

# COMPARISON OF THE COIL TECHNOLOGIES

## PWM

### Meaning:

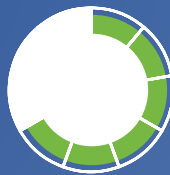
PWM stands for "pulse width modulation" and refers to a method of reducing power by means of electronically clocked DC voltage. With PWM, the power is controlled by switching the voltage on and off. This is done at short intervals, whereby the ratio between the time switched on (which is called pulse width) and the determines the degree of power reduction.

### Summary:

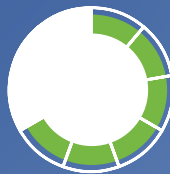
Pulse width modulation is an energy-efficient method. However, this technique is associated with hidden costs and effort in terms of EMC and commissioning. In addition, the whistling noises of the frequency in can be disturbing in various applications.



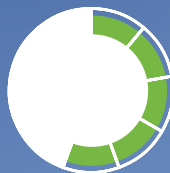
**Audible whistling noises**



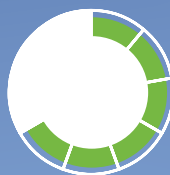
**Suitable PWM plug required**



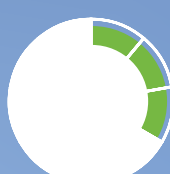
**Connector with PWM control easily loseable**



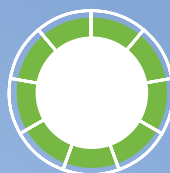
**EMC compensation for industrial standard**



**Long signal lines require additional EMC measures**



**PWM via PLC; Planning and documentation necessary**



**Holding voltage reduces the energy demand**

## VS.



Noises



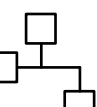
Cable plug



Protection and placement of the electronics



Electromagnetic compatibility Building & Industry



Cable length



Commissioning costs



Power consumption

**No noise generation**

**Any cable plug according to EN standard 173301- 803- A can be used**

**Integration of the electronics in the coil**

**Full EMC conformity**

**Freely selectable cable length without EMC problems**

**Plug & Play**

**Min. 80% energy-saving**

## KICK AND DROP

### Meaning:

Kick and Drop technology is an energy-efficient method of reducing power reduction in which two windings are connected in series. The first winding, the so-called inrush winding, opens the valve by means of a short current pulse. The second holding winding is connected in series approx. 0.5 s later. It reduces the power consumption and ensures the holding operation.

### Summary:

The energy-saving Kick and Drop coil technology not only proves to be an energy-saving wonder, but even saves valuable space. The flexible and noiseless use without additional hidden costs makes this technology a must have when it comes to efficiency and sustainability.