



FU-05

Ultrasonic Level Switch with Sensor made of Stainless Steel



- **No moving parts**
- **2- or 3-wire connection**
- **Independent of mounting position**
- **Status LED**
- **Wetted parts from stainless steel**
- **Works even in difficult liquids**
- **Insertion length only 36 mm**

Description: The stainless steel sensor element contains two piezo-electric crystals on each side of the gap at the tip of the sensor. An ultrasonic signal is transmitted from one crystal into the gap. If there is air or gas in the sensor gap, the signal is not received by the other crystal. If there is liquid present, the signal will be transmitted across the gap, and the integral electronics will switch the output circuitry to signal the presence of a liquid.

Range of application: FU-05 is a compact ultrasonic gap switch, that switches as soon as a liquid fills its gap. It may be set on site to energise on either wet or dry. A small LED in the middle of the end cover is constantly on, when the status of the FU-05 is „On“ and flashes once per second, when the status of the FU-05 is „Off“. The output of FU-05 may be connected to nearly each evaluation unit, because it can be wired as 2-wire-sensor in series with the load or as 3-wire-sensor for PLC-operation. The housing of FU-05 is rotatable on the sensor element. Wetted parts of the unit are from stainless steel 316 and the insertion length of FU-05 is designed extremely short. The rough level switch works independently of the mounting position and ignores even low-frequency vibrations.

Versions:

FU-05: standard version,
insertion length = 36 mm without thread

Technical specifications:

max. Pressure: 0.25 bar up to 20 bar rel.
max. Media temperature: -40°C up to +125°C
max. Ambient temp.: -40°C up to +50°C
Process connection: G 1"-, R 1"- or 1"-NPT-male
Wetted parts: stainless steel 316L (1.4404)
Housing: glass filled Nylon, yellow,
end cap black
Switching point SP: 8,5 mm from end of vertically
mounted sensor
Time delay: 1 s dry to wet / wet to dry
Hysteresis: ± 1 mm
Weight: 0.43 kg
Altitude: max. 2000 metres
Humidity: 100% R.H.
Viscosity: 0.2 to 10000 cPs

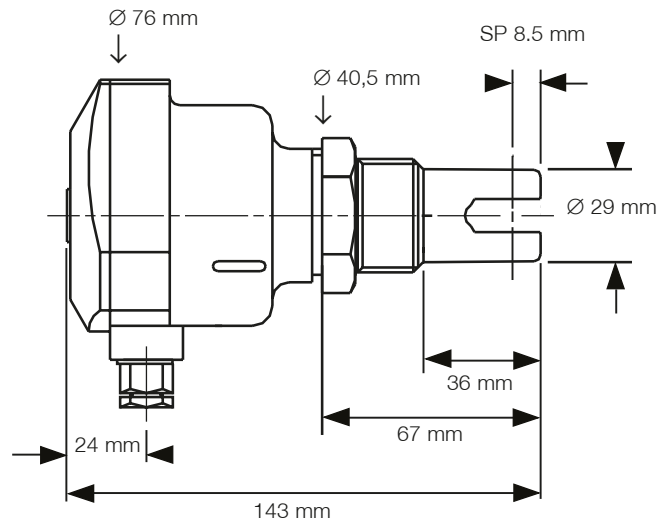
Electrical specifications:

Electrical connection: 2-wire in series with load or
3-wire for PLC-operation
Supply voltage: 22 VDC to 264 VDC or
22 VAC to 264 VAC (50-60 Hz)

Approximate voltage drop:				
Supply Voltage	Current			
	20 mA	50 mA	100 mA	500 mA
24 VDC	6.5 V	4.5 V	3.5 V	2.5 V
110 VAC	5.5 V	3.5 V	3.0 V	2.5 V
240 VAC	5.0 V	4.0 V	3.5 V	2.5 V

max. Load: 500 mA
min. Switching current: 20 mA
max. Switching current: 5 A for max. 40 ms
Current drawn „load off“: < 3 mA
Cable gland: M16 (supplied)
Terminals: 2.5 mm²
Protection class: IP66 / IP67 NEMA 4X,
housing is rotatable 330°
on sensor

Dimensions:



Ordering codes:

Ordering number: FU-05. R.

**FU-05 Ultrasonic Level Switch with Sensor made of
Stainless Steel**

Process connection:
R = R 1" DIN 2999 male
G = G 1" ISO 228 male
N = 1" NPT male