Electroposicionador SRD-991

- Auto-start with self-calibration
- Self diagnostics, status- and diagnostic messages
- Communication HART, FoxCom, PROFIBUS-PA or FOUNDATION Fieldbus H1
- Configuration by means of local keys, hand-held terminal, PC or I/A Series system
- Easy operation with three key pads
- Low air consumption
- Low vibration effect in all directions
- Stroke 8 to 120 mm (0.3 to 4.7 in)
- Angle range up to 95 °
- Supply air pressure up to 6 bar (90 psig)
- Single or double-acting
- Mechanical travel indicator
- Mounting on linear actuators directly or according to IEC 534, Part 6 (NAMUR)
- Mounting on rotary actuators according to VDI/VDE 3845
- Protection class IP 65, NEMA 4X
- Explosion protection: EEx ia according to CENELEC, ATEX or “Intrinsic safety” according to FM and CSA
- Sensors for supply air pressure and output pressure (optional)
- Booster relay to minimize stroke time (optional)



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 operation tools such as PC20 / IFDC. The positioner is available with different communication protocols. This includes versions with analog setpoint (4 to 20 mA) and superimposed HART- or FoxCom signal; digital with FoxCom protocol, or fieldbus communication according to PROFIBUS-PA and FOUNDATION fieldbus H1 based on IEC 1158-2.

4

- Additional Inputs / outputs (optional):
  – 2 binary outputs (limits)
  – Position feedback 4 to 20 mA, 1 Alarm output
  – 2 binary inputs
- Built-in independent inductive limit switches (optional)

Input

Two-wire system
Reverse polarity protection . . . standard feature

With HART communication

Signal range . . . . . 4 to 20 mA
Operating range . . . . . 3.6 to 21 mA
Voltage . . . . . DC 12 to 36 V
max. load . . . . . 600 Ω
Communication signal . . . . . HART, 1200 Baud, FSK modulated on 4 to 20 mA
Input impedance Zi . . . . . ~ 250 Ω (0.5 to 5 kHz)

With FOXCOM communication

Operating mode digital

Input signal . . . . . digital
Supply voltage . . . . . DC 13 to 48 V
Supply current . . . . . ~ 9 mA at 24 V
Communication signal . . . . . FoxCom digital, 4800 Baud, FSK modulated on supply voltage
Input impedance Zi . . . . . ~ 500 Ω (0.5 to 20 kHz)

Operating mode analog

Signal range . . . . . 4 to 20 mA
Operating range . . . . . 3.6 to 21.5 mA
Voltage . . . . . DC 13 to 48 V
max. Load . . . . . 650 Ω
Communication signal . . . . . FoxCom, 600 baud, FSK modulated on 4 to 20 mA
Input impedance Zi . . . . . ~ 500 Ω (0.5 to 20 kHz)

With Fieldbus communication:

Input signal . . . . . digital
Supply voltage . . . . . DC 9 to 32 V
Operating current . . . . . 10.5 mA ± 0.5 mA (base current)
Current amplitude . . . . . ± 8 mA
Fault current . . . . . base current + 4 mA by means of independent FDE-safety circuit

PROFIBUS-PA

Data transfer . . . . . acc. to PROFIBUS- PA profile class B based on EN 50170 and DIN 19245 part 4

FOUNDATION Fieldbus H1

Data transfer . . . . . FF Spezification Rev. 1.4, Link-Master (LAS)
Function blocks . . . . . AO, Transducer, Resource, PID (in preparation)

FOXBORO ECKARDT
An Invensys company

AGUAPUR VAPOR

Positioners SRD991

Response characteristic

Sensitivity . . . . . ≤ 0.1 % of travel span
Non-linearity (terminal based adjustment) . . . . . ≤ 0.4 % of travel span
Hysteresis . . . . . ≤ 0.3 % of travel span
Supply air dependence. . . . . ≤ 0.1 % / 1 bar (15 psi)
Temperature effect. . . . . ≤ 0.3 % / 10 K
Mechanical vibration
10 to 60 Hz up to 0.14 mm,
60 to 500 Hz up to 2 g . . . . . ≤ 0.25 % of travel span

Pneumatic connection

NAMUR mounting . . . . . 3x female threads 1/4-18 NPT for pipe diameter 6 ... 12 mm (0.24 ... 0.47 in)
Direct mounting . . . . . Instead of the output y1 an air connection on the backside with O-ring will be used (closed at NAMUR mounting).

Supply

Supply air pressure . . . . . 1.4 to 6 bar (20 to 90 psig)
Supply air. . . . . free of oil, dust, water according to IEC 654-2

Model Codes

Intelligent Positioner	**SRD991**							
Version								
Single acting		-B						
Double acting		-C						
Input/Communication								
HART communication (4 - 20 mA)			H					
FOXCOM communication (4 - 20 mA / IT1)			E					
FOXCOM communication (digital / IT2)			F					
PROFIBUS-PA			P					
FOUNDATION Fieldbus H1			Q					
Additional Inputs/Outputs								
without (e)				M				
prepared for additional Inputs/Outputs (a)				N				
Binary inputs (a)				B				
Two binary outputs (a)				P				
Position feedback 4 - 20 mA (a) (e)				Q				
Built-in limit switch								
without					S			
Inductive limit switch - intrinsic safe (standard version) (a)					T			
Inductive limit switch - intrinsic safe (security version) (a) (e)					U			
Cable Entry								
M20 x 1.5 without cable gland						1		
M20 x 1.5 with one cable gland, color gray						7		
Electrical certification								
without							ZZZ	
EEx ia IIC T4							EA4	
EEx ia/ib IIB/IIC T4/T6 and EEx nA/L IIB/IIC according to ATEX (d)							EAA	
Non-incendive for Class I, Division 2, Groups A, B, C, D, hazardous locations indoors and outdoors, NEMA 4X (e)							NFM	
FM approved for intrinsic safety Class I, Division 1, Groups A, B, C, D, hazardous locations indoors and outdoors, NEMA 4X (e)							FAA	
CSA approved for intrinsic safety Class I, Division 1, Groups A, B, C, D, hazardous locations indoors and outdoors, NEMA 4X (c) (e)							CAA	
Optional features								
Two built-in pressure sensors for supply air and output to actuator y1								-B
Custom Configuration								-T
Tag.No. Labeling: Stamped with weather resistant color								-G
Tag.No. Labeling: Stainless steel label fixed with wire								-L

Footnotes
(a) only with Electrical classification ZZZ, EA4, EAA, NFM & FAA, others pending
(b) not released
(c) pending
(d) only with input / communication P and Q
(e) not with input / communication P and Q

Accessories for Positioners	see EVE9902
Accessories for Instruments	see EOO9001

For complete specifications, refer to Product Specification Sheet PSS EVE0105 A-(en)