



FD16-326

FD

Maximum pressure limiters for liquid gas installations

Pressure limiters of the FD series are constructed in accordance with the special directives for liquid gas engineering. The requirements of TRB 801 Appendix II §12 are met. All parts coming into contact with the medium are made of stainless steel 1.4104 and 1.4571. The pressure sensor was designed to be "self-monitoring" to exceed the requirements of TRB, i. e. should the measuring bellows rupture, the pressure sensor switches

off towards the safe side. The pressure sensor thus complies with "of special construction" in the sense of VdTÜV Memorandum "Pressure 100". Pressure limiters are used in intrinsically safe control circuits (Ex-protection Ex-i). By using an isolating amplifier, the control circuit is also monitored for line break and short circuit.



SIL 2 according IEC 61508-2

Technical data

Pressure connection External thread G 1/2 (pressure gauge connection) according to DIN 16 288 and internal thread G 1/4 to ISO 228 Part 1.

Switch housing 300
Die cast aluminium GD Al Si 12.

Protection class: IP 65

Mounting position: Vertically upright

Explosion protection Ex-i (only when used in conjunction with isolating amplifier).

Pressure sensor materials
Housing: 1.4104, Pressure bellows: 1.4571
All parts fully welded. Perbunan safety diaphragm (not in contact with medium).

Ambient temperature -25°C to +60°C.
At ambient temperatures below 0°C, ensure that condensation cannot occur in the sensor or in the switching device.

Max. medium temperature: +60°C.

Outdoor installations

Protect the device against direct atmospheric influences. Provide a suitable protective cover.

Max. permissible working pressure: 40 bar.

Switching pressure: 3–16 bar. Adjustable with the setting spindle after removing the terminal box.

Calibration

The **FD16-316** and **FD16-327** series are calibrated for rising pressure. This means that the adjustable switching pressure on the scale corresponds to the switching point at rising pressure. The reset point is lower by the amount of the switching differential. (See also page 23, 2. Calibration at upper switching point).

Interlock after cutout

Internal interlock on **FD16-327**.
Interlock defeat: after pressure reduction of approx. 2.5 bar by pressing the red button (with tool) on the scale side of the pressure switch.

External interlock on **FD16-326**.

Interlock defeat: After pressure reduction of approx. 0.5 bar. Press unlocking button in control cabinet.

Line break and short circuit monitoring

On types **FD16-326** and **FD16-327** used in conjunction with isolating amplifier, the control circuit is monitored for short circuit and line break. The resistor combination incorporated into the pressure switch ensures that a defined current flows at all times during normal operation. In the event of short circuit or line break, the current level changes and the relay drops out to the safe side.

Product Summary

Type	Setting range	Switching differential	Interlock	Dimensioned drawing
FD16-326	3...16 bar	0.5 bar	Extern	3 + 19
FD16-327	3...16 bar	2.5 bar	Intern	3 + 19

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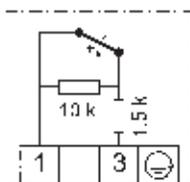
Defeat:

E = External, i.e. in control cabinet via relay with latching
I = Internal, i.e. locally at pressure limiter

For the power supply circuit

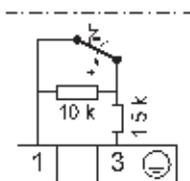
U_i 14 V DC
R_i 1500 Ohm
C_i 1 nF
L_i 100 µH

Internal circuit



FD 16-326

Single pole change over switch with resistor combination for line break and short circuit monitoring. (External interlock in control cabinet necessary).



FD 16-327

Single pole changeover switch with mechanical switching state interlock on reaching maximum pressure and with resistor combination for line break and short circuit monitoring.

Please note: FD pressure limiters must never be connected directly to mains voltage. They must only be used in conjunction with isolating amplifier.