What do “floating” and “floating” inputs mean for the extension modules?

When wiring the input channels of an expansion module, the terms “floating” and “floating” are used. Observance is important, as disregarding or incorrect connection can lead to errors in operation or on the device.

The following are definitions of the terms.

- **Potential-free** means that an external contact is passive, i.e. it does not or must not supply any voltage itself. Example would be a simple mechanical light switch.
- **Potential** means that an external contact is active, i.e. it supplies or must supply a voltage itself. Example would be a device fault signal (output), which outputs 24VDC for siganallization of the state.

Extension module KIO7017 – 8-channel analog input

The extension module 7017 has **floating** inputs. These are 8 analog inputs for 0-10V(DC) measuring voltage or 4-20mA(DC) measuring current. Active sensors are therefore required for measured value acquisition with this module.

Extension module KIO7052 – 8-channel input/output

The extension module 7052 has 8 digital inputs for a **potential-loaded** wiring. The external system must therefore supply a voltage of 0V(DC) for OFF and 24V(DC) for ON. The evaluation logic (e.g. ON/OFF) can be set.

Extension module KIO7053 – 16-channel input

The 7053 extension module has 16 digital inputs for **potential-free** wiring with external contacts. A closed contact then means ON (alarm) an open contact OFF (no alarm). The evaluation logic (e.g. ON/OFF) can be set.

It is essential to observe the wiring instructions in the data sheets and manuals. There you will find more information about the external wiring.