

# OR10H450MNDB (BF)

OR Series – 450 W

108 cells  
MONO M10 HALF | N-TYPE



**TOPCon bifacial technology**



**Anti-reflective double glass**

Maximum efficiency and high performance



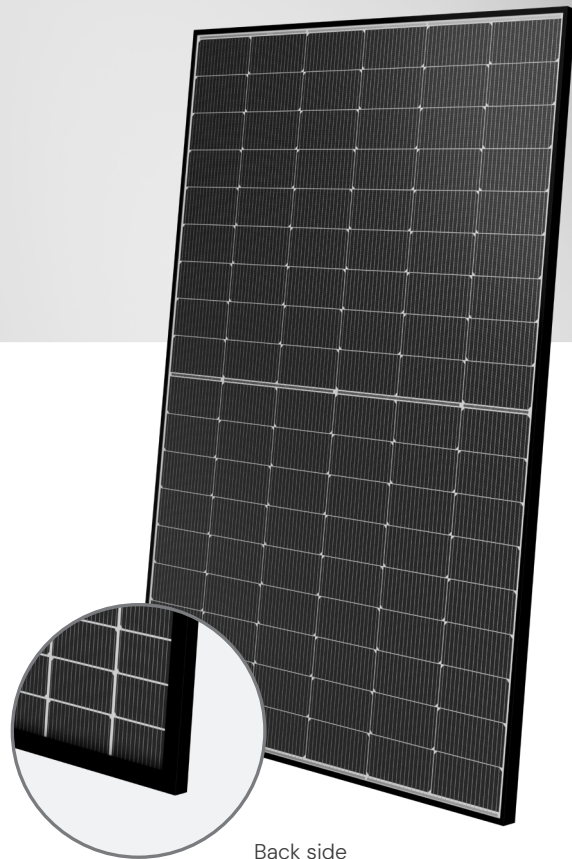
**Compact and sturdy frame**

Anchorable also on the short side <sup>(5)</sup>



Module fire performance:

**Class 1**



Back side



**30 years**

Linear power warranty

**25 years**

Product warranty



**QBE insurance**

QBE Product Liability Insurance

QBE is a global leader in the insurance sector, offering comprehensive solutions for business risk management. With a worldwide network, it protects clients against a wide range of risks and provides flexible insurance solutions tailored to various industries, including the energy sector.

# OR10H450MNDB (BF)

## Electrical Characteristics (STC) <sup>(1)</sup>

Nominal Output (Pmax) <sup>(2)</sup>	450 W
Sorting Tolerance	0/+5 W
Voltage at Pmax (Vmp)	33,25 V
Current at Pmax (Imp)	13,53 A
Open Circuit Voltage (Voc) <sup>(2)</sup>	38,99 V
Short Circuit Current (Isc) <sup>(2)</sup>	14,25 A
Maximum System Voltage	1500 V
Maximum Series Fuse Rating	30 A
Module Efficiency	23,04%   22,52%
Protection class against electric shock	Class II

1. STC: (Standard Test Condition) Irradiance 1000 W/m<sup>2</sup>; Module Temperature 25 °C; Air Mass 1,5

2. Pmax, Voc, Isc measurement tolerance: ±3%

## Electrical Characteristics with rear side power gain

Pmax gain	5%	10%	15%	20%	25%
Nominal Output (Pmax)	472 W	495 W	517 W	540 W	562 W
Voltage at Pmax (Vmp)	33,25 V	33,25 V	33,25 V	33,25 V	33,25 V
Current at Pmax (Imp)	14,21 A	14,88 A	15,56 A	16,24 A	16,91 A
Open Circuit Voltage (Voc)	38,99 V	38,99 V	38,99 V	38,99 V	38,99 V
Short Circuit Current (Isc)	14,96 A	15,68 A	16,39 A	17,10 A	17,81 A

## Mechanical Characteristics

Solar Cells	108 M10 HALF monocrystalline <b>N-TYPE</b>
Solar Cells Size	182 x 91 mm / 7,16 x 3,58"
Front Cover	2,0 mm / 0,08" thick, low iron tempered glass
Back Cover	2,0 mm / 0,08" thick, low iron tempered glass
Encapsulant	EVA / POE
Frame	Anodized aluminium alloy, double wall
Frame finishing	Black
Diodes	3 Bypass diodes serviceable
Junction Box	IP68 rated
Connector	MC4 or compatible connector
Cables Length	1100 mm / 43,30"
Cables Section	4,0 mm <sup>2</sup> / 0,006 in <sup>2</sup>
Dimensions	1722 x 1134 x 30 mm / 67,79 x 44,64 x 1,18" 1762 x 1134 x 30 mm / 69,37 x 44,64 x 1,18"
Weight	23,24 kg / 51,2 lbs - 23,77 kg / 52,4 lbs
Max Load (Test Load) - SF	5400 Pa - 1,5 <sup>(5)</sup>

5. Consult the installation manual for the relative mounting configurations

## Temperature Characteristics

NMOT <sup>(3)</sup>	43±2 °C
Temperature Coefficient of Pmax	-0,29 %/°C
Temperature Coefficient of Voc	-0,25 %/°C
Temperature Coefficient of Isc	0,046 %/°C
Operating Temperature	-40 °C ~ +85 °C

3. NMOT: Nominal Module Operating Temperature; Irradiance 800 W/m<sup>2</sup>; Air 20 °C; Wind speed 1 m/s

## Packaging <sup>(4)</sup>

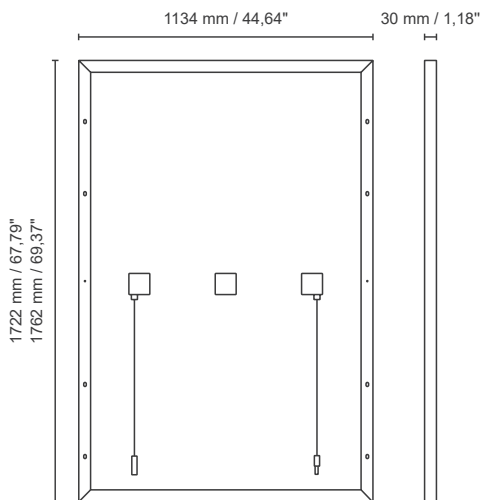
Pallet dimensions	Pieces per pallet - Weight
1750 x 1130 x 1265 mm / 68,9 x 44,5 x 49,8"	36 pcs - 864 kg / 1904,8 lbs
1750 x 1130 x 1265 mm / 68,9 x 44,5 x 49,8"	37 pcs - 888 kg / 1957,7 lbs
1780 x 1130 x 1265 mm / 70,1 x 44,5 x 49,8"	36 pcs - 883 kg / 1946,68 lbs

4. Pallets can be stacked up to two

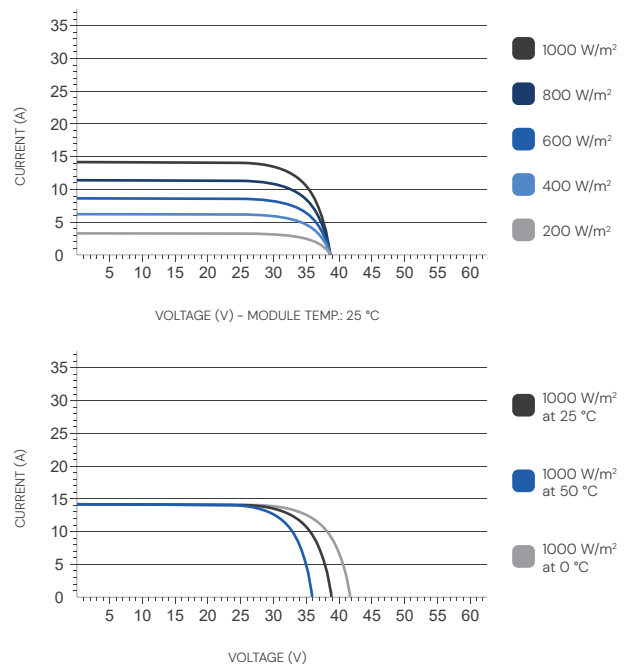
## Certifications

Fire Resistance Rating	Class of reaction to fire 1 (UNI 9177)
Product Certificate	IEC 61215-1, IEC 61215-1-1, IEC 61215-2, IEC 61730-1, IEC 61730-2

## Dimensions



## Current/Voltage Characteristics



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