

Masoneilan^{*} SVi1000 Digital Valve Positioner

fact sheet

GE Energy's SVi1000 is a user friendly 4-20mA digital valve positioner with HART® Protocol for single-acting pneumatic control valves with proven magnetic position measuring technology.

Benefits

- Faster commissioning and startup of control valves
- Reliable valve positioning
- Bi-directional communication for local or remote setup
- Integration with many control systems and asset management software

Features

- User friendly "One-button-one-function" local interface
- Non-contact magnetic-type travel sensor
- Optional integrated magnet
- Industrial aluminum housing
- Universal design for linear and rotary valve applications
- Universal label with FM, FMC, ATEX, IEC, CE approvals
- HART communication-compliant
- Built-in isolated solid-state switches
- eDDL and DTM support



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Specifications

Housing:

- Case/Cover: Low copper and anodized aluminum, ASTM 360
- Paint: Grey (RAL 7001) polyurethane with epoxy primer
- Protection: IP66 and NEMA 4X

Weight:

- 2kg (4.5lb)

Input Power and Signal:

- Min/Max current: 3.2mA / 24mA
- Required terminal voltage: 9Vdc at 20mA
- Termination: Screw-type terminals
- Electrical connection: One 1/2NPT female

Output Signals:

- Two configurable solid-state switches
1A – 30Vdc, Normally Open or Normally Closed

Communication, Setup and Calibration:

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

Ambient Temperature and Humidity Limits:

- -40 to 85°C (-40 to 185°F)
- 10 percent to 95 percent 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, 5, 6, 8 - EMC 89/336/EEC Directive
- IEC 801-2,-3,-4
- CE MARK per ATEX 94/9/EC and EMC 2004/108/EC

Performance per ISA S75.13 – 1996:

Accuracy +/- 0.5 percent Full span

Hysteresis + DeadBand +/- 0.3 percent Full span

Repeatability +/- 0.3 percent Full span

Power-Up with position control <500ms

Power Interruption without reset <100ms

Options:

/G (Supply and Output Gauges), /IM (Integrated Magnet),

/SW (Solid State Switches),

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

Hazardous Area Certifications:

- FM (Factory Mutual)

Non-Incendive

Class I, Division 2, Groups A, B, C, D

AEx nL, Zone 2, Groups IIA, IIB, IIB +H2, IIC

Intrinsically Safe

Class I, Division 1, Groups A, B, C, D

AEx ia, Zone 0, Groups IIA, IIB, IIB +H2, IIC

AEx ic, Zone 2, Groups IIA, IIB, IIB +H2, IIC

- FMc (Factory Mutual Canada)

Non-Incendive

Class I, Division 2, Groups A, B, C, D

Ex n, Zone 2, Groups IIA, IIB, IIB +H2, IIC

Intrinsically Safe

Class I, Division 1, Groups A, B, C, D

Ex ia, Zone 0, Groups IIA, IIB, IIB +H2, IIC

- ATEX

Limited Energy

II 3 G, Ex nL IIC T4 (T4 Ta= -40°C to +85°C)

Intrinsically Safe

II 1 G, Ex ia IIC T4 (T4 Ta= -40°C to +85°C)

- IEC

Limited Energy

Ex nL IIC T4 (T4 Ta= -40°C to +85°C)

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