



FlexGen-M PWM

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BENEFITS

- Generation of power PWM signals up to 10A with frequencies of 1 Hz to 10kHz
- Self-sufficient function also possible without a test bench
- Activation via analog input and CAN (optional)
- Control algorithm for actuators with absolute position transducer (optional)

MULTIFUNCTIONAL PWM-GENERATOR WITH POWER OUTPUT

The FlexGen-M PWM is used to generate variable PWM signals with output currents up to 10A. The frequency and duty cycle are both adjusted via a rotary encoder with a rough and fine function. With the help of a selector switch, concrete frequency ranges can be chosen for adjusting up to 10kHz.

The pulse duty factor is adjustable via:

- internal rotary encoder
- external control voltage 0... 10V
- CAN (optional)
- course of profile configurable via USB (optional)

All adjustable parameters can be read on the integrated display. Due to the robust aluminum casing as well as the high-quality control elements, it is excellently suitable for the hard, mobile use in test benches. Via the analog input, a duty cycle of 0 to 100% can be adjusted with a gauge 0... 10V (e.g. of an automation system).

In addition to the basic functions, the generator comes with an automated duty cycle drive already in its basic version. In this, a pre-defined duty cycle ramp is run down at a fixed adjustable frequency. The start and stop values, the ramp time, the hold time and the number of drives are freely tunable.

FlexGen-M PWM

FIELDS OF APPLICATION

- Activation of regulating flaps and actuators like throttle valves, AGR valves, turbocharger controllers
- Text and calibration of lamps, heating wires etc. in passenger vehicles
- PWM signals for test bench and test vehicle
- Stress test of relevant consumers

VARIATIONS

Optionally, a CAN interface is also available with which the duty cycle settings and frequency specifications can be executed. In this, the necessary CAN ID and Baud rate are freely parametrizable.

With the USB option, complex duty cycle courses can be generated with a PC software, filed on the device and retrieved also without PC connection.

The FlexGen-M PWM variation with control algorithm serves to activate actuators that generate a position feedback. Via a learning function, the end positions of the used valve/the actuator are trained-in beforehand. The position generator within the actuator is supplied with 5 V. The included control algorithm is suitable for a multitude of actuators; if necessary, you can configure the PID portions of the controller yourself.

Further special variations are possible on demand, e.g. open collector output, maximum current 20 A, adjustable PWM output amplitude 8 V... 18 V, SENT interface etc.

TECHNICAL DATA

Name	5 A Basic version	10 A Basic version
Voltage supply	9-18 V DC (inverse-polarity protected)	8-28 V (inverse-polarity protected)
Output current TV 100 %	5 A	10 A
Duty cycle/resolution	0-100 % / 0.1 % or 1 % (switchable)	
Frequency range	1 Hz to 10 kHz (ranges: 1 Hz - 100 Hz / 100 Hz - 1 kHz / 1 kHz - 10 kHz)	
Frequency resolution	0.1 % / 1 % of the range end value (switchable)	
Output type power amplifier	H full bridge, short-circuit proof	
Display	4 lines OLED display	
Edge steepness (12 V)	typ. 10 V/μs	
Casing dimensions	app. 200 x 106 x 60 mm	
Ambient temperature	-40 °C to +80 °C (operation)	
PWM output amplitude	virtually supply voltage (depending on load current)	
Internal contact resistances	< 80 mΩ	< 50 mΩ
Analog input	0-10 V (for duty cycle specifications from outside)	
Connectors:		
• Voltage supply	LEMO ExJ.1B.302.HLD	Banana sockets 4 mm
• PWM output	LEMO ExA.1B.302.HLN	Banana sockets 4 mm
• Analog output	BNC	BNC
Connector cable (scope of delivery)	Lemo on banana plug, length 2 m	No
Order number basic device	70007350	70007386
Option 1: CAN interface	CAN interface (Highspeed ISO 11898-2 A and ISO 11898-2 B)	
Option 2: control algorithm	Activation of actuators with position feedback, learning function and PID shares configurable, sensor supply 5 V+/- 100 mV	
Option 3: Analog output	0... 10 V for measuring purposes, depending on TV 0...100 %	
Option 4: USB/PC configuration software	USB interface, PC software for configuring complex duty cycles profile courses	
Special version 1: 20 A	No	on demand
Special version 2: open collector	on demand	
Special version 3: PWM output amplitude adjustable	Amplitude adjustable from 8-18 V independent of supply voltage, restricted to 3 A carry current, amplitude voltage shown on display	