



# Leave Surveillance to the Top

ThinkTop® AS-Interface 31 node or 62 node

## Concept

The ThinkTop® is designed to ensure optimum valve control in conjunction with Alfa Laval sanitary butterfly, single-seat and Mixproof valves and it is compatible with all major PLC systems (Programmable Logic Controller with PNP/NPN interface). It is for use in food, dairy and brewery installations and in biopharmaceutical applications.

## Working principle

The ThinkTop® is a control head including indication units and solenoid valves to control all kinds of processing valves. It is used to control and supervise pneumatic valves and it is mounted on the top of the valve. It receives signals from a PLC to control the valve and it sends feedback signals to the PLC to indicate when the valve is in a certain position. To adapt the sensor board to the specific valve and to the application, the user sets up the ThinkTop either by the local keys or by using the key pad (which is ordered separately). When using the key pad it is not necessary to dismantle the top unit.



## TECHNICAL DATA

### Communication

Interface option 1 . . . . . AS-Interface v2.1, 31 node  
 Supply voltage . . . . . 29.5V - 31.6 VDC  
 Slave profile . . . . . 7.F.F.F  
 Default slave address . . . . . 0

### Communication

Interface option 2 . . . . . AS-Interface v3.0, 62 node  
 Supply voltage . . . . . 29.5V - 31.6 VDC  
 Slave profile . . . . . 7.A.7.7  
 Default slave address . . . . . 0

### Sensor board

Power supply . . . . . 24 VDC, 1 W  
 Feedback signal #1 . . . . . Closed valve  
 Feedback signal #2 . . . . . Open valve  
 Feedback signal #3 . . . . . Seat-lift 1 or 1 External signal  
 Feedback signal #4 . . . . . Seat-lift 2 or 1 External signal  
 Feedback signal #5 . . . . . Status  
 Valve tolerance band . . . . . 1-5  
 Default tolerance band . . . . . ± 5 mm  
 Sensor accuracy . . . . . ± 0.1 mm  
 Stroke length . . . . . 0.1 - 80 mm

### Solenoid valve

Supply voltage . . . . . 24 VDC ± 10%, 1 W  
 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  
 Throttle function air inlet/outlet . . 0-100 %  
 Push-in fittings . . . . . ø6 mm or 1/4"

## PHYSICAL DATA

### Materials

Plastic parts . . . . . Blue Nylon PA 12 Reinforced  
 Steel parts . . . . . Stainless steel 304 and 316  
 Seals . . . . . Nitrile (NBR) rubber

### Environment

Working temperature . . . . . -20°C to +85°C  
 Protection class . . . . . IP66 and IP67

### Cable connection

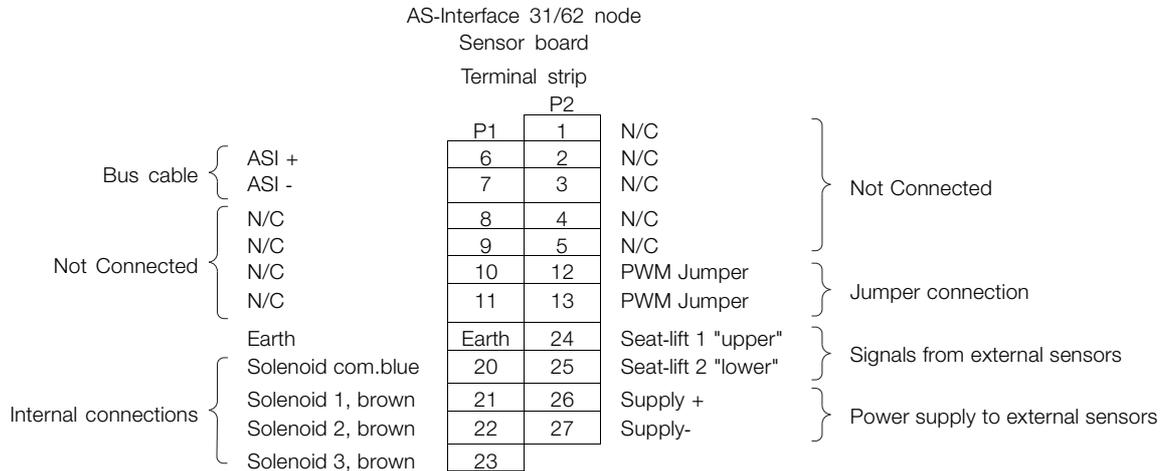
Main cable gland . . . . . PG11 (ø4 - ø10 mm)  
 Cable gland for external sensor . . PG7 (ø3 - ø6.5 mm)  
 Max wire diameter . . . . . 0.75 mm<sup>2</sup> (AWG 20)



## Typical Power Consumption ThinkTop

Test conditions = One ThinkTop connected with 1 feedback active (on) and		
No solenoid valve on	Supply voltage 24 VDC	30 mA
1 solenoid valve active	Supply voltage 24 VDC	75 mA
2 solenoid valves active	Supply voltage 24 VDC	120 mA
3 solenoid valves active	Supply voltage 24 VDC	165 mA

## Electrical connection

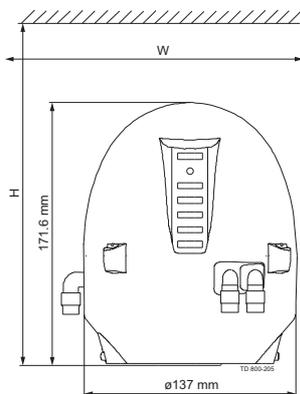


## AS-Interface bits assignment

For AS-interface version with 31 and 62 node, the following bit assignment can be used.

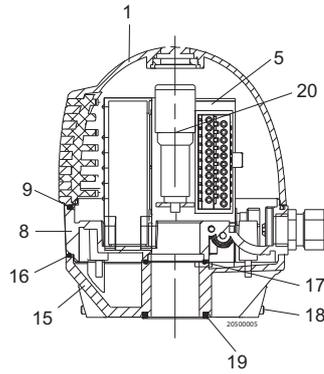
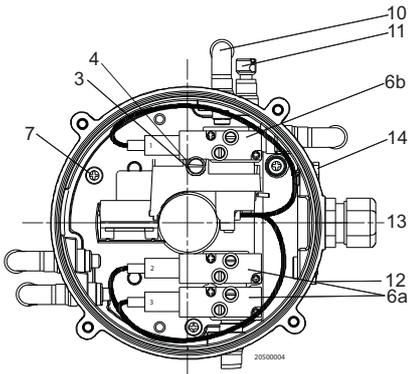
DI0	Feedback #1 Closed valve
DI1	Feedback #2 Open valve
DI2	Feedback #3-4 Seatlift 1 or Seatlift 2
DI3	Feedback #5 Status
DO0	Out #1 Not connected
DO1	Out #2 Solenoid valve 1
DO2	Out #3 Solenoid valve 2
DO3	Out #4 Solenoid valve 3

## Dimensions



Note! This is the basic design. Recommended clearance around the ThinkTop		
Valve Type	W	H
Unique SSV NC	225	250
SMP-SC/-BC/-TO	225	250
Unique Mixproof	225	250
MH	225	250
SBV	225	250
Unique SSV NO	225	320
LKLA-T	225	300

## Basic design



1. Shell
2. N/A
3. Screw
4. Washer
5. Sensor board
6. Solenoid valve\*
7. PT screw
8. Base
9. Special X-ring, grey
10. Air fittings
11. Blow-off valve
12. Thread plug, PG7
13. Cable gland, PG11
14. Gore Vent. membrane
15. Adapter
16. Special X-ring, black
17. O-ring
18. Allen screw
19. Special X-ring
20. Indication pin

\* 6a: Solenoid valve (3/2)

\* 6b: Solenoid valve (3/2 or 5/2).

## Options

- 2 m drop-cable (2 x 0.5 mm<sup>2</sup>) with ASI flat cable connector;  
9611-99-3518
- Gore Vent. w/adapter ( Basic Design pos. 14) for ThinkTop before  
November 2006; 9613-4315-01

### Accessories

- IR keypad
- External PNP sensors
- Main cable gland PG11
- Cable gland PG7 for external sensor
- External sensor bracket for Unique Mixproof

### Ordering

Please state the following when ordering:

- ThinkTop AS-Interface v2.1, 31 node or v3.0, 62 node
- Number of solenoid valves (0-3).
- Type of solenoid valves (3/2-way or 5/2-way).

- Push-in fittings  $\varnothing 6$  mm or 1/4"
- Please state if for series 700 valves.
- Special indication pin; 9613-1581-01 For Unique SSV-LS valves
- Special indication pin; 9612-6370-01 For SRC-LS Stop valve size 63.5-101.6 mm/DN 65 - 100
- Special indication pin; 9613-1581-01 For Unique SSV High Pressure valve size 76.1-101.6 mm/DN 80-100

### Note!

For further information: See also ESE000356

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







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ESE00298EN 1201

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