

Two pieces of advice how not to destroy a pressure transmitter when connecting it

Use caution when mounting a pressure transmitter, unqualified approach could damage it before it starts working in the application. It is necessary to follow the right procedure when mounting it into a pressure circuit and when connecting it to an electric circuit.

A) What can happen when connecting it to a pressure circuit

If you are mounting a transmitter into a distribution system where the measured medium is water or other incompressible liquid and you seal the transmitter “into a thread” – with Teflon, tow, etc., it is necessary to realize that the transmitter will work as a piston when being mounted to the connecting fitting. As water is incompressible, you can easily exert pressure higher than 4 Mpa (40 bars) on the transmitter input by complete tightening of the transmitter, unless the transmitter membrane does not break thanks to this disallowed overload. Therefore all pressure ranges from 1.6 MPa (16 bars) and lower are endangered by this procedure. How to proceed correctly? The best way is to use O-ring sealing or flat sealing “on the face” of the transmitter or screw the transmitter into fitting which is not filled with water.

If there is no other possibility than sealing “into the thread” and mounting “into water”, **screw the transmitter only on first 2-3 threads so that it holds and partially seals, then carefully open the closing valve to the pipeline and tighten the transmitter.** In that case there is no risk of creating dangerous pressure, the pressure under the transmitter will equalize with the pressure in the pipeline!!!

B) What can happen when connecting it to an electric circuit

A transmitter can be destroyed especially by disallowed power supply voltage. The transmitter must be power supplied by **DC voltage up to 36 V**, use of higher voltage or AC voltage will probably damage the transmitter.

Three-outlet transmitters, ie. outlets H (0-10V, 0-5V, 2-10V, etc.) and outlets G (0-20V) **can be damaged by incorrect connecting of the outlets.** By connecting the power supply voltage between the outlet (OUT) and minus of the power supply terminal (-Ucc) or between the outlet (OUT) and plus of the power supply terminal (+Ucc), you connect the electronics of the transmitter in a way which cannot work on principle. Therefore even the built-in overload protection then does not work and the transmitter electronics will be seriously damaged. Also higher voltage, supplied by mistake to the transmitter outlet from a connected external circuit, can have a similar effect.

If there is incorrect connection to the electric circuit because of any reasons, we recommend checking the function and calibration of the transmitter even in case it looks good at first sight.

The only protection is a careful check of connection of the connecting connector and voltage on the connector outlets before it is plugged in the transmitter.

For detailed information – see the contacts in this document head.