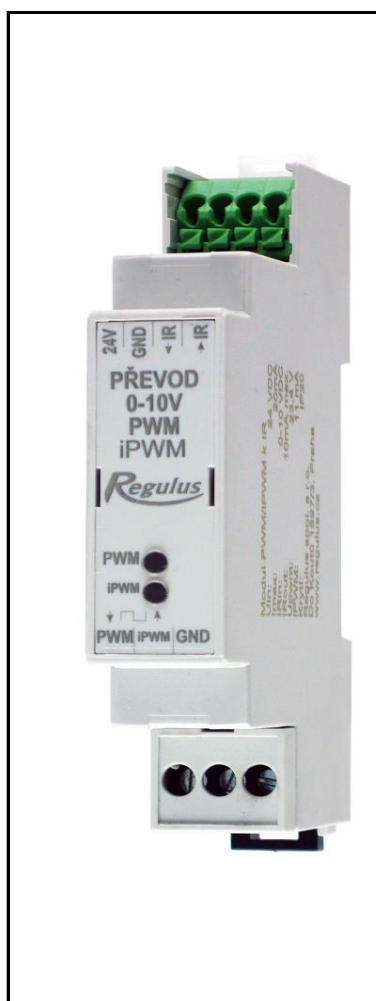


IR 12 Module Converting 0-10V to PWM, iPWM included



Main Features	
Description	add-on module for IR 12
Application	converts the 0-10 V signal from the IR 12 to a PWM signal to control the circulation pumps of heating and solar thermal systems; it also transfers the iPWM signal from the pump to the controller; designed for Wilo and Grundfos pumps
Code	17838
Technical Data	
Control range	0-10 V (0-100 % PWM)
Indication	when energised, the green and orange LEDs flash twice LEDs indicate module condition, see table below
Electric Data	
Power supply	
Voltage	24V ss $\pm 10\%$ (power supply for IR 12)
Max. power input	0,48 W
Input	
Control signal	0-10V from IR 12 controller (terminal IR ▼) must be wired
iPWM signal	from pump (usually black conductor, terminal iPWM ▲) needn't be wired
Output	
PWM signal	with 0-100% duty cycle, 23.4 V, 490Hz frequency (usually brown conductor, terminal PWM ▼) must be wired
Output of converted iPWM	signal for IR controller (terminal IR ▲) needn't be wired

LED indication of module condition	
PWM output (pump control)	
Condition	Indication
controller output - output from module	green LED
0 V - 0 % PWM (or not connected signal)	the LED is 1s on and 5s off
(0,5 V - 5 % PWM) to (10 V - 100 % PWM)	the LED flashing rate depends on the PWM signal LED flashes fastest at 100 % PWM
iPWM (pump response)	
Condition	Indication
iPWM input - signal for controller	orange LED
0 % iPWM (or not connected signal)	the LED is 1s on and 5s off
5 % iPWM to 100% iPWM	the LED flashing rate depends on the iPWM signal LED flashes fastest at 100% iPWM

The PWM output for pump control works even if the pump does not have an iPWM output or the iPWM signal cable is not connected. In this case, the module will work unidirectionally.

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Wiring Diagram

