

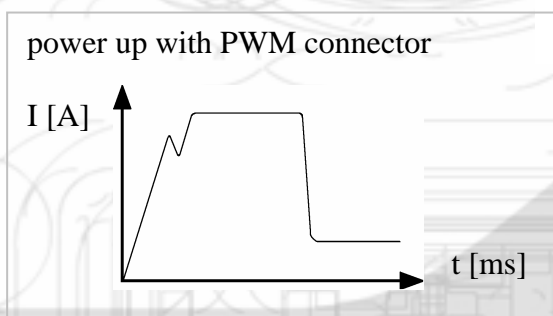
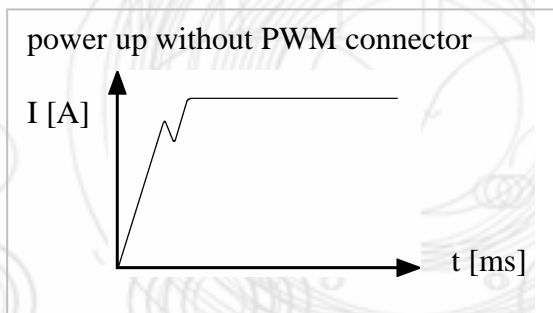
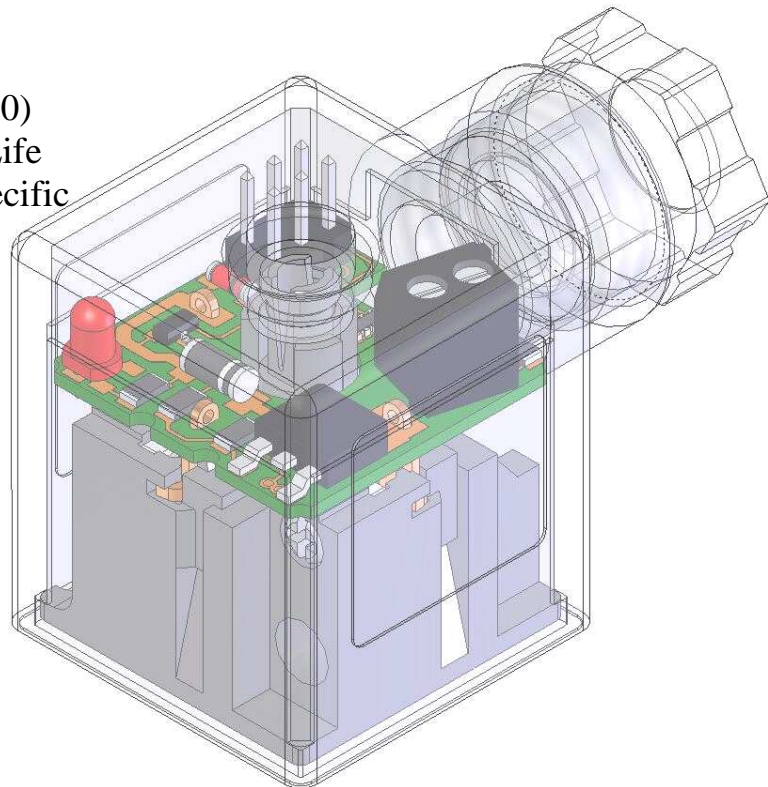
PWM connector

Description

Available in the Form A (EN 175301-803 / ISO 4400) connector size, the PWM (pulse-width-modulations) circuit provides energy savings, and extends the lift expectancy of the valve coil. The PWM connector receives the nominal voltage (12 to 48V DC) in order to fully energize the solenoid. Then, after a timed period (approximately 100ms), the circuit reduces the full voltage to a reliable holding power, saving energy and reducing coil heat, which in turn, extends coil life.

Features:

- Form A (EN 175301-803 / ISO 4400)
- Reduces Coil Heat / Extends Coil Life
- Adjustable time periods to meet specific applications.
- Saves Energy / Saves Energy Costs
- LED indicator available



Technical Parameters:

- Nominal Voltage 12-48V DC
- Maximum Current 1 A
- Output frequency around 5KHz.
- Duty Cycle 25% - 75%

Advantages:

- Extended Coil Life / Less Maintenance
- Allows for lower wattage / lower cost solenoids may be used.
- Energy savings by minimizing power consumption.
- Circuit designed for a wide voltage range (12-48V DC).

Multifunctional Connector: Power Saver with PWM Signal

Description

The PWM (Pulse-Width-Modulation) connector provides energy savings and extends the life expectancy of the valve coil. The connector receives the nominal voltage in order to fully energize the solenoid. Then after a timed period, the circuit reduces the full voltage to a reliable holding power to save energy. This will reduce the heat rise temperature of the coil, extending the coil's life. The power reduction is accomplished through pulses with adjustable modulation of the output voltage.

Technical Data

Operating Voltage $V_{dc} = 24V DC$
 Maximal Current $I_{max} = 1 Amp$
 Delay ca. 175ms
 Switching Frequency 3.1 KHz @ 24VDC
 Pulse-Pause Ratio of PWM Signal 8 fix Variation
 Polarity Sensitive..... Yes
 Over-Voltage Protection..... No

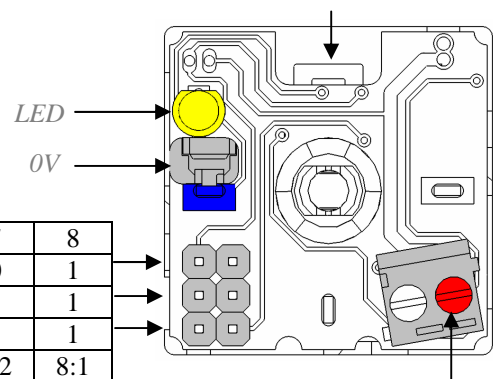
Set Up of Pulse-Width-Modulation

Installation of jumper(s) make it possible to achieve the desired level of energy savings.

If no jumper is installed, the greatest amount of energy savings is achieved. (PWM Signal = 1x On, 8x Off)

If all three jumpers are installed, the least amount of energy savings is achieved. (PWM Signal = 8x On, 1x Off)

Cable Entry (Shown In 12h Position)

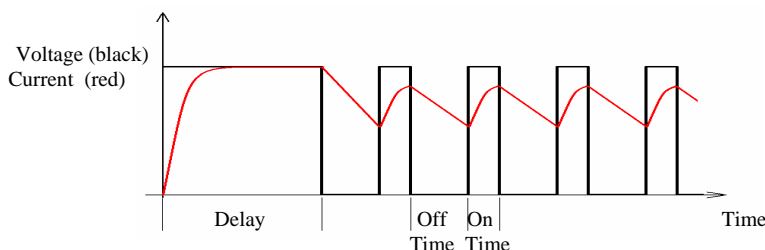


Program	1	2	3	4	5	6	7	8
Jumper 1	0	1	0	1	0	1	0	1
Jumper 2	0	0	1	1	0	0	1	1
Jumper 3	0	0	0	0	1	1	1	1
Pulse Ratio	1:8	2:7	3:6	4:5	5:4	6:3	7:2	8:1
U Reduction	11%	22%	33%	44%	56%	67%	78%	89%

Output

For optimum performance, the coil's technical data and electrical parameters must be observed.

The PWM circuit includes a protecting diode at the output, eliminating the switch-off power surges from the coil. Additional protecting components, such as VDR and TVS diodes, are not required.



Switching Process

