

Water pressure prouct

Stainless steel spec

Level switch

 ϵ

This level switch has been developed to detect liquid level in a water tank!

LSN

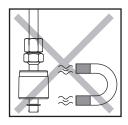
SUS spec

RoHS





Use in a magnetic field would cause mulfunction.



- This is a small and low price level switch consisting of a high accuracy reed switch and a float with a built-in magnet.
- It ensures stable operation without being affected by fluid temperature.
- It is installed from the top surface of a tank, using a flange with a connector.
- Depth of liquid detection (L): 80~500mm (By the 1mm)
- **** Regarding M12×1-4 pin connector type, contact us.**

Specification //

	Standard spec (For water)
Contact capacity	1.2VA DC
Contact resistance	1 Ω or less
Max. voltage	24V DC
Max. current	0.05A DC
Min. current load	5mA
Insulation resistance	$50M\Omega$ or more by DC500V
Proof voltage	AC1000V /1 min
Ambient temp.	− 10°C~ 80°C
Specific gravity	0.7 ± 0.05 (float)
Standard accessories	① Packing (Material : NBR, Size : P38) : 1pc ② Hexagon socket head bolt (M4×16) : 2 pcs
Fluid	Pure water, Petroleum oil, Water-glycol based oil
Weight	280g (Without a pipe)

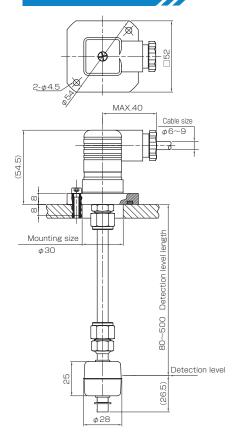
^{If you need 100V spec, contact us.}

Description

LSN - 200 L - A - 31

1	Name	Level switch
2	Level length *1	Min. 80mm \sim Max. 500mm (By the 1mm) Setting accuracy: \pm 3mm
3	Contact type	H-A: ON above level (OFF below level) H-B: OFF above level (ON below level) L-A: ON below level (OFF above level) L-B: OFF below level (ON above level)
4	Model no.	31 : SUS spec (SUS304)

% 1 : Specific gravity of fluid = 1.0



Temperature switch

This is a bimetal temperature switch developed to detect oil temperature in a water tank!

TSD/TSF

SUS spec

RoHS





TSD: Temperature switch (From tank side)

- A switch is directly installed on the side of a tank, using R1/2 screw.
- Low cost compared to "TSF" type.
- Connector type.

TSF: Temperature switch (From tank top)

- It is installed from the top surface of a tank, using a flange with a connector.
- Install from the top of a tank so that a switch main unit is entirely immersed in water.
- Detection length (L): 130~500mm (By the 1mm)
- Regarding M12×1-4 pin connector type, contact us.

Setting temp. (Fixed at our factory)

Setting temp. range	45°C∼ 75°C (By the 5°C)	
Setting temp. rank	45°C∼ 50°C	55°C∼ 75°C
Temp. differential	± 3°C	± 4°C

Standard accessories (TSF)

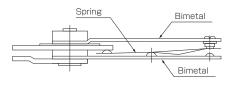
① Packing (Material: NBR, Size: P38) : 1pc ② Hexagon socket head bolt (M4 × 16) : 2pcs

Contact spec

Model	Contact type	Differential	Contact capacity	Min. current	Contact life	Temp. range	Fluid	Weight
TSD-%X-31	Temp. rise/OFF		AC125V 1.5A		Mechanical life: 2 million			200g
TSD-%Y-31	Temp. rise/ON	45X~75X: 6.5(5~8)°C 45Y~65Y: 4.5(3~6)°C		50mA	times	−20~105°C	Pure water, Petroleum oil,	
TSF-*X-31	Temp. rise/OFF	70Y~75Y: 6.5(5~8)°C		SUITA	Contact life: 100 thousand	-20~1050	Water-glycol based oil	Without a pipe
TSF-*Y-31	Temp. rise/ON	7 3 11 3 3 4 5 7 5 7	(Life: 100 thousand)		under max. load			320g

31: SUS spec (SUS304)

Principle



Contact configuration

X (e.g.: if switch off at temp. rize of 60° C)

ON 60°C

OFF

ON (53.5°C)

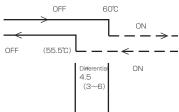
OFF

OFF

(5.5)

OFF

Y (e.g.: if switch on at temp. rize of 60°C)

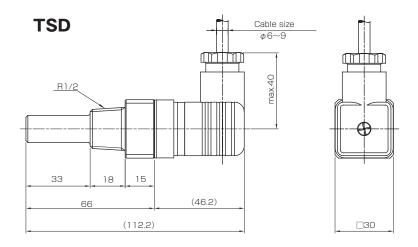


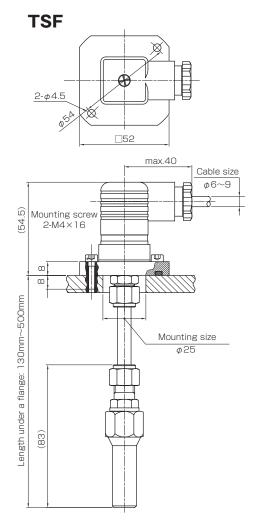
Temperature switch

TSD/TSF

Description

1	Name	TSD: Temperature switch (From tank side) TSF: Temperature switch (From tank top)
2	Setting temp.	$45 \sim 75^{\circ}\text{C}$ (By the 5°C)
3	Contact type	X: Temp. rise/OFF Y: Temp. rise/ON
4	TSF length under flange (Except TSD)	Min. 130mm ~ Max. 500mm (By the 1mm)
5	Model no.	31 : SUS spec





Glycerin pressure gauge (\$60)

Standard accessories: Safety marks!

SUS spec

RoHS





- Shaking of a pointer due to mechanical vibration is absorbed by viscous drag of glycerin into a gauge.
- Movement of a bourdon tube is also absorbed, improving absorption effect of pulsating pressure of fluid.
- Glycerin serves as lubricating oil for a friction part of a bearing and gear in a gauge, thereby improving the durability of the internal mechanism.
- Even if a bourdon tube is broken, a front plate isn't shattered, because water is purged from a safety cap.
- You can easly set pressure range and setting value by green marks on a front plate.
- Select a pressure gauge which has max pressure scale of 2 times more than your pressure range.



Specification //

Fluid	Pure water (Petroleum oil (Phosphate ester oil)	
Accuracy	± 1.6%/F.S.	
Temp. range	− 5 ~ 40°C	
Indication error	± 0.3% / 10°C	
Liquid	Glycerin	
Vibration range	0~7 G	
Optional spec	 Color scale (Contact us) Cold climates spec (Temp. range: − 15 ~ 60°C, Silicon oil spec) 	

Description //

1	















1	Name	Glycerin pressure gauge SUS spec
2	Profile	A : Frameless
3	Socket type	T : Square
4	Screw type	G1/4 R1/4
(5)	Size	60 : φ 60mm
6	Pressure range (Max. scale)	See model tables

How to use safety marks $(\phi 60)$

For setting pressure range

Set 2 safety marks on upper limit (Right) and lower limit (Left) of your pressure range.



For setting pressure value

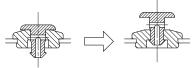
Set 2 safety marks on right and left together like an arrow form.





Note

- Some combinations of shape, size, and pressure range are not available. Please refer to model tables to select your gauge.
- A glycerin pressure gauge should be mounted vertically. Otherwise, indication error and glycerin leakage may occur.
- We do not offer a glycerin pressure gauge with a special hand-written scale.
- Pull a green plug before using, if pressure range of your gauge is less than 1MPa.



As a pressure gauge of less than 1MPa has little torque of a bourdon tube, temperature change (internal pressure change) into the gauge will affect indication accuracy. By pulling a green plug of a safety cap, a balance between internal pressure and atmospheric pressure can be maintained, thereby preserving accuracy.

Glycerin pressure gauge

Conversion table : P26

: P27 Scale plate

Model tables/Dimension

ϕ 60 parts table

No.	Parts	Material	Q'ty
1	Case	SUS304	1
2	Lid	SUS304	1
3	Socket	SUS316	1
4	Safety cap	Silicon rubber	1
5	Safety mark	PP/SUS304	2

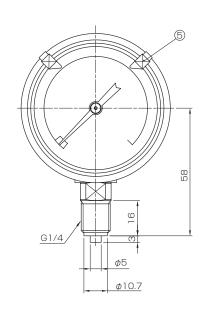
ϕ 60 A type G1/4

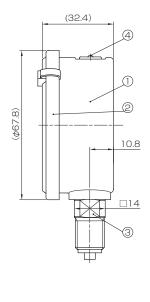
Profile Frameless Socket type Square

Screw type

G1/4 Weight 230g

Oeder no.	Model
R402-507	OSG-AT-G1/4-60 × 1 MPa
R402-508	OSG-AT-G1/4-60 × 1.6MPa
R402-509	OSG-AT-G1/4-60 × 2.5MPa
R402-510	OSG-AT-G1/4-60 × 4 MPa
R402-511	OSG-AT-G1/4-60 × 6 MPa
R402-512	OSG-AT-G1/4-60 × 10 MPa
R402-513	OSG-AT-G1/4-60 × 16 MPa
R402-514	OSG-AT-G1/4-60 × 25 MPa
R402-515	OSG-AT-G1/4-60 × 40 MPa





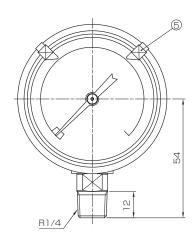
ϕ 60 A type R1/4

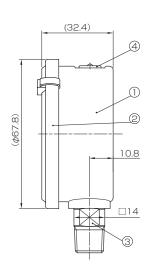
Profile Frameless Socket type Square

Screw type Weight

R1/4 230g

Order no.	Model
R402-607	OSG-AT-R1/4-60 × 1 MPa
R402-608	OSG-AT-R1/4-60 × 1.6MPa
R402-609	OSG-AT-R1/4-60 × 2.5MPa
R402-610	OSG-AT-R1/4-60 × 4 MPa
R402-611	OSG-AT-R1/4-60 × 6 MPa
R402-612	OSG-AT-R1/4-60 × 10 MPa
R402-613	OSG-AT-R1/4-60 × 16 MPa
R402-614	OSG-AT-R1/4-60 × 25 MPa





Pressure tester

Suitable for occasional pressure detection if you don't always measure pressure!

APT

SUS spec

RoHS



Specification

Max. pressure	35MPa
Proof pressure	50MPa
Fluid	Pure water, Petroleum oil, Water-glycol based oil
Material	SUS

- You can measure circuit pressure up to 35MPa even during pressurization.
- If you install a special nipple to a circuit where you need to measure, you can check pressure whenever required.
- Cost reduction, by replacing a pressure gauge in use with a pressure tester.
- You can read pressure at all positions with a pressure hose.
- Suitable for venting air from a circuit and sampling oil.
- Easy diagnosis and maintenance of a hydraulic circuit.

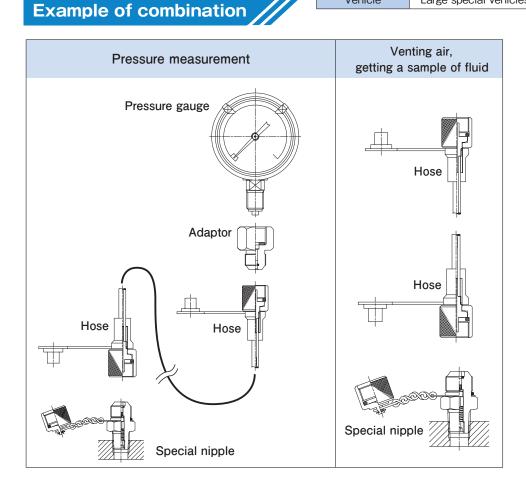


Safety precaution

- Use a preesure tester when you check temporary pressure. If your circuit is always pressured, use our "NH hose" with hose fittings.
- A pressure tester hose is mainly made of nylon resin.
 Do not fold or twist it.

Example of use

Construction	Concrete pumping car, shovel car, bulldozer
Machine	Large machine, special-purpose machine, hydraulic press
Iron and steel	Iron and steel making plants
Injection	Accumlator injection circuits, clamping circuits
Vehicle	Large special vehicles



Pressure tester

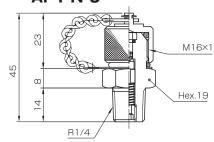
Special nipple



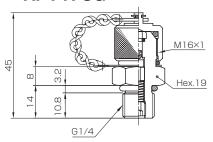
This is a check valve type special nipple. If you tighten a metal fitting on a high pressure hose side, a check valve will open.

Order no.	Model	Screw type	Packing Material/Size	Weight
A040-N05	APT-N-5	R1/4	_	00-
A040-N5G	APT-N-5G	G1/4	NBR/P11	80g

APT-N-5



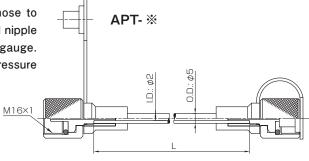
APT-N-5G



High pressure hose



This is a high pressure hose to connect between a special nipple and a glycerin pressure gauge. You can use it when a pressure detecting position is far.



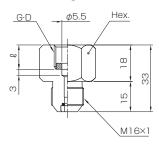
Order no.	Model	Lenght L	Max. pressure	Proof pressure	Temp. range	Ambient temp.	Min. bending radius	Weight
A040-105	APT-05-NS	0.5m				Max. 60°C or less	40mm	90g
A040-110	APT-10-NS	1.0m	35MPa	50MPa	−20~60°C			100g
A040-120	APT-20-NS	2.0m	SSIVIPA	SUMPA	-20~60 C			120g
A040-130	APT-30-NS	3.0m						140g

Pressure gauge adaptor



Order no.	Model	Screw type	l	Hex	Weight	Packing material	Packing dimension
A040-G05	APT-G-5	G1/4	12	21	70g	PTFF	11 × 5.5 × 3
A040-G06	APT-G-6	G3/8	14	24	80g	PIFE	14.5 × 5.5 × 3

APT-G- *



- This is an adaptor to connect a high pressure hose to a glycerin pressure gauge. Select the best adaptor in conformance to the screw diameter of your gauge.
- If you use this pressure gauge adaptor, you can easily connect or disconnect a glycerin pressure gauge and a high pressure hose by hand without using a wrench.
 Be sure to use an adaptor for each pressure gauge.

APT

Storage kit (Plastic Case)

- Suitable for accommodating pressure tester pieces in a compact space, to be used as a portable tool.
- This case can accommodate up to 3 glycerin pressure gauges, 6 special nipples, 3 pressure gauge adaptors, and 3 high pressure hoses.

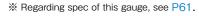
Order no. Model		Dimension	Weight
A040-BOX	APT-BOX	410×300×70	1300g



For pressure tester

- Sturdy stainless steel case!
- Select a pressure gauge whose full scale pressure is more than double your pressure range.

Order no.	Model
R402-510	OSG-AT-G1/4-60 × 4MPa
R402-511	OSG-AT-G1/4-60 × 6MPa
R402-512	OSG-AT-G1/4-60 × 10MPa
R402-513	OSG-AT-G1/4-60 × 16MPa
R402-514	OSG-AT-G1/4-60 × 25MPa
R402-515	OSG-AT-G1/4-60 × 40MPa





High pressure nylon hose (For small diameter piping)

Characterized flexibility and high pressure use!

SUS spec

RoHS



Note

Refer to "Hose length" below, when ordering.

- This is a small diameter nylon hose for high pressure.
- This hose eliminates the need of bending work by a bendor, and reduces your time for complicated or long piping.

A

Safety precaution

- NH hose is made of nylon resin. It must be connected without "fold" or "twist".
- Expansion and contraction of hose outer diameter and length is generated, due to chenges of inner pressure. If you use a hose clamp to fix a hose, do not fix the hose tightly because of it. Select hose length added 20mm to your length, just in case.
- Bending radius of hose must be more than the minimum value in "spec".
- Keep NH hose away from fire.
- Do not use beyond temperature range.

Specification

0.D. × I.D.	φ6×φ3
Min. bending radius	50mm
Max. pressure	35MPa
Proof pressure	70MPa
Temp. range	−20~60°C
Ambient temp.	Max. 60°C
Fluid	Pure water, Petroleum oil,
Fluid	Water-glycol based oil
Weight	30g/m

Example of use

- Piping for a pressure gauge
- Piping for a small flow rate pilot line
- Hydraulic clamp for work
- Piping for a miniature cylinder
- Hydraulic circuit for an injection molding machine
- Piping for a clamp cylinder and a pressure gauge of hydraulic press
- Piping pressure gauge of hydraulic unit
- * Suitable for hydraulic circuits of low flow rate

Description



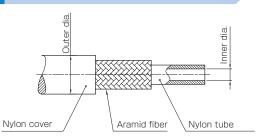
1	Model	NH3 : 0.D.φ6×I.D.φ3
2	Fitting model	Select from hose fitting table. P67
3	Hose length L	1.0m or more: Order by the 0.1m Form 0.2m till 1.0m: Order by the 0.05m Less than 0.2m: Not available
4	Fitting mode	Select from hose fitting table. P67
5	Wire blade	Unmarked: Without wire blade W: With wire blade (SUS)

Note of hose length



L means hose total length, if K6 type for bith sides.

Structure





JIS symbol

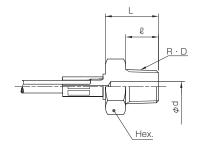
Hose fitting

NH3-R5

Male fitting

Material: SUS

Model	Screw type R • D	L	l	φd	Hex.	Weight
NH3-R5	R1/4	21	13	4	19	32g

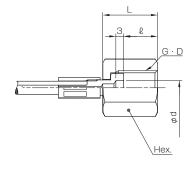


NH3-G *****

For gauge

Material : SUS

Model	Screw type G • D	L	l	φd	Hex.	Packing	Packing dimension	Weight
NH3-G5	G1/4	21	13		19	PTFE	11 × 5.5 × 3	42g
NH3-G6	G3/8	۷۱	13	5.5	21	(Material)	14.5 × 5.5 × 3	52g

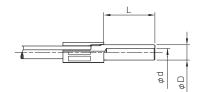


NH3-K6S

For flareless joint

Material : SUS

Model	φD	L	l	φd	Hex.	Weight
NH3-K6S	6	20	_	3	_	17g

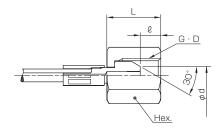


NH3-UM5

Union female fitting

Material: SUS

Model	Screw type G • D	L	l	φd	Hex.	Weight
NH3-UM5	G1/4	21	8	7	19	42g



Gauge valve

Can be used as a small-flow-rate throttle valve!

SAN-100

SUS spec

RoHS





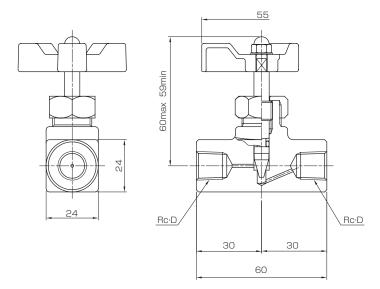
A needle valve for a pressure gauge.

Specification

Max.Pressure	35MPa
Proof pressure	63MPa
Body material	SUS
O-ring material	NBR

Model

Order no.	Model	Screw type Rc · D	Fluid	Weight
A010-105	SAN-100-5	Rc1/4	Pure water	000-
A010-106	SAN-100-6	Rc3/8	(Petroleum oil, Water-glycol based oil	320g



Gauge valve with damper

Needle valve for pressure gauge with damper fuction!

SAN-200N/SAN-300N

SUS spec

RoHS





- As surge pressure and pulsating pressure are absorbed by a damper, accuracy and durability of a pressure gauge are greatly improved.
- Than a damper and a gauge valve are installed separately, this installation method saves space and reduces your costs.
- You can easily set the direction of a pressure gauge by a gauge socket.

Specification

Max	Max. pressure							
Prod	63MPa							
Вос	Body material							
O-rii	ng mate	rial	NBR					
Torque	0 D	G1/4	40N · m					
*	G∙D	G3/8	50N ⋅ m					

 As to be safely sealed the space between a pressure gauge and a gauge valve socket by using the attached a teflon packing, please refer to the torque which we recommend on this table before installing.

Model

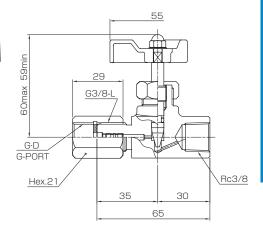
Order no.	Model	Gauge screw type G · D	Pipe screw type	Packing	Packing diameter	Fluid	Weight
A012-205	SAN-200N-5	G1/4	De1 /4			Pure water	
A012-206	SAN-200N-6	G3/8	Rc1/4	PTFE (Material)	14.5 × 5.5 × 3	/ Petroleum oil	360g
A013-306	SAN-300N-6	G3/8	Rc3/8	(Material)		\Water-glycol based oil/	

Dimension

SAN-200N

35 30 Rc1/4

SAN-300N



Needle gauge valve with drain

One valve performs the functions of two valves!

SUS spec

RoHS





- Set a knob in "Close" position after measuring, and a gauge pointer goes to "0."
- If you always set "Close", normally, a gauge pointer remains "0". This keeps a pressure gauge accurate long, and ensures improved durability.
- A shaft is a needle valve structure to prevents fluid leakage when fully closed.

Specification

Max. pressure	35MPa
Proof pressure	63MPa
Body material	SUS
Fluid	Pure water (Petroleum oil Water-glycol based oil
Torque	25N·m
O-ring material	NBR

Structure

Two needle vales symmetrically facing each other.

Knob Open
Knob Middle

: for measuring

: for circuit air purge

Knob Close

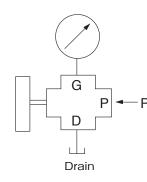
: for circuit port shut-off

Both ordinary gauge valve function and circuit air purge valve function can be provided by a single valve.

Model

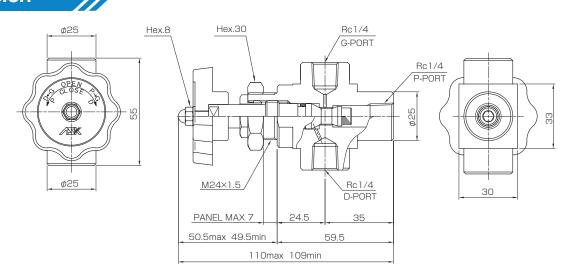
Order no.	Model	Screw type	Weight
A021-205	CA-200N-5	Rc1/4	460g

Connection



Residual pressure returns to a drain port.

2 functions: Valve to purge air and gauge valve



Joint for pressure gauge

For connection between a valve and a pressure gauge!

AJ

SUS spec

RoHS

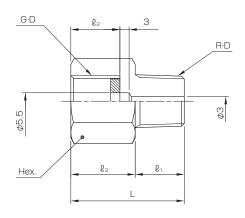


Specification

Max. pressure	35MPa
Proof pressure	63MPa
Material	SUS
Fluid	Pure water (Petroleum oil, Water-glycol based oil)

Specification

Order no.	Model	G·D	R·D	l 1	l 2	l 3	L	Hex	Torque	Packing material	Packing diameter	Weight
A005-105	AJ-105	G1/4	R1/4	14	14	19	33	19	40N · m		11 × 5.5 × 3	40g
A005-106	AJ-106	G3/8	R1/4	14	16	21	35	24	50N · m		14.5 × 5.5 × 3	60g
A005-305	AJ-305	G1/4	R3/8	16	14	19	35	24	40N · m	PTFE	11 × 5.5 × 3	40g
A005-306	AJ-306	G3/8	R3/8	16	16	21	37	24	50N ⋅ m		14.5 × 5.5 × 3	60g



Low pressure damper

Prevent pulsating pressure of a pressure gauge!

SA

SUS spec

RoHS

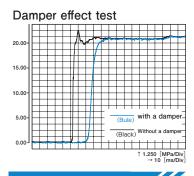




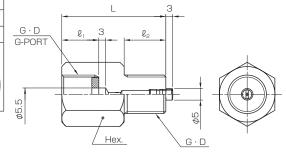
- Use this fixed throttle valve at a position where you measure pressure.
- You can also use it for synthetic oil, water based oil and brake oil.

Specification

Dimension



Max. pressure	10MPa
Proof pressure	18MPa
Material	SUS
Fluid	Pure water /Petroleum oil, Water-glycol based oil



Model

Order no.	Model	G·D	l 1	l 2	L	Hex	Torque	Packing	Packing dimension	Weight
A001-105	SA-100-5	G1/4	14	16	42	19	40N · m	PTFE	11 × 5.5 × 3	60g
A001-106	SA-100-6	G3/8	16	18	45	24	50N⋅m	(Material)	14.5 × 5.5 × 3	100g

High pressure damper

Prevent pulsating pressure of a pressure gauge!

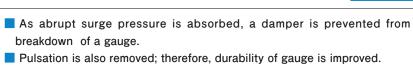
SAH

SUS spec

RoHS

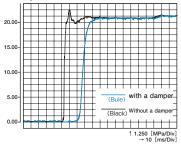






- You can ajust pulsation by needle valve, and also use as a stop valve.

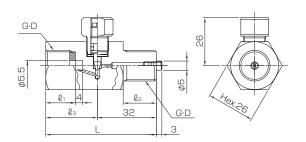
Damper effect test



Specification

Max. pressure	35MPa
Proof pressure	63MPa
Body material	SUS
O-ring material	NBR

Dimension



Model

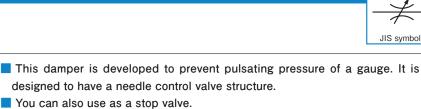
Order no.	Model	G·D	l 1	l 2	l 3	L	Torque	Packing material	Packing dimension	Fluid	Weight
A002-105	SAH-100-5	G1/4	14	16	26	58	40N · m	DTEE	11 × 5.5 × 3	Pure water / Petroleum oil.	220g
A002-106	SAH-100-6	G3/8	16	18	28	60	50N · m	PTFE	14.5 × 5.5 × 3	Water-glycol based oil	230g

Glycerin pressure gauge damper

Prevent pulsating pressure of a pressure gauge!

SUS spec

RoHS

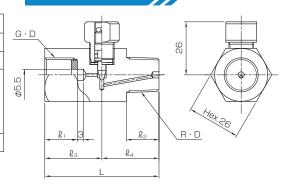




Specification

Max. pressure	35MPa
Proof pressure	63MPa
Material	SUS
Fluid	Pure water (Petroleum oil, Water-glycol based oil
O-ring material	NBR

Dimension



Model

Order no.	Model	G·D	R·D	l 1	l 2	l 3	l 4	L	Torque	Packing	Packing dimension	Weight
A003-05T	SAD-5T	G1/4	R1/4	14	14	26	26	52	40N · m	PTFE	11 × 5.5 × 3	210g
A003-06T	SAD-6T	G3/8	R3/8	16	16	28	28	56	50N ⋅ m	(Material)	14.5 × 5.5 × 3	220g

Pressure switch damper

Pressure switch damper absorbs water pressure pulsation!

SUS spec

RoHS





Specification

Max. pressure	35MPa			
Proof pressure	63MPa			
Material	SUS			
	Pure water			
Fluid	/ Petroleum oil, \			
Fluid	Water-glycol			
	\ based oil /			
O-ring material	NBR			
	•			

pressure pulsation and prevents chattering of a contact. Durability of pressure switch is improved.

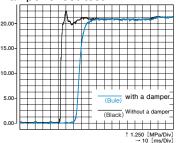
A damper mounted on a screw of a pressure switch absorbs water

You can also use this as a stop valve.

Dimension

pressure	35MPa		
pressure	63MPa	R.D.	
aterial	SUS		
Fluid	Pure water Petroleum oil, Water-glycol based oil		
g material	NBR	<u> </u>	12 Rc1/4
		28	28

Damper effect test



Model

Order no.	Model	R·D	Torque	l	Weight
A004-005	PSD-5	R1/4	25N·m	14	000-
A004-006	PSD-6	R3/8	45N · m	16	230g

56

In-line check valve

In-line type for easy pipe connection!

SUS spec

RoHS







- This is an in-line check valve of stainless steel developed for the machine tool coolant system and for water.
- A valve can also be used in fresh water and industrial water but coolant.
- It is possible to prevent a valve from being locked by rust during transportation of a coolant system or long suspension of a operation.
- To avoid failure of dew condensation in a factory under poor conditions.

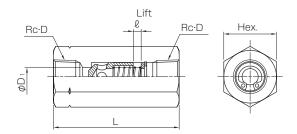
Description

1	Name	In-line check valve				
2	Screw type	02 : Rc1/4 03 : Rc3/8 04 : Rc1/2				
3	Cracking pressure	04:0.04MPa				
4	Model no.	31 : SUS spec (SUS303)				

Specification

Max. pressure	25MPa
Proof pressure	45MPa
Material	SUS

Dimension

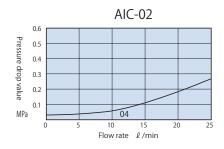


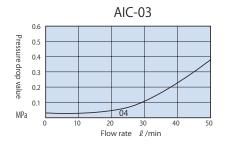
Model

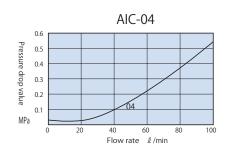
Order no.	Model	Rc · D	L	D ₁	l	Hex	Fluid	Weight
A055-202	AIC-02-04-31	Rc1/4	53	7	4	21	Pure water	120g
A055-203	AIC-03-04-31	Rc3/8	62	9	4	26	/ Petroleum oil,	220g
A055-204	AIC-04-04-31	Rc1/2	73	11	5	30	Water-glycol based oil	320g

Data sheet: Flow/pressure drop characteristics

Condition / Oil: ISO VG32 Oil temp.: $45 \pm 5^{\circ}$ C











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