Pressure Transducer with amplifier
DGW-12-HF / 2.5…2500 bar
DGW-12K-HF / 10…2500 bar

Purpose
Measuring, especially remote measuring of pressure in hydraulicsystems with oil or grease.

Operating
Signal of strain gauge bridge upon the diaphragm is amplified by an internal amplifier

Advantages
- Tight, non corroding, high overload
- Small dead room, deaeration screw
- Very small combined error
- Suitable for wet areas, waterproof receptacle with gold-plated contacts
- Protected against HF-Interferences by shielding and filter
- 10 V-output allows indicating + evaluating without additional amplifier
- Since 1991 furnished with a CAL-unit
- ZERO and SPAN are remote adjusted from feeding set
- K-Option is improved in accuracy and shift. It has three years guarantee
- Similar model DGW-15 (data sheet E 01.8) has hydraulic connection SW-13

Application
Measuring static and dynamic pressure, remote control, even in wet and electrically disturbed areas. Electro-hydraulic control, e.g. of screw down movement of top roll of mill, together with our feeding sets NK-10/15 Z2/3] or NW-16 (data sheet E 12.4 / E 12.8)

Construction
Diaphragm, fabricated together with the pressure connection thread from one part of stainless steel, bronze or aluminium is furnished with:
- strain gauge bridge with adjusting elements for ZERO/SPAN (K-option f. shift)
- print-card with amp and CAL-unit in shock-proof SMD-technics, bridge and amplifier with separate feeding
- the front plate with the receptacle
- shield tube sealed by joint O-rings.

Accessories
We deliver, in foam-plastics packaging, together with the following accessories:

protection caps, joint rings, spanner for hook + deaeration screw, cable-connector.

Electrical Data

Bridge resistance.....4 x 350 Ω nominal
" actual value.....test certificate
Flange connector.....T 3106-003 (7 p.)
" Option.....LEMO RAE 2307
Bridge excitation.....max.12 V symmetr.
" Contacts.....6 / 3
Amplifier feeding.....- 15 V / 0 V / + 15 V
" Contacts..... 2 / 7 / 4
Output(0..nom.press.)……0…10 V
" Contacts.....5 / 7
Balancing.....± 1 V for ± 10 %
" Contact.....1

Tolerances (20°C).....Standard K-Option

Balancing*).....< 2 % < 1 %
"Thermal shift/10K.....< 0.5 % < 0.2 %
Output*)/nom.value.....< 2 % < 1 %
" /type plate.....< 0.1 % < 0.05 %
"Thermal shift/10K.....< 0.5 % < 0.1 %
**)adjustable by potis in feeding sets*

Combined error.....< 0.1 % at 10 bar
< 1 % at 5 bar
< 1.5 % at 2.5 "
Common mode reject.....100 dB 100 Hz typ.
Amplif.frequ.range.....0…20 kHz 3 dB
Nominal Temp.-range.....- 20°C…+ 80°C
Tolerated range.....- 50°C…+ 120°C

For testing the cabeling we recommend Phantom for DGW-12(data sheet E 01.5)

Mechanical Data

Pressure connection.....M 20 x 1.5
" Option (more cost).....G 1/2“
Dead volume.....< 3 cm^3
Option.....<.3 cm^3
Working pressure.....1.5 x nom. pressure
(But output limited to nearly 12 V DC)
Limiting pressure.....2 x nominal pressure
Destroying ".....> 4 x nom. pressure
Standard steps(bar).....2.5#) - 5#) - 10
#)*not in K-Option).....*25 - 50 - 100
250 - 500 - 1000
without deaer. screw:.....2500
Other steps: higher price + delivery time
Natural frequencies.....1.3 - 4 - 13 - 40kHz
at nom. pressure.....2.5-25-250-2500 bar
Weight.....nearly .4 kg
Dimensions.....see drawing

Since 1991, our DGW-12 contain a CAL-unit simulating 100 % nominal pressure for remote control. This is done by pressing down the CAL-key of feeding sets NK 10-15/Z2/3 or AN 15/P2 (data sh. E 12.4) or newer models NW 17/1/2 (data sh. E 12.9). It is not neces-sary to measure at the place of transducer, or to induce a known pressure to it. But older models of feeding sets, e.g. NK 10-15/Z1, re-main compatible, of course without the remote calibrating.