

Masoneilan* SVi* 1000 Digital Valve Positioner

The SVi 1000 from BHGE is a user-friendly 4-20 mA digital valve positioner with HART® Protocol for single-acting pneumatic control valves with proven magnetic position measuring technology.

Benefits

- Easier and faster commissioning and startup of control valves
- Reliable and accurate valve positioning
- HART® 5 or 7 compliant for local or remote setup and commissioning
- Integration with many control systems, handhelds and asset management software systems
- Fewer components with integrated valve position feedback and limit switches

Features

- User-friendly “One-button-one-function” local interface
- Robust, non-contact, shielded magnetic-type travel sensor
- Industrial metal housing
- Universal design for linear and rotary valve applications
- Intrinsically safe
- Integrated diagnostics: Cycle counts, Step Tests, Ramp Tests, as well as system health indicators
- Integrates with all major DCSs with full DD, eDDL, or DTM support
- Universal label with FM, FMc, ATEX, IEC, CE approvals
- Powerful DTM with user friendly interface for commissioning, calibration, tuning, diagnostics and maintenance

Specifications

Housing:

- Case/Cover: Low copper and chromated aluminum, ASTM A360
- Paint: Grey (RAL 7001) polyurethane with epoxy primer
- Protection: IP66 and NEMA 4X



Weight:

- 2 kg (4.5 lb)

Input Power and Signal:

- Min/Max current: 3.2 mA/24 mA
- Required Compliance voltage:
9 Vdc at 20 mA
11 Vdc at 4 mA

- Termination: Screw-type terminals
- Electrical connection: One 1/2NPT female

Optional Output Signals

- Two configurable solid-state switches
1A – 30 Vdc, Normally Open or Normally Closed
- 4 to 20 mA Position Retransmit

Communication, Setup and Calibration

- Local pushbutton and LEDs for setup and calibration including stops, air action, Autotuning and tuning sets
- HART Protocol, Rev 5, 7

Ambient Temperature and Humidity Limits

- –40 to 85°C (-40 to 185°F)
- 100% RH non-condensing

Tropical Environmental Compatibility

- Fungus resistance per ASTM-G21
- Exposed circuits covered with anti-fungal coating
- Positively pressured housing with bug-resistant orifices

EMC Conformity Standards

- EN 61000-4-2, 3, 4, 5, 6, 8
- CISPR 11
- CE MARK per EMC Directive 2004/108/EC or 2014/30/EU

Performance

Accuracy +/- 0.5 percent (typical or less) Full span
Hysteresis + DeadBand +/- 0.3 percent Full span
Repeatability +/- 0.3 percent Full span
Power-Up with position control <500 ms
Power Interruption without reset <100 ms

Options

/G (Supply and Output Gauges)
/IM (Integrated Magnet),
/SW (Solid State Switches)
/PR (4–20 mA Position Retransmit)

Actuator Capabilities

- Non-contact magnetic travel sensor capable of:
 - Linear Motion: 0.25" to 8" (6.4 to 200 mm)
 - Rotary Motion: 18° to 140°

Pneumatics (Single-Acting Only)

Air or sweet natural gas-regulated and filtered
Air supply pressure: 1.4 to 6.9 bar max (20 to 100 psi max)

Air delivery

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

Standard Diagnostics

Ramp Test: Hysteresis and Deadband, Linearity, Position Error
Step Test: Overshoot, Response Time (T86,T63,Td)
Travel Accumulator, Time Near Closed/Open

Hazardous Area Certifications

- Factory Mutual (FM), FMc, IEC, ATEX

Intrinsically Safe

US/Canada-CL I; DIV 1; GP A,B,C,D, T4
US – CL I; Zone 0; AEx ia IIC T4
Canada – CL I; Zone 0; Ex ia IIC T4
II 1G Ex ia IIC T4 Ga;
II 3G Ex ic IIC T4 Gc;
Ex ia IIC T4 Ga
Ex ic IIC T4 Gc

Non-Incendive and Limited Energy

US/Canada-CL I; DIV 2; GP A,B,C,D T4
US – CL I; Zone 2; AEx nC IIC T4
Canada – CL I; Zone 2; Ex nL IIC T4

bhge.com

*Denotes a trademark of Baker Hughes, a GE company LLC.

Other company names and product names used in this document are the registered trademarks or trademarks of their respective owners.

© 2018 Baker Hughes, a GE company LLC - All rights reserved.

Baker Hughes reserves the right to make changes in specifications and features shown herein, or discontinue the product described at any time without notice or obligation. Contact your BHGE representative for the most current information. The Baker Hughes logo is a trademark of Baker Hughes, a GE company. The GE Monogram is a trademark of the General Electric Company.

GEA32214B 09/2018

**BAKER
HUGHES**
a GE company

