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Product profile	
Part number	2016-0100
Article name	HeatPlate
Description	Automation friendly Heater thermoblock. Designed to be integrated in liquid handling and automation platforms to process labware in chemical and biological laboratories.
Recommended use	Automation | Heating | Tubes, Vials, Microplates
Scope of delivery	HeatPlate | External power supply | Power cords Europe & US | 2x screws to mount device (M3 x 18 | DIN 912) | Calibration certificate | Operation & Integration manual
Conforming use	System is operated by qualified and trained research and laboratory personnel. Applicable safety standards or rules need always be fulfilled.
Country of origin	DE
Customs tariff code	8419.89.98

Temperature control	
Temperature range*	RT to 99 °C (RT to 210.2 F) with a resolution of 0.1 °C
Temperature accuracy	± 0.1 °C
Temperature uniformity*	±0.5 K at 45 °C | ±0.7 K at 75 °C | ±1.0 K at 95 °C
Heating speed above RT*	~ 7 K/min (10 min from 21 to 95 °C)

** Value depends on the used Thermo-adapter. Conditions for values: RT=21 °C, Adapter=2016-1041 (96-well PCR), Temperature measured in the adapter*

Device control	
Description	The device has a built-in electronic remote control. No external controller is required.
Operation control	Remote controlled as described in the Integration Manual
Peripheral interface	EIA-232 / RS-232 interface (2 m cable with RS-232 plug-in connector) optional: USB via USB-Serial Adapters (Exp. DIGITUS DA-70156) or USB via MOXA USB-to-Serial Hub
Status	LED at front side(GREEN = ok | RED = error)

Thermo-adapter plates for different labware	
Description	An adapter is required for optimal temperature transfer to and/or optimal fixation of labware and needs to be purchased separately. The adapter can be exchanged by the user.
Microplates	All microplates according ANSI-SLAS format 4-, 6-, 8-, 12-, 24-, 48-, 96-, 384-, and 1536-well microplates, deep well plates, PCR plates
Tubes and Vials	0.2, 0.5, 1.5, 2.0 ml standard tubes | 2.0, 4.0, 6.0, 8.0, 10.0 ml cylindrical shaped vials
Others	Custom made adapter on request

Electrical	
Operating voltage	24 V DC | Imax: 4.5 A | Peff: 85 Watt | Pmax: 108 Watt
Power supply	Input: 100 - 240 V AC | 50 - 60 Hz Output: 24 V DC | Imax: 5.0 A | Pmax: 120 Watt Approved external power supply unit (CE marked UL/CSA approved, 85-264 V AC, 47-63 Hz, IEC/EN60320-1 C14 | Degree of protection: IP20)
Power connection*	Cable connection| length 2 m | hollow connector (ID 2.5 mm x OD 5.5 mm)

** Only use the external power supply supplied with the device or an equivalent replacement power supply explicitly approved by QINSTRUMENTS. The use of any other power supply may impair electrical safety and proper operation.*

Operating, transport and storage conditions	
Operating range	5 °C - 45 °C (41 - 113 °F) | 10 - 80 % RH | up to 2000 m above sea level | non-condensing
Operating conditions	stable (resonance free) | horizontal | dry | inside buildings | well ventilated and no direct exp. to sunlight
Transportation and storage	-10 °C - 60 °C (14 - 140 °F) | 10 - 80 % RH | non-condensing

General properties	
Housing material	Aluminum anodized
Degree of protection	IP20 (Protected against solid objects up to 12 mm |No protection against water)
Pollution degree	1 (no contamination or only dry, non-conductive contamination | contamination has no influence)
Airborne sound emission	< 70 dB(A)

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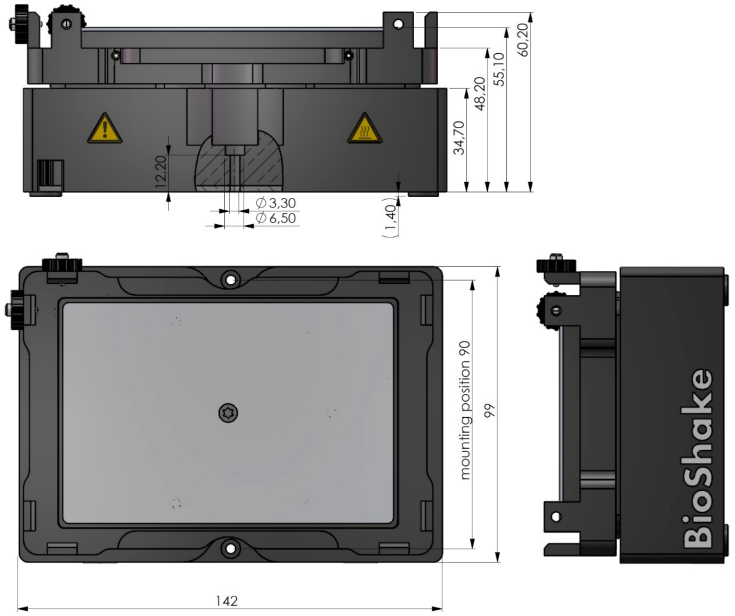
Dimension and weight	
Dimensions	(W x D x H) 142 x 99 x 62.7 mm | 5.59 x 3.9 x 2.47 inch
Weight	1.3 kg | 2.87 lbs
Packaging size	(W x D x H) 347 x 252 x 131 mm | 13.66 x 9.92 x 5.16 inch | cardboard box
Packaging weight	3 kg | 6.61 lbs

Certifications	
Regulatory compliance	2011/65/EU, 2014/30/EU, 2014/35/EU, 2015/863/EU, DIN EN 61010-1:2020-03, DIN EN IEC 61010-2-010:2022-12, DIN EN IEC 61326-1:2022-11, DIN EN 55011:2022-05, DIN EN IEC 63000:2019-05
Patents pending	WO2008135565, US8323588, EP2144716, WO2011113858, US9126162, EP2547431, WO2013113847, US10052598, EP2809436, WO2013113849, US9371889, EP2809435, WO2014207243, US20160368003, EP3013480, WO0020221288l4A1, WO0020221288l9A2 Please notify us or our designated agent, if you believe that a user has infringed our intellectual property rights.

Drawing



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