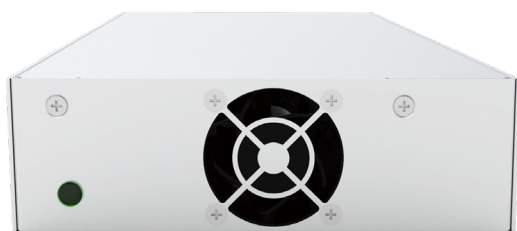


# Bidirectional Power Module Specification

TPS-BM152250SI(R)F-U





### Features

- AC-DC bidirectional isolation and energy flow, reliable inverter in grid-connected system
- Mature and excellent soft switching technology, more reliable and efficient
- High efficiency: AC to DC 91%, DC to AC 90%
- Bidirectional high PF >0.99, low THDi <5%
- Bidirectional switch with seamless voltage, meeting the fast response requirements of test equipment
- Excellent EMC, meeting EN55032 and other international standards
- Strong adaptability, adapt to unstable grids and harsh environments, no derating at 45°C
- Modular design, intelligent expansion, automatic parallel operation
- Perfect fault protection function
- It has passed UL certification: UL62368-1
- Can pass UL, CE, TUV certification

### Applications

- Cell formation and testing
- Power bidirectional testing
- Energy recyclable power aging

### Profile

#### TPS-BM Single-phase LV AC-DC Seamless Switching BPM

TPS-BM AC-DC seamless switching BPM is suitable for various electrical test scenarios, and adopts the mature soft switching technology, advanced control algorithm and excellent manufacturing. The module provides high performances such as high reliability, strong adaptability of grids and environments, bidirectional seamless switching without voltage difference, high efficiency, high power density, high PF, low THDi, intelligence.

### Specification

Product Model		TPS-BM152250SI(R)F-U	
AC To DC Direction	Rated Output Capacity		2250W
	AC Input	Wiring Mode	L+N+PE
		Rated Voltage	220/230/240VAC
		Voltage Range	176~264VAC
		Frequency Range	50/60 ± 5Hz adaptive control
		Input Current	≤ 15A
		THDi	<5% @220VAC, full load, power grid THDu ≤ 2%
		PF	0.99 @220VAC, full load, power grid THDu ≤ 2%
	DC Output	Rated Voltage	15.5VDC
		Rated Current	145.2A
		Voltage Accuracy	1%
Ripple Voltage		500mV	
Peak Efficiency		91%@230VAC	

DC To AC Direction	Rated Input Capacity		1562W
	DC Input	Rated Voltage <sup>①</sup>	15.5VDC
		Rated Current	100.8A
	AC Output	Voltage Range	176~264VAC
		Frequency Range	50/60 ± 5Hz adaptive control
		THDi	<5% @220VAC, full load, power grid THDu ≤ 2%
		PF	0.99 @220VAC, full load, power grid THDu ≤ 2%
Peak Efficiency		90%@230VAC	
Complete Machine	System	Power Direction	Bidirectional
		Isolation Method	High frequency isolation
		Cooling System	Forced air cooling, intelligent control
		Air Flow	Default: Front inlet and rear outlet, R type: Rear inlet and front outlet(front: fan; rear: terminal)
		Expandability	4
		Non-balance of Current Sharing	<5%
	Environment	Operation Temperature <sup>②</sup>	-10°C~45°C full load, 45°C~55°C power derating to 90%, 55°C~60°C power derating to 80%(input voltage ≥ 190VAC)
			-10°C~45°C power derating to 80%, 45°C~55°C power derating to 70%, 55°C~60°C power derating to 60%(input voltage < 190VAC)
		Storage Temperature	-40°C~70°C
		Relative Humidity	5~95%(no condensing)
		Operation Altitude	<1000m; 1000m~3000m, power derating 1% per 100m rising
	Interface	Indicator Lamp	Operation: Blue      Fault: Red
	Mechanical	Size(W*H*D)	141mm*44mm*285mm
		Weight	≤ 2.4kg
	Certification	Production Compliance	UL62368-1

Note:

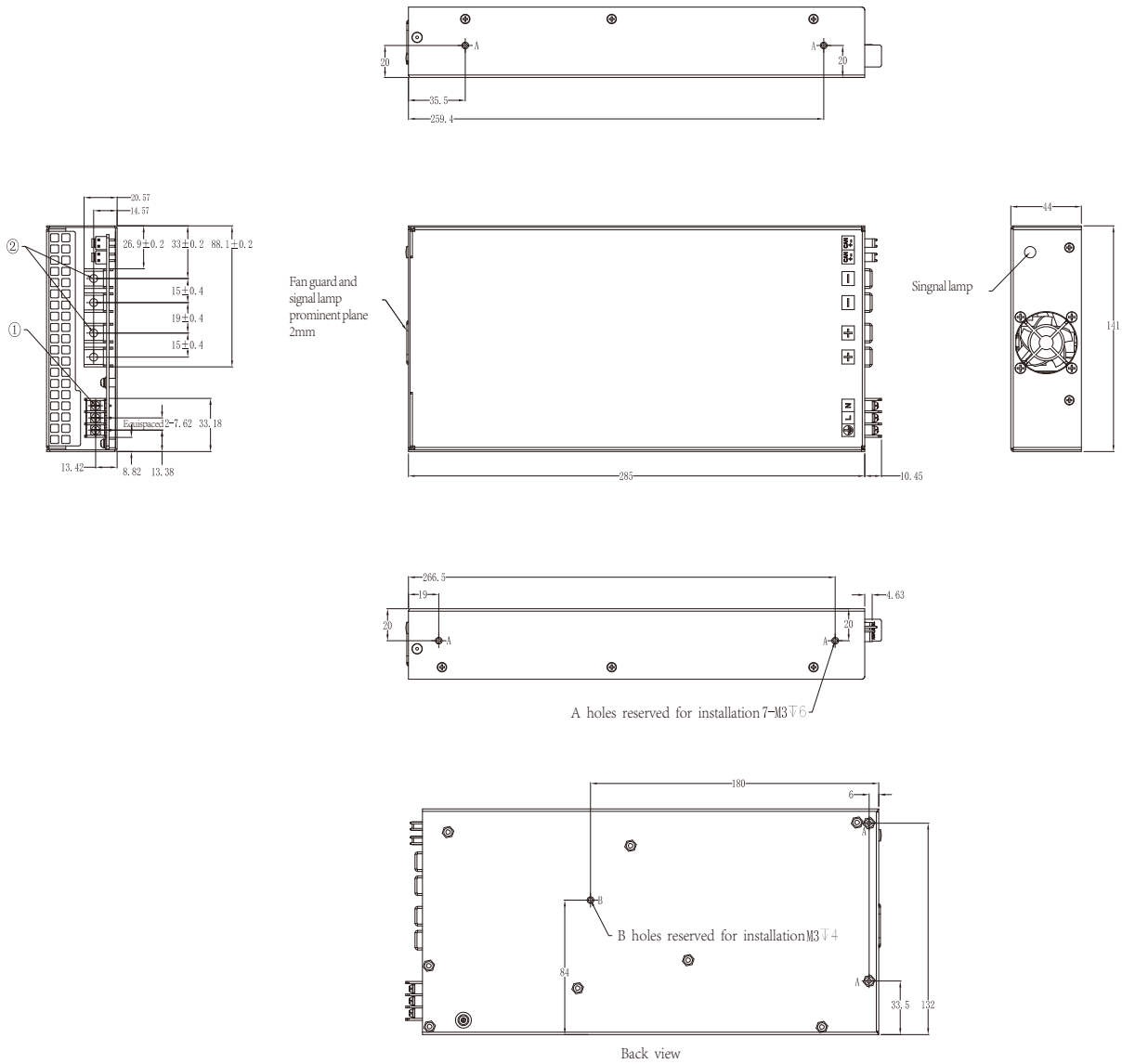
- ① DC side voltage exceeding 25VDC will cause power failure
- ② Shut down due to over temperatuer afer overload



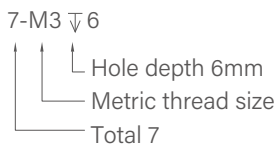
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### Dimension

#### • TPS-BM152250SI(R)F-U Installation Structure



#### • Identification explanation



#### • Warning

1. The length of the screw shall not exceed the depth of the hole in the drawing when the screw is installed at the reserved hole position (∇). Otherwise it will cause damage to the equipment.

Serial number	Type	Name	Specification	Quantity	Tightening torque
②	Output terminal fastening screws	GB907413-88 series cross slot hexagon head spring flat washer combination screws	M5X12	4pcs	1.5N·M
①	Input terminal fastening screw	Cross recessed pan head flat washer combination screw	M3X5.5	3pcs	1.5N·M

Dimensional tolerance (GB1804-M level)	0.5-6	±0.1	Unit	Proportion	Projection identification
	6-30	±0.2			
	30-120	±0.3			
	>120	±0.5			