

Alfa Laval IndiTop

Sensing and control

Introduction

The Alfa Laval IndiTop is a digital valve indication unit that offers reliable, cost-effective operation and standard functionality for automated sensing of hygienic valves. The IndiTop provides real-time information about valve operating status 24/7 while boosting productivity and securing traceability.

Application

The IndiTop is designed to sense and indicate the fluid handling process in hygienic applications across the dairy, food, beverage, biotechnology, pharmaceutical and many other industries.

Benefits

- Reliable and accurate valve sensing
- Proven and inherently safe design
- Streamlined and compact design
- Watertight design
- Easy to operate

Standard design

The IndiTop valve sensing unit consists of a proven no-touch, set-and-forget sensor system with light-emitting diodes (LEDs) and an encapsulated cable for connection to any programmable logic controller (PLC) system with a digital interface. 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 the keypad pushbuttons to startup sequence. Or set up the indication unit without the keypad using the optional remote-control wire function in combination with the PLC system.

Working principle

The Alfa Laval IndiTop is an automated indication unit that does not require the use of any solenoid valve. It transmits the status and condition of the valve position to any PLC system using one of two electrical feedback signals—either DC/AC or PNP/NPN. LEDs display



the current main valve position and on/off power status at all times.

The sensor system accurately detects valve stem movement, the position of the valve at any given time, with an accuracy of $\pm 1\text{mm}$ 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.

Each indication unit fits all Alfa Laval hygienic valves and provides a tolerance band for valves to prevent product failure. This indication unit also eliminates the need to readjust the sensors and boosts productivity.

LEDs conveniently display the main valve positions, setup and local fault indication on the indication unit.

Certificates



TECHNICAL DATA

Communication

Interface:	Digital PNP/NPN
Supply voltage:	8-30 VDC/VAC

Sensor board

Max current consumption:	45mA
Feedback signal #1:	De-energized valve
Feedback signal #2:	Energized valve
Valve tolerance band options:	1
Default tolerance band:	± 0.2"
Sensor accuracy:	± 0.004"
Stroke length:	0.004" - 3.15"

PHYSICAL DATA

Materials

Steel parts:	Stainless steel and Brass
Plastic parts:	Black Nylon PA 6, SEBS and POM

Environment

Working temperature:	-4 °F to +185 °F
Protection class:	IP66 and IP67
Protection class equivalent:	NEMA 4.4x and 6P

Cable connection

16 ft option:	6 wire, dia. 0.2" (AWG26)
33 ft option:	6 wire, dia. 0.2" (AWG26)
1.6 ft with plug option:	M12 plug, incl. M12 socket

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

Options

- Cable configuration

Accessories

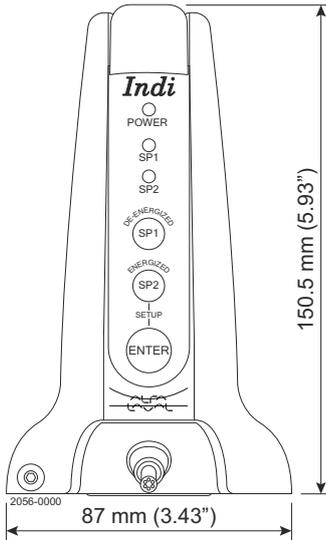
- Threaded plate for indication pin on SRC, SMP-BC and i-SSV valves
- Adaptor for Unique SSSV valves

Compatible actuators

SBV	Yes	Unique 7000	Yes
Koltek	Yes	Unique 7000 aseptic	Yes
LKLA-T	Yes	Unique 7000 long stroke	No
ARC	Yes	SMP valves	Yes
SRC	Yes	Unique Mixproof (U/L seat lift)	No
SRC long stroke	No		

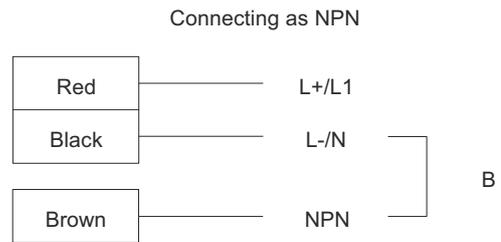
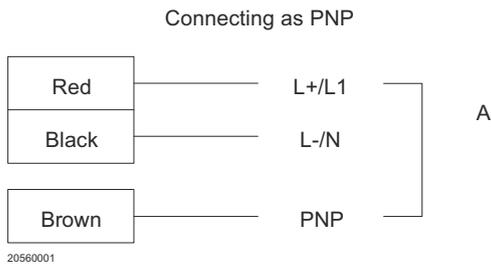
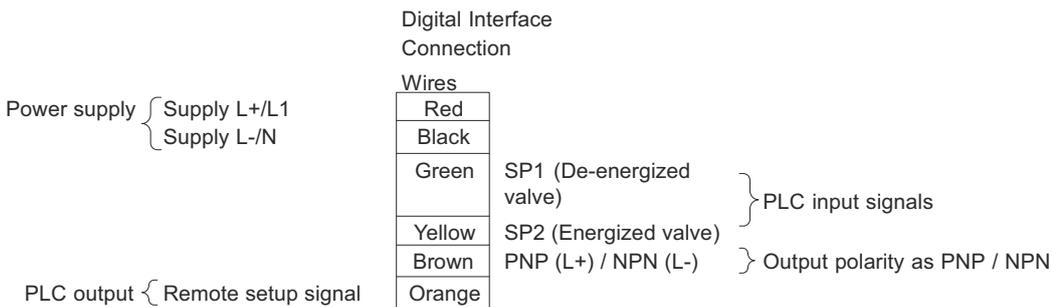


Dimensions (inch)



Electrical connection

The fixed cable consists of 6 wires. For standard 2 feedbacks not using the remote setup features only 4 wires need to be connected to external systems (Red/Black/Green/Yellow). Brown is always connected to either Red (PNP) or Black (NPN) depending on whether PNP or NPN is required. The orange wire must be connected to Red if the remote setup feature is not used.



A. Brown connected with Red wire on external screw terminals if PNP polarity

B. Brown connected with Black wire on external screw terminals if NPN polarity

Cable wire connections		M12 plug - PIN connections	
Red	L+/L1	PIN 1	Black L-/N
Black	L-/N	PIN 2	Yellow SP2 (Energized valve)
Green	SP1 (De-energized valve)	PIN 3	Green SP1 (De-energized valve)
Yellow	SP2 (Energized valve)	PIN 4	Red L+/L1, 8-30V AC/DC
Brown	PNP (L+) / NPN (L-)	M12 Plug	PNP (L+) PIN 4
	Remote setup signal	Internal wire connections	Brown NPN (L-) PIN 1
Orange	If not used - connect to L+/L1	PIN 5	Orange Remote setup signal
			If not used - connect to L+/L1



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