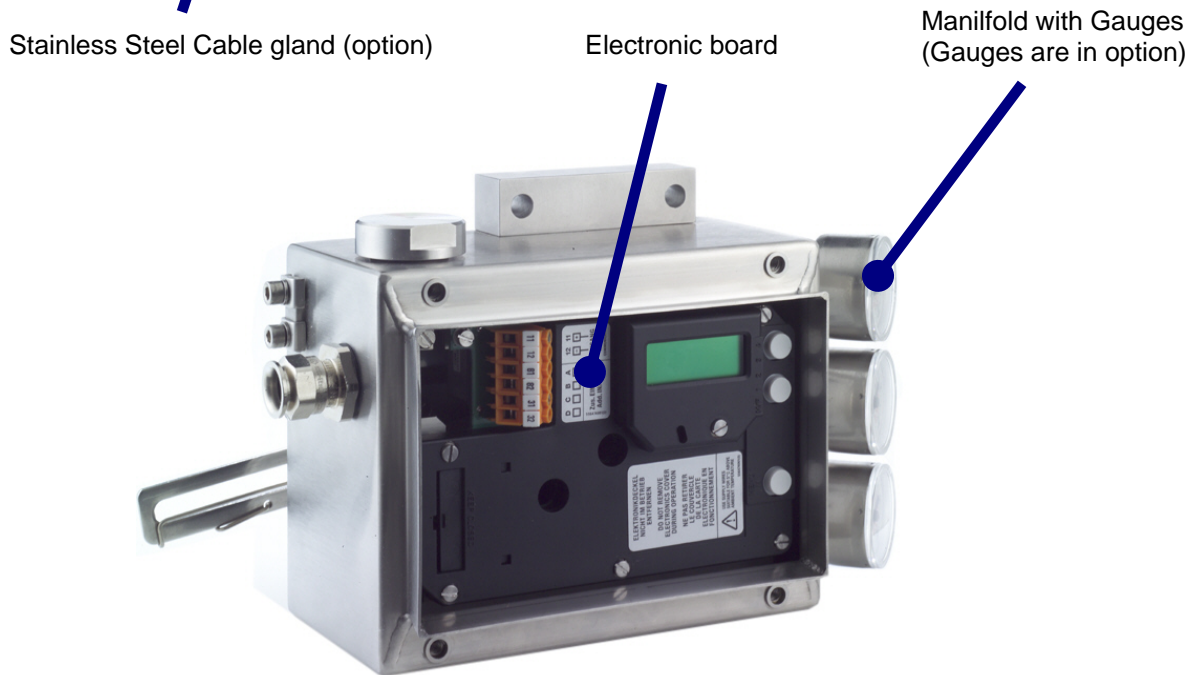
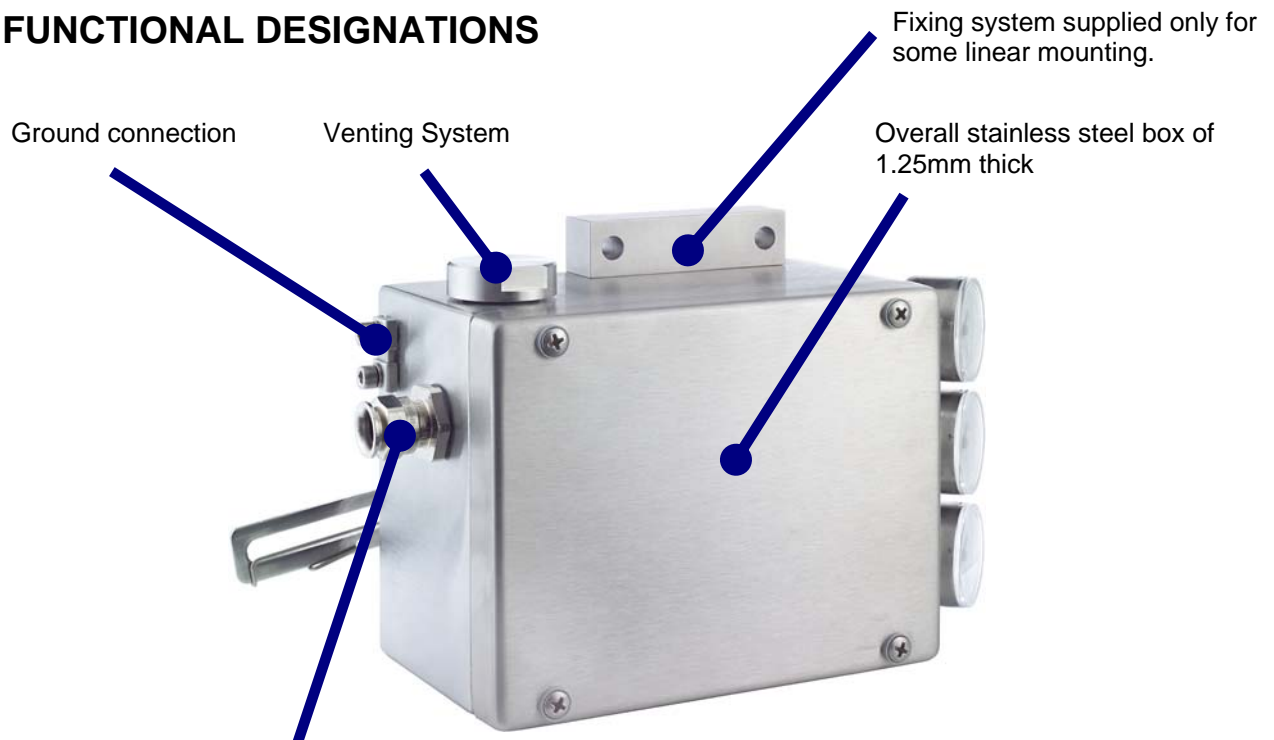
Type of protection ATEX “**intrinsically safe**”
Analog positioner (Basic device)
Type AI 636. II 2G EEx ia IICT6
Certificate of Conformity. PTB 02 ATEX 2206

1) Below -20 °C the LCD reacts only slowly; above +70°C the background becomes dark.
5) National requirements must be observed

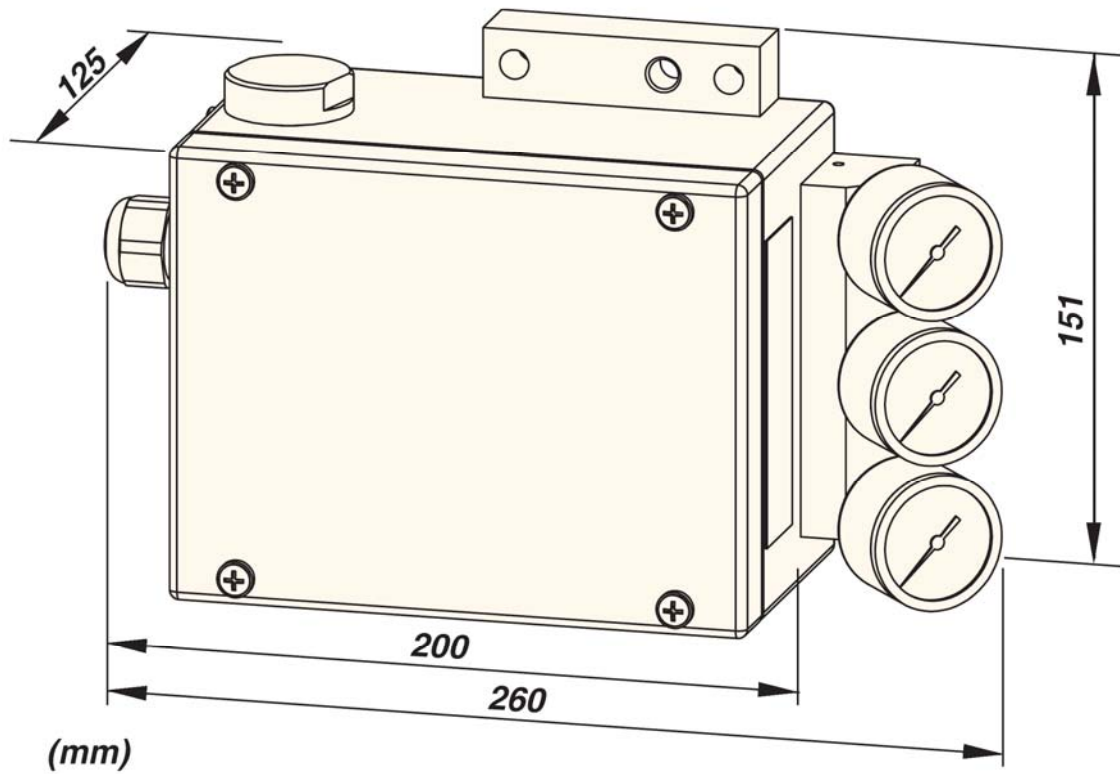
HOW TO ORDER

The option -Z in the model code of the SRI990 or SRD991 must be select to get this rugged Stainless Steel Housing.

FUNCTIONAL DESIGNATIONS

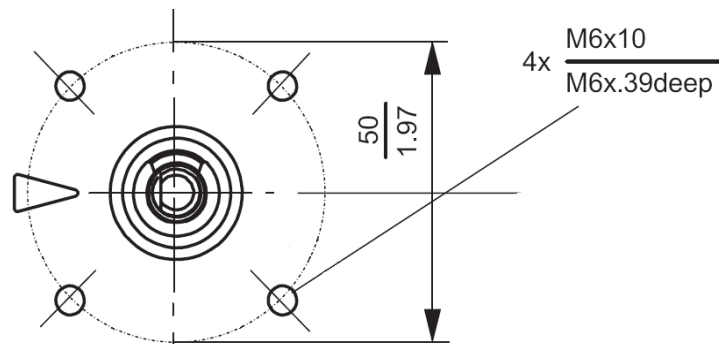


DIMENSIONS



Detail of the mounting interface according VDI/VDE3845.

This interface is used as well as for the rotary actuator (with EBZG-R) or for the linear actuator (with EBZG-H6)



Additional Documentation for these products:**Technical Information for Attachment Kits for Positioners**

TI EVE0011 A Overview of Attachment Kits of all positioners on actuators/valves of different manufacturers

SRD991**Quick Guide:**

QG EVE0105 A/B Extract of Master Instruction for an easy to use, understand, and fast start-up guide. This document highlights the most important benefits.

QG EVE0105 C Quick guide dedicate to the Stainless Steel version.

Product Specification Sheet:

PSS EVE0105 E SRD991 -all versions-

Master Instructions:

MI EVE0105 E SRD991 -all versions-

Technical Information for Fieldbus-Communication:

TI EVE0105 P SRD991/960 -PROFIBUS-PA

TI EVE0105 Q SRD991/960 -FOUNDATION Fieldbus H1

Instruction for HART-Communication:

MI EVE0105 B HART with Hand-Held Terminal

SRI990**Quick Guide:**

QG EVE0107 A Extract of Master Instruction for an easy to use, understand and fast start-up guide. This document highlights the most important benefits.

Product Specification Sheet:

PSS EVE0107 A SRI990 -all versions-

Master Instructions:

MI EVE0107 A SRD991 -all versions-

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