

SVI[®] II AP-1

Advanced Performance

An Easy Smart Positioner
that Enables Effortless and Reliable Operation



Key Features:

- Extreme accuracy and reliability
Fit & forget technology
- Universal design
(linear or rotary applications)
- Setup Wizard for quick and easy commissioning
- Valve position Autotune (self calibration)
with user selectable valve response
- Non-contact Hall Effect position sensor
- Sealed housing with no moving shaft,
no shaft penetration and fully potted electronics
- AO: Position transmitter 4-20mA Output
- DO: Two adjustable Discrete Outputs
- Optional intrinsically Safe LCD & buttons
- High air delivery, optimized performance regardless of actuator size
- Upgradeable Flash firmware
- Upgradeable options
(LCD display & buttons, position transmitter and discrete outputs)

Digital Communication Interface Solutions:

- ValVue[®] Communication software:
 - Serial Port or USB Modem
 - MTL Multiplexor
- Control System Integration:
 - Emerson[®]
 - AMS[™]
 - AMS[™] ValVue SNAP-ON[™]
 - FDT-DTM
 - Any FDT-DTM compatible Host
 - Honeywell[®]
 - FDM
 - ValVue For Experion[™]
 - Asset Manager PKS[™]
 - Yokogawa[®]
 - PRM[®]
 - ValVue PRM[®] Plug-In
- HART[®] Configuration Tools:
 - Compatible with any certified configurator using DDL technology such as Handheld 375



Masoneilan[®]

Where Flexibility Meets Best Fit Technology

Control valves – Actuators – Pressure Regulators – Digital Instrumentation & Software

www.masoneilan.com

SVI® II AP-1

Specifications

Housing Material:

- Case/Cover: Low copper aluminum
- Paint: Grey Polyurethane

Input Power and Signal:

- Power supply (taken from 4-20mA)
- Required terminal voltage: 9Vdc at 20mA
- Minimum current signal: 3.2mA

Output Signals:

- AO (Valve Position): 4-20mA
 - 2 wire loop powered with 10-24Vdc compliance voltage
- DO (1 & 2): Configurable solid state switch
 - 1A – 30Vdc

Input Signals:

- Valve Setpoint: 4-20mA

Communication:

- HART® Protocol

Ambient Temperature Limits:

- -50 to 85 °C

Ambient Humidity Limits:

- 10 to 95% RH non-condensing

EMC Conformity Standards:

- EN 61000-4-2, 3, 5, 6, 8 - EMC 89/336/EEC Directive
- IEC 801-2,-3,-4
- CE MARK

Actuator Travel Range:

- Linear Motion: 0.25" to 4" (12 to 100 mm) - standard mounting
 - > 4" (100 mm) - extended mounting
- Rotary Motion: 18 to 140 deg
- Travel sensor resolution: 0.0015%

Pneumatics:

Air or sweet natural gas - regulated and filtered

Air supply pressure:

- Single-Acting: 1.4 to 5.5 bar max (20 to 80 psi max)

Air Delivery:

Single Acting Pneumatics:

- 16.8 Nm³/h at 2.1 bar (30 psi) supply
- 28.2 Nm³/h at 4.2 bar (60 psi) supply

Materials:

- I/P Motor and Relay are constructed of composite polymers and stainless steel (300 and 400 series)

Control Valve Mounting System:

- Material:
 - 300 Series SST standard
- Linear or rotary motion control valve

Hazardous Area Certifications:

- Intrinsic Safety: ATEX II 2 G/D EEx ia IIC T6, IP 66 T96°C
- Limited Energy: ATEX II 3 G/D EEx nL IIC T6, IP 66 T96°C
- NEMA 4X / IP 66

Performance per ISA S75.13 – 1996:

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|----------------------------------|---------------------------------------------------------------|
| Accuracy | +/- 0.5% Full span (typical +/- 0.10% or better Full span) |
| Conformity | +/- 0.5% Full span |
| Hysteresis + DeadBand | +/- 0.3% Full span |
| Repeatability | +/- 0.3% Full span |
| Power-Up with position control | <150ms |
| Power Interruption without reset | <100ms |

SVI II AP-1 Model Numbering

Series Identification **SVI II AP-abcdefg**

- a Style**
 - 1. Easy Smart Version
- b Pneumatic Train**
 - 1. Single Acting
- c Pneumatics**
 - 1. Standard Flow
- d Display**
 - 1. No Display or Pushbuttons
 - 2. With Display and Pushbuttons
- e Hardware Version**
 - 3.
- f Communications**
 - 1. 4 to 20 mA - HART Communications
- g Option Board**
 - 1. None
 - 2. Position Retransmit and Limit Switches
- h Agency Approvals**
 - 4. ATEX Intrinsic Safety & Non Incendive

Approved Configuration Codes

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|-------------|---|---|---|---|---|---|---|
| SVI II AP-1 | 1 | 1 | 1 | 3 | 1 | 1 | 4 |
| | | 2 | | | 2 | | |

