conductive filling level relays 1250

design	**22.5 x 99.0 x 114.5mm**	
operating range	liquid resistance	**≤ 200kΩ** **≤ 1MΩ** **≤ 8MΩ**

- ✓ **adjustable turn-on delay**
- ✓ **adjustable response sensitivity**
- ✓ **minimum or maximum safety**
- ✓ **niveau or two step control**
- ✓ **compact design**
- ✓ **mounting on EN 50020 DIN-rail**

2 floating relay outputs
AC/DC devices

description

The **FV56** ***ipf*** filling level relay is used in order to evaluate one or two filling levels and/or limit levels in conductive, i.e. electrically conductive liquids with a resistance of 200kΩ, 1MΩ or 8MΩ max.
The device can be used as a security device to guard against any leakage and overfilling of liquids as well as for building a two-step control e.g. for controlling a pump or as a protection against running dry.
The signal line of the filling level relay is connected to a reference electrode or the metallic container wall and/or the pipe wall and the measuring electrode(s). The AC voltage generated by the integrated electronics is then either applied between the electrode rods or between the electrode rods and the metallic container wall and/or the pipe wall connected with the metallic process connection serving as a reference electrode. Through the use of an AC current corrosion is avoided on the electrode rods and electrolytic decomposition of the filling material is also avoided.
As soon as the electrically conductive filling material forms a connection between the electrodes and/or between the electrode and the metallic container wall and/or the pipe wall, an AC current flows which causes a lowering of the AC voltage. A drop in the voltage is detected and the integrated evaluation switch initiates the switching of the relay and/or relays, depending on the safety circuit that is set. The switching status of the relay is displayed on the front side of the device with two yellow LEDs. In some applications, in order to avoid unintentional switching actions, it is necessary to compensate heavy wave movements which are caused for example, by stirrers or when filling and/or emptying. Two switches on the front side of the device enable a switch delay of 0.5 / 3 / 5 / 8sec to be set. This has an impact on both channels, both when energizing and de-energizing the filling level relay.
There is a potentiometer on the front side of the device for compensating the responsiveness to the conductivity of the liquid.

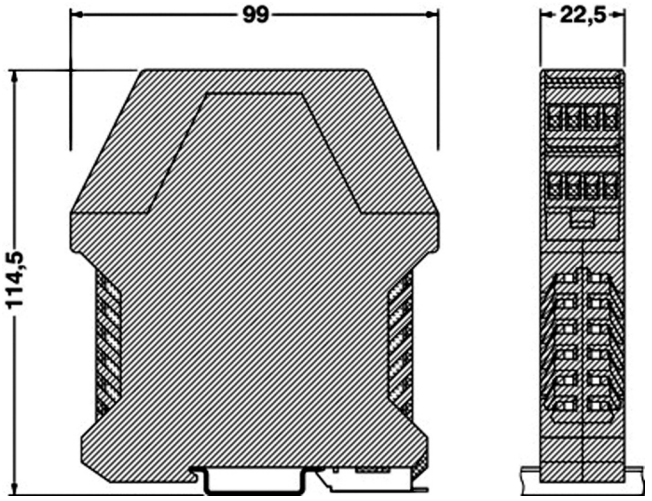
application examples

- as a security device to guard against leakage and overfilling
- as a protection against running dry of pumps
- as a two step control in systems
- limit state checks in containers

filling level sensors

1250 conductive filling level relays

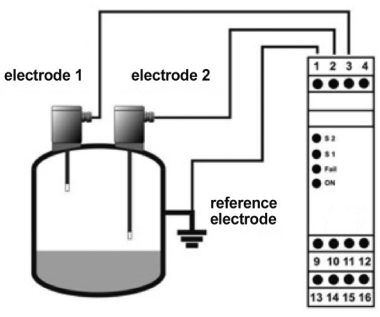
article-no.	FV565900	FV565901	FV565908
operating range	≤ 200kΩ	≤ 1MΩ	≤ 8MΩ



TECHNICAL DATA

operating range	≤ 200kΩ	≤ 1MΩ	≤ 8MΩ
output	relay, 2 x change-over contact		
function	level detection or two-step control		
operating voltage	20 ... 253V AC / DC, 48 ... 62Hz		
power consumption	≤ 3.5VA / 1.3W		
switching capacity	max. 250V AC / max. 10A AC max. 2500VA at ohmic load / 500VA at cosφ ≥ 0.7		
contact life	≤ 100000 operating cycles at max. load		
power supply	≤ ±10V (90Hz ± 15Hz) / ≤ ±1mA (galvanically isolated)		
turn-on delay	0.5 / 3.0 / 5.0 or 8.0sec		
display (operation)	green LED		
display (alarm)	red LED		
display (signal)	2 x yellow LED		
sensitivity adjustment	potentiometer		
short-circuit protection	-		
reverse polarity protection	+		
design	22.5 x 99.0 x 114.5mm		
housing material	PA - polyamide		
operating temperature	-40 ... +70°C		
system of protection (EN 60529)	IP20		
weight	145g		
connection	terminals, max. 1x2.5mm² or 2x1.5mm²		

connection:



Warning:
Never use these devices in applications where the safety of a person depends on their functionality.