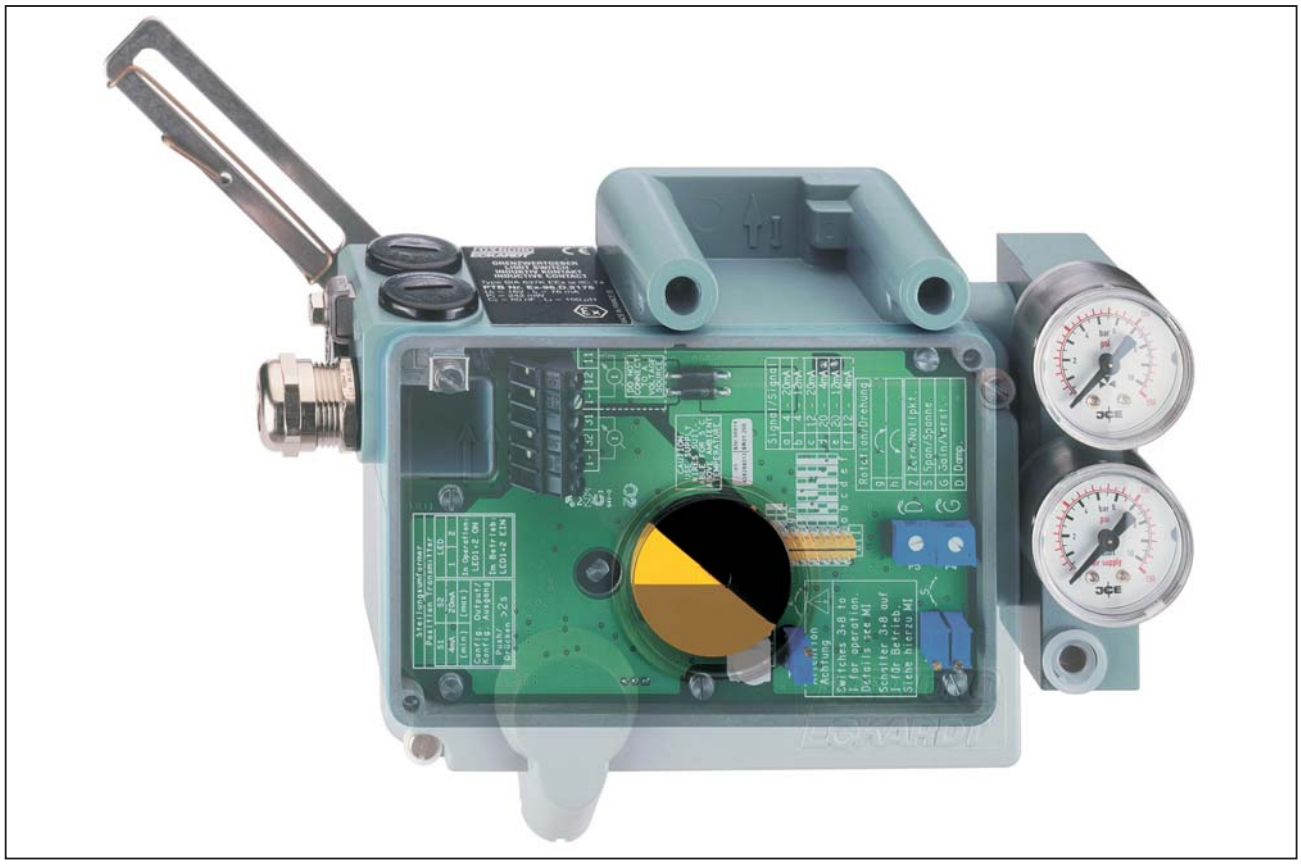
SRI990 Analog Positioner
SRI990-T Electrical Position Transmitter



The analog Positioner **SRI990** with analog input 4 to 20 mA is designed to operate pneumatic valve actuators. It offers an easy adjustment by means of switches and potentiometers. The modular structure of the POSYS positioner series enables conversion from an analog to a “intelligent” positioner by easy exchanging the electronics.
In version “Electrical Position Transmitter” **SRI990-T** the device includes the option Position Transmitter but no controller and no pneumatic components. The positon of actuator is given as 4-20 mA signal.
Further versions see next page.

FEATURES

- Configuration by means of switches and potentiometers
- Load 300 Ω
- Low air consumption
- Stroke 8 to 120 mm (0.3 to 4.7 inch)
- Angle range up to 95 degree
- Supply air pressure up to 6 bar (90 psig), with spool valve up to 7 bar (105 psig)
- Single acting or double acting
- Mechanical travel indicator
- Reverse polarity protection and interlock diode
- Attachment to stroke actuators directly or according to IEC 534 part 6 (NAMUR)
- Attachment to rotary actuators according to VDI/VDE 3845
- Protection class IP 65 (IP 66 on request) and NEMA 4X
- Explosion protection:
  II 2 G EEx ia IIC T6 according to ATEX
  or “Intrinsic safety” according to FM and CSA

Additional equipments (compatible to SRD991):
- Integrated inductive limit switches, independent of device electronics

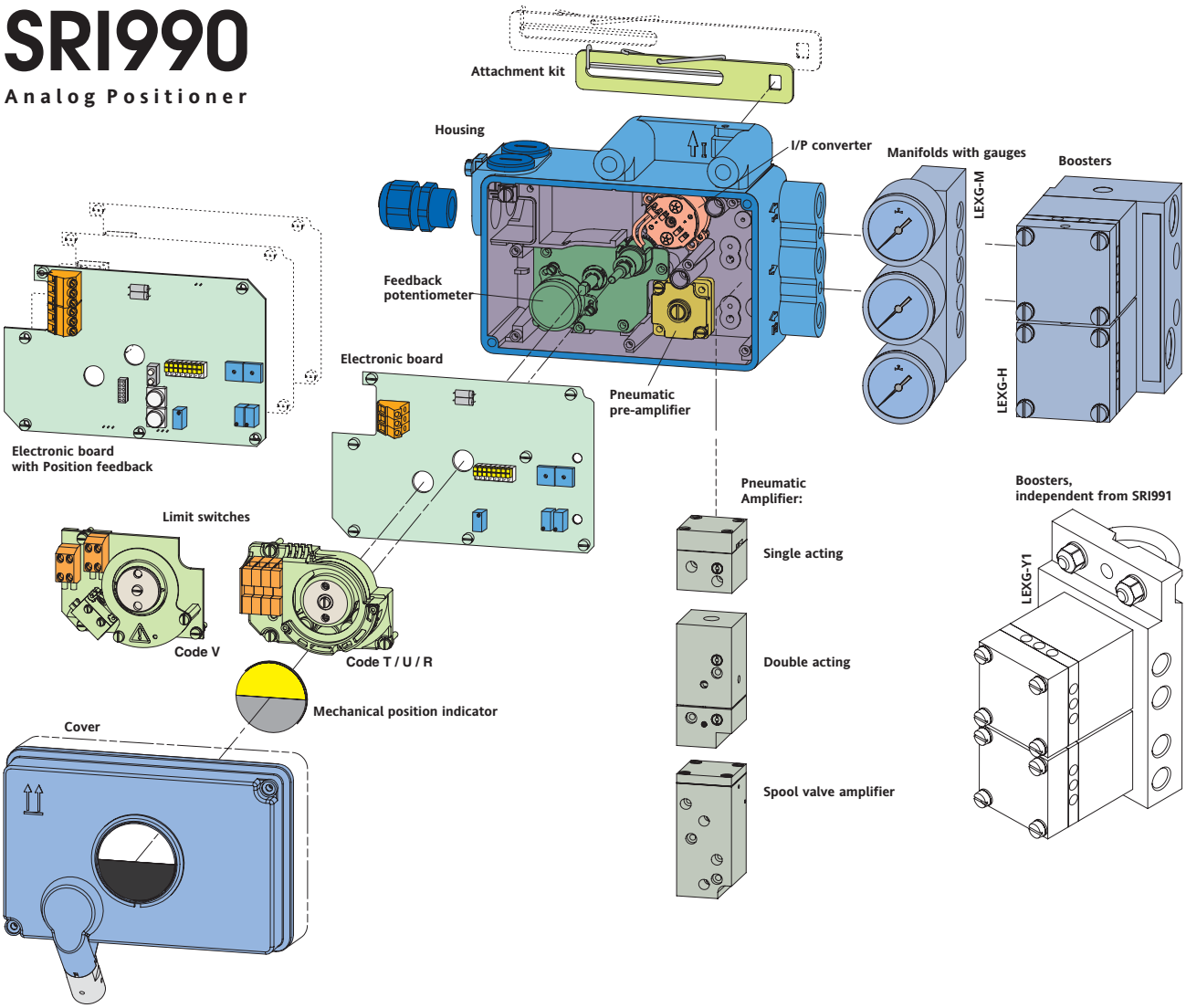
Accessories (compatible to SRD991):
- Gauge attachment for supply air and outputs
- Booster relay

FOXBORO ECKARDT

Product overview

SRI990

Analog Positioner



By the modular structure of this product family we can offer the SRI990 in different versions: (see also page 8 for Model Code)

Model Code:	SRI990- -BIMS...	-BIQS...	-BIQT... U...	-BIMT... U...	-TXMT... U...	-TXQS...	-TXQT... U...	-TXMS*****-H	-TXMT*****-H U*****-H
Analoger Positioner	●	●	●	●					
Position Trans-mitter 4-20 mA		●	●			●	●		
Limit switches types T / U / R / V			●	●	●		●		●
stand-alone potentiometer								●	●
built-in pneumatics	Yes	Yes	Yes	Yes	No	No	No	No	No
	• single acting **-B** or • double acting **-C** or • Spool valve **-C*****-S**								

TECHNICAL DATA

Input

Two-wire system
Reverse polarity protection . . feature
Interlock diode . . . . . feature
Signal range . . . . . 4 to 20 mA
Characteristic. . . . . linear to rotation angle [1)]
Operating range. . . . . 3 to 21.5 mA
Input voltage . . . . . DC 12 to 36 V [2)] (unloaded)
Load . . . . . 300 Ω, 6 V at 20 mA

Configuration

with switches:

Rotation . . . . . clockwise or counter clockw.
Input signal . . . . . 4 to 20 mA (direct)
20 to 4 mA (inverse)
Split range [1) 3)] . . . . . 4 to 12 mA, 12 to 20 mA
(by means of Dip switch) 20 to 12 mA, 12 to 4 mA

with potentiometers: . . . . . Zero (ZERO)
Span (S)
Gain (G)
Damping (D)

Travel indication

mechanical (display window), for rotary or stroke actuator
transmission . . . . . 1:2 or 1:6 switchable

Output

Action . . . . . single or double acting
Output to actuator . . . . . 0 to ~ 100 % of supply air

Pneumatic connection

NAMUR mounting . . . . . 3 x female threads 1/4-18NPT or G 1/4 for pipe diameter 6 to 12 mm (0.24 to 0.47 in) for air supply and outputs y1, y2 to the actuator
Direct mounting . . . . . Instead of the output y1 an air connection on the rear side with O-ring will be used (closed at NAMUR mounting).

Electrical connection

Line entry. . . . . 1 or 2 cable glands 1/2-14 NPT or M20 x1.5
(others with Adapter AD-...)
Cable diameter . . . . . 6 -12 mm (0.24 - 0.47 in)
Screw terminals . . . . . terminals 11 +, 12 – for input, I– for current measurement
optional . . . . . 4 additional terminals for limit switch signals
Wire cross section . . . . . 0.3 - 2.5 mm² (AWG 22 - 14)

Test sockets Ø 2 mm . . . . . integrated in terminals, for non- interruptable current measurement

Weight

Single acting . . . . . approx. 1.7 kg (3.7 lbs)
Double acting. . . . . approx. 2.0 kg (4.4 lbs)

Materials

Housing . . . . . aluminum (Alloy No. 230) finished with DD varnish
All moving parts of
feedback system . . . . . 1.4306 / 1.4571 / 1.4104
Mounting bracket . . . . . aluminum (Alloy No. 230)

Mounting

Attachment to stroke actuators
- direct . . . . . with attachment kit EBZG -D
- direct, FoxPak, FoxTop . . . with attachment kit EBZG -E
- for casting yoke acc. to IEC 534-6 (NAMUR) . . . . . with attachment kit EBZG -H
- for pillar yoke acc. to IEC 534-6 (NAMUR) . . . . . with attachment kit EBZG -K

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

– Further attachement kits see Modelcodes on page 10 –

Mounting orientation. . . . . see attachment dimensions on pages 12 to 14

Ambient conditions

Operating conditions
acc. to IEC 654-1 . . . . . the device can be operated at a classe Dx location
Ambient temperature . . . . . –40 to 80 °C (–40 to 176 °F)
Relative humidity . . . . . up to 100 %
Transport and storage
Ambient temperature . . . . –40 to 80 °C (–40 to 176 °F)
Storage conditions according to IEC 60721-3-1: 1K5; 1B1; 1C2; 1S3; 1M2
Protection class
according to IEC 529 . . . . IP 65 [4)], IP 66 [4)] on request
according to NEMA. . . . . Type 4X [4)]

Electromagnetic compatibility EMC

Operating conditions . . . . . industrial environment
Immunity according to
- NAMUR recommendation NE21 fulfilled
- EN 61 326 . . . . . fulfilled
- EN 61 000-6-2 . . . . . fulfilled
Emission according to
- EN 55 011,
Group 1, Class A . . . . . fulfilled
- EN 61 000-6-2 . . . . . fulfilled

Offline diagnosis

Test possibility for pneumatic control

1) The digital positioner SRD991 offers enlarged functionality
2) On request we can specify higher voltage limits
3) At maximum rotation angle range of 30 degrees (± 15 degrees around center position of feedback lever). Split range is not available for actuators with a swivel range >30 degrees
4) Under services as directed

TECHNICAL DATA (continued)

Travel range

Stroke range . . . . . 8 ... 70 mm (0.3 ... 2.8 in),
and . . 60 ... 120 mm (2.4 ... 4.7 in),
and . . 100 ... 260 mm (3.9 ... 10.2 in)
Rotation angle range . . . . . up to 95 °
(without mechanical stop)

Supply

Supply air pressure . . . . . 1.4 ... 6 bar (20 ... 90 psig)
with spool valve . . . . . 1.4 ... 7 bar (20 ... 105 psig)
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

For air supply, we recommend the FOXBORO ECKARDT FRS923 filter regulator.

Response characteristic [2] [3]

Sensitivity . . . . . 0.2 % of travel span
Non-linearity (terminal based adjustment) [4]. . . . . < ±0.8 % of travel span
Hysteresis . . . . . < 0.5 % of travel span
Supply air dependence. . . . . < 0.3 % / 1 bar (15 psi)
Temperature effect. . . . . < ±0.5 % / 10 K
Mechanical vibration
10 - 60 Hz up to 0.14 mm,
60 - 500 Hz up to 2 g . . . . . < 0.25 % of travel span

Air consumption (steady state) l_n/h (scfh)

Supply air pressure bar (psig)	1.4 (20)	3 (45)	6 (90)
single acting	100 (3.5)	110 (3.9)	150 (5.3)
double acting	200 (7.0)	220 (7.8)	300 (10.6)

The listed values are simplified. The exact values can be determined using the following formulas:

single acting;
P in bar: Qcon= (Psup+1)*20 + Pout*60 [Nl/h]
P in psi: Qcon= (Psup+15)*0.0008 + Pout*0.0024 [scfm]

double acting:
P in bar: Qcon= (Psup + 1)*110 [Nl/h]
P in psi: Qcon= (Psup + 15)*0.0044 [scfm]

Qcon Max. Air consumption
Psup Supply pressure
Pout Output pressure

Remarks to the air achievement

With very small actuators the air achievement of the positioner can be to high, particularly at the spool valve. Remedy by user by inserting a throttle into the supply line.

Air output l_n/h (scfh)

at max. deviation, single and double acting:

Supply air pressure bar (psig)	1.4 (20)	2 (30)	4 (60)	6 (90)	7 (105)	
without booster	2 700 (95)	3 500 (124)	5 500 (194)	7 500 (265)	–	
with Spool Valve	3 400 (120)	4 300 (151)	7 200 (254)	10 000 (350)	11 400 (400)	
with booster code F, G	18 000 (636)	24 000 (847)	40 000 (1 492)	55 000 (1 942)	–	
with booster code H	36 000 (1 271)	48 000 (1 695)	80 000 (2 825)	110 000 (3 884)	–	

The listed values are simplified. The exact values can be determined using the following formulas:

single acting and double acting:
P in bar: Qout= (Psup + 1)*1100 [Nl/h]
P in psi: Qout= (Psup+15)*2.6 [scfh]

with booster
single acting, doubled air capacity:
P in bar: Qout= (Psup +1)*15700 [Nl/h]
P in psi: Qout= (Psup+15)*36.8 [scfh]

with Spool Valve,
single acting and double acting:
P in bar: Qout= (Psup + 1)*1450 [Nl/h]
P in psi: Qout= (Psup+15)*3.4 [scfh]

1) Pressure dew point 10 K under ambient temperature
2) Data measured according to VDI/VDE 2177
3) With stroke 20 mm and lever length 42 mm
4) The operating influences depend on the chosen gain. The values are given for an actuator PA-200, spring range 0.6 to 1.4 bar, stroke range 20 mm (rotation angle ~30 degree) and a closed loop gain of about 70.

SAFETY REQUIREMENTS

CE label

Electromagnetic compatibility 89/336/EWG
Low voltage regulations . . . . w/o Ex: 73/23/EWG fulfilled
(with Ex: not applicable)

Safety

Safety . . . . . safety class III
as per DIN EN 61010-1 (DIN IEC 61010-1) (VDE 0411 part 1)
overvoltage category 1
internal fuses . . . . . none
external fuses . . . . . Limitation of power supplies for fire protection has to be observed due to EN 61010-1 9.3. ff.

Electrical classification [1) 2)]

See Certificate of Conformity EX EVE0107A

Type of protection ATEX "intrinsically safe"
Analog positioner (Basic device)
Type AI 636 . . . . . II 2 G EEx ia IIC T6
Certificate of Conformity . . . . PTB 02 ATEX 2206
For use in hazardous areas in circuits certified as intrinsically safe with the following maximum values:
Input circuit
U_{max} . . . . . 40 V
I_{max} . . . . . 150 mA
Internal inductance . . . . . 5 µH
Internal capacitance . . . . . 6 nF diff. / 11 nF to earth
T6 P_{max} . . . . . 1 W
Ambient temperature. . . –40 ... 40 °C (–40 ... 104 °F)
T4 P_{max} . . . . . 1 W
Ambient temperature. . . –40 ... 80 °C (–40 ... 176 °F)

Additional equipment "Inductive limit switch"
For use in hazardous areas in circuits certified as intrinsically safe with the following maximum values:
U_{max} . . . . . 16 V
I_{max} . . . . . 25 mA
P_{max} . . . . . 64 mW
Internal inductance . . . . . 100 µH
Internal capacitance . . . . . 30 nF
T6 Ambient temperature . . –40 ... 40 °C (–40 ... 104 °F)
T4 Ambient temperature . . –40 ... 80 °C (–40 ... 176 °F)

Permissible temperature class and ambient temperature dependent on the basic device.

Additional equipment "Position Transmitter"
For use in hazardous areas in circuits certified as intrinsically safe with the following maximum values:
Ui = 30 V, Ii = 130 mA, Pi = 0.9 W or
Ui = 22 V, Ii = 66 mA, Pi = 0.5 W
Internal inductance Li . . . . 25 µH
Internal capacitance Ci . . . 7 nF diff. / 23 nF to earth

The control circuit is safely electrically isolated from ground and all other circuits.

Explosion protection Zone 2
It is recommended to use the positioner with explosion protection "intrinsically safe" (consider temperature class). In the Federal Republic of Germany these positioners may be operated in Zone 2 with non-intrinsically safe circuits if the operating values do not exceed the maximum reference values.

Type of protection
FM approved for "non-incendive"
Class I, II, III, Division 1, Groups A, B, C, D /T4,
hazardous locations, indoors and outdoors, NEMA 4X

FM approved for "intrinsic safety"
Class I, Division 1, Groups A, B, C, D, E, F, G / T4,
hazardous locations, indoors and outdoors, NEMA 4X

CSA approved for "intrinsic safety" (pending)
Class I, Division 1, Groups A, B, C, D,
hazardous locations, indoors and outdoors, NEMA 4X

1) With appropriate order only
2) National requirements must be observed

ADDITIONAL EQUIPMENT

Built-in limit switch [1)]

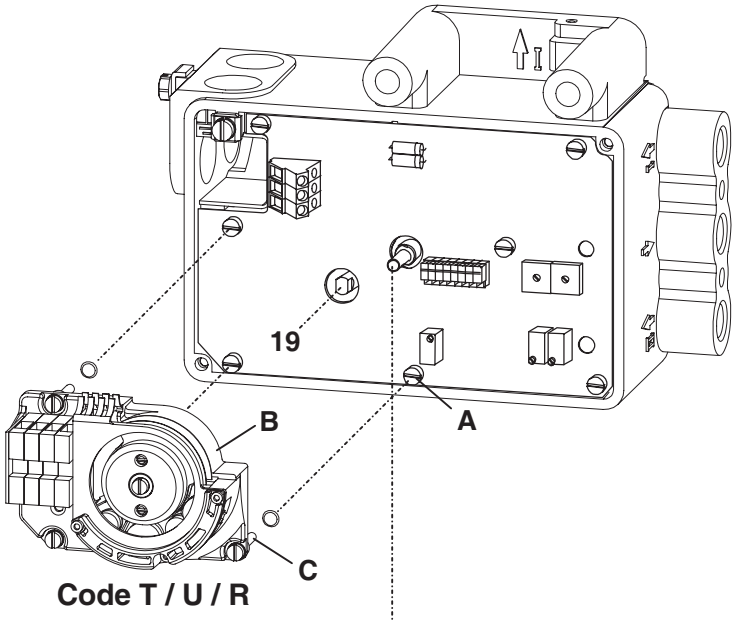
Inductive Limit Switch Code T / U / R

Stroke / angle derivated from positioner feedback lever

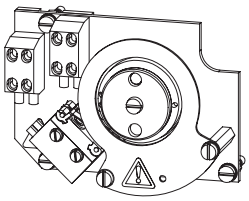
Output . . . . . 2 inductive proximity sensors acc. to DIN 19 234 or NAMUR for connection to switching amplifier with intrinsically safe control circuit [2)]
Standard version (SJ2-N) . . . Code T
Security version (SJ2-SN) . . Code U
Three Wire Version . . . . . Code R
Parts sets for subsequent mounting:
Code T . . . . . EW 426 164 012
Code U . . . . . EW 426 164 021
Code R . . . . . EW 426 164 057

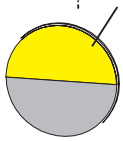
Current consumption
vane clear . . . . . > 2.2 mA
vane interposed . . . . . < 1 mA
for control circuit with the following electrical values:
supply voltage . . . . . 8 V DC, R_i approx. 1 kΩ
supply voltage range. . . . . 5 to 25 V DC (only with ZZZ)
Residual ripple . . . . . < 10 % p.p.
Permissible line resistance . . < 100 Ω

Response characteristic [3) 4)]
switching differential . . . . . < 1 %
switching point repeatability . < 0.2 %
EMC . . . . . according to EN 60947-5-2
Terminals for GW1 . . . . . 41 +, 42 –
GW2 . . . . . 51 +, 52 –

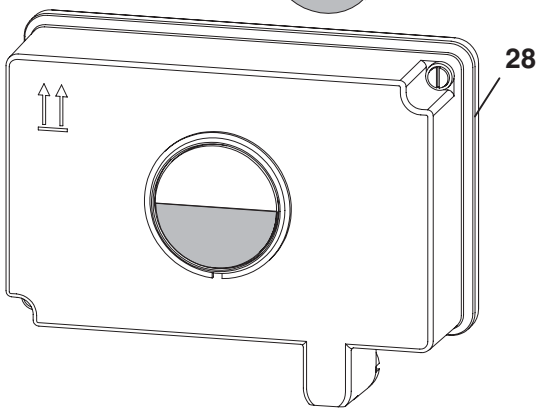


Code T / U / R





Code V



Mechanical Switches (Micro Switches) Code V

(only with ZZZ)

Stroke / angle derivated from positioner feedback lever

Output . . . . . 2 mechanical switches (Micro switches) [5) 6)]
Manufacturer . . . . . Saia-Burgess
Type . . . . . V4NS-C4-AC1-UL (UL- and CSA-approved)
Parts set for subsequent mounting:
Code V . . . . . EW 426 164 066

Absolute limit values **AC**
of mechanical switches built into positioner:
Umax. . . . . 130 V AC [7)]
Imax . . . . . 0.5 A (resistive Load) [7)]
Imax . . . . . 0.03 A (inductive Load) [8)]

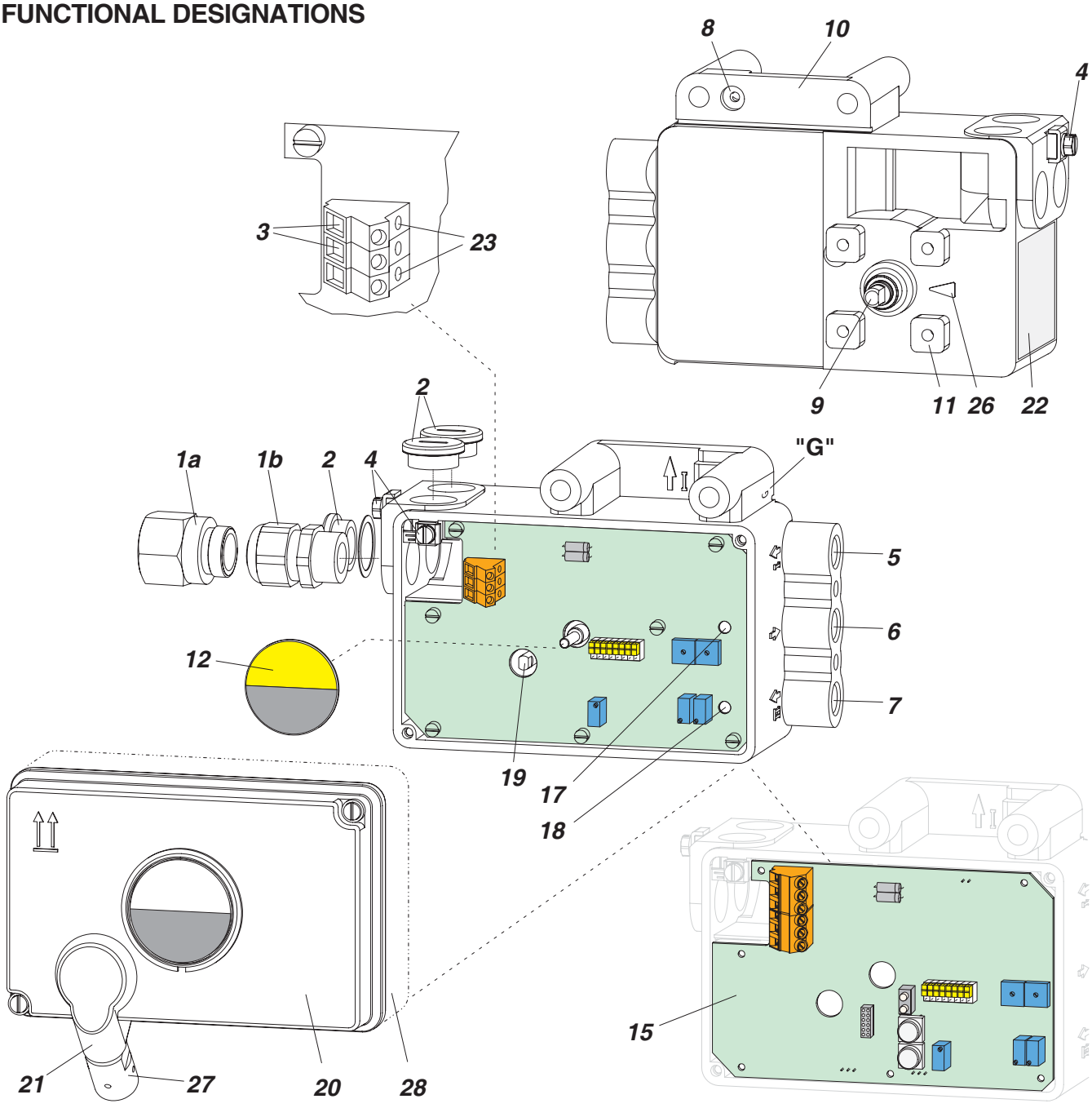
Absolute limit values **DC**
of mechanical switches built into positioner: [9)]
Umax. . . . . 30 V DC
Imax . . . . . 1 A

Switching Differential: . . . . . < 2.5 %

The circuit of the mechanical switches have to be protected by a suitable fuse. The diameter of the protective conductor needs to be at least 1.5 mm² / AWG 16.

1) In combination with high cover ***28***
2) Operating mode min. (= low) / max. (= high) selectable by adjustment of switch vanes
3) Data measured according to VDI/VDE 2177
4) With stroke 30 mm and lever length 90 mm
5) Operating mode min. (=low) / max. (=high) selectable by adjusting the respective vane
6) Operating mode normally open / normally closed selectable by vane adjustment
7) Approval according to UL (UL 1054) and CSA (CSA 22.2 No. 55) at 6,000 operations and T = 65 °C / 149 °F
8) Based on EN 61058-1, at 10,000 operations and T = 85 °C / 185 °F
9) General rating at 50,000 operations and T = 85 °C / 185 °F

FUNCTIONAL DESIGNATIONS



1a Adapter, eg. 1/2"-14NPT
1b Cable gland
2 Plug, interchangeable with Pos. ***1***
3 Screw terminals (11 + / 12 –) for input (w)
I– for current measurement (see also Item ***23***)
4 Ground connection
5 Female thread G) 1/4 -18 NPT for output I (y / y1)
6 Female thread G) 1/4 -18 NPT for air supply (s)
7 Female thread G) 1/4 -18 NPT for output II (y2)
8 Direct attachment hole for output I (y / y1)
9 Feedback shaft
10 Connection manifold for attachment to stroke actuators
11 Connection base for attachment to rotary actuators

12 Travel indicator
15 Main board version “with Position Feedback”
17 Damping screw* for output I
18 Damping screw* for output II
19 Fixing shaft for limit switch
20 Cover with window to ***12***
21 Air vent, dust and water protected
22 Data label
23 Tip jacks for current measurement, ∅ 2 mm (integrated in teminals)
26 Arrow is perpendicular to shaft ***9*** at angle 0 degree
27 Check valve (at type of protection NEMA 4X)
28 High cover with built-in limit switches

G) With marked letter "G" in the housing the pneumatic connecting threads are cut as G 1/4 instead of 1/4-18 NPT

* Service only

MODEL CODES SRI990

Analog Positioner	**SRI990**								170305
Version									
Single Acting		-B							
Double Acting		-C							
Position Transmitter (without pneumatic componets)		-T							
Input									
Signal Range 4 - 20 mA	(a)(h)		I						
(Not applicable; without Input Signal or Pneumatics)	(a)(f)		X						
Additional Inputs/Outputs									
Without Additional Inputs / Outputs				M					
Position Feedback 4 - 20 mA				Q					
Built-In Limit Switch									
Without Built-In Limit Switch					S				
Inductive Limit Switch - Intrinsic Safe (Standard Version SJ2-N)	(a)				T				
Inductive Limit Switch - Intrinsic Safe (Security Version SJ2-SN)	(a)				U				
Inductive Limit Switch (Three Wire Version)	(g)				R				
Mechanical Switches (Micro Switches) / UL- and CSA-approved	(g)				V				
Cable Entry									
1/2"-14 NPT (with Adapter(s) M20x1.5 to 1/2"-14 NPT)						6			
M20 x 1.5 With One Plastic Cable Gland						7			
Electrical Classification									
Without Ex							ZZZ		
II 2 G EEx ia IIC T6 according to ATEX							EAA		
II 3 D EEx ia IIC T6 according to ATEX							ED3		
FM Approved Nonincendive For Class I, Division 2, Groups A, B, C, D, E, F & G Hazardous Locations Indoors And Outdoors, NEMA 4X	(k)						NFM		
FM Approved For Intrinsic Safety Class I, Division 1, Groups A, B, C, D, E, F & G Hazardous Locations Indoors And Outdoors, NEMA 4X	(k)						FAA		
CSA Approved For Intrinsic Safety Class I, Division 1, Groups A, B, C, D, Hazardous Locations Indoors And Outdoors, NEMA 4X	(k)(b)						CAA		
GOST Approved For Intrinsic Safety	(d)(k)						GAA		
Options									
Amplifier Free Of Nonferrous Metals	(i)								-C
Pneumatical Connections G 1/4 instead of 1/4-18 NPT	(h)								-P
Pneumatic Amplifier in the Version "Spool Valve"	(e)								-S
Certificate for SIL2 / SIL3 application	(d)(l)								-Q
Version of Positioner according to VDI/VDE 3847	(c)								-N
Version of Position Transmitter with a potentiometer for remote mounting	(f)								-H
Version of Position Transmitter with additional cable connections for solenoid-valve-connection	(d)(f)								-D
Tag No. Labeling									
Stamped With Weather Resistant Color									-G
Stainless Steel Label Fixed With Wire									-L

Example:	SRI990	-B	I	M	S	7	ZZZ	-L

(a) Only with Electrical Classification ZZZ, EAA, NFM & FAA
(b) On request
(c) In addition select one Mounting Adapter EBZG -N1 to -N4
(d) Not released
(e) Only with Version -C
(f) Only with Version -T
(g) Not available with Electrical Classification EAA, NFM, FAA & CAA
(h) Not available with Version -T
(i) Only available for Version single-acting -B
(k) Not available with Additional Inputs/Outputs Q
(l) Only available for Version single-acting -B

Auxiliary see EVE9902
Fittings see EOO9001

Accessories, for all basic devices:

Booster relay, Code LEXG - ...

Air output . . . . . see table on page 4

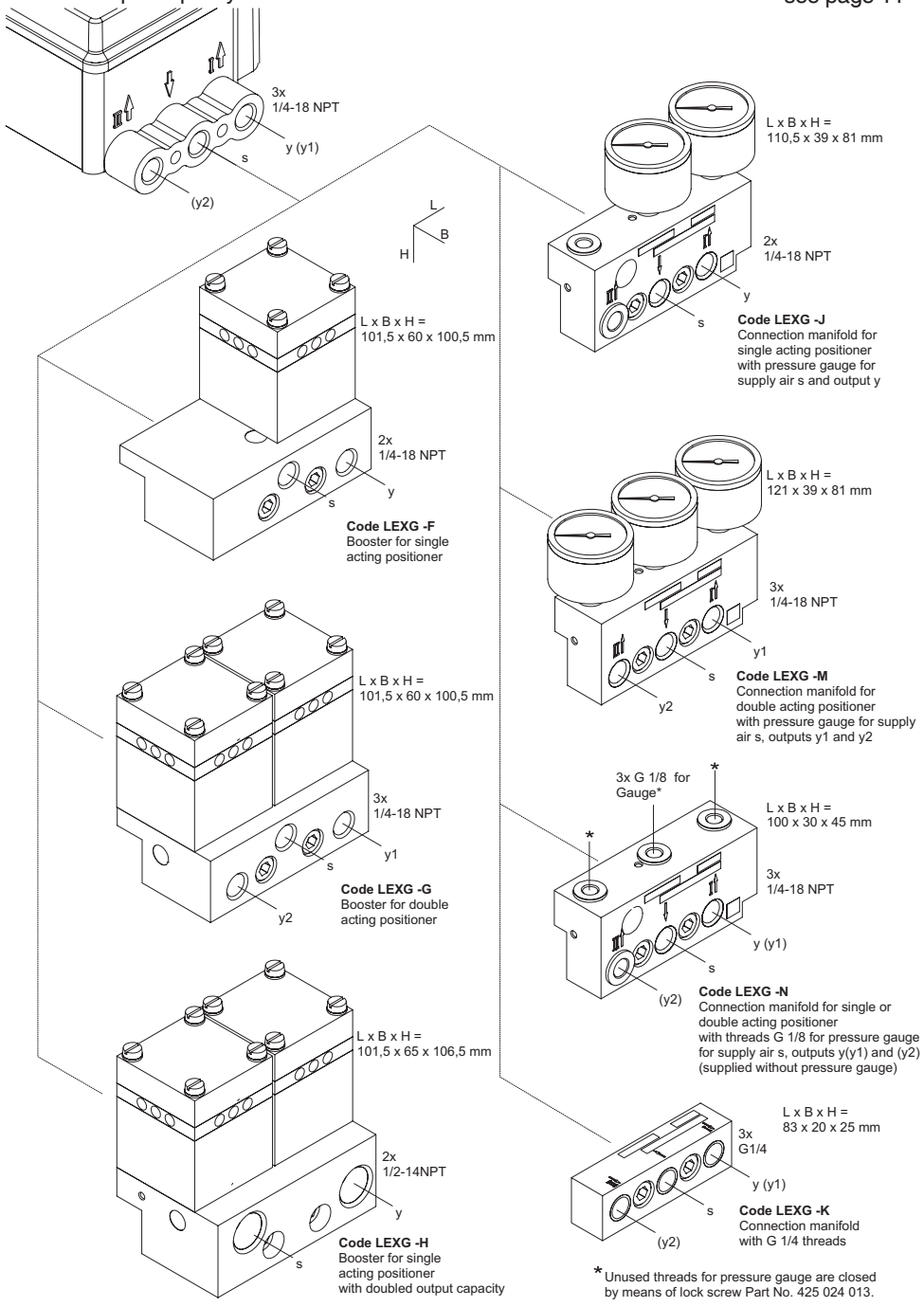
Lateral attachment to positioner, **connection 1/4 -18 NPT:**
LEXG -F Booster relay for version single acting
LEXG -G Booster relay for version double acting
Lateral attachment to positioner, **connection 1/2 -14 NPT:**
LEXG -H Booster relay for version single acting, with doubled output capacity

Lateral attachment to positioner, **connection G1/4:**
LEXG -F1 Booster relay for version single acting
LEXG -G1 Booster relay for version double acting
Lateral attachment to positioner, **connection G1/2:**
LEXG -H1 Booster relay for version single acting, with doubled output capacity

Attachment to positioner acc. to IEC 534 part 6 (NAMUR), mounted **independent** from positioner, connection from positioner to booster with tubes, **connection G1/4:**
LEXG -X1 Booster relay for version single acting
LEXG -Y1 Booster relay for version double acting
Mounted **independent** from positioner, **connection G1/2:**
LEXG -Z1 Booster relay for version single acting, with doubled output capacity

Gauges manifold

Lateral attachment to positioner
with 2 or 3 gauges . . . . . Accuracy class 1.6
Indicating range . . . . . 0 to 10 bar (0 to 150 psig)
connection . . . . . 1/4 -18 NPT or G1/4,
see page 11



MODEL CODES Attachment kits

ACCESSORIES FOR POSITIONER (SRD991, SRI990, SRD960) 170305

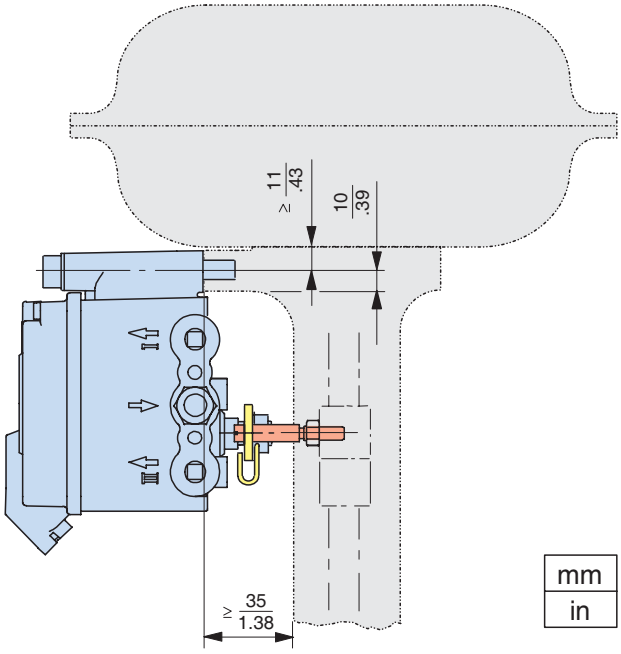
Attachment Kit	**EBZG**
For diaphragm actuators with casting yoke acc. NAMUR (incl. standard Couple lever)	-H
For diaphragm actuators with pillar yoke acc. NAMUR (incl. standard Couple lever)	-K
For directly mounting (incl. standard Couple lever)	-D
For mounting to rotary actuators acc. VDI/VDE 3845 (without bracket)	-R
For mounting to rotary actuators acc. VDI/VDE 3845 (heavy duty) (h)	-R2
For FoxTop / FoxPak (g)	-E
For FoxTop / FoxPak (f)	-E1
For Masoneilan Type Camflex II	-M
Brackets VDI/VDE 3845 (A = 130 mm/5.12 in; B = 50 mm/1.97 in)	-C3
Brackets VDI/VDE 3845 (A = 80 mm/3.15 in; B = 30 mm/1.18 in)	-C2
Brackets VDI/VDE 3845 (A = 80 mm/3.15 in; B = 20 mm/0.79 in)	-C1
For Badger Meter - Research Control Series 754 and 755 Size 1/2 inch	-B1
For Fisher 657, 667 (linear) size 30 and 40	-F1
For Fisher 1051, 1052, 1061 size 40	-F2
For Fisher 657, 667 size 30 and 60	-F3
For Fisher 657, 667 size 70 and 100	-F4
For Fisher 1051, 1052, 1061 size 33	-F5
For Fisher 1051, 1052, 1061 size 60	-F6
For Foxboro P-Series / such as -H with installed height 80 mm/3.15 in	-H1
NAMUR-Attachment kit for centered mounting position on the casting yoke	-H2
For mounting on ADAR control valve	-H3
For mounting on ADAR micro flow control valve (k)	-H4
Such as -K with installed height 80 mm/3.15 in)	-K1
For Kinetrol (Actuator Size 05)	-K2
For Kinetrol (Actuator Size 07)	-K3
For Kinetrol (Actuator Size 09)	-K4
For Metso / Neles Rotary actuators Type AB6 and Type BJ & BC size 8 and 10, B1C11	-L1
For Metso / Neles Rotary actuators Type BJ and BC size 12 and 16, B1C17	-L2
NAMUR-Attachment kit for linear actuators acc. to VDI/VDE3847 w/o gauges, with feedback lever	-N1
NAMUR-Attachment kit for linear actuators acc. to VDI/VDE3847 prepared for gauges, with feedback-lever(h)	-N2
NAMUR-Attachment kit for linear actuators acc. to VDI/VDE3847 with gauges (supply/Y1), with feedback-lever (h)	-N3
NAMUR-Attachment kit for linear actuators acc. to VDI/VDE3847 with gauges (supply/Y1/Y2), with feedback-lever	-N4
NAMUR-Attachment kit for rotary actuators acc. to VDI/VDE3847 w/o gauges, with rotary coupling	-N5
NAMUR-Attachment kit for rotary actuators acc. to VDI/VDE3847 prepared for gauges, with rotary coupling(h)	-N6
NAMUR-Attachment kit for rotary actuators acc. to VDI/VDE3847 with gauges (supply/Y1), with rotary coupling (h)	-N7
NAMUR-Attachment kit for rotary actuators acc. to VDI/VDE3847 with gauges (supply/Y1/Y2), with rotary coupling(h)	-N8
For ARI-Armaturen - Direct Mounting to actuator type DR	-P1
For ARCA - Direct Mounting to actuator type BR 812	-P2
For Samson Type 3277 with 1/4 - 18 NPT	-S1
For Samson Type 3277 with G 1/4	-S2
For Samson Type 3277 with 1/4 - 18 NPT and gauges for supply- and output-pressure (g)	-S5
For Samson Type 3277 with G 1/4 and gauges for supply- and output-pressure (g)	-S6
For Samson Micro flow Type 3277-5 (k)	-S8
Tuflin / XOMOX Type MX60 (h)	-T1
Tuflin / XOMOX Type MX200 (h)	-T2
Tuflin / XOMOX Type MX450 / Typ MX750 / Typ MX1250 (h)	-T3
Tuflin / XOMOX Type MX3000 (h)	-T4
For mounting to rotary actuators with squared coupling 14 mm/0.55 inch, e.g. for Worcester Series 39	-W1
For mounting to rotary actuators with squared coupling 16 mm/0.63 inch	-W2
For Masoneilan Type 37/38 (as -M2, but only with feedback lever and attachment plate and without connections between stem and lever)	-M3
For Masoneilan Type 37/38 size 15 and 18 (complete kit)	-M2
For Hagan actuators (left of pneumatic cylinder)	-X2
For Hagan actuators (right of pneumatic cylinder)	-X1

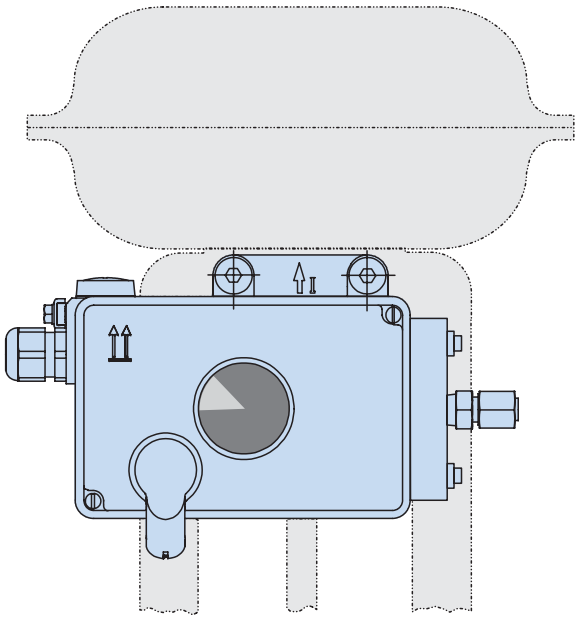
(continued on next page)

MODEL CODES Accessories

Attachment Kit (continued)	**EBZG**	071205
For AMRI rotary actuator (requires minor modification of actuator. Please consult ECKARDT production before ordering!)		-X3
For Siemens actuators V-Series		-S3
For Sereg Maxflo, Revca, Reglob new type		-S4
For Sereg Maxflo "old type"		-S7
For Sereg CNX (Flowserve)		-S9
For Masoneilan 47/48 (Sigma-F)		-M1
For Masoneilan Type 87/88 all size		-M4
For Masoneilan Varipac		-M5
For Masoneilan 37/38 size 9, 11, 13		-M6
For Masoneilan / Severn Glocon Type Domotor size small (h)		-M7
For Valtek Linear Actuator all Sizes - Stroke up to 4 inch / 102 mm		-V1
For VETEC Type R150		-V2
For Valtek Linear Actuator Size 200 and 300 - Stroke approx. 6 and 8 inch / 152 and 203 mm		-V4
For Valtek Linear Actuator Size 200 - Stroke approx. 12 inch / 305 mm		-V5
For De Zurik Actuator DR40A (source Foxboro USA)		-Z1
For De Zurik Actuator DR55A (source Foxboro USA)		-Z2
For De Zurik Actuator DR85A (source Foxboro USA)		-Z3
For De Zurik Actuator DR145A (source Foxboro USA)		-Z4
For De Zurik Actuator DR250A (source Foxboro USA)		-Z5
Couple Lever	**EBZG**	
Standard (stroke max. 80 mm)		-A
Extended (stroke max. 260 mm)		-A1
Reduced (stroke < 8 mm)		-A2
Extended (stroke max. 120 mm)		-B
Manifold (for SRD960, SRD991 and SRI990)	**LEXG**	
With Connection G 1/4		-K
Gauges Manifold (for SRD960, SRD991 and SRI990 with 1/4 - 18 NPT connection)		
Without gauges		-N
With gauges for Version single acting		-J
With gauges for Version double acting		-M
with G1/4 connection		
Without gauges		-N1
With gauges for Version single acting		-J1
With gauges for Version double acting		-M1
Booster Relay (for SRD960, SRD991 and SRI990, with connection 1/4 - 18 NPT)		
for Version single acting		-F
for Version double acting		-G
for Version single acting with doubled output capacity		-H
with connection G1/4 - 18		
for Version single acting		-F1
for Version double acting		-G1
for Version single acting with doubled output capacity		-H1
Booster Relay (mounted independent from positioner, for SRD960, SRD991 und SRI990, with connection G1/4)		
for Version single acting		-X1
for Version double acting		-Y1
for Version single acting with doubled output capacity		-Z1
Adapter	**AD**	
Adapter 1/2" NPT to 3/4" NPT (stainless steel)		-A3
Adapter M20 x 1.5 to G1/2" (internal thread) (stainless steel)		-A8
Adapter M20 x 1.5 to 1/2" - 14 NPT (internal thread) (brass with nickel coating)		-A5
Adapter M20 x 1.5 to 1/2" - 14 NPT (internal thread) (stainless steel)		-A6
Adapter (plastic) M20 x 1.5 to PG13.5 (internal thread)		-A9
Cable glands and plugs	**BUSG**	
M20 x 1.5 plastics, color blue		-K7
M20 x 1.5 plastics, color white		-K9
M20 x 1.5 stainless steel		-S6
M20 x 1.5 plastics, color gray		-K6
M20 x 1.5 plug, plastic		-V3

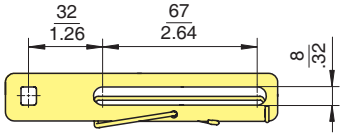
DIMENSIONS – Direct attachment to stroke actuators



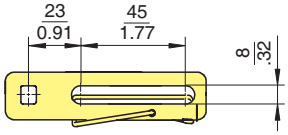


mm
in

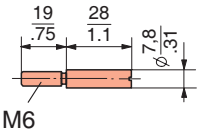
Feedback lever Code EBZG-A for 8..70 mm travel

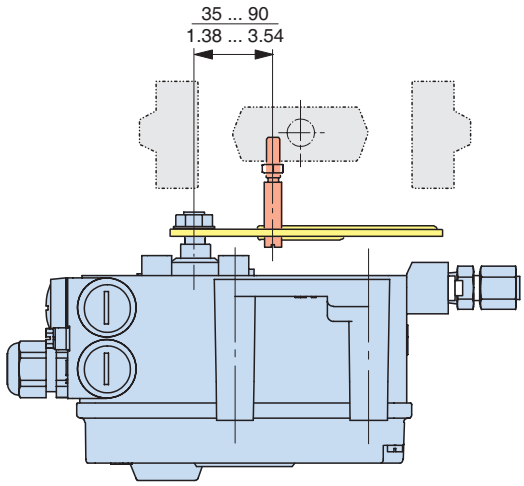


Feedback lever Code EBZG-E

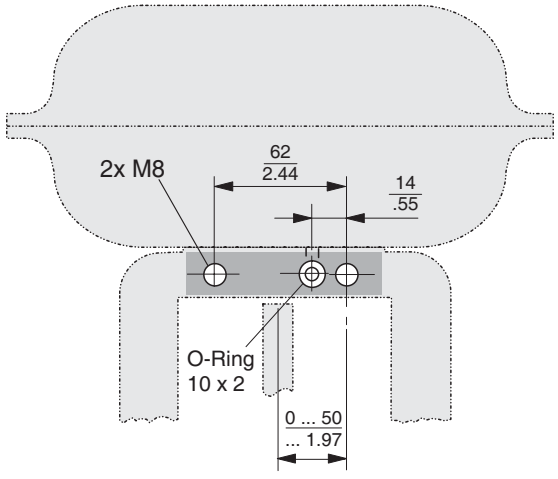


Carrier bolt for connection to valve stem

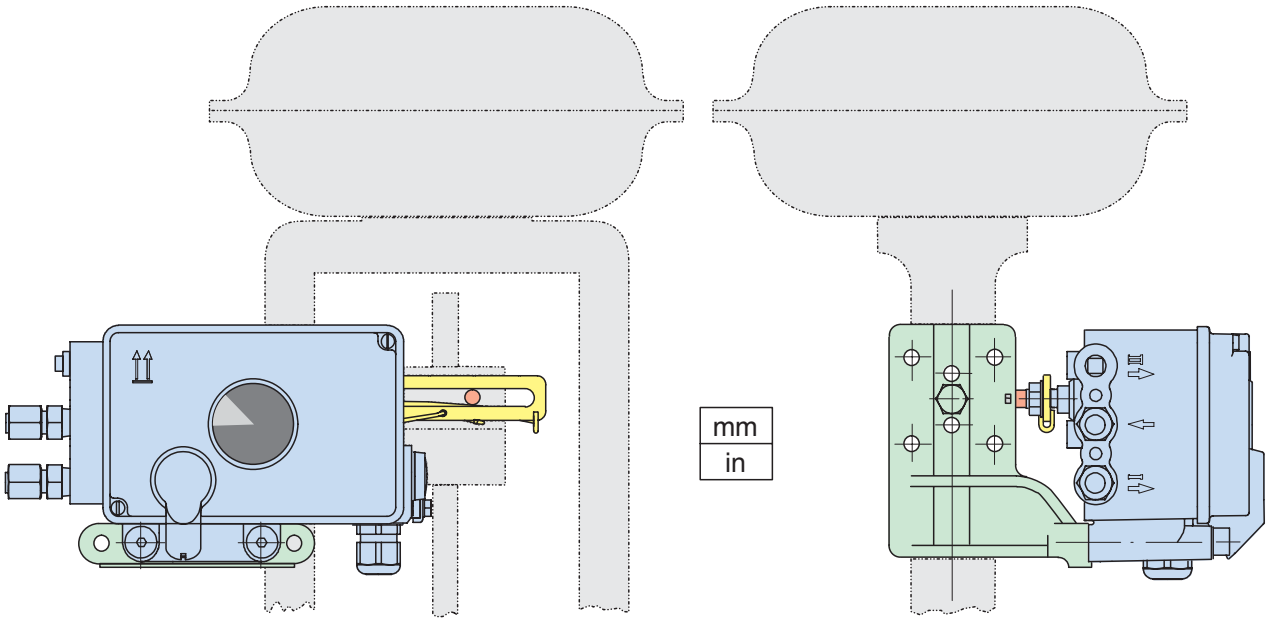




Connection to yoke using the direct connection hole for rear output I (y/y1)

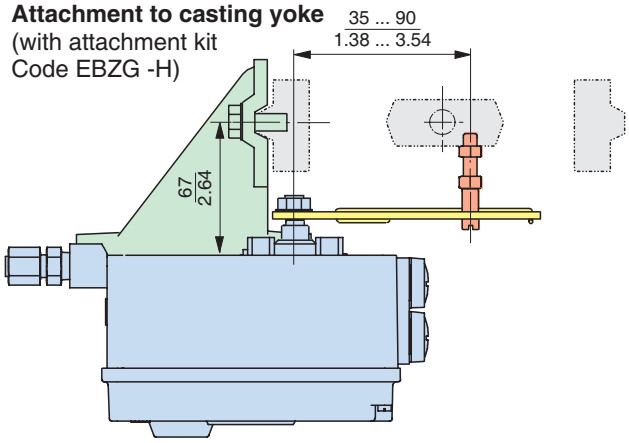


Attachment to stroke actuators acc. to IEC 534-6 (NAMUR)

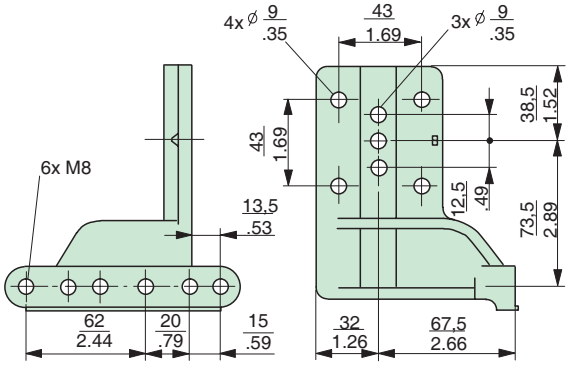


mm
in

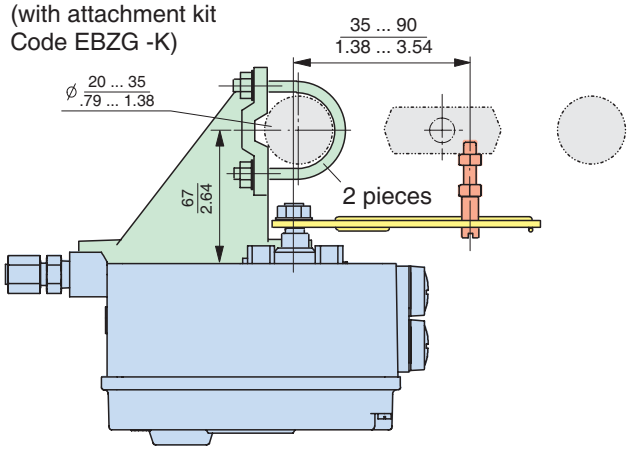
Attachment to casting yoke
(with attachment kit
Code EBZG -H)

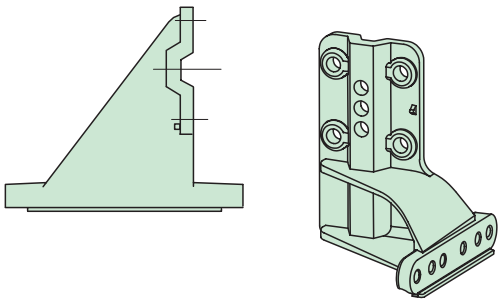


Mounting bracket

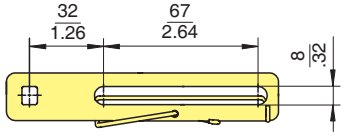


Attachment to pillar yoke
(with attachment kit
Code EBZG -K)

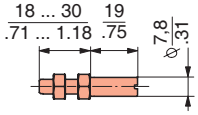




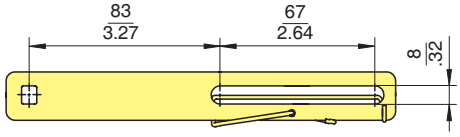
Feedback lever Code EBZG-A for 8..70 mm travel



Carrier bolt for connection to valve stem



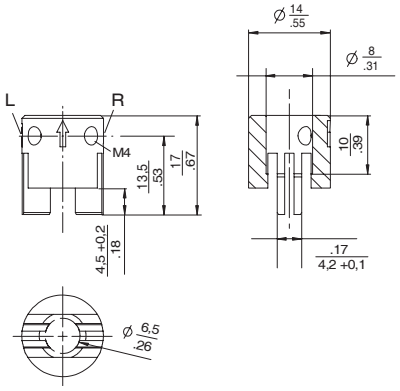
Feedback lever Code EBZG-B for 60..120 mm travel



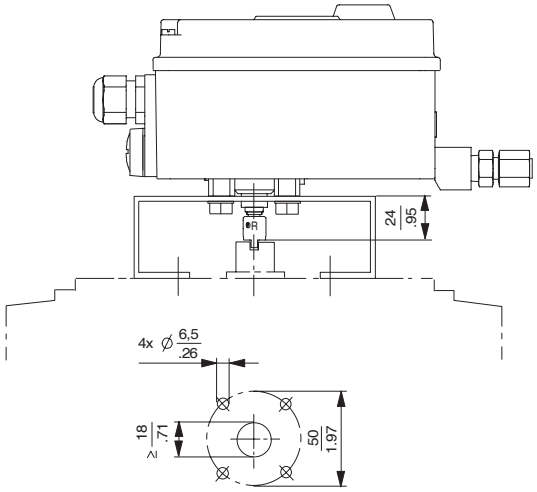
DIMENSIONS – Attachment to rotary actuators acc. to VDI/VDE 3845

Linking piece

mm
in



Attachment diagram of bracket

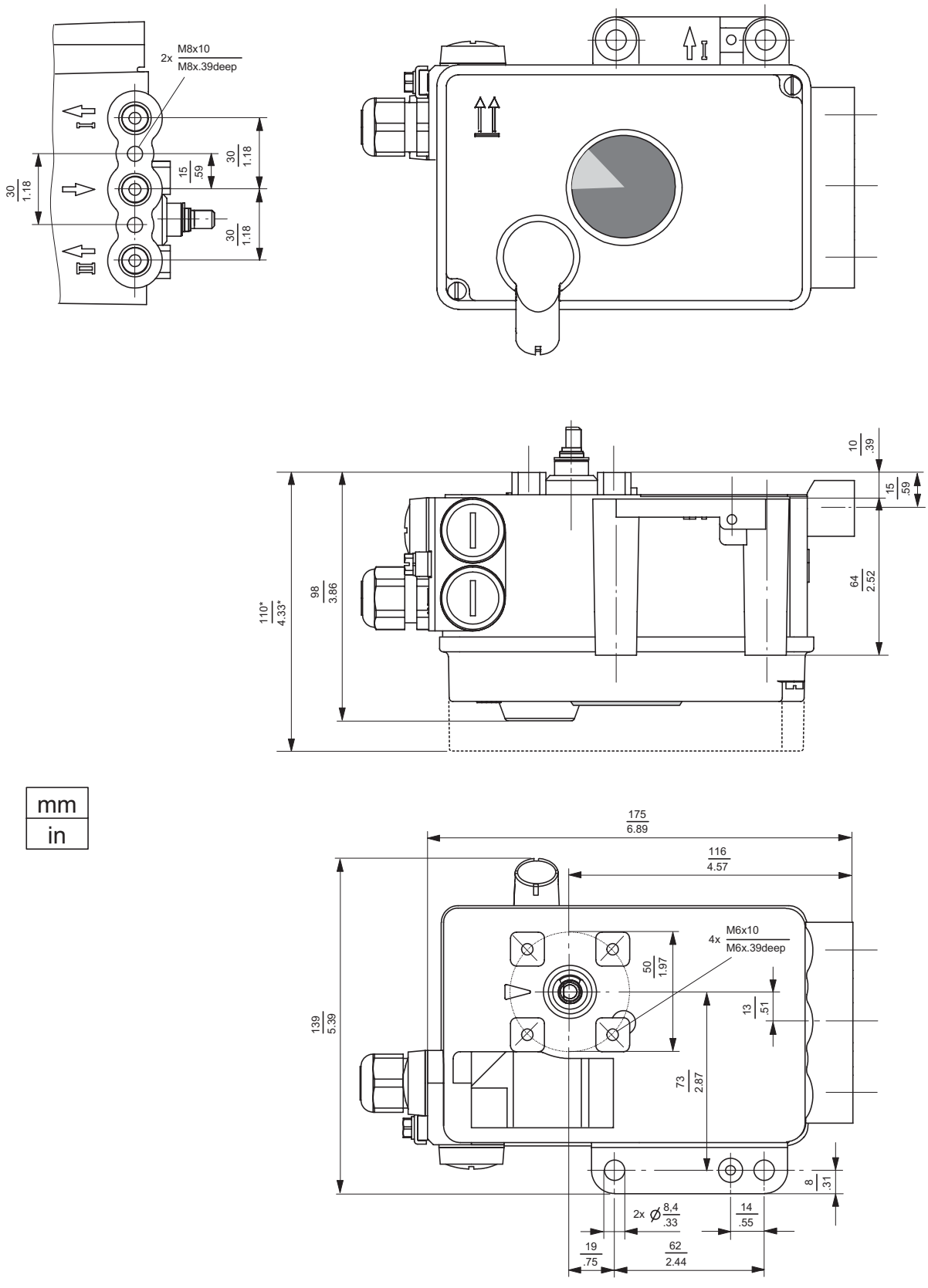


Delivery of bracket by manufacturer of actuator

Further Product Specification Sheets:

PSS EVE0101A-(de)	SRP981	Pneumatic Positioner
PSS EVE0102A-(de)	SRI986	Electro-Pneumatic Positioner
PSS EVE0103A-(de)	SRI983	Electro-Pneumatic Positioner - explosion proof or EEx d version
PSS EVE0105A-(de)	SRD991	Intelligent Positioner
PSS EVE0107A-(de)	SRI990	Analog Positioner
PSS EVE0109A-(de)	SRD960	Universal Positioner

DIMENSIONAL DRAWINGS



*) Dimensions with high cover for option “limit switch”

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DOKT 536 022 028

invensys