SCHISCHEK
EXPLOSIONPROOF

Pressure Sensor
ΔP, P

Pressure Sensors with resistance output signal for P, ΔP, in harzardous locations zones 1 and 2. **ATEX compliant** **DFK-07-2G DFK-17-2G**

APPLICATIONS

DFK-..-2G is a pressure sensor with passive resistance output signal for negative, pressure and differential pressure in room and for duct. In combination with EEx-i transducer Type EXL-IMU-1 with intrinsic safe circuit the sensors may be used in hazardous areas zones 1 and 2. The transducer changes the resistance output into an active signal 0... 10 V/0(4)... 20 mA, proportional to P, ΔP

DFK-07-2G	min/max.	-700/700 Pa	P, ΔP	wall mounting	room/duct-pressure
DFK-17-2G	min/max.	-1700/1700 Pa	P, ΔP	wall mounting	room/duct-pressure

smallest adjustable measuring range 40 Pa
greatest adjustable measuring range 1800 Pa

TECHNICAL DATAS

Type	**DFK-07-2G**	**DFK-17-2G**
Supply	by EXL-IMU-1	by EXL-IMU-1
Mounting position	vertical, vibration free	vertical, vibration free
Measuring	negative, pressure differential pressure	
Sensor	3-wire, resistance linear	3-wire, resistance linear
Working range	on request e.g. -25/0/25 Pa	on request e.g. 0... 1,7 kPa
Measuring accuracy*	1,5% of max. value, or 1,5 Pa	1,5% of max. value, or 1,5 Pa
Min./max. pressure	±0,9 Pa, temporal unlimited	±1,8 kPa, temporal unlimited
Ambient temperature	0... 60 °C	0... 60 °C
Housing material	Makrolon 30% GF	Makrolon 30% GF
Installation	vertical, on walls	vertical, on walls
Connecting terminals	max. 2,5 mm²	max. 2,5 mm²
Protection acc. to EN60529	IP40	IP40
Weight	3,5 kg	3,5 kg
Medium	gaseous, not aggressive	gaseous, not aggressive
Max. cable length	Between measuring point and ring balance < 50 m.	

Including sensor
Installation area The ring balance can be used in hazardous areas, zones 1 and 2 together with the transducer EXL-IMU-1.

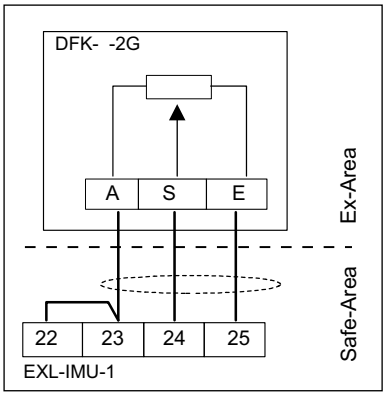
*with constant temperature on the ring balance
output value of the transducer will change about 0,1%/1°C temperature change at the ringbalance.

MOUNTING AND INSTALLATION

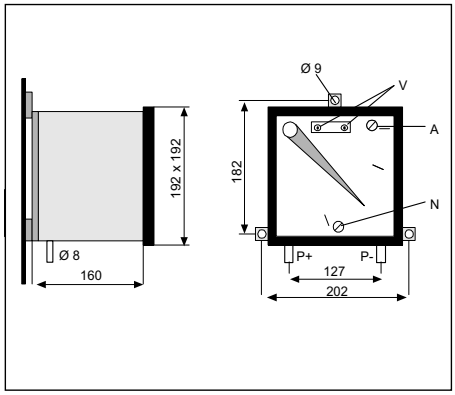
1. Mounting: Vertical on the wall or panel.
2. Open valves: The valves “V” prevent the drain of the sealing liquid during the transport. When in operation, turn both screws in counterclockwise direction to their end positions.
   Attention: Partly opened valves are not gastight, explosive gas can issue at this position.
3. Locking screw: Turn the locking screw “A” in counterclockwise direction to its end position. The pointer should now balance out to “0”.
4. Correct zero settings: Use screw “N”.
5. Process connections:
   - left side - higher pressure P+ • right side - lower pressure (or suction) P-
   - differential pressure higher pressure left side P+ • right side - lower pressure
   - max. length of tubes - 50 m / scale ranges lower 100 Pa - 20 m
6. Close front door: Place slot vertically and press in screw firmly.

IMPORTANT
The ringbalance instrument contains filling fluid. Before dismantling or transporting:
1. Lock down the ringbody: Use screw “A” while pointer is held on the dot near zero.

ELECTRICAL CONNECTION



DIMENSIONS



II2G EEx ia IIC T6
Zone 1, 2
acc .to ATEX

EEx-i CIRCUITS - TABLE 1

Operation values maximum at terminal

Terminals		**A-S-E**
Voltage	Ui	9 VDC
Current	Ii	5 mA
Power	Pi	10 mW
Capacity	Ci	< 20 pF
Inductivity	Li	negligible

The maximum values must not be exceeded!
Please check your external capacities and inductivities in acc. to the length of the cable and the methode of installation.

RECOMMENDED TRANSDUCER

- Transducer Mfr. Schischek Type EXL-IMU-1.
- In combination with transducer EXL-IMU-1 is intrinsic safety proof for simple circuits given.
- Manufacturer declaration zone 1 and 2.

MAINTENANCE

The ring balance is maintenance free.

ATTENTION!

- For installation, use and maintenance the official standards and rules must be applied.
- The energy of intrinsically safe circuits are below the level to start an explosion in the event of a spark.
- Intrinsic safe circuits must be installed with light blue coloured and separate from non intrinsic safe circuits.
- The sensor is passiv and potential free for use in hazardous locations in zone 1, 2.
- Pay attention to the max values for wiring, listed in table 1.
- Avoid electrostatic discharge.
- Only wet cleaning.

Important:
Don`t tip over the ringbalance after opening the valves “V” because the sealing liquid will drain.

subject to change

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