

## Fluid level gauge FSA Reflex



**Symbol**  
Size 195–992



### Model code (also order example)

FSA - 500 - 1 . 0 - ... ASS REFLEX - 1SF ABS

#### Designation

FSA = fluid level gauge

#### Nominal size ( $\cong$ centre distance of bolts)

195; 290; 380; 500; 600; 682; 782; 922; 992

#### Sealing material

1 = NBR (Perbunan)  
2 = FKM (Viton)

#### Series

(specified by manufacturer)

#### Ambient temperature

No details = -20 °C to +80 °C (standard)  
TT = low temperature (on request)

#### Installation conditions

ASS = weld-on piece  
G1/2 = connection G $\frac{1}{2}$  (on request)

#### Viewing window version

REFLEX = borosilicate reflex sight glass

#### Number of viewing windows

1SF = one viewing window (up to size 600)  
2SF = two viewing windows (size 682 and above)

#### Approval

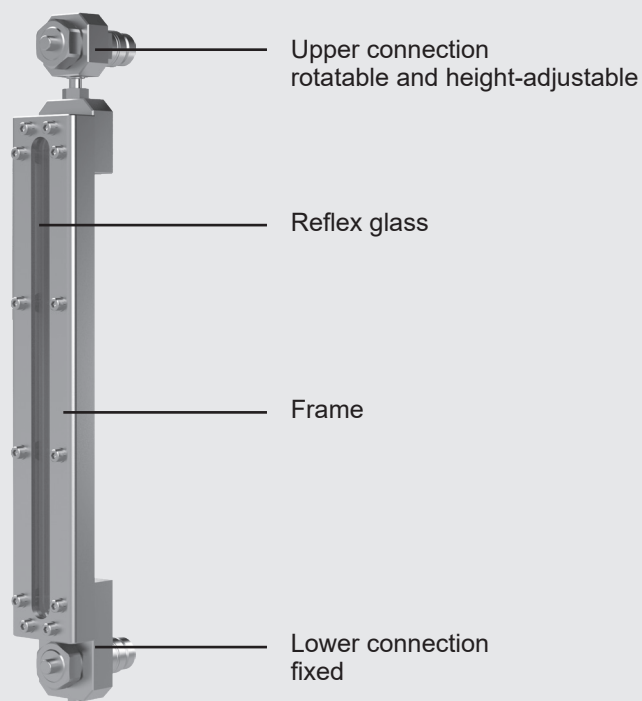
ABS = ABS approval

## DESCRIPTION

Stainless steel fluid level gauges with display windows made from unbreakable flat glass are used to observe the fill levels in tanks with flammable liquids such as hydraulic oils, lubricating oils, water-oil mixtures and biodiesel. They are used in harsh environments such as marine environments (cargo ships and service vessels) and the offshore industry (stationary and mobile). Protected against glass breakage! - Even if this should happen, no liquid will leak from the tank due to the check valves!

## DESIGN

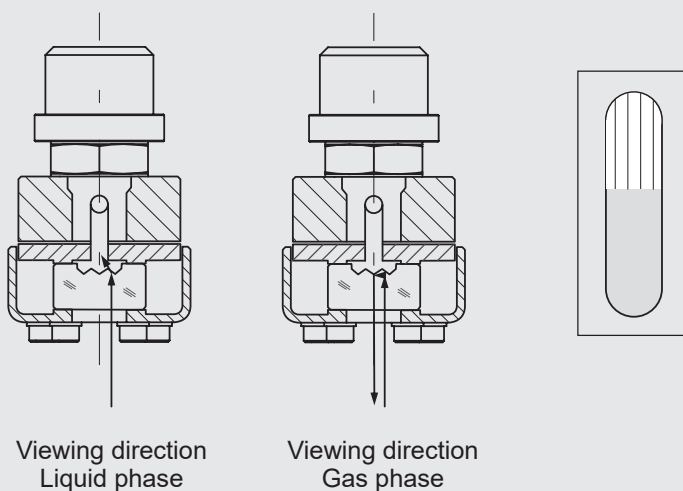
The sight glass fittings are angular frame mounts each with a sight glass plate inserted between the seals and firmly screwed in place.



## PRINCIPLE OF OPERATION OF REFLEX GLASS TO DIN 7018

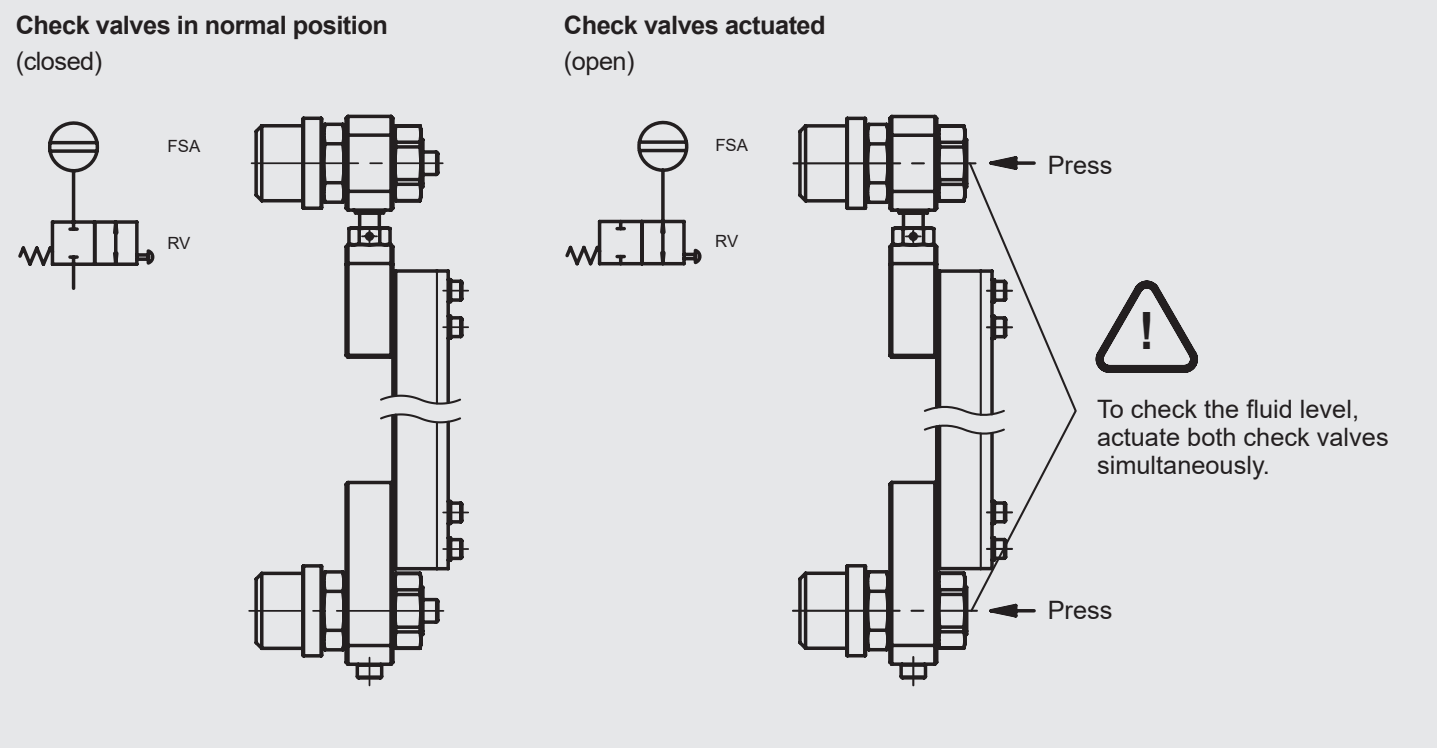
The reflective glass inside the fluid level gauge refracts the beams of light coming from the outside.

Depending on the specific refractive index of the fluid, the beams of light are either absorbed (liquid phase) or reflected at the prismatic grooves of the sight glass (gas phase). The result is that the fluid level is displayed in a dark colour, while the space free from fluid remains light.



# DISPLAY OF THE FILL LEVEL

The shut-off elements of the fluid level gauge are closed by default. There is no connection to the contents of the tank.  
When the check valves are actuated simultaneously, they open and the fluid level adjusts to the level in the tank. The current tank fill level can therefore be read off.  
When the check valves are released, the connection between tank and fluid level gauge is automatically closed.

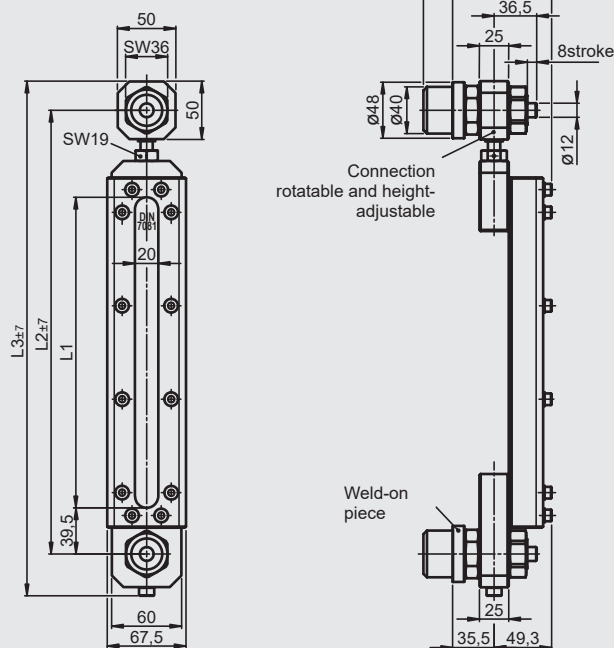


## Technical data

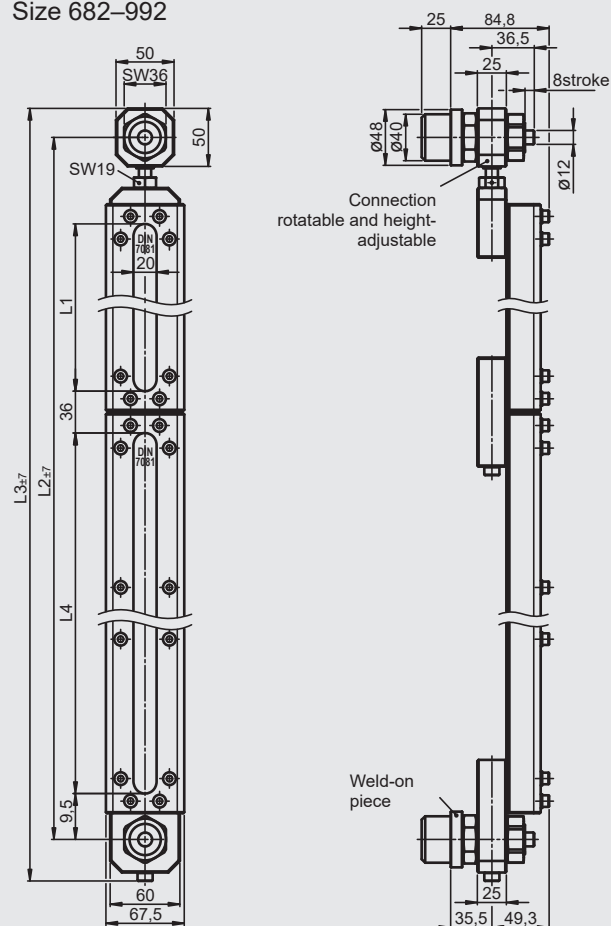
Nominal size	195 to 992 mm
Connections	Weld-on piece Connection G1½ on request
Frame material	Stainless steel
Valve material	Stainless steel
Glass material	Borosilicate reflex glass, clear (chemical and temperature resistant) to DIN 7081
Temperature range of operating fluid	-25 °C to +80 °C (standard) Others on request
Max. operating pressure	1 bar
Viscosity range	Max. 2000 mm²/s
Type of shut-off elements	Pilot-operated check valve

## DIMENSIONS

### Size 195–600



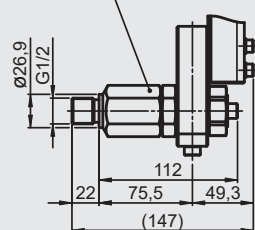
### Size 682–992



Type	Nominal size $\approx$ Centre distance of bolts	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	Number Viewing windows
FSA-195 REFLEX 1SF	195	81	195	256		1
FSA-290 REFLEX 1SF	290	176	290	351		1
FSA-380 REFLEX 1SF	380	266	380	441		1
FSA-500 REFLEX 1SF	500	386	500	561		1
FSA-600 REFLEX 1SF	600	486	600	661		1
FSA-682 REFLEX 2SF	682	266	682	743	266	2
FSA-782 REFLEX 2SF	782	316	782	843	316	2
FSA-922 REFLEX 2SF	922	386	922	983	386	2
FSA-992 REFLEX 2SF	992	356	992	1053	486	2

Connection G $\frac{1}{2}$

Connection G $\frac{1}{2}$



## NOTICE

The information in this brochure relates to the operating conditions and applications described.

For applications and/or operating conditions not described, please contact the relevant technical department.

The operator is always responsible for determining the product suitability for the specific application. Quantified values for product characteristics are average values for a new product that undergo a time deterioration process.

Subject to technical modifications and errors.

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