



Alfa Laval ThinkTop® Basic AS-Interface

Ensures optimum valve control for fluid handling in hygienic applications

Introduction

The Alfa Laval ThinkTop® Basic AS-Interface is a modular valve control unit that offers reliable, cost-effective operation and standard functionality for automated sensing and control of hygienic valves. ThinkTop provides real-time information about valve operating status 24/7 while boosting productivity.

Application

The ThinkTop Basic AS-Interface is designed to control the fluid handling process in hygienic applications across the dairy, food, beverage, biotechnology, pharmaceutical and many other industries.

Benefits

- Reliable and accurate valve sensing and control
- Proven and inherently safe design
- Low total cost of ownership
- Watertight design
- Easy to operate

Standard design

The ThinkTop Basic AS-Interface valve sensing and control unit consists of a proven no-touch, set-and-forget sensor system with light-emitting diodes (LEDs), solenoid valves, and valve control sensor board for connection to any programmable logic controller (PLC) system with an AS-Interface v3.0, 62 node. It fits on all Alfa Laval hygienic valves; no adapter is required.

Installation is straightforward. No special expertise or tools are required. To initiate manual setup, simply press a push-button startup sequence.

Working principle

The sensor system accurately detects valve stem movement, the position of the valve at any given time, with an accuracy of ± 0.1 mm through the use of microchip sensors. To locate the current valve position, sensor chips inside the sensor board calculate the angle between the axial magnetic field produced by an indication pin mounted on the valve stem.



The solenoid valves receive signals from the PLC system to activate or deactivate the air-operated valve. It then transmits feedback signals indicating the main valve position and condition back to the PLC system.

In the control unit, up to three electric solenoid valves can physically convert compressed air into mechanical energy to activate or deactivate the pneumatic valve actuator.

Each control unit fits any Alfa Laval hygienic valve and has a valve tolerance band with a default tolerance. This eliminates the need to readjust the sensors and boosts productivity.

LEDs conveniently display the main valve position, solenoid activation, setup and local fault indication on the control unit.

Certificates



TECHNICAL DATA

Communication	
Interface:	AS-Interface v3.0, 62 node
Supply voltage:	29.5V - 31.6 VDC
Slave profile v3.0:	7.A.7.7
Default slave address:	0

Sensor board	
Max current consumption:	45mA
Feedback signal #1:	De-energized valve
Feedback signal #2:	Energized valve
Feedback signal #5:	Status
Valve tolerance band options:	1
Default tolerance band:	± 5 mm
Sensor accuracy:	± 0.1 mm
Stroke length:	0.1 - 80 mm

Solenoid valve	
Max current consumption:	45mA
Air supply:	300-900 kPa (3-9 bar)
Type of solenoids:	3/2-ways or 5/2-ways
Numbers of solenoids:	0-3
Manual hold override:	Yes
Push-in fittings:	ø6 mm or 1/4"

PHYSICAL DATA

Materials	
Steel parts:	Stainless steel and Brass
Plastic parts:	Black Nylon PA 6 Reinforced
Seals:	Nitrile (NBR) rubber

Environment	
Working temperature:	-20 °C to +85 °C
Protection class:	IP66 and IP67
Protection class equivalent:	NEMA 4.4x and 6P

Cable connection	
Main cable gland:	PG11 (4 - 10 mm)
Max wire size:	0.75 mm ² (AWG 19)
Optional main M12 plug:	2 wire (A coded)

Note!

For further information: See also ESE00356

The ThinkTop has Patented Sensor System, Registered Design and Registered Trademark owned by Alfa Laval

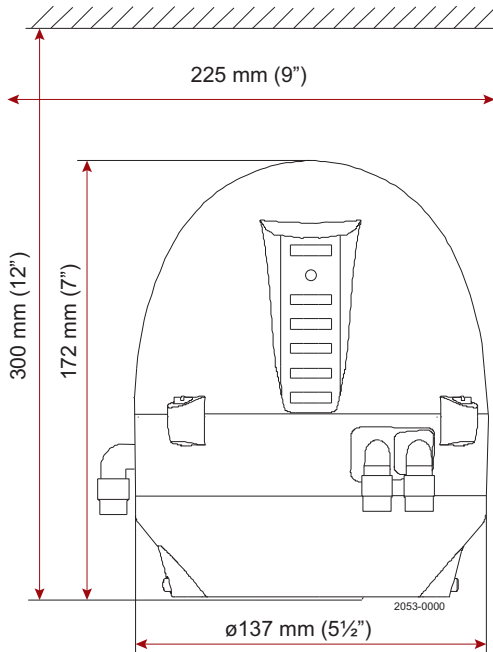
Options

- Communication interface
- Solenoid valve configuration
- Pneumatic tubing interface
- Main cable connection

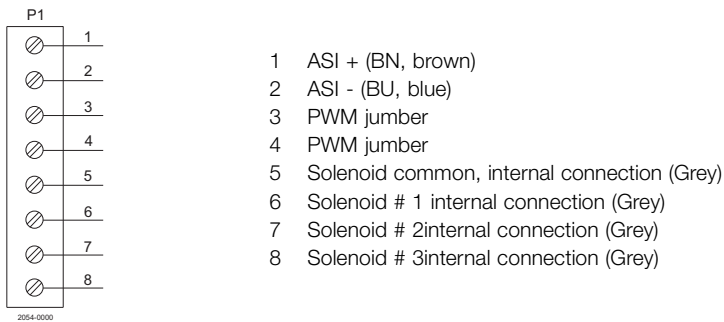
Accessories

- Various cable options
- Threaded plate for indication pin on SRC, SMP-BC and i-SSV valves
- Special indication pin for Unique SSV-LS, Unique SSV High Pressure valves
- Adaptor for Unique SSSV valves

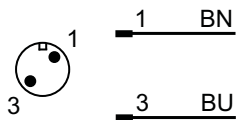
Dimensions (mm)



Electrical connection



M12 plug option



AS-Interface bits assignment

For AS-Interface version with 62 node, the following bit assignment can be used	
DI0	Feedback #1 De-Energized valve
DI1	Feedback #2 Energized valve
DI2	Feedback #3 Not connected
DI3	Feedback #4 Status
DO0	Out #1 Not Connected
DO1	Out #2 Solenoid valve 1
DO2	Out #3 Solenoid valve 2
DO3	Out #4 Solenoid valve 3

Alfa Laval reserves the right to change specifications without prior notification.

How to contact Alfa Laval

Contact details for all countries
are continually updated on our website.
Please visit www.alfalaval.com to
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