# KIO-Modul: Potentialfrei und Potentialbehaftet

When describing the contacts of a KIO module, the terms "potential-free" and "potential-loaded" appear. Disregarding them and connecting them incorrectly may lead to errors during operation or may destroy the device. In the following the terms are defined.

- Potential-free means that a connection is passive, i.e. it does not or must not supply voltage itself.
- Potential-loaded means that a connection is active, i.e. it supplies or must supply a voltage itself.

When connecting interfaces, a **potential-free** contact is usually always connected to a **potential-loaded** contact, i.e. one side is voltage-free, the other side is voltage-loaded.

If both sides are potential-free, the communication does not work. If, on the other hand, both sides are potential-loaded, in the worst case the device may be destroyed.

## KIO7017

The I/O module 7017 has no potential-free or potential-loaded inputs. It has 8 analog inputs for measured values (0-10 V, 4-20 mA)

## KIO7052

The I/O module 7052 has 8 digital inputs for circuits with potential.

## KIO7053

The I/O module 7053 has 16 digital inputs for potential-free circuits.

You can find further information here Kentix IO-Modules