Push Button Guide for Masoneilan* SVi*1000 Digital Valve Positioner
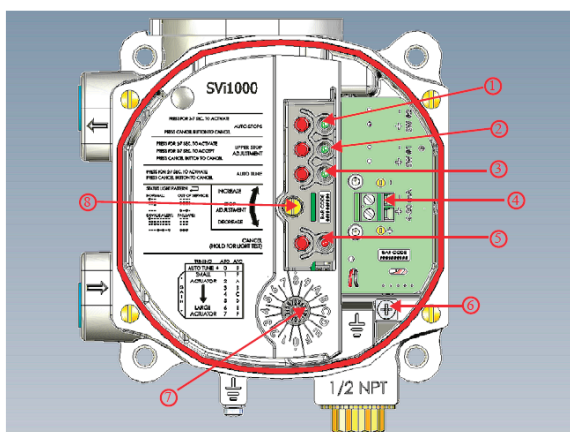
(Applicable to Firmware 2.2.1 (HART® 5) or 3.1.1 (HART® 7))

SVi1000 Operator Controls - Standard

① Auto Find Stops Button and LED 1	⑤ Cancel/ Status Button and LED 4
② Upper Stop Button and LED 2	⑥ Ground
③ Auto Tune Button and LED 3	⑦ Configuration Selection Switch
④ 4- 20 mA Input Signal	⑧ Open Stop Adjustment Screw

The local user interface is where you configure the unit and perform system operations. These operations consists of:

Configuration Selection Switch

This switch provides control to the following functions:
- Actuator Air Action
- Select autotuned or preset tuning parameters

Auto Find Stops

This function automatically sets the lower and upper stops.

Open Stop Adjustment

Use the Open Stop Adjustment screw to perform an upper stop adjustment and save it to the device.

Autotuning

The autotune process determines optimum tuning parameters for the valve being commissioned. This function is only active when the Configuration Selector Switch is set to AutoTune.

SVi1000 Modes

Normal Mode

In this mode the valve follows the 4-20 mA input signal.

HART® Override mode

In HART® override mode, the local user interface buttons are disabled until any button is pushed, then local control is reestablished. At this time, the instrument interface functions as if in Manual and Setup mode when us-

ing the optional laptop-based software or other HART® interface tools. In

HART® Override Mode the following functiond are supported over HART® by ValVue* or DTM based interface:
- Set Characterization (Linear, Equal%(30,50, Camflex*), Quick Open and Custom
- Enable or Disable Bumpless Transfer
- Set Near Closed Value
- Allow Tune to Override limits
- Configure Tight Shutoff
- Set Lower and Upper Position Limits
- Configure Position Fault Limits (Position Error Band and Time 1)
- Configure Switch I/O
- Run Find Stops
- Run AutoTune (Provided the option is set at the local user interface)
- Perform a Manual Find Stops
- Set Open Stop Adjustment
- Set Valve Position
- Command valve to full open or closed

Failsafe Mode

When a fault results in Failsafe mode being activated, the output pressure of the SVi1000 is set low and the red status LED illuminates continuously. If the fault is considered self-clearing, then once corrected, the unit returns to Normal mode. If the fault is not self-clearing, then the unit requires a reset after correcting the failsafe condition.

Commissioning Services

These are temporary states activated when a local user interface issued command dictates their use. When the positioner is in a Commission Processes a status light indicates this activity. Examples of Commission Processes are Auto Find Stops and Auto Tune. Once a task completes the unit returns to Normal mode.

HART® Handheld Guide for Masoneilan* SVi*1000 Digital Valve Positioner

HART® DD - SVi1000 (Applicable to Firmware 2.2.1 (HART® 5) or 3.1.1 (HART® 7) and DD version 1)

HART Application
1 Offline
2 Online
3 Utility
4 HART Diagnostics

Online (SVi1000)
1 Mode
2 Input Signal
3 Valve Position
4 Manual Setpoint
5 Trend
6 Device Setup
7 Status/Diagnostics

Device Setup
1 Mode
2 Change Mode
3 Setup Wizard
4 Manual Setup
5 Configuration
6 Calibration
7 Commissioning Services

Manual Setup
1 Mode
2 Reset Basic Conf and Cal to Defaults
3 Find Stops
4 Autotune

Configuration
1 Reset Basic Conf and Cal to Defaults
2 General
3 Positioning
4 Limits/Shutoff
5 Alarms Setup
6 Switches
7 HART
8 Device Info

General
1 Tag
2 Descriptor
3 Message
4 Date
5 Final Assembly Nbr
6 Air Action

Positioning
1 Characterization
2 Low Signal
3 High Signal
4 Bumpless Transfer
5 Transfer Time
6 Active Position Sensor

Status/Diagnostics Menu
1 Mode (Display)
2 Reset SVi1000 (Execute Method)
3 Device Variables (HART 7, 3.1.1 only)
4 Status Faults
5 Sensor Measurements
6 Continuous Diagnostics

Calibration
1 Mode
2 Change Mode
3 Valve Travel
4 Manual Position Setpoint
5 Valve Tuning Data
6 Sensors
7 Reset Cal Factory Defaults

Valve Travel
1 Mode
2 Change Mode
3 Find Stops
4 Manual Stops
5 Open Stop Ad (Display)
6 Open Stop Adjustment (Execute Method)
7 Autotune
8 Manual Tuning

Limits/Shutoff
1 Pos Limit Low
2 Limit Low
3 Pos Limit Upper
4 Limit Upper
5 Rate Limit Down
6 Rate Limit Up
7 Pos. Rate Limits
8 Tight Shutoff
9 Tight Shutoff Value

Basic Info
1 Tag
2 Air Action
3 Low Signal
4 High Signal

Commissioning Services
1 Mode
2 Input Signal
3 Valve Position
4 Basic Info
5 Manual Position Setpoint
6 Position Retransmit
7 Switches
8 Signal Bar
9 Position Bar

Manual Position Setpoint
1 Valve Position
2 Full Open
3 Full Closed
4 Set Position
5 Position Bar

Alarms Setup
1 Pos Error Enable
2 Pos Error Band
3 Pos Error Time

Status/Faults
1 Mode
2 Device Status
3 Current Faults
4 Clear Current Faults
5 Historical Faults
6 Clear All Faults
7 HART Info
8 Fault List

Position Bar
1 Valve Position

Switches
1 DO Switch 1 Action
2 DO Switch 1 Normally
3 DO Switch 1 Value
4 DO Switch 2 Action
5 DO Switch 2 Normally
6 DO Switch 2 Value

Continuous Diagnostics
1 Total Travel
2 Number of Cycles
3 Time Closed
4 Time Near Closed
5 Time Open
6 Reset Historian

HART Info
1 Model
2 Device ID
3 Univ Cmd Rev
4 Hardware Rev
5 FLD Dev Rev
6 Software Rev
7 Firmware Version

Aggressiveness
10
29
38
47
56
65
74
83
92
1
-1
-2
-3
-4
-5
-6
-7
-8
-9

Valve Tuning Data
1 Active PID Slot
2 Air Action
3 P
4 I
5 D
5 Padj
6 Beta
7 Dead Zone
8 Position Comp
9 Boost
Display PID in Slot

HART
1 Poll Address
2 Nbr req Preambles
3 Phys Signl Code
4 Device Flags
5 Burst Mode
6 Burst Option

Sensor Measurements
1 Input Signal (Display)
2 Valve Position (Display)
3 I/P
4 Temperature
6 Raw Sensor Data

I/P
1 I/P Current
2 PWM Output
3 I/P Output

Sensors
1 Input crnt snsr.

Device Info
1 Manufacturer
2 Model
3 Device ID
4 Univ Rev
5 Hardware Rev
6 FLD Dev Rev
7 Software Rev
8 Terminal Board
9 Terminal Module Serial Number

Fault List[1]
1 Fault Code 0
2 Fault Code 1
3 Fault Code 2
4 Fault Code 3
5 Fault Code 4
6 Fault Code 5
7 Fault Code 6
8 Fault Code 7
9 Fault Code 0 History
Fault Code 1 History
Fault Code 2 History
Fault Code 3 History
Fault Code 4 History
Fault Code 5 History
Fault Code 6 History
Fault Code 7 History

[1] Each entry navigates to a lower screen with specific faults

Temperature
1 Board Temperature
2 Min Temperature
3 Max Temperature

Raw Sensor Data
1 Raw Signal
2 Raw Position
3 PWM Output
4 Lower Stop
5 Upper Stop
6 I/P Current

Position Retransmit
1 Set Analog Output
2 Re-transmitter Range1

HOT KEY MENU
1 Mode
2 Input Signal
3 Valve Position
4 Pressure
5 Change Mode
6 Set Position
7 Read/Clear Faults
8 Sensor Measurements

Display PID in Slot
1 Select the Slot
2 Slot
3 Air Action
4 P
5 I
6 D
7 Padj
8 Beta
9 Dead Zone
Position Comp
Boost