

## Feed control system

### Task definition

easy is required to control automatic feeding systems in a pond. Trout should be fed at different times depending on size and age. A fault message is to be output when the feeding container is empty.

An automatic feeding system consists of a conical container with a motor for the extruder screw. The metering of the feed quantity is determined by the on duration of the motor. The longer it is switched on, the more rotations occur, and therefore the more feed is metered. The conical container design and the vibration of the motor ensure that feed is always supplied.

Automatic feed system 1 at output Q1 supplies the breeding pond. Feed is to be provided each day at hourly intervals between 8:00 am and 18:00 pm. This means that each day a 2-second pulse activates the feed screw motor at hourly intervals between 8 am and 18:00 pm. However, feed is only supplied if the on switch at I1 is actuated and the level indicator at I4 signals "Full".

The second automatic feed system is activated for 2 seconds each day at 12:00 pm and at 16:00 pm, and at 8:00 am over the weekend.

The third automatic feed system is activated for 2 seconds at 9:00 am and 15:00 pm from Monday to Saturday.

Systems 2 and 3 also only supply feed if the on switch at I2 and I3 are actuated and the level indicator at I5 and I6 outputs a "Full" signal.

If one of the automatic feed systems is empty, this is indicated by a signal light via Q4.

### Device class used

easyE4

### Wiring

#### Inputs

I01	On switch - automatic feed system 1
I02	On switch - automatic feed system 2
I03	On switch - automatic feed system 3
I04	Level switch - automatic feed system 1
I05	Level switch - automatic feed system 2
I06	Level switch - automatic feed system 3

#### Outputs

Q01	Automatic feed system 1
Q02	Automatic feed system 1
Q03	Automatic feed system 3
Q04	Filling level signal lamp

#### Parameters

H01	Daily signal 1
H02	Daily signal 2
H03	Daily signal 3
T01	1 h clock pulse container 1
T02	2 s Pulse container 1
T03	2 s Pulse container 2
T04	2 s Pulse container 3