



2110 - Mini-SQUING

Mobrey™ Mini-Squing Compact Vibrating Fork Level Switch



Features

- / 3/4", 1" or 2" Tri-clamp
- / High operating frequency
- / 21...264V DC or AC voltage
- / Least depth for mounting
- / Diagnostic LED

Description:

The 2110 vibrates in the air according to the principle of a tuning fork at the frequency of resonance. When the switch is dipped into a fluid the frequency changes due to the higher inertia of the medium. The integrated electronic components capture this change and link to a load connected in series. For the first time, we succeeded in shortening the sensor element that is contacted by the media to 50 in keeping its size so narrow that a 3/4" thread is absol

The same device can be operated with supply voltage AC or DC, thereby reducing the storage of spare parts to a minimum. The device is provided with a microprocessor that is capable of self-monitoring and fail-safe functions. It triggers a user-defined alarm that indicates a dry-run or wet status through an LED which changes from continuous light to blinking and, in the event of malfunctioning, changes again its frequency.

Application:

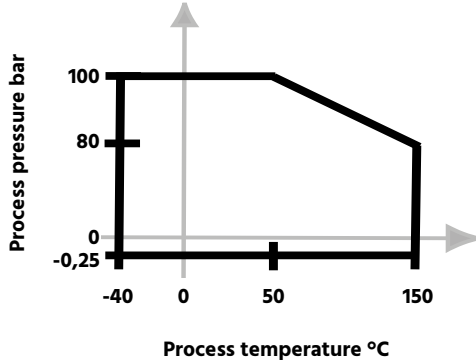
The 2110 series of limit switches is intended for recording limit levels in most of the fluids and slurries. The device can process also media with high viscosities or sticky properties without any problem since it is capable of „shaking away“ adhesions by virtue of its function. Irrespective of whether for overflow protection, pump protection, leakage monitoring or pump control, the 2110 is universally applicable and, due to its small dimensions, it can be mounted even in narrow spaces. The switch has a fully stainless steel facing to the media and can be connected with an R3/4" or R1" thread to the process. Optionally, a fitting is available for applications in food-processing industry which enables, together with the 1" variant and an O ring, a smooth joint to the fluid.



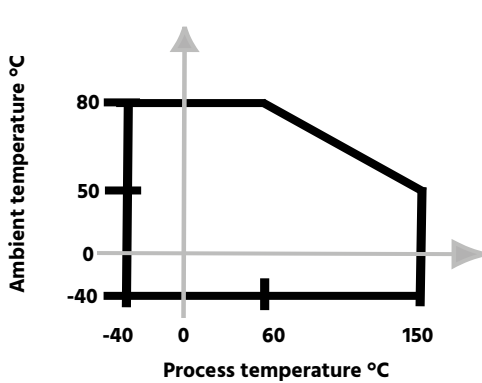
Technical Specifications:

Pressure range /	-0.25...+100 bar at 50°C
Temperature range /	-40...+150°C
Ambient temperature /	-40...+80°C (50°C at 150°C on the wet side)
CIP-cleaning /	withstands steam cleaning routines up to max. 150°C
Medium specific weight /	600 kg/m ³
Viscosity /	0.2...10000 cP
Switching point (water) /	approx. 13 mm immersion depth
Hysteresis (water) /	± 1 mm nom.
Switching delay /	1 sec.
Housing /	stainless steel 304
Fork /	stainless steel 316
LED-window /	anti-flammable polycarbonate
Plug /	polyamide, reinforced fiberglass
Plug sealing /	nitrile butadien rubber
Function test /	through magnetic test point during operation

Process pressure curve /



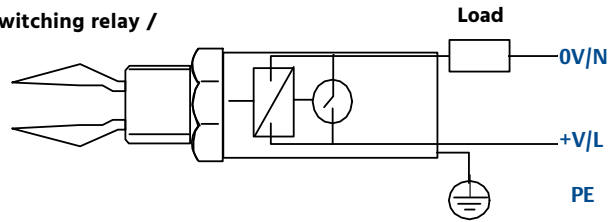
Process temperature curve /



Electrical Specifications:

Supply voltage /	2-wire: 21...264 V (± 10%) DC or AC 3-wire: 18...60 VDC
Leakage current (without load) /	< 3.0 mA continuous (2-wire)
max. Load /	500 mA
max. Peak load /	5 A for max. 40 ms electr. protected
min. Switching load /	20 mA continuous (2-wire)
Voltage drop 2-wire /	6.5 V for 24 VDC, 5.0 V for 240 VAC
Voltage drop 3-wire /	< 3.0 V
Electr. Protection /	protection against polarity reversal and short-circuiting, protection when load is absent
Electr. Connection /	square plug as per DIN 43650
Cable diameter /	4...9 mm (PG9)
Protection class /	IP66/IP67 EN60529

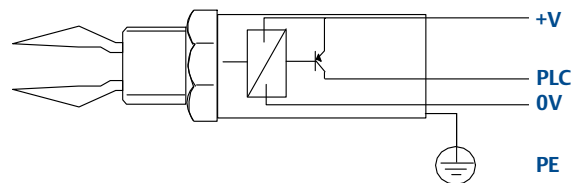
Switching relay /



Switching relay

Power supply	21...264 Vac (50...60 Hz)/dc
max. switching voltage	500 mA
max. peak voltage	5 A for 40 ms
min. switching voltage	20 mA continuous
Current drop	6.5 V at 24 VDC
Current consumption	< 3.0 mA continuous

PNP Switch /

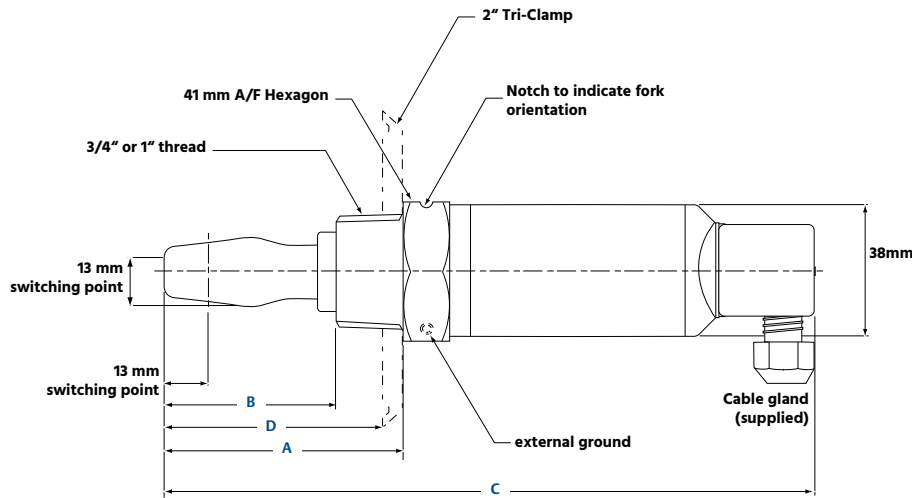


PNP Switch

Power supply	18...60 VDC
max. switching voltage	500 mA
max. peak voltage	5 A for 40 ms
Current drop	< 3 V
Current supply	3 mA nominal
Current output	< 0.5 mA



Dimensions in (mm):



Connection	A	B	C	D
R 3/4"-male	69 mm	50 mm	188 mm	-
NPT 3/4"-male	69 mm	50 mm	188 mm	-
R 1"-male	69 mm	50 mm	188 mm	-
G 1"-male	78 mm	60 mm	201 mm	-
2" Tri-clamp	69 mm	50 mm	188 mm	64 mm
R 1"-male extended	116 mm	98 mm	239 mm	-

Ordering Codes:

Order number	2110.	1.	1A
2110 Miniature Vibrating Fork			
Electrical function /			
0 = 2-wire in series to load			
1 = PNP-3-wire for SPS-operation			
Process connection /			
0A = R 3/4"-male DIN2999			
1A = R 1"-male DIN2999			
0D = NPT 3/4"-male			
2R = 2" Tri-clamp, hygiene fitting			
1B = G 1"-male			
1L = G 1"-male extended			

