

MU-ANALOG-65-Ex

Ringbalance for draft, pressure, differential pressure and flow as "Passive Sensor" EEx (ATEX) to be connected to the Ex-Transmitter type PR5114B2A



Ringbalance

as "Passive Sensor" according to EN50020 (5.4) intrinsically safe "i" to be mounted in the hazardous area, Ex-zone 2.

Housing	for wall mounting IP65; see page 10
Display	large display 150 x 150 mm (6" x 6")
Measuring Ranges	from 0...40 Pa (+/-20 Pa) to 0...1.8 kPa - see page 9 -
Accuracy	max. error +/-1.5% of span, or +/-1.5 Pa
Scale Units	Pa, kPa, daPa, mbar, mmWS, mmCE, in.W.C.
Ambient Temper.	-20 . . . 0 . . . +40 C° (-4 . . . +104 °F)
Measuring Pickup	Magnetic field sensor; non-contact and with infinite resolution

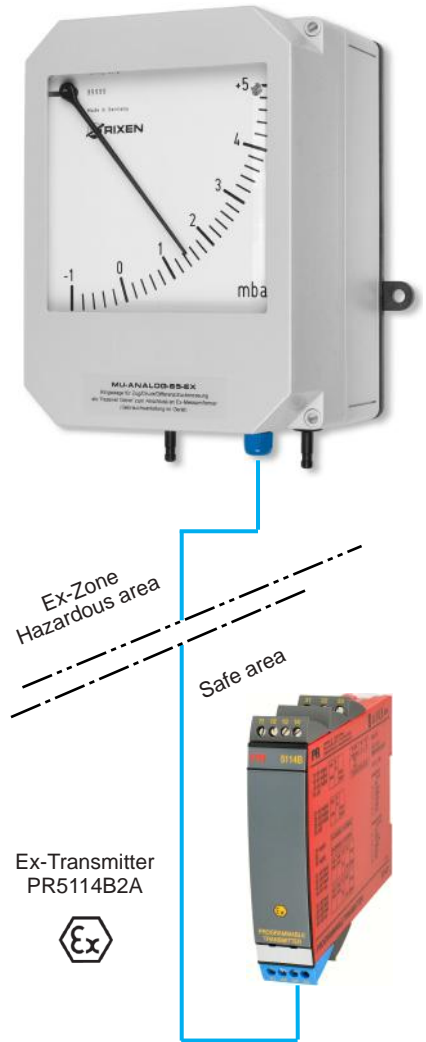
Ex-Transmitter PR5114B2A

converts the sensor signal of the Ringbalance into the standard output signals of 0-20mA, 4-20mA, 0-10V, and 4-20mA (loop-powered)

Approvals	ATEX 0539 "Ex" II (1) G; [EEx ia] II; DEMKO 99 (ATEX 124571) applicable zone 1,2
Housing	snap-in mounting on DIN-rail, 109mm high, 24mm wide, 130mm deep
Power supply	22...250V AC / 20...300V DC
Outputs	0/4-20 mA; 0-10 V; and 4-20 mA (loop-powered) linear/proportional for draft/pressure/diff.-press; or with root-extraction for velocity/flow

Order Specifications

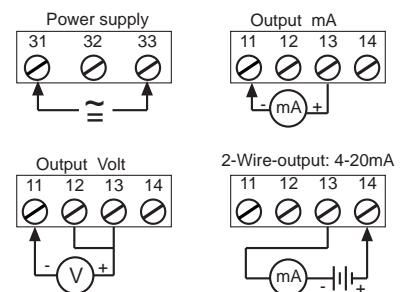
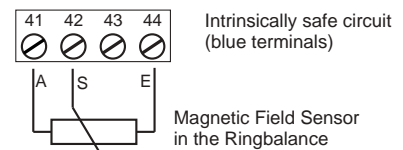
Ringbalance	1. Type : MU-Analog-65-Ex 2. Measuring range (please specify)
Ex-Transmitter	1. Type : PR5114B2A 2. Required output signal (please specify)
	Factory Calibration Certificate included



Ex-Transmitter PR5114B2A



Terminals of Ex-Transmitter



Measuring Ranges,

Filling Fluids, Overload Protection Device

Measuring Ranges

0.....40 Pa	Oil	-200+20 Pa	Oil
0.....50 Pa		-250+25 Pa	
0.....60 Pa		-500+50 Pa	
0.....80 Pa		-100.....0+100 Pa	
0.....100 Pa		-250.....0+250 Pa	
0.....150 Pa		-500.....0+500 Pa	
0.....200 Pa			
0.....250 Pa		-200+40 Pa	
0.....300 Pa		-400+20 Pa	
0.....500 Pa		-300+10 Pa	
0.....600 Pa	-100+30 Pa		
0.....700 Pa	-200+80 Pa		
		-250+75 Pa	
0.....800 Pa	Galden	-250.....0+50 Pa	
0.....1.000 Pa		-100.....0+300 Pa	
0.....1.500 Pa		-100.....0+500 Pa	
0.....1.800 Pa			

Conversions			
	Pa	mbar	mmW.C.
1 Pa =	1	0.01	0.102
1 mbar =	100	1	10.2
1 mmW.C.=	9.81	0.098	1
1 in.W.C. =	249	2.49	25.4

Measuring Range	Filling Fluid	max. Overload
below 700 Pa	Oil (0.8 kg/l)	+/-900 Pa
above 700 Pa	Galden (1.9 kg/l)	+/-2.1 kPa

Further scale units:
mbar / mmWS / mmW.C. / in.W.C. /

Filling Fluids

"Oil" Mineral oil, density 0.8 kg/l;
for ranges from 0-40 Pa (0.15" W.C.)
to 0-700 Pa (3"W.C.)
Overflow point at +/-900 Pa (3.5"W.C.)

"Galden" Synthetic oil, density 1.9 kg/l;
for measuring ranges over +/-700 Pa
Overflow point at +/-2.1 kPa (8.5"W.C.)

Overload Protection

Every Ringbalance is inherently protected to at least +/-900 Pa (3.5"W.C.), even it has, for example, a measuring range of only 0-40 Pa (0.15"W.C.).

With the synthetic oil filling fluid GALDEN, the Ringbalance is inherently protected to +/-2.1 kPa (8"W.C.).

If those limits (900 Pa / 2.1 kPa) are expected to be exceeded in the specific application, the Overload Protection Device "DZ" is available as an option on all Ringbalances.

Overload Protection DZ1 Bypass

How it works

A tube is installed in the ringbody, with one end submerged in the filling fluid on the high-pressure side, and the other end leading into the right (low-pressure) chamber (Fig.1).

The tube has no effect as long as it remains submerged in the fluid. However, when the maximum permissible differential pressure is exceeded, the inlet end of the tube rises out of the oil and the overpressure in the left chamber vents into the right chamber (Fig.2).

By means of this pressure relief effect, the maximum rise of the oil is limited to a level below "overflow".

In applications where frequent and/or prolonged overload conditions occur, an external filter should be installed in the high side sampling line in order to keep the ringbody and filling fluid clean.

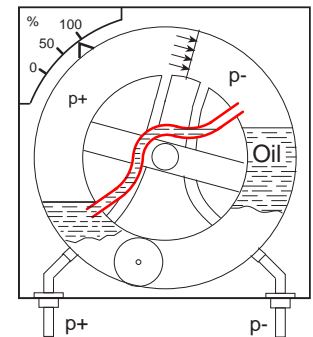


Fig. 1
Tube submerged

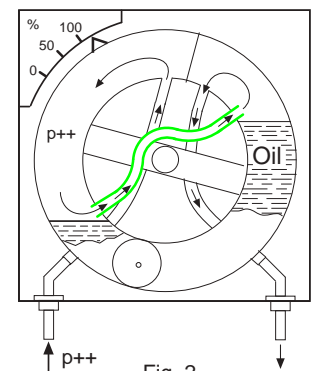


Fig. 2
Bypass open