1. 1-wire

Note! Not every LogicMachine has a 1-wire interface.

1-wire is a bus technology which is based on client-server topology and allows to connect up to 100 devices to one controller. It is either 2-wire or 3-wire bus installation. In case of a 2-wire system, a parasitic powering is used directly from the bus, normally up to 20 devices can work this way. In case of a bigger amount of 1-wire sensors, you can use LogicMachine 5V DC output to power 1-wire devices (not every LogicMachine has 5V DC output).
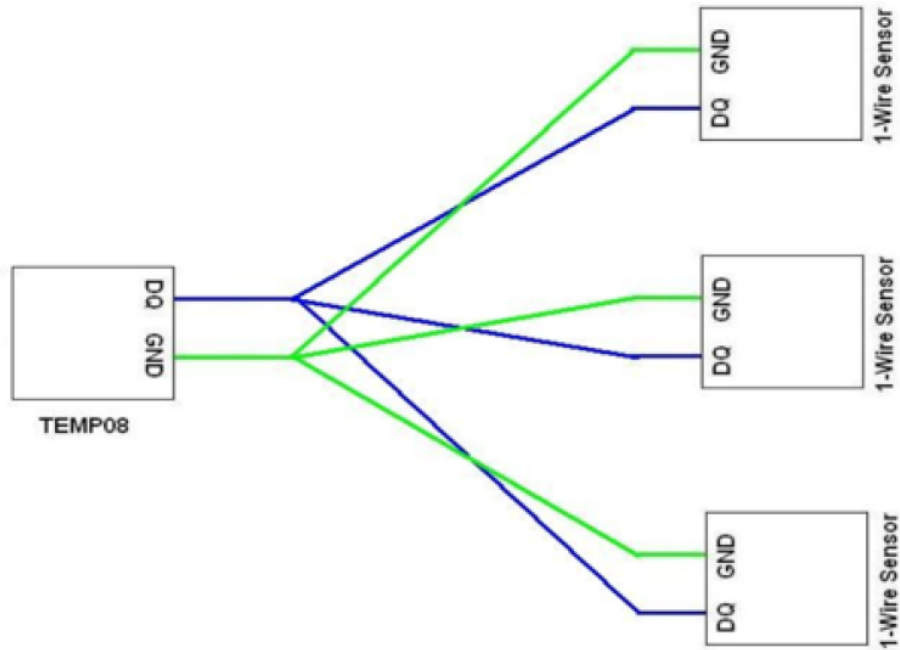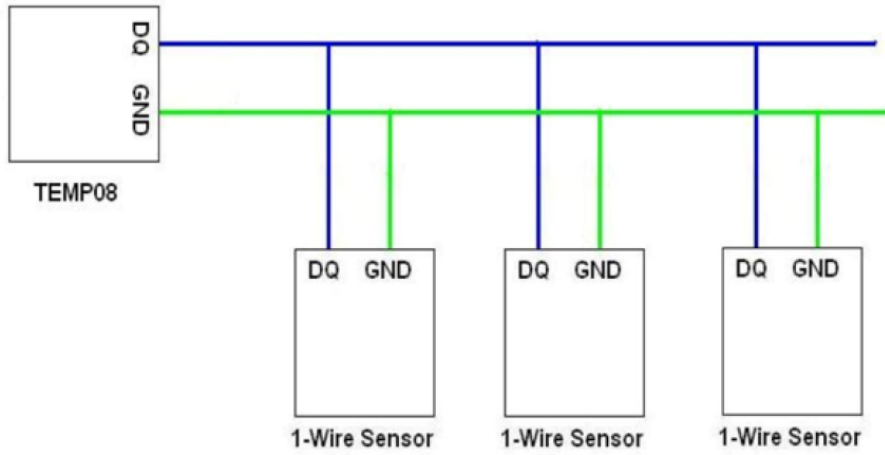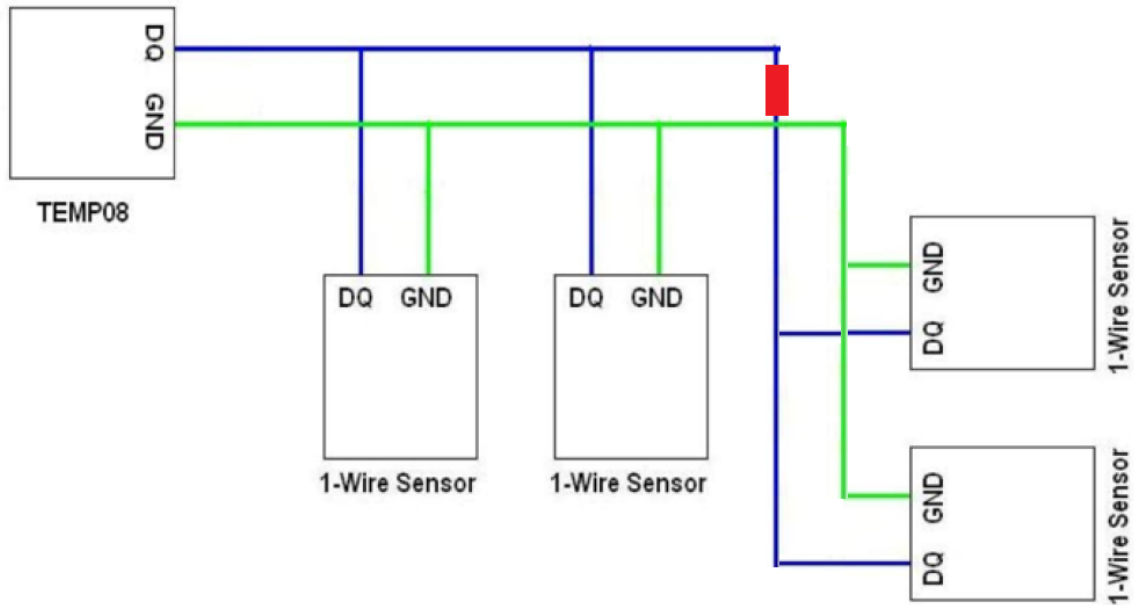
Advantages of 1-wire over KNX
- No need for ETS.
- Very cost-effective.
- You can use the same wiring as KNX does and connect all standard sensors.

Advantage of 1-wire over resistive sensors:
- Substantial savings on equipment.
- An easier connection diagram allows to reduce the complexity of laying wiring.
- Extension possibility: connection of additional sensors without changing basic wiring.
- Ability of remote monitoring of sensors (open circuit, short circuit etc.).
- No need to take into account the resistance of conductors like in the circuit with resistive sensors.

1-wire connection diagrams:

Once 1-wire sensors are connected to the 1-wire interface of LogicMachine:

- *Name* - name of the 1-wire device
- *Linked to object* - mapped KNX object
- *Sensor status object* - mapped KNX status object
- *Write to bus* - define either to write telegram in KNX bus on read value
- *Send delta* - define either to send delta of the temperature sensor

- *Send timer (seconds)* - define an interval in which send the measurement
- *Value compensation* - compensate value of the reading of temperature