



## PK1-M10-DGS Calibration Kit Operating Manual

DGS has two operating keys. The left key (SELECT) serves to select the functions and the pressure units. The right key (ENTER) activates the selected function or pressure unit. The right key is also used to switch between the Min and Max pressure value.

Pressing the SELECT key turns the DGS on. The instrument first displays the full-scale pressure range (top display) and the software version (year/week). The DGS is then ready for use and indicates the actual pressure (top display) and the last measured Max pressure value (bottom display)

The DGS has the following functions:

### RESET

Min./Max. values are set to the actual pressure

### OFF

Turns the DGS off

### MANO

Releases the following function:

#### ZERO SET

Sets a new zero reference pressure

#### ZERO RES

Sets the zero reference pressure to the factory setting

#### CONT on/off

Deactivates/Activates the automatic turn-off function (the DGS turns off 15 min after the last operation).

### Available engineering units:

bar, mbar, hPA, kPa, MPa, PSI,  $\text{kp/cm}^3$ ,  $\text{cmH}_2\text{O}$ ,  $\text{mH}_2\text{O}$ ,  $\text{inH}_2\text{O}$ ,  $\text{ftH}_2\text{O}$ , mmHg, inHg

### General Safety Instruction:

When installing and operating the DGS, attention should be paid to the corresponding safety regulations.

On DGS with pressure range  $\geq 61$  bar, the pressure connections could show residual hydraulic oil, determined by production flow.



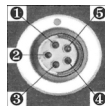
### Battery Change / Battery Life

When the battery starts weakening a low battery warning (BAT LOW) will appear on the display.

Please turn off the DGS before changing the battery. Open the DGS from the front panel (no rotation is needed). Change the weak battery with a new one (CR2430) and close the

### RS485 Interface:

At the back of the DGS (Fischer plug Series 103)



- |         |            |
|---------|------------|
| 1) GND  | 4) RS485 A |
| 2) n.c. | 5) RS485 B |
| 3) +VCC |            |

- 1- Remove the fill cap and fill reservoir to the recommended level with the appropriate fluid. Replace the cap.
- 2- Connect hose fittings to the adapter. Connect the DGS to the pump via the top port. Connect instrument under test to the flexible hose/gauge adapter.
- 3- To prime the system, twist the knurled knob marked "Release". Squeeze the handles together and release. Twist the knob once again. Repeat as necessary until system is fully primed and low pressure is indicated on the DGS. The feature can be changed at any pressure.
- 4- Operate handle several times to build pressure. Please note that once pressure starts to rise, it will rise very rapidly. **Be sure to not exceed the maximum operating pressure indicated on the DGS and on the pump** (the lower pressure has to be consider). e.g.: DGS 400 bar, Pump 700 bar: do not exceed 400 bar.
- 5- Careful use of the release valve & fine control enable a controlled release of pressure, essential for calibration purposes.
- 6- If the fluid level in the reservoir falls considerably during the use, a partial vacuum can be created in the reservoir which may affect pump performance. To avoid this, unscrew the fill cap to allow air to enter the reservoir.



Range: 0...700 bar

#### MAINTENANCE

No routine maintenance is required.

A periodic check of system is recommended, however. While the pump is field serviceable, it is recommended it be returned to CalRef if repair is needed.

#### POINTS TO REMEMBER

- Do not exceed max pressure 700 bar or the max pressure of the digital gauge DGS if lower.
- In order to use NPT fittings, the required NPT to BSP parallel thread adapter must be used (adapters included).
- Bonded washers (included) are required to insure a proper seal. To seal the adapter, simply hand-tighten and snug up with a wrench. Do not over-tighten.
- Use with distilled water, mineral-based hydraulic oil or alcohol.