



Series NGS Float Level Switch Installation and Operating Instructions

KOBOLD Instruments, Inc. 1801 Parkway View Drive, Pittsburgh, PA 15205
Telephone: (412) 788-2830 FAX: (412) 788-4890 www.koboldusa.com

Precautions

User's Responsibility for Safety: KOBOLD manufactures a wide range of process sensors and technologies. While each of these technologies are designed to operate in a wide variety of applications, it is the user's responsibility to select a technology that is appropriate for the application, to install it properly, to perform tests of the installed system, and to maintain all components. The failure to do so could result in property damage or serious injury.

Proper Installation and Handling: Use a proper sealant with all installations. Never over tighten the sensor within its fittings. Always check for leaks prior to system start-up.

Wiring and Electrical: This is an electrically operated device and only properly trained personnel should install and maintain this product. Be sure that the power supplied to the sensor is appropriate for the electronics supplied. Electrical wiring should be performed in accordance with all applicable national, state and local codes.

Temperature and Pressure: Temperature and pressure maximums vary depending upon the material selected. Operation outside these limitations will cause damage to the unit.

Material Compatibility: Make sure that the material of construction is chemically compatible with the application liquids. While the sensor's outer housing is liquid resistant when installed properly, it is not designed to be immersed. It should be mounted in such a way that it does not normally come into contact with fluid.

Flammable, Explosive and Hazardous

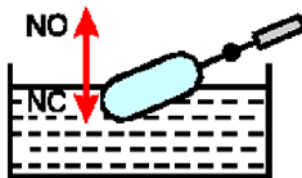
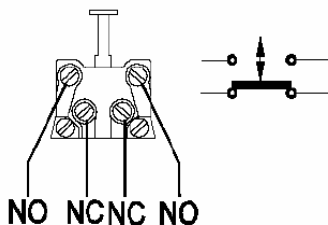
Applications: This unit is not an explosion-proof design. It should not be used in applications where an explosion-proof design is required.

Make a Fail-Safe System: Design a fail-safe system that accommodates the possibility of sensor or power failure. In critical applications, KOBOLD recommends the use of redundant backup systems and alarms in addition to the primary system

Description:

The NGS series is one of the most rugged level switches on the market. The float and all other wetted parts are made of 316 stainless steel. The switch mechanism is activated by a permanent magnet external to the switch housing so that no penetrations exist between the process and the switch internals. A snap-action-mechanism operates a microswitch by way of a plunger. This mode of operation results in a very reliable switch which requires no external power to operate. The high capacity 10 amp switch will handle most electrical loads such as relays, solenoid valves and motor starters directly.

Electrical Connection:



Arrow indicates position when contacts are closed

Specifications:

Nominal pressure:	25 bar (363 PSI)
Medium temperature:	-20°C to +250°C (480°F)
Ambient temperature:	-20°C to +80°C
Density:	minimum 0.7 g/cm ³
Installation position:	horizontal
Immersion length:	202 mm (7.95")
Total deflection:	118 mm (4.65")
Switch hysteresis:	fixed at 3/4"
Wetted parts:	stainless steel cast aluminum housing, epoxy coated
Mech. Connection:	square flange or 2" NPT
Switching element:	1 microswitch, SPDT
Switch capacity:	250 VAC/10 A or 220 VDC/0.6 A
	for IS operation: 250 VAC/2.5 A or 220 VDC/0.3 A
Electrical connection	PG 13.5 gland w/ conduit thread
Protection:	NEMA 4 - IP 65
Weight:	approximately 7.5 pound

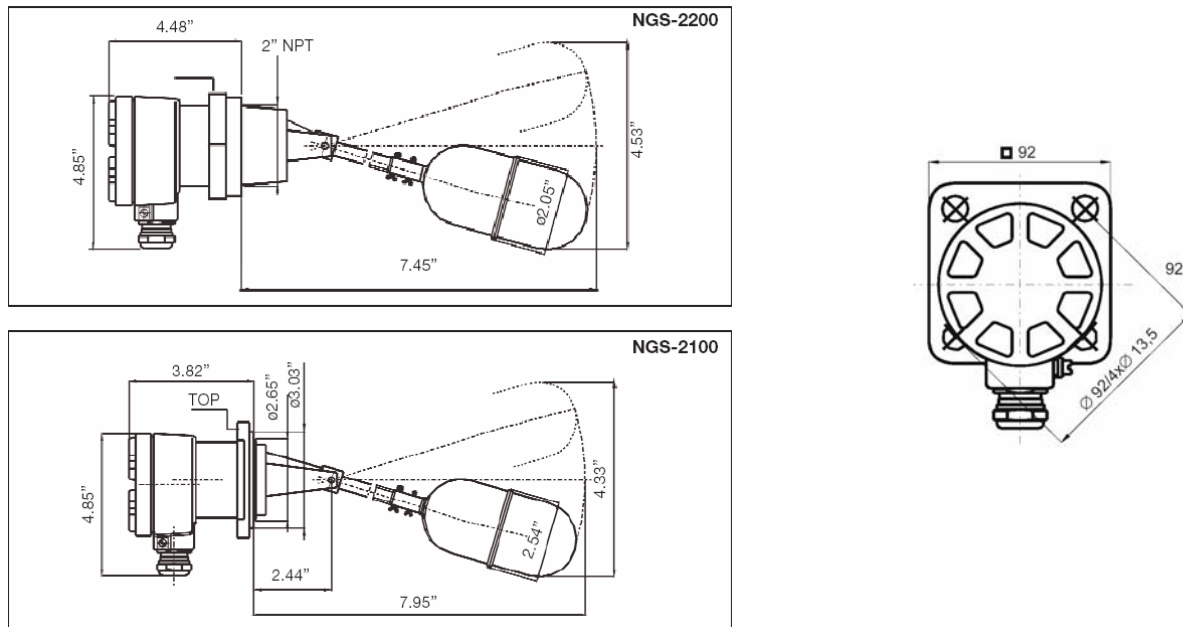
Installation:

The NGS level switch should be installed so that the float can move freely without touching the vessel walls, top or bottom. Avoid installation in areas of high turbulence: such as close proximity to inlet valves or agitators. The NGS should also be protected from suspended material that could adhere to the float and interfere with the switching process.

When installing the float switch in a separate chamber, appropriate drain valves should be provided to allow accumulated particulates to be periodically flushed. To facilitate maintenance, the switch should be installed in an easily accessible location.

The float switch must be installed with a connecting flange. A separately packaged seal is provided. (Gasket Klingersil C 4500). For corrosive media, an appropriate seal, compatible with the medium being used, should be substituted.

Dimensions:



Optional Mating flange:

Mounting the NGS is accomplished either by simply attaching it to a 2" NPT "coupling" on the tank (NGS-2200), or by inserting into an access hole cut with associated bolt holes in the tank (see pattern below) (NGS-2100), or the optional mating flange (NGS-MFF1 or MFF2) may be welded into a 3" hole cut into the tank (applies to the NGS-2100). All methods utilize the provided seal.

