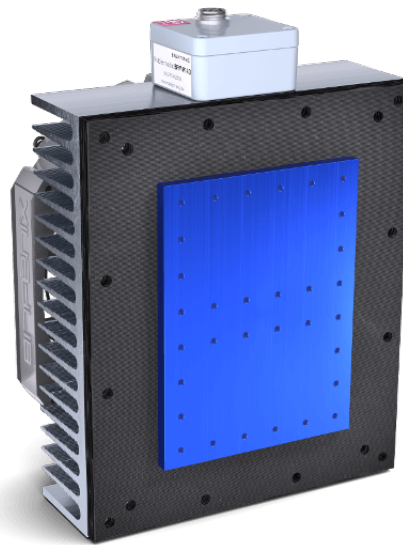


OEM Peltier Modules **BPM**

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

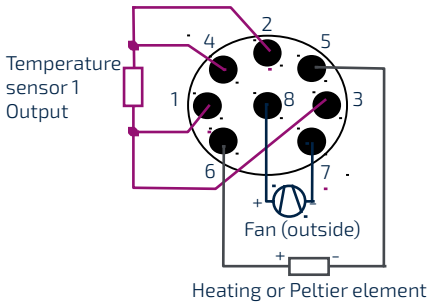
Name / Order number: OEM Peltier Module BPM -	A140 (air)	P140 (plate)
Achievable temperature difference to ambient temperature in cooling mode [°C]	30	36
Permissible lowest temperature [°C] / Permissible highest temperature [°C]	0 / 85	-25 / 120
Maximum cooling capacity at 0°C temperature difference [W]	164	164
Maximum heating capacity at 0°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.

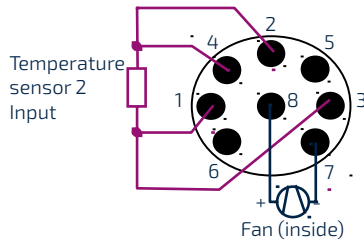
Technical modifications and errors excepted. Images similar. Last update: 11/24/2017

PIN Assignment

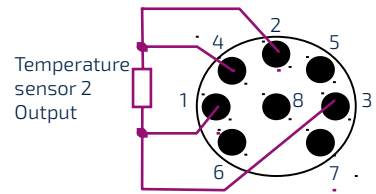
Junction box 1



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

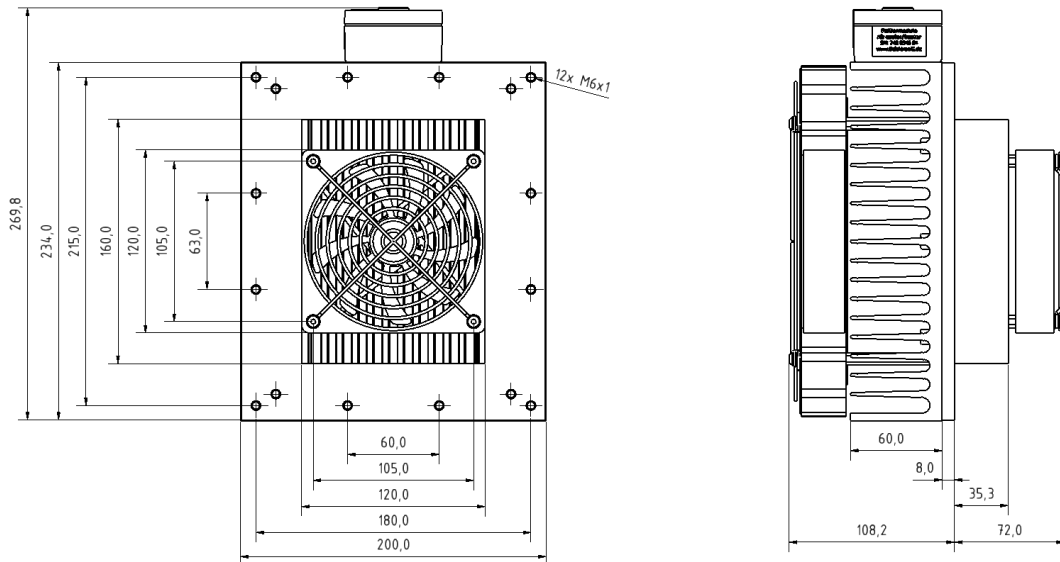
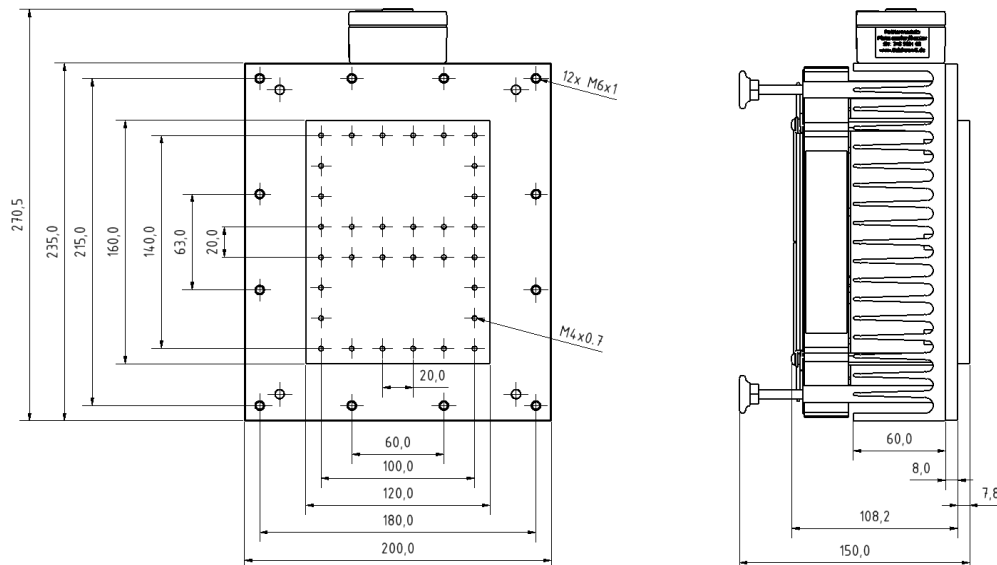


Plate cooler/heater BPM-P140



Technical modifications and errors excepted. Images similar. Last update: 11/24/2017

Technical Data

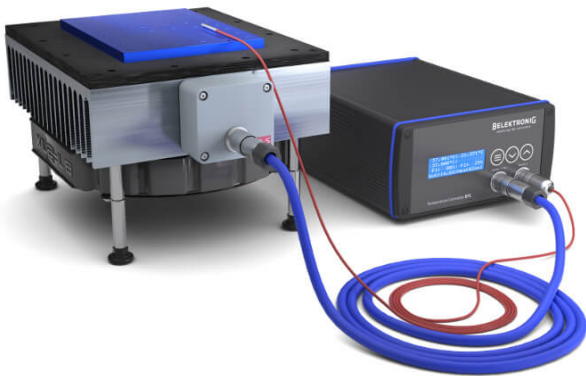
Dimensions and Conditions of Operation

- › Dimensions (L x W x H): 270.5 x 200 x 180 mm³ (Air cooler)
270.5 x 200 x 108 mm³ (Plate cooler)
- › Weight: ~4.5 kg
- › Operating temperature: 10...45°C
- › Relative humidity: 0...80%, not condensating

Scope of delivery

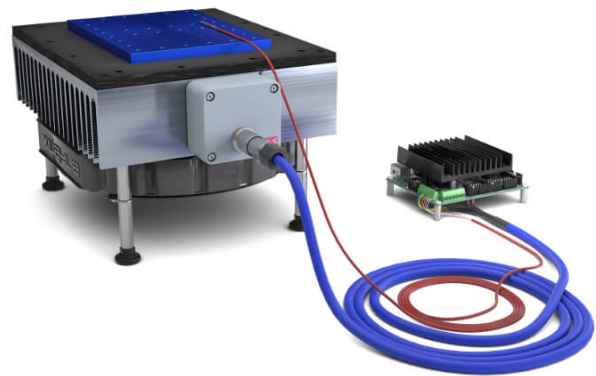
- › Peltier module
- › Connecting cable
- › Allen screws M6 x 20 for mounting of Air cooler/heater
- › Matching connector plugs 8polar (on request)
- › Matching stand foot (Plate cooler/heater only)

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

