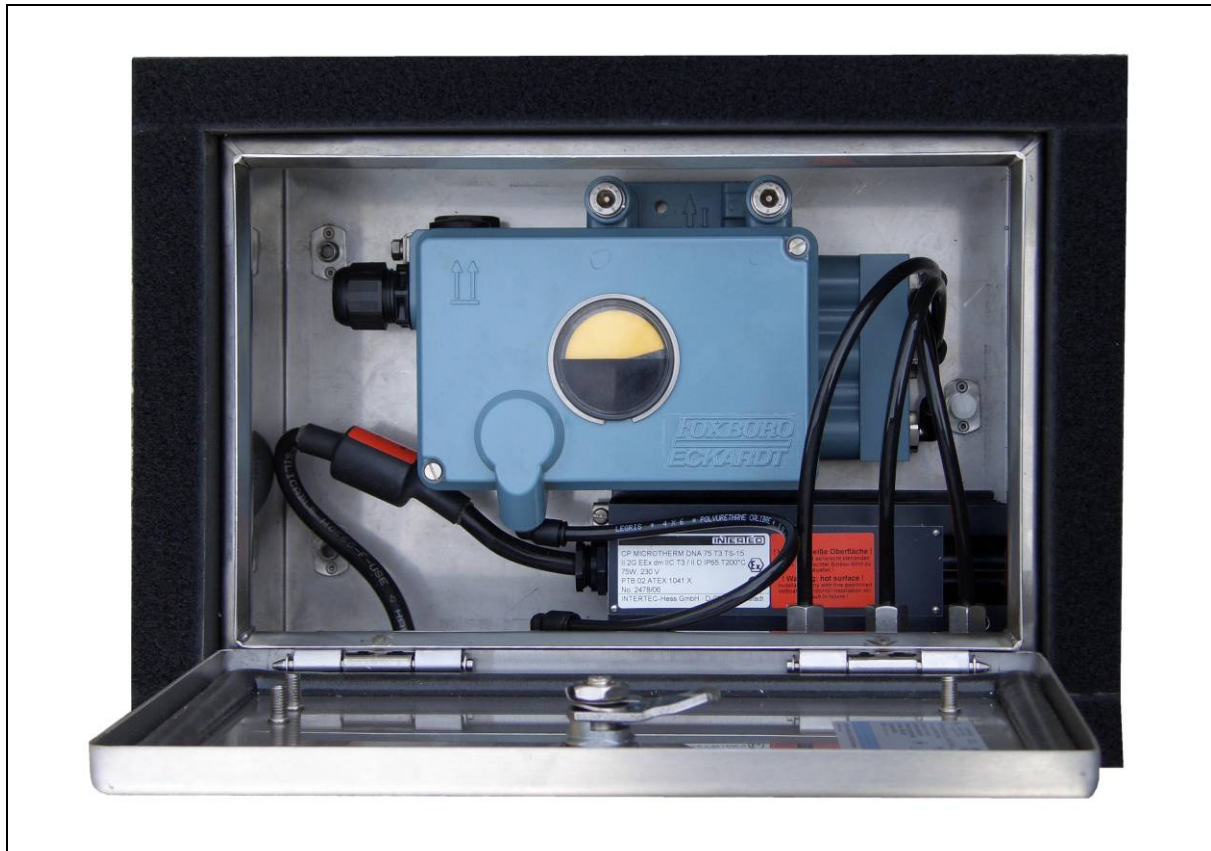


Very Low Temperature for SRD991 and SRI990



Special design of positioner for Very Low Temperature application (down to -60°C ambient temperature) with heating system.

The SRI990 analog or SRD991 intelligent positioners are designed to operate pneumatic valve actuators and can be operated from control systems (e.g. the Foxboro I/A Series System), controllers or PC-based configuration- and operation tools such as VALcare™ (FDT software). The SRD991 positioner is available with different communication protocols. For the SRD991 a multi-lingual full text graphic-LCD (optional with infrared interface) in connection with the 3 push buttons allows a comfortable and easy local configuration and operation.

MAIN FEATURES

Intelligent

- Auto-start with self-calibration
- Self diagnostics, status- and diagnostic messages
- Easy local operation with three key pads
- Multi-Lingual full text graphical LCD, or LEDs
- VALcare™ (FDT software) for valve diagnostics and predictive maintenance
 - **with communication**
HART, FOUNDATION Fieldbus H1, PROFIBUS-PA, FoxCom or
 - **without communication**

Additional equipments:

- Integrated inductive limit switches,
- Mechanical Switches
- Position feedback 4-20mA

Accessories:

- Gauge attachment for supply air and outputs
- Booster relay

Special version available for PST (Partial Stroke Test) of ESD (Emergency Shut Down) Valve

OVERVIEW

This special design of positioner is dedicated to Very Low Temperature (VLT).

The VLT design is made of an overall casing in stainless steel with inside a heating convector system and a positioner type SRI990 analog or SRD991 intelligent. The insulation of the overall stainless steel housing is made of a high density foam.

The heating convector system is self regulate and heat only under temperature of -20°C (+-5°C). The heating system insure that with an outside temperature of -60°C, the inside temperature does not drop under -30°C.

FUNCTIONAL SPECIFICATIONS

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

The functional specifications are not modified by this special design for Very Low Temperature.

PHYSICAL SPECIFICATIONS

Mounting

Attachment to stroke actuators for casting yoke or for pillar yoke acc. to IEC 534-6 (NAMUR):
with attachment kit EBZG-H2

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

Attachment to rotary actuators acc. to VDI/VDE 3845:
with attachment kit EBZG-R

Materials

Housing and covers of the positioner itself Aluminum (Alloy No. 230) finished with DD-varnish

All moving parts of feedback system . . . Stainless steel 1.4306 / 1.4571 / 1.4104

Attachment kits Stainless steel or Aluminum (Alloy No. 230),
finished with DD-varnish (depending upon version)

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

Overall casing Stainless Steel 1.4104

Insulation foam Alveolux - chemically crosslinked,
closed cell polyolefin foams of 25mm thick

Main characteristics of Insulation foam

- excellent physical properties
- fine, regular, closed-cell structure
- excellent thermo and pressforming characteristics
- wide working temperature range
- excellent thermal insulation characteristics
- low water absorption
- low water vapour transmission
- good weatherability
- inertness to most chemicals
- ecologically and chemically neutral
- safe disposal by recycling, dumping or incineration

Weight

Single acting approx. 7.6 kg

Double acting. approx. 7.9 kg

Pneumatic connection

3 built-in tube fitting for pipe 6x1mm for air supply and outputs y1, y2 to the actuator

Electrical Connection

Line entry. 1 or 2 cable glands 1/2-14 NPT or M20 x1.5 (others with Adapter AD-...)

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 -60 ... 80 °C

Transport and storage -50 ... 80 °C

Storage conditions acc. to IEC 60721-3-1: 1K5; 1B1; 1C2; 1S3; 1M2

Indicators: (inside temperature of overall stainless steel box)

LCD (visible) ¹⁾ -25 ... 70 °C

LEDs -40 ... 80 °C

With temperature under -40°C it is recommended not to open the overall box to read or to configure directly the positioner with push button. With temperature under -40°C is recommended to use the communication to do a remote configuration of acquisition of data.

The heating system insure that with an outside temperature of -60°C, the inside temperature does not drop under -30°C.

Relative humidity up to 100%

Protection class:

acc. to IEC529. IP 66

acc. To NEMA. Type 4X

Electromagnetic compatibility EMC

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

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

1) Below -20 °C the LCD reacts only slowly; above +70°C the background becomes dark.

HEATING SYSTEM

The Heating system used is made by company INTERTEC under the reference CP Microtherm DNA 75 T3 TS.

The heating convector system is self regulate and heat only under temperature of -20°C (+-5°C).

The heating system insure that with an outside temperature of -60°C, the inside temperature does not drop under -30°C.

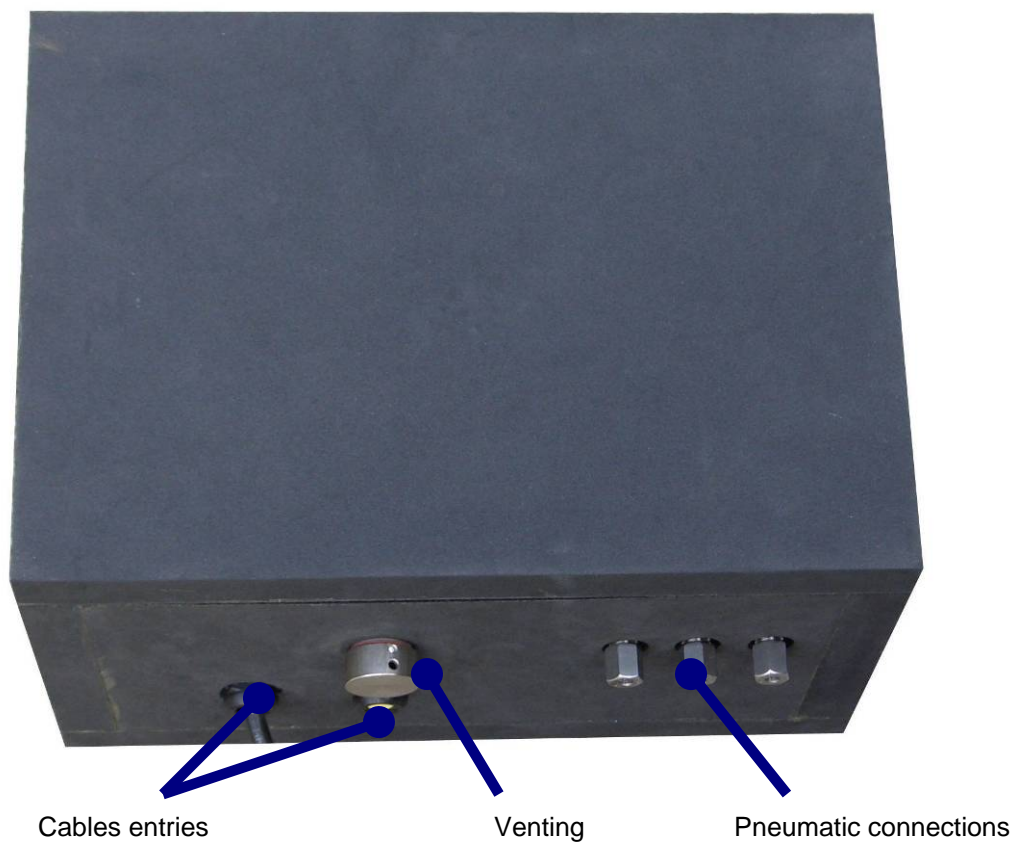
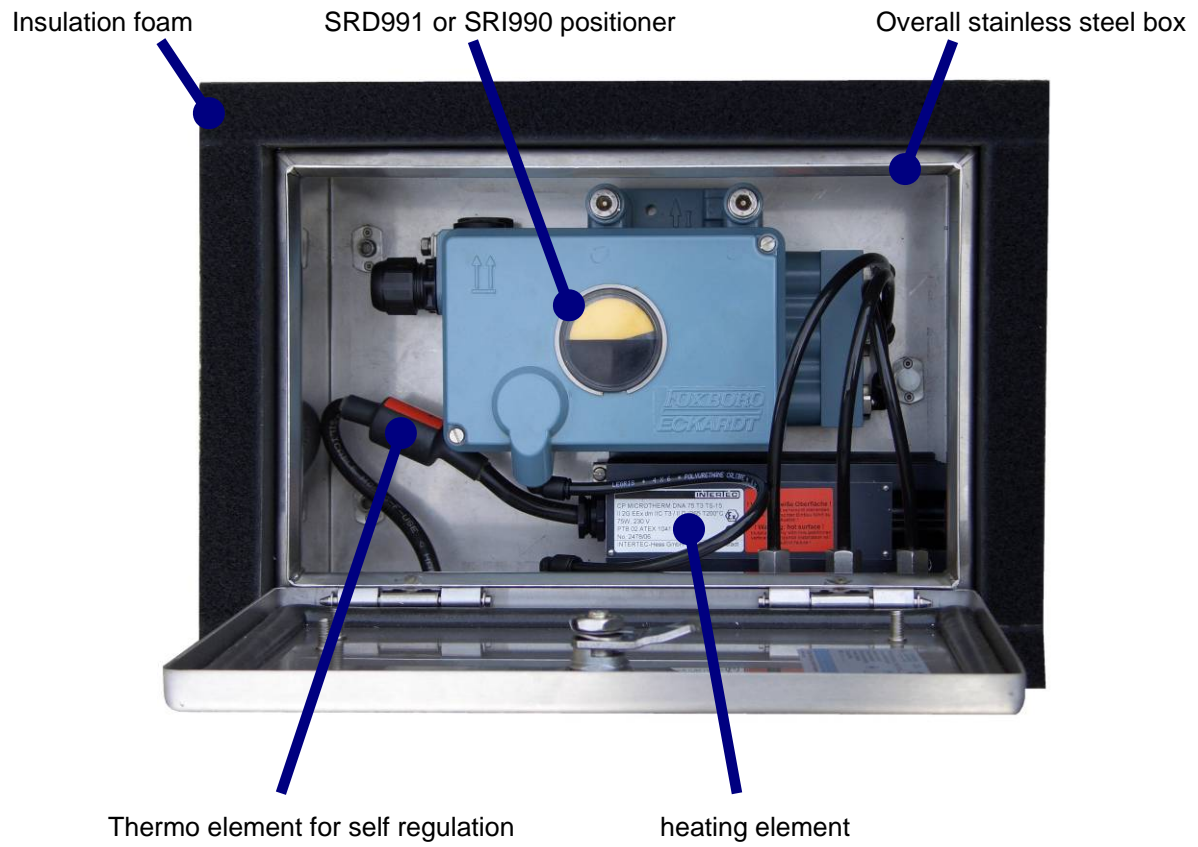
Electrical classification for the heating system

Ignition protection class	II 2 G EEx dm IIC T3
EC Type-examination certificate	PTB 02 ATEX 1041 X
Protection degree	IP 68, NEMA 4X
Operating temperature range	-50°C to 180°C
Nominal voltage	230V AC
Connection cable	EWKF 3x1,5 mm ² Ø8,5 mm
Connection cable for	AM EWKF 5x1,5 mm ² Ø8,8 mm
Length of connection cable	1 m
Length, width	50 mm, 50 mm
Material	seawater-proof aluminium, black anodized
Nominal power	75 W

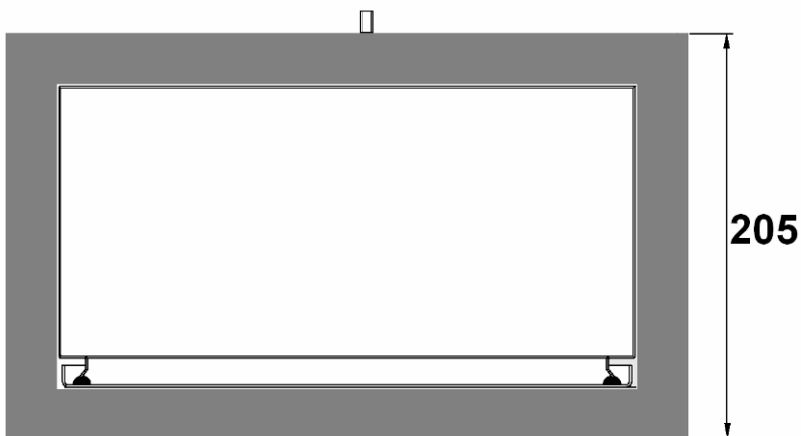
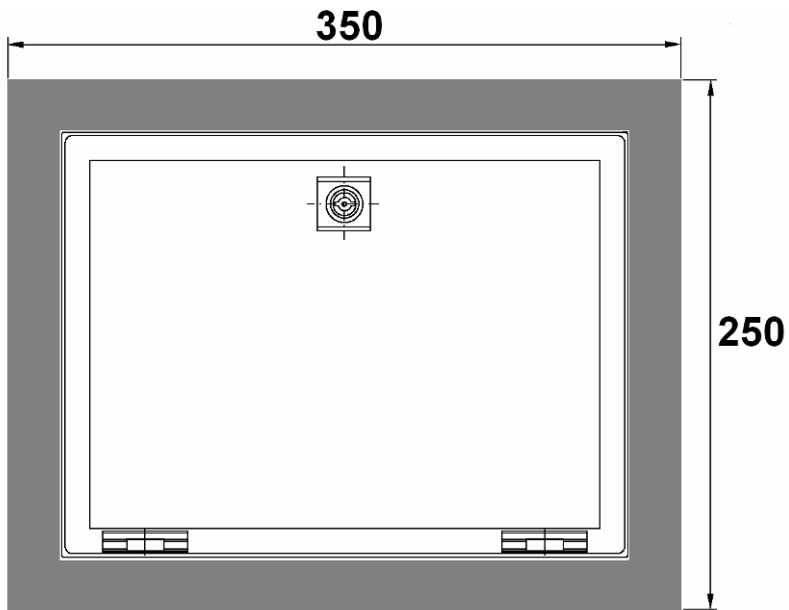
HOW TO ORDER

Please order the SRI990 or SRD991 together with the ECEP EP0247

FUNCTIONAL DESIGNATIONS

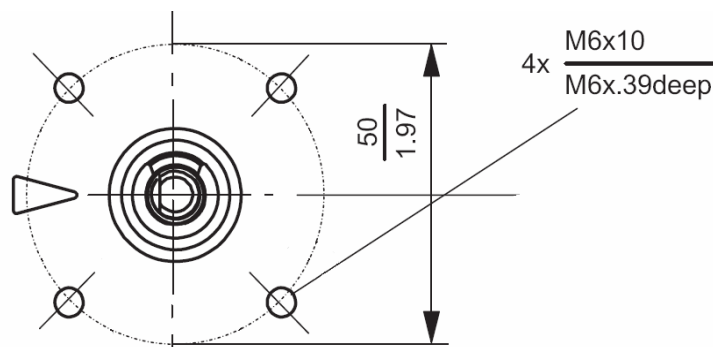


DIMENSIONS



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-H2)



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.

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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