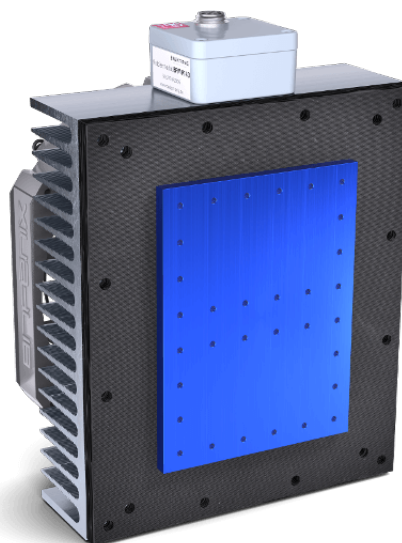


# OEM Peltier Modules **BPM**

Datasheet



Made in Germany

## Functions

The BELEKTRONIG OEM Peltier modules are used for temperature control of objects or air in experimental setups or analytical instruments. With cooling capacities up to 164 W and heating powers up to 240 W, they are the ideal solution for fast and effective temperature management. The high temperature stability is achieved in combination with the built-in and benchtop temperature controllers of BELEKTRONIG. Optimized for barely audible operating noise, the Peltier modules generate no additional noise pollution in the laboratory.

**Air cooler/heater:** For temperature control of air in closed chambers such as incubators, furnaces, microscopes, control cabinets, electronic housings, etc.

## Key Features

- ✓ Cooling capacity up to 164 W
- ✓ Heating capacity up to 240 W
- ✓ Barely audible operating noise
- ✓ Fast reaching of setpoint temperature
- ✓ High temperature stability up to  $\pm 0.002^{\circ}\text{C}$
- ✓ Versatile and flexible
- ✓ Optimized for operation with BELEKTRONIG built-in and benchtop temperature controllers

**Plate cooler/heater:** For temperature control of objects that can be connected directly to the surface, such as biosensors, test setups of optics, printed circuit boards, etc.

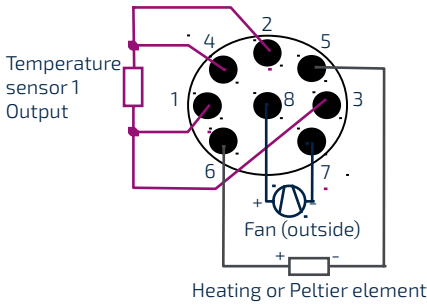
## Configurations

Name / Order number: OEM Peltier Module BPM -	A140 (air)	P140 (plate)
Achievable temperature difference to ambient temperature in cooling mode [ $^{\circ}\text{C}$ ]	30	36
Permissible lowest temperature [ $^{\circ}\text{C}$ ] / Permissible highest temperature [ $^{\circ}\text{C}$ ]	0 / 85	-25 / 120
Maximum cooling capacity at $0^{\circ}\text{C}$ temperature difference [W]	164	164
Maximum heating capacity at $0^{\circ}\text{C}$ temperature difference [W]	240	240
Rated voltage [V] / Maximum permissible rated voltage [V]	24...27 / 32	24...27 / 32
Maximum current consumption [A]	8	8
Maximum operating noise outer fan / inner fan [dB(a)]	26 / 19	26 / -

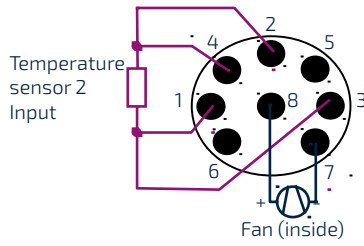
\*Thermal isolation is required to reach the maximum temperature differences.

### PIN Assignment

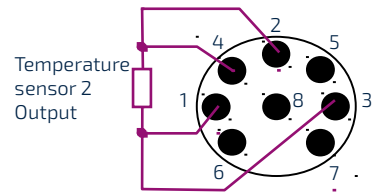
**Junction box 1**



**Junction box 2 (air cooler only)**



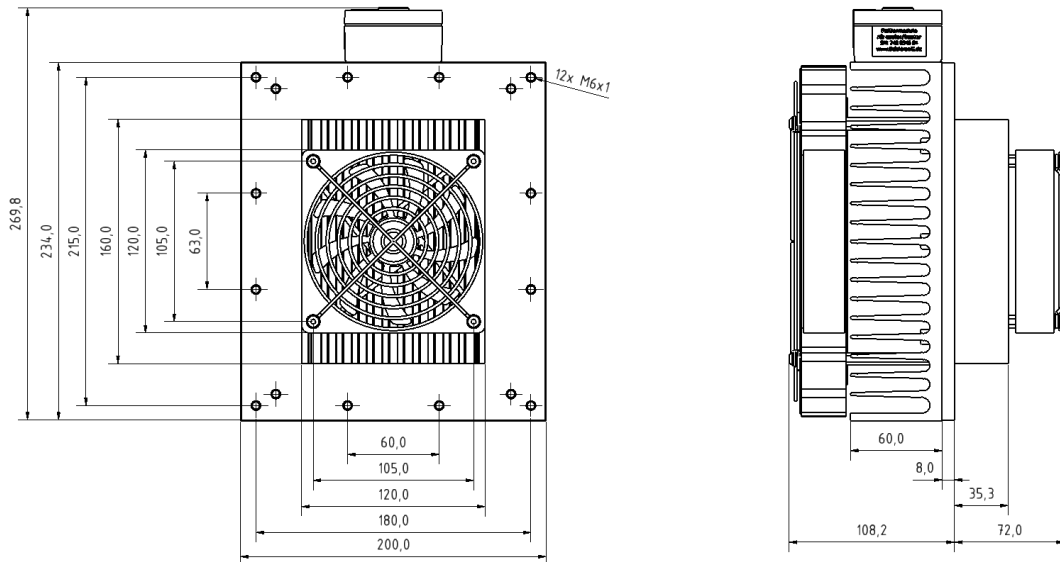
**Junction box 3 (Air cooler only)**



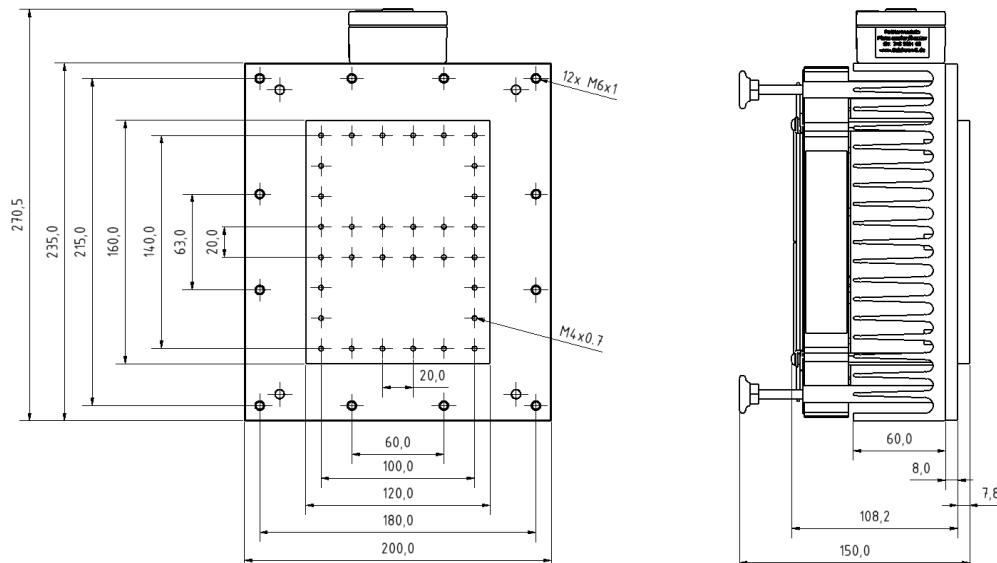
- › Show is the soldering view of the cable connector
- › Junction box 2 is used to connect fan output 2 of the BELEKTRONIG temperature controller with the Peltier module
- › Temperature sensor 2 will be connected via junction box 3

### Dimensions [mm]

**Air cooler/heater BPM-A140**



**Plate cooler/heater BPM-P140**



Technical modifications and errors excepted. Images similar. Last update: 11/23/2017

**Technical Data**

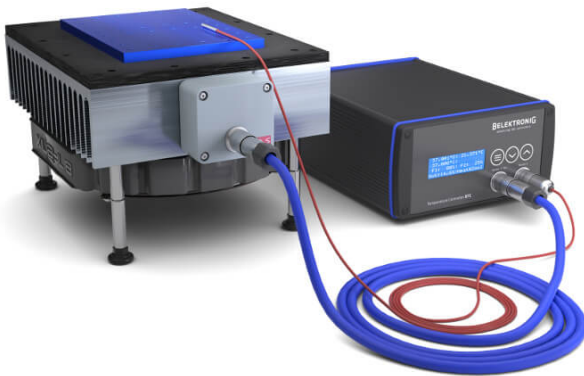
**Dimensions and Conditions of Operation**

- › Dimensions (L x W x H): 270.5 x 200 x 180 mm<sup>3</sup> (Air cooler)  
270.5 x 200 x 108 mm<sup>3</sup> (Plate cooler)
- › Weight: ~4.5 kg
- › Operating temperature: 10...45°C
- › Relative humidity: 0...80%, not condensating

**Scope of delivery**

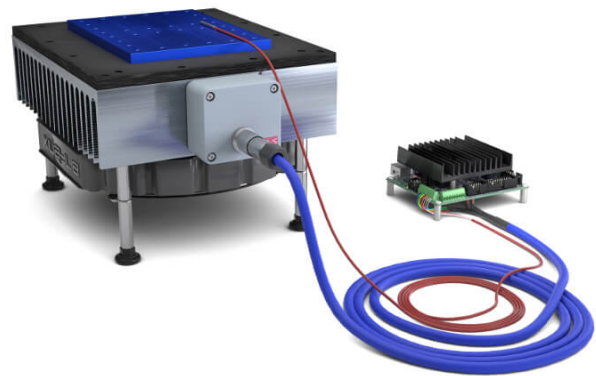
- › Peltier module
- › Connecting cable
- › Allen screws M6 x 20 for mounting of Air cooler/heater
- › Matching connector plugs 8polar (on request)
- › Matching stand foot (Plate cooler/heater only)

**Optimized for Operation with BELEKTRONIG Benchtop Temperature Controllers**



- › Air or Plate cooler in a set along with benchtop temperature controller and matching connecting cables
- › Short setup-time due to plug-and-play
- › Instantly and precise temperature control of objects, conductor boards, optical setups, etc.
- › Customer-specific sets can be individually combined for laboratory use

**Optimized for Operation with BELEKTRONIG Built-in Temperature Controllers**



- › Air or Plate cooler in a set along with built-in temperature controller and matching connecting cables
- › Short setup-time due to plug-and-play
- › OEM components as easy-to-integrate solution in modern measurement devices for industry and research
- › Customer-specific OEM sets can be individually combined for effective implementation in laboratory instruments

Learn more about the quality standards of BELEKTRONIG and easily request a quote for your individual experimental setups.  
Dr.-Ing. Glen Guhr and Dr.-Ing. Raimund Bruenig

