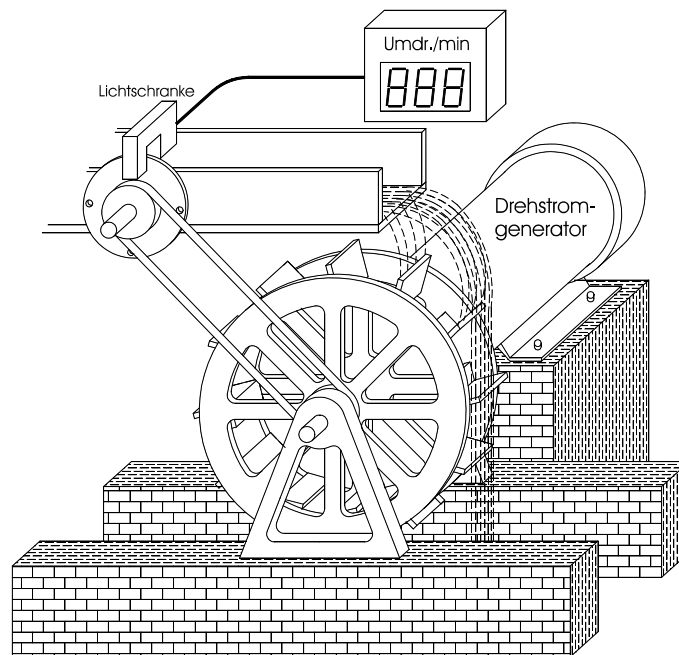


Practical circuit of AnalogMaths

Periodic revolution counting of a water wheel.

Technical drawing



Operation description

A current generator is driven by a water wheel. The revolutions have to be captured for 1 sec and transferred onto the text display of the LOGO!. The display is updated every 5 sec.

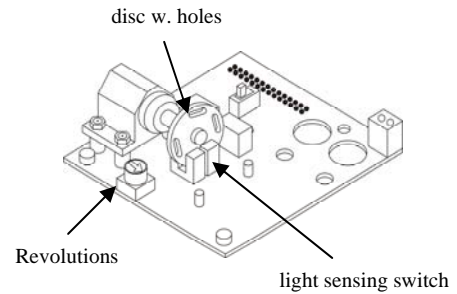
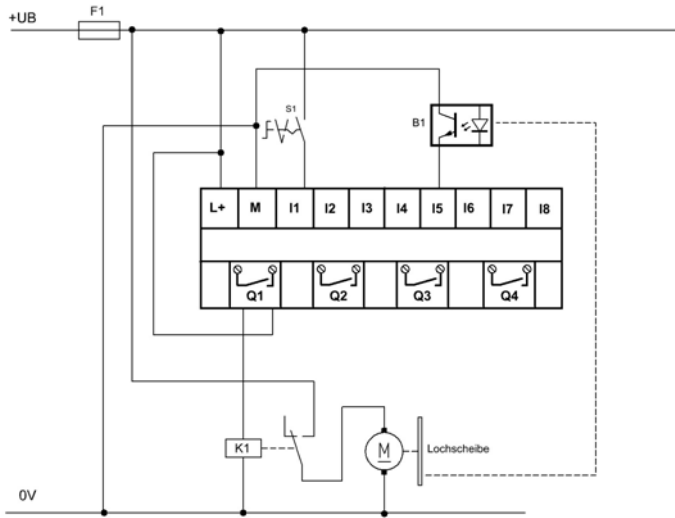
The text display LOGO! TD is used for the display. The function "AnalogMaths" has to be used for the arithmetic. The revolutions are counted with a light sensing switch (B1). One revolution sends 4 impulses because the disc which passes the light sensing switch has 4 holes. In order to display the revolutions, which should be recorded in 1 sec intervals, they have to be divided by 4 and on the display of the revolutions/min they have to be multiplied by 60.

The module "LOGO!Learn_Motor" is used for the actual simulation. With switch S1 (I1), or with the IR-remote control (button 1 On- button 0 Off) the motor is switched on or off and the movement of the water wheel is started.

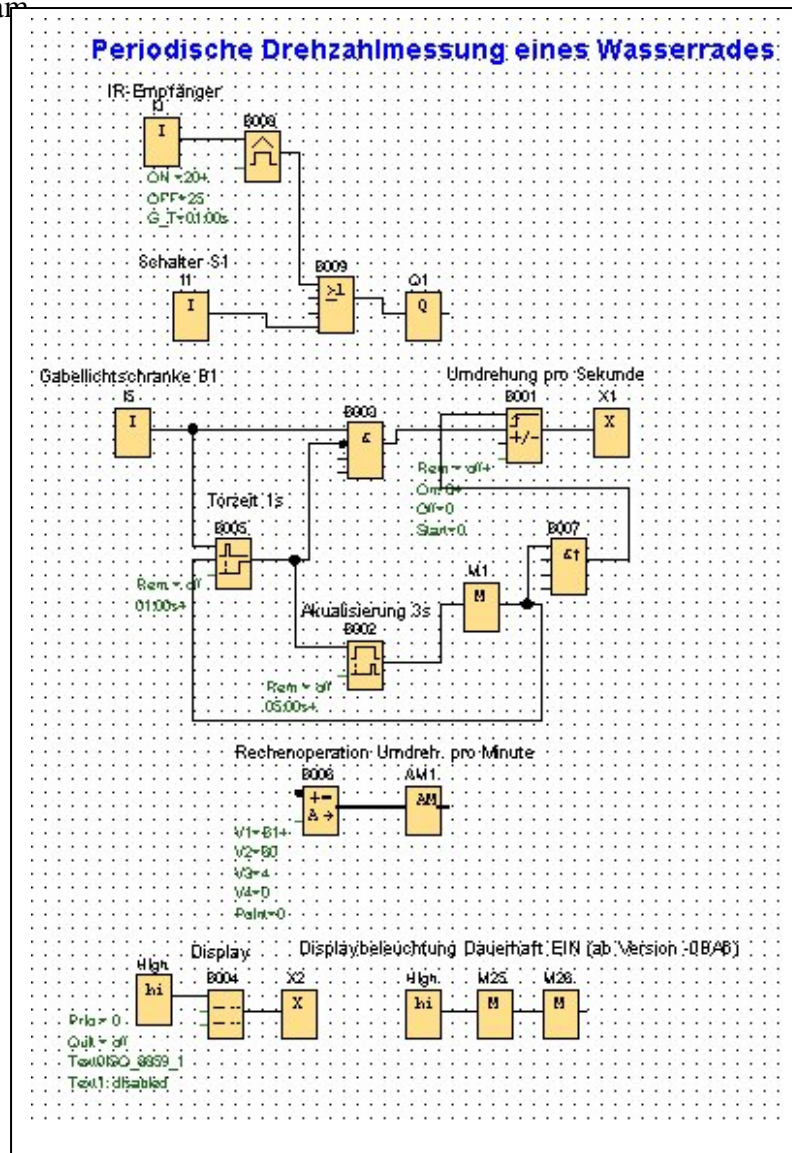
The revolution per minute can be adjusted from 0 to max. with the mounted potentiometer.

Correlation list		
Symbol	Component	Comment
S1	I1	Switch "make"
B1	I5	Light sensing switch
K1	Q1	Relay for Motor "LOGO!Learn_Motor"

Connection to LOGO!



Function block diagram



Exercise

- Enter program with the software LOGO! Comfort according to given function block plan into the PC and save under filename „Periodic revolution counting“.
- Test program with the integrated simulator according to function block diagram and ladder diagram.
- Transfer program into LOGO! and test