

SRD991 Intelligent Positioner with HART, PROFIBUS-PA, FOUNDATION Fieldbus H1 or Without Communication



The intelligent positioner SRD991 is 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 operational tools such as FDT/DTM Software. The positioner is available with different communication protocols. The multi-lingual full text graphical-LCD in connection with the 3 push buttons allows a comfortable and easy local configuration and operation. For installations in contact with explosive atmospheres, certificates are available.

DEVICE FEATURES

Intelligent

- Auto-start with self-calibration
- Self diagnostics, status- and diagnostic messages
- Easy operation with three key pads
- Multi-Lingual full text graphical LCD
- VALcare™ or Valve Monitor DTM for valve diagnostics and predictive maintenance

With communication

- HART, FOUNDATION Fieldbus H1, PROFIBUS-PA
- Configuration by means of local keys, hand-held terminal (HART), PC with FDT-DTM or I/A Series system

Without communication

- Input signal 4 to 20 mA

COMMON FEATURES

- Stroke 8 to 260 mm (0.3 to 10.2 in) with standard lever; larger stroke with special lever
- Angle range up to 95° (up to 300° as option)
- Supply air pressure up to 6 bar (90 psig), with spool valve up to 7 bar (105 psig)
- Single or double-acting
- Mounting on linear actuators according to NAMUR – IEC 50534-6-1 – VDI/VDE 3847
- Mounting on rotary actuators acc. to VDI/VDE 3845 or IEC60534-6-2
- Protection class IP 66 and NEMA 4X
- Approved for SIL applications
- Explosion protection: Intrinsic safety according to ATEX / IECEx, FM, CSA, INMETRO, NEPSI, EAC, ...



MODEL CODES SRD991

Intelligent Positioner

SRD991

Version

- Single Acting-B
- Double Acting-C

Input/Communication

- Intelligent without communication (4 - 20 mA) D
- HART Communication (4 - 20 mA) H
- PROFIBUS-PA (acc. to FISCO)..... P
- FOUNDATION Fieldbus H1 (incl. PID-Fct. Block, acc. to FISCO) Q

Additional Inputs/Outputs

- Prepared For Additional In-/OutputsN
- Binary Inputs(z)..... B
- Binary Inputs-Outputs (mandatory for ESD application).....(z)..... E
- Position Feedback 4 - 20 mA and one Binary Output for Alarm..... F

Built-In Limit Switch

- Without Built-In Limit Switch S
- Inductive Limit Switch - Intrinsically Safe (Standard Version SJ2-N) T
- Inductive Limit Switch - Intrinsically Safe (Security Version SJ2-SN)..... U
- Inductive Limit Switch - Three wire version(u)..... R
- Mechanical Switches (Micro-Switches) / UL- and CSA-approved.....(u)..... V
- Potentiometer Input - CEM Filter (for Remote Mounting - main unit)(k)..... D

Cable Entry

- M20 x 1.5 Without Cable Gland 1
- 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 ExZZZ
 - for Input/Communication D, H.....(y)
 - for Input/Communication H, F.....(x)
- II 2 G Ex ia IIC T4 Gb according to ATEX / IECEx(c)..... EA4
- II 2 G Ex ia IIC T6 Gb according to ATEX / IECEx(d)..... EAA
- II 3 G/D Ex ic T4 Gc/Dc according to ATEX(b)..... 2C4
- II 3 G/D Ex ic T6 Gc/Dc according to ATEX(b)..... 2CA
- II 2 G Ex ia IIC T4 Gb + II 1D Ex iaD 20 T100°C Da acc. to ATEX / IECEx.(c)..... ED4
- II 2 G Ex ia IIC T6 Gb + II 1D Ex iaD 20 T100°C Da acc. to ATEX / IECEx.(d)..... EDA
- FM Nonincendive for Class I, Division 2, Groups A, B, C, D,
 - Hazardous Locations Indoors And Outdoors, NEMA 4X..... NFM
 - for Input/Communication D, H.....(y)
- FM Approved for Intrinsic Safety Class I, Division 1, Groups A, B, C, D,
 - Hazardous Locations Indoors And Outdoors, NEMA 4X..... FAA
 - for Input/Communication D, H.....(y)
- CSA Approved for Intrinsic Safety Class I, Division 1, Groups A, B, C, D,
 - Hazardous Locations Indoors And Outdoors, NEMA 4X..... CAA
 - for Input/Communication D, H.....(y)
- EAC Approved for Intrinsic Safety Ex ia IIC T4(c)..... RU4
- EAC Approved for Intrinsic Safety Ex ia IIC T6..T4(d)..... RU6
- NEPSI - Ex ia IIC T4/T6 Gb Ex iaD 20 T100°C IP65.....
- INMETRO - Ex ia IIC T6 Gb (-40°C <= Tamb <= +55°C) IP66 BA6
- INMETRO - Ex ia IIC T4 Gb (-40°C <= Tamb <= +80°C) IP66 BA4

Attachment Kit

- Order as Auxiliary N

Manifold

- Pneumatic connection 1/4 - 18 NPT made of an additional manifold..... Y
- Pneumatic connection G 1/4..... R



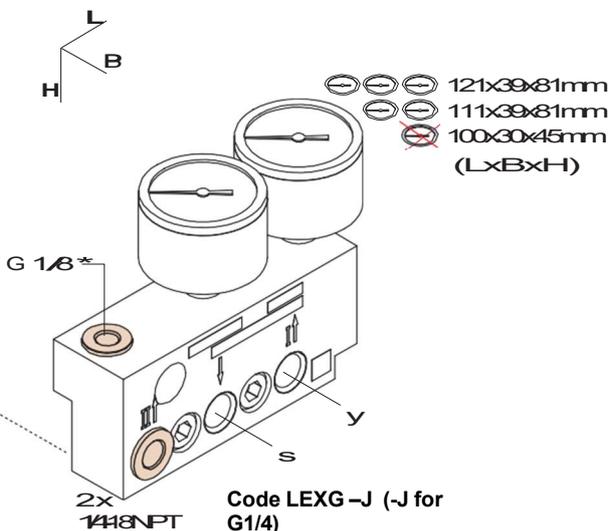
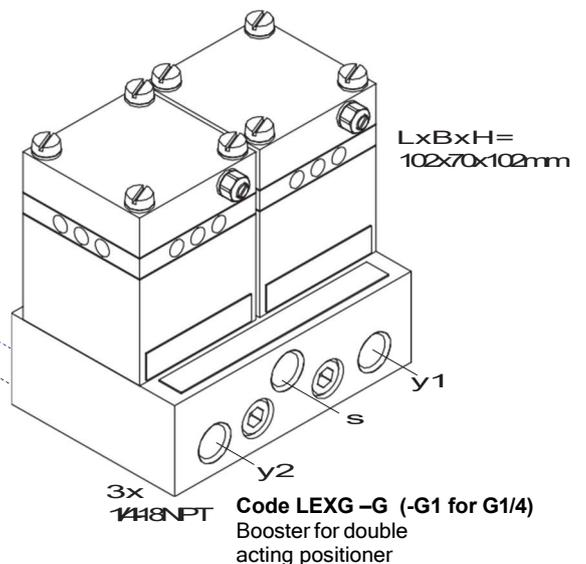
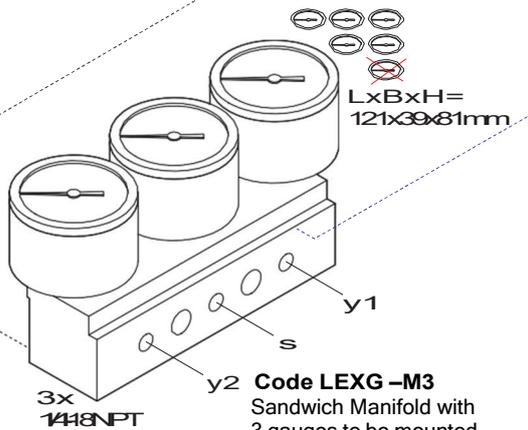
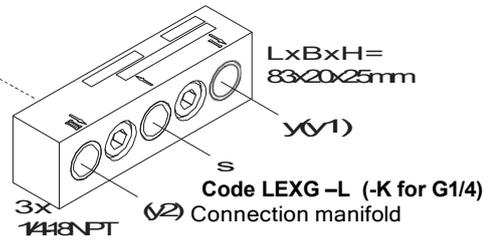
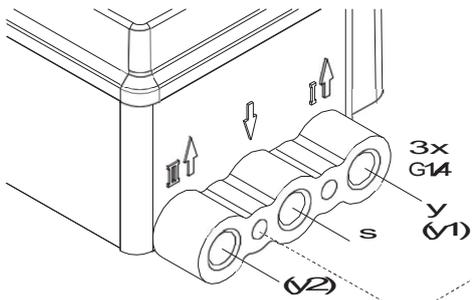
MODEL CODES SRD991 (continued)

OPTIONS

Premium Diagnostics Features (made with built-in Pressure Sensors) ..(v)	-B
Positioner free of copper and its alloys	(h).....-C
Pneumatic Amplifier in the "Spool Valve" Version.....	(n).....-S
Approved for SIL2 / SIL3 application.....	(w).....-Q
Custom Configuration.....	.....-T
Version of Positioner according to VDI/VDE 3847 .....	.....-N
Version for ESD Valve with PST functionalities	(a).....-E
Rotating angle up to 300 ° .....	.....-J
Stainless Steel Housing	(f).....-Z
Stainless Steel Housing without SST gauges	(f).....-Z1
Stainless Steel Housing 10 bar supply.....	(m).....-ZK
Stainless Steel Housing 10 bar supply without SST gauges.....	(m).....-ZK1
Top Mounting version of SRD991 with built-in linear potentiometer	(j)(l).....-W
LCD with Menu-Language in English / German / French	-V01
LCD with Menu-Language in English / German / Spanish.....	-V02
LCD with Menu-Language in English / German / Portuguese.....	-V03
LCD with Menu-Language in English / German / Polish	-V04
LCD with Menu-Language in English / German / Czech.....	-V05
LCD with Menu-Language in English / German / Italian	-V06
LCD with Menu-Language in English / German / Turkish	-V07
LCD with Menu-Language in English / German / Swedish	-V08
LCD with Menu-Language in English / German / Finnish	-V09
LCD with Menu-Language in English / German / Chinese.....	(b).....-V10
LCD with Menu-Language in English / German / Russian	-V11
LCD with Menu-Language in English / German / Hungarian	-V12
LCD with Menu-Language in English / German / Serbian.....	-V13
LCD with Menu-Language in English / German / Dutch.....	-V14
LCD with Menu-Language in English / German / Romanian.....	-V15
LCD with Menu-Language in English / German / Lithuanian	-V16
Tag No. Labeling	
Stamped With Weather Resistant Color.....	-G
Stainless Steel Label Fixed With Wire	-L

- (a) ONLY WITH (additional Inputs/Outputs E) AND (Optional Feature -B)
- (b) Not released
- (c) Only with Input/Communication D, H
- (d) Only with Input/Communication F, H, P and Q
- (e) NOT WITH (electrical certification ZZZ, EA4, EAA, GA4, GAA)
- (f) Available WITH (Version: C) AND (Built-in Limit Switch: S, D) AND (Electrical Classification: ZZZ, EA4, EAA, GA4, GAA, NFM, FAA) OR WITH (Version: B) AND (Built-in Limit Switch: S, D) AND (Electrical Classification: ZZZ, EA4, EAA, GA4, GAA, NFM, FAA)
- (g) Available ONLY WITH (Electrical Classification:FAA, NFM, CAA)
- (h) Available WITH (Version: B) OR WITH (Version: C) AND (Optional Features: S)
- (j) ONLY WITH (Built-in limit switch -S) AND (Electrical Classification EAx, NFM, FAA, GAx)
- (k) Only with ELECTRICAL CLASSIFICATION EA4, EAA or ZZZ
- (l) NOT WITH (optional feature -N OR Z OR Z1)
- (m) Available WITH (Version: C) AND (Built-in Limit Switch: S, D) AND (Electrical Classification: ZZZ, EA4, EAA, EDA, ED4, GA4, GAA, NFM, FAA) AND (Optional feature -S) NOT WITH (Optional feature -B)
- (n) Only with Version -C
- (s) Only available with Optional Feature LCD (-V01 to -Vxx) (u) Only with Electrical Classification: ZZZ
- (v) Only available for Input/Communication F, H, P and Q in connection with Electrical Classification ZZZ, FAA, NFM, EAA, CAA & GAA
- (w) Only available for Version single-acting -B in connection with Input/Communication -D and -H (x) Only in connection with Optional Features -B
- (y) Not with Optional Features -B
- (z) Not available with Electrical Classification FAA, NFM and CAA
- (1) On request

Accessories, for all basic devices



Code LEXG-M (-M for G1/4)
Connection manifold for
double acting positioner
with pressure gauges for
supply air s and output y1 and y2

Code LEXG-N (-N for G1/4)
as -M, M1, but without pressure gauges

* Unused threads for pressure are closed
by means of lock screw Part No. 425 024 013



MODEL CODES Accessories

Accessories for intelligent Positioners

Filter Regulators

Filter Regulator FRS923-2SK Filter Regulator for -40°C to 80°C.....	FRS01
Filter Regulator Filter Regulator for -20°C to 70°C.....	FRS02
Filter Regulator Stainless Steel (316) Filter Regulator.....	FRS03
Mounting Bracket for FRS02 or FRS03	EBZG-FR1
Orientable Mounting Bracket for FRS02 or FRS03	EBZG-FR2
Nipple for direct mounting Filter regulator 1/4 NPT both sides.....	VG-91

Communication / Modem / DTM

HART USB Modem (made by Ifak) with ATEX IS Certification	MOD900
DTM for SRD Serie for HART / FF / Profibus / FoxCom	VALCARE
ATEX IS Barrier Rail Mounted Module, 1 Channel, ATEX Ex ia IIC / FM Intrinsically Safe (TV228-SEGX) .	TV228

Booster Relay

Booster Cv 1 - Alu Housing - Remote mount	(f).....	BS100
Booster Cv 1 - SST Housing - Remote mount	(g).....	BS110
Booster Cv 7 - Alu Housing - Remote mount	(b).....	BS300
Booster Cv 7 - SST Housing - Remote mount	(b).....	BS310
Booster Relay with connection 1/4-18 NPT		LEXG-G
Booster Relay with connection G 1/4		LEXG-G1

Surge / Lightning Protection

Surge/Lightning Protection for 4-20 mA with or without HART type TP48-N-NDI.....	BUSG-L1
Surge/Lightning Protection for FF/Profibus type TP32-N-NDI.....	BUSG-L4

Lock-in Relays

Lock-In Relay for lost of air supply for single acting / NAMUR Mounting	LEXG-VR1
Lock-In Relay (Fail Freeze) for lost of air supply and electric power for single and double acting / SRI990 direct mounting	LEXG-VR6
Lock-In Relay for lost of air supply for single and double acting / direct mounting.....	LEXG-VR8

wirelessHART module

WirelessHART Module Type Mactek BULLET for PST Monitoring (no Ex)	BUSG-WH1
WirelessHART Module Type Mactek BULLET for PST Monitoring (Intrinsically Safe ATEX+FM) ..	BUSG-WH2

Cable Gland

Cable Gland, M20x1.5 Plug-Connector For Fieldbus (ss/Threaded Connection 7/8 - UN).....	BUSG-F2
Cable Gland, M20x1.5 Plastics, Color Gray / Black	BUSG-K6
Cable Gland, M20x1.5 Plastics, Color Blue	BUSG-K7
Cable Gland, M20x1.5 Plastics, Color White	BUSG-K9
Cable Gland, M20x1.5 Plug-Connector For Fieldbus (ss/Threaded Connection M12).....	BUSG-P3
Cable Gland, M20x1.5 HF For Fieldbus.....	BUSG-P4
Cable Gland, M20x1.5 Stainless Steel.....	BUSG-S6

Tube Fittings

Tube Fittings, G 1/4 A, 6x1mm , 1 pc.....	VG-01
Tube Fittings, G 1/4 A, 6x1mm, 2 pcs	VG-02
Tube Fittings, G 1/4 A, 6x1mm, 3 pcs	VG-03
Tube Fittings, 1/4 NPT, 6x1mm, 2 pcs	VG-52
Tube Fittings, 1/4 NPT, 6x1mm, 3 pcs	VG-53

Adapter

Adapter (Brass With Nickel Coating) M20 x 1.5 to 1/2 - 14 NPT (Internal Thread).....	AD-A5
Adapter (ss) M20x1.5 to 1/2-14 NPT (Internal Thread).....	AD-A6
Adapter (ss) M20x1.5 to G 1/2" (Internal Thread)	AD-A8
Adapter (Plastic) M20x1.5 to PG13.5 (Internal Thread)	AD-A9



MODEL CODES Attachment kits

ACCESSORIES FOR POSITIONER (SRD991, SRI990, SRD960)

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
ForFoxTop/FoxPak .....	..-E
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
1051, 1052, 1061 size 40.....	..-F2
657, 667 size 30 and 60.....	..-F3
657, 667 size 70 and 100.....	..-F4
1051, 1052, 1061 size 33.....	..-F5
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
Micro flow control valve..... (k).....	..-H4
Such as -K with installed height 80 mm (3.15 in).....	..-K1
For Kinetrol (Actuator Size 05).....	..-K2
(Actuator Size 07).....	..-K3
(Actuator Size 09).....	..-K4
For Metso / Neles Rotary actuators Type AB6 and Type BJ & BC size 8 and 10, B1C11 .....	..-L1
Type BJ and BC size12 and 16, B1C17.....	..-L2
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
Type 3277 with G 1/4 .....	..-S2
Type 3277 with 1/4 - 18 NPT and gauges for supply and output pressure (g) .....	..-S5
Type 3277 with G 1/4 and gauges for supply and output pressure..... (g) .....	..-S6
Microflow Type 3277-5 .....	..-S8
Tuffin/XOMOX Type MX60 .....	..-T1
Type MX200 .....	..-T2
Type MX450 / Type MX750 / Type MX1250 .....	..-T3
Type MX3000.....	..-T4
For Hagan actuators (left of pneumatic cylinder).....	..-X2
(right of pneumatic cylinder).....	..-X1
For AMRI rotary actuator (requires minor modification of actuator. Please consult us before ordering!) .....	..-X3
For Siemens actuators V-Series .....	..-S3
For Sereg Maxflo, Revca, Reglob new type .....	..-S4
Maxflo "old type" .....	..-S7
CNX (Flowserve) .....	..-S9
For Masoneilan Type Camflex II .....	..-M
47/48 (Sigma-F) .....	..-M1
Type 37/38 size 15 and 18 (complete kit) .....	..-M2
Type 87/88 all sizes .....	..-M4
Varipac .....	..-M5
37/38 size 9,11,13.....	..-M6
/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

*) We recommend to contact our field service dept. before selection of these mounting kits.
Further Attachment kits on request.



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