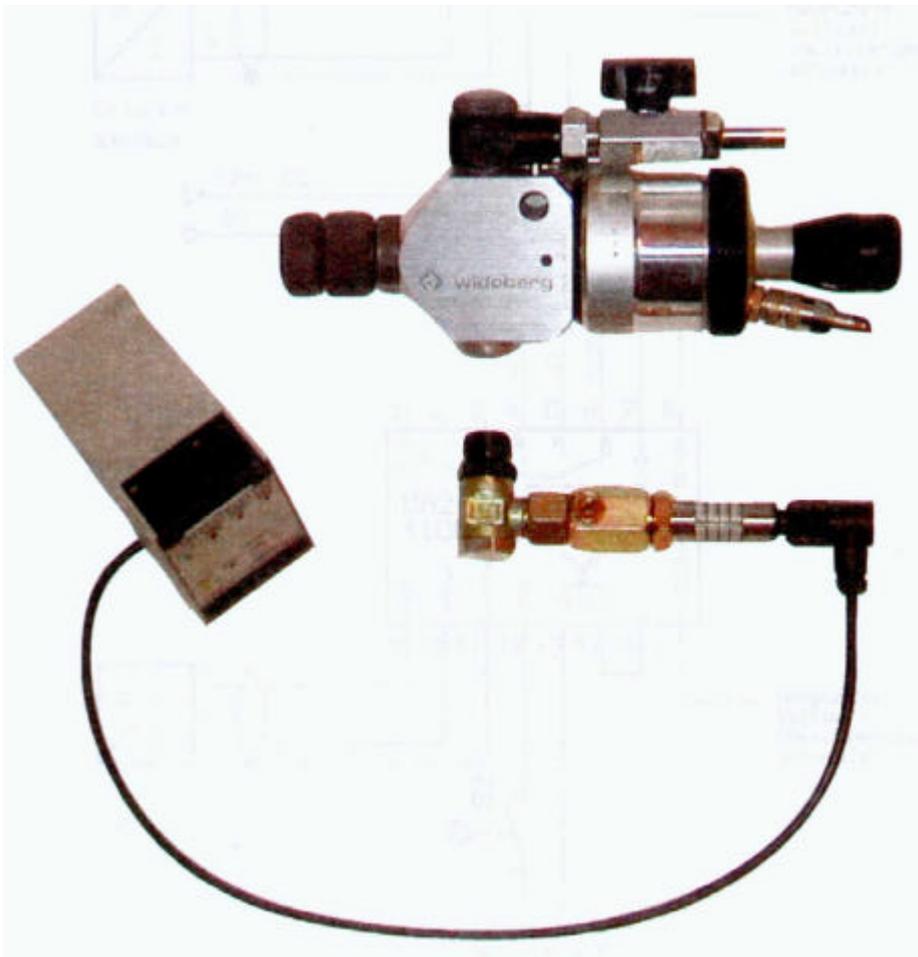




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Electronic monitoring system type **Wido-Control III** for High Pressure Spray Guns



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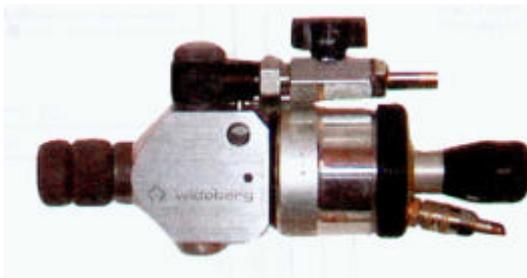
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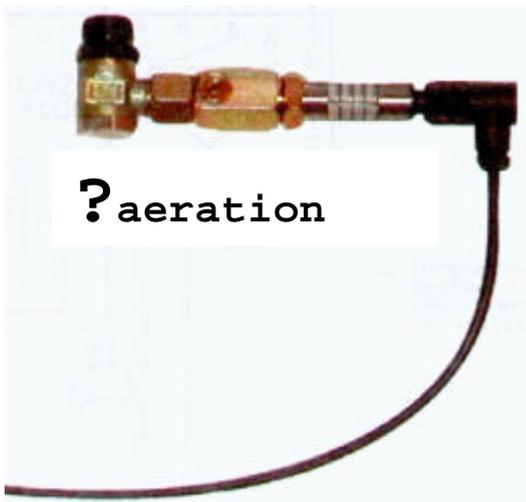
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Operating Principle

Control module for High Pressure Spray Gun type WIDOSPRAY



By using an analog sensor on the spray gun, which usually is added after the installation, in connection with a specially developed module it is possible to continually monitor the function of the spray gun. That means not only the actual spraying cycle is checked, but also the supply of compound, system errors or wire breaks.



When starting up, first the applied pressure of the compound within the gun is checked. It is set at about 2 bar (30 psi). If this minimum value is present, the spraying cycle can begin with aid of an electrical impulse (triggered by a timer). The start signal is simultaneously entered into the control module and activates an additional measurement within a specific time period. During this period a high pressure signal must be built up as well as dissipate. When this happens, the check / function is okay, that means no fault is registered. If no pressure signal is received within a specific period of time or the pressure signal is registered too long the module will indicate a fault.

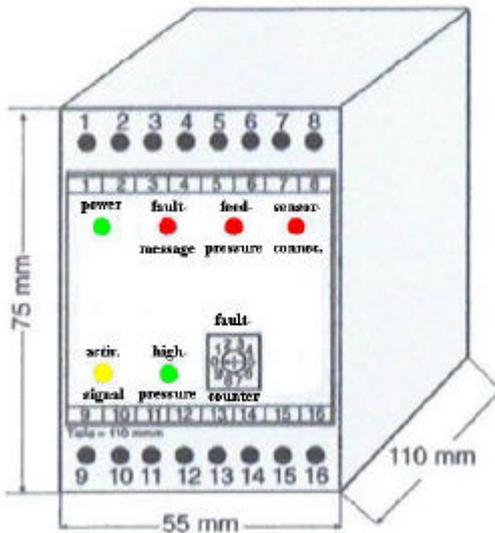
An internal counter counts the fault messages. With a rotational switch in can be determined how many faults are permitted.

The counter is automatically returned to zero when the measurement is correct or when the supply voltage is turned off.



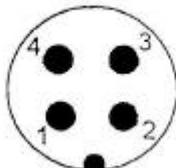
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Control Module - Front side:

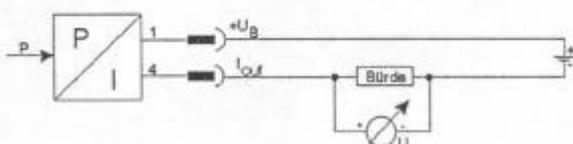


Attention: Counter must not be set at zero (no fault signal)

Pin location M 12 - plug



Electrical connection with 2-line technique



1. **LED** green (power) shows that the module is ready for Operation

2. **LED** red (fault message) lights up with every fault and shows a combined fault in which also the fault relay activates. The LED turns off at a good spray result or when the power supply is turned off.

3. **LED** red (feed pressure < 30psi / 2 bar) lights up when the feed pressure of the compound in the spray gun drops below 30 psi / 2 bar.

4. **LED** red (sensor connection) lights up when the connection cable to the pressure sensor is not properly connected (e.g. break in cable, connector loose...), with this LED also the fault message lights up.

5. **LED** yellow (active) lights up as soon as the control cycle has started. It stay on as long as the start signal is on. The length of the start signal has no impact on the control operation.

6. **LED** green (high pressure) only lights up briefly when the predetermined pressure value of the spraying system is reached (spraying cycle was ok).

Rotational switch

The number of successive faults allowed, before the monitor indicates a fault message, can set between 1 – 9 by a rotational switch.

Due to safety reasons and to avoid the running dry of the polishing wheel, not more than 3 faults should be allowed.

Installation Instructions

General:

The monitor consists of two modules: a special sensor with adapter and exhaust as well as an electronic control unit for installation in the electrical control cabinet.

Both modules are connected with a shielded cable.

The communication between sensor and control unit is laid out as a two-line system and can be operated with two different electrical currents with the aid of a transformer with a supply voltage of 24 volts (see connection plan).

The electronic control of the gun takes place also during the pause time. In this case only the compound feed pressure is controlled and is indicated with the LED „Feed Pressure“.

The actual monitoring during the spray cycle can only take place by an electronic start signal which either is sent from a timer direct or from the magnetic valve to the control module.

After the start signal, the received pressure values are controlled by the module and are registered as acceptable or faults.

The electronic is adjusted by ourselves based on standard values. However, if during installation an adjustment of the electronic is necessary one must proceed as follows:

- Remove cover plate of the module
- Adjust trimmer below right, that with each spray cycle the control LED „High Pressure“ lights up for a few milliseconds so that a positive spray result will be indicated.

The number of allowable faulty sprays can be set by rotational switch „fault counter“ between 1 – 9 so that the system does not stop with the first fault signal.

Due to safety reasons and to avoid dry running of the polishing wheel, not more than 3 faults should be allowed

Mechanical Installation

- Close stop cock for polishing compound at the gun.
- Remove inspection plug **number 30**, including usit-ring **number 29**.
- Attach adaptor with exhaust and sensor into gun body (without usit-ring # 29).
- Do not install cable or plug in the direction of the buff due to safety reasons.
- Open stop cock again and let air escape by opening vent screw on the adaptor. At new installation the complete compound feed line can be vented by this means.
- If possible the gun should be mounted in such a way that the vent screw points up, so that the air is vented at the highest point in the system.

Electrical Installation

- Install electrical control module in the electrical control cabinet on standard rail.
- Make cable connections according to circuit diagram.
- For cable connections use shielded cable only.
- Do not install the cable together with power cables. The cable length should not exceed approx. 66 feet (20 meters).