

These instructions refer to data sheet 1609.

## **1. Functioning**

The AE 30 and AE 40 pollution indicators are electrical differential pressure indicators.

The AE 50 to AE 80 pollution indicators are combined optical and electrical differential pressure indicators. These differential pressure indicators can be fitted to all pressure filters ( $p \leq 420$  bar stainless steel,  $p \leq 220$  bar aluminium) for which there is a corresponding assignment on the relevant dimension drawing. As the degree of pollution of the filter element rises, so the difference between the entry pressure  $p_1$  and the exit pressure  $p_2$  of the filter increases. Depending on this pressure difference and irrespective of the operating pressure, in the pollution indicators

- AE 30 and AE 40, two electrical signals (contact maker/contact breaker) are triggered
- AE 50 and AE 62, two electrical signals (contact maker/contact breaker) are triggered and one optical signal is formed
- AE 70 and AE 80, two electrical signals (contact maker/contact breaker) are triggered and two optical signals are formed.

A metering piston subjected to the entry and exit pressure moves against a metering spring according to the pressure differential. Depending on the path a permanent magnet integrated in the metering piston activates a reed contact (electromagnetic switch) and triggers the electrical signal. The electrical and optical indication is effected as a digital signal at the given switching pressure. Versions 50 to 80 of the pollution indicator are fitted with additional LED displays. The optical LED signal becomes visible according to the selected version in the translucent cover plate of the line box on the pollution indicator.

In the pollution indicators

- AE 50 and AE 62, the red LED signals that the filter element needs to be changed
- AE 70 and AE 80, the green LED signals the normal operating state ( filter element not yet polluted to an unacceptable level), while the red LED signals that the filter element needs to be changed.

## **2. Operating instruction**

Normally filters are supplied with mounted clogging indicators.

It is necessary to make sure the availability and the right positioning of sealing parts O-ring 14 x 2 as well as a dirt-free mounting.

The electrical contacts are to be connected according to the graphical symbol shown on the type plate of the clogging indicator



Only use the EATON supplied screw to tighten the connector plug

## **3. Maintenance**

The device is maintenance-free, however, note that no cleaning fluids and solvents get on the transparent cap of the optical indicator.

### **Note:**

For clogging indicators being used in hazardous locations the Eaton documentation N° 41874 "Supplementation of the Operating Manual for the use of clogging indicators in potential explosive areas.