

ABB small wind inverters

UNO-2.0/2.5-I-OUTD-W

2 to 2.5 kW



The UNO-I-W wind turbine inverter is designed with ABB's proven high performance technology. The smallest wind turbine inverter by ABB is the right size for micro wind turbine installations.

The high speed and precise power curve tracking algorithm allows to best match the power curve of each turbine.

Efficiency of up to 96.3%

The UNO-I-W features an efficiency of 96.3 percent including an isolation transformer.

It has power curve customization with high granularity, up to 16-point, for high production yield.

The inverter has new features including a special built-in heat sink compartment and front panel display system.

It is a sealed unit to withstand harsh environmental conditions.

Highlights

- Single phase output
- Power curve customization
- High frequency isolated technology
- Field-selectable grid standard settings

Additional highlights

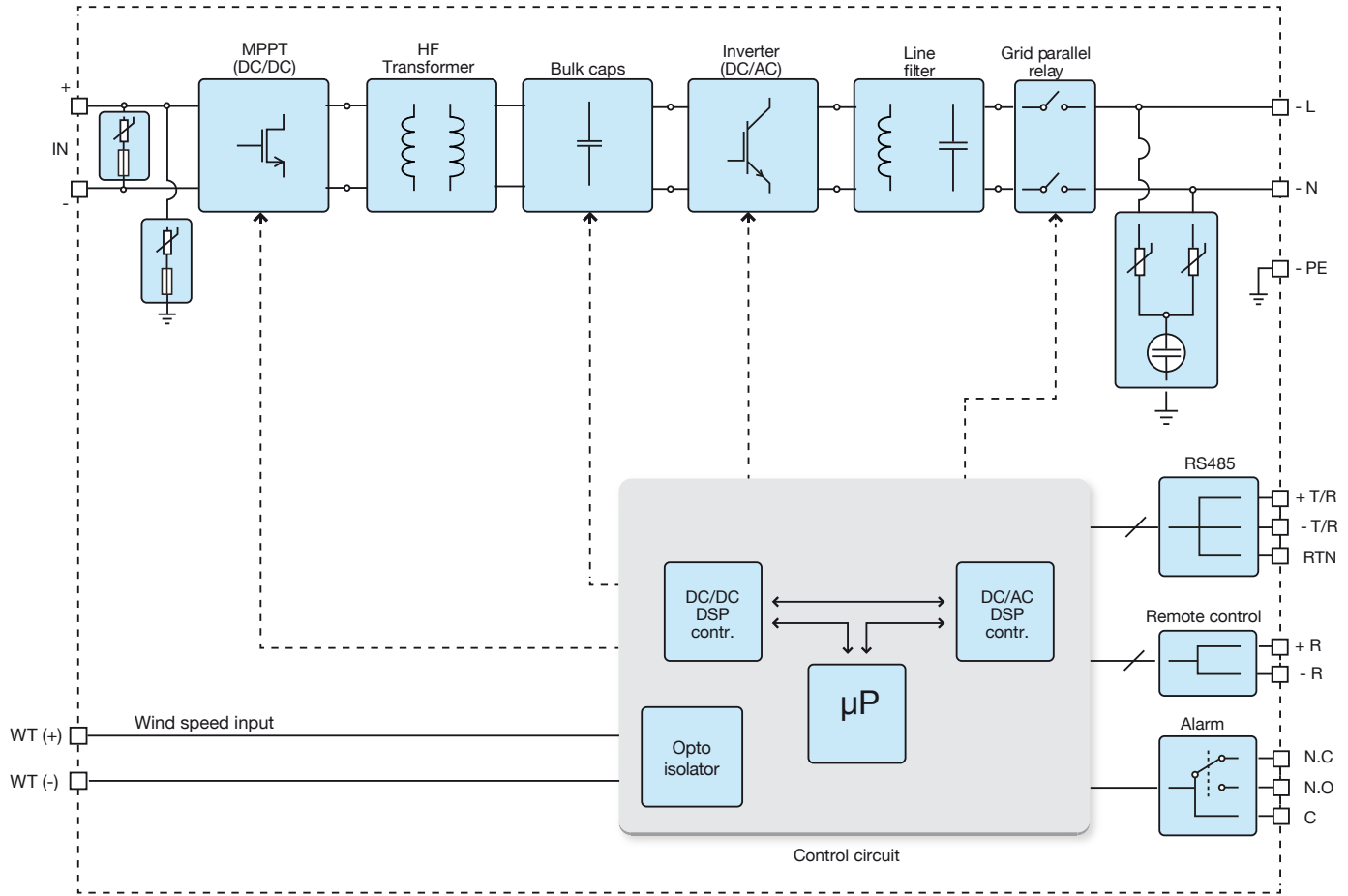
- Extra-quiet high-frequency transformer
- Flexible data monitoring options to view inverter performance
- Compatible with ABB 7200-WIND-INTERFACE



Technical data and types

Type code	UNO-2.0-I-OUTD-W	UNO-2.5-I-OUTD-W
Input side		
Maximum absolute DC input voltage ($V_{max,abs}$)	500 V	
Operating DC input voltage range ($V_{dcmin}...V_{dcmax}$)	90...500 V	
DC input voltage range at P_{acr} ($V_{rp,min}...V_{rp,max}$)	200...470 V	
Rated DC input voltage (V_{dcr})	360 V	
Dc power limitation	Linear derating from Max to Null [$470V \leq V_{dc} \leq 500V$]	
Maximum DC input current (I_{dcmax})	12.5 A	12.8 A
Maximum input short circuit current	15.0 A	
DC connection type	Screw terminal block	
Input protection		
Reverse polarity protection	Yes, from limited current source	
Input over voltage protection - varistor	2	
Generator isolation control	According to local standard	
Output side		
AC grid connection	Single phase	
Rated AC power ($P_{acr} @ \cos\phi=1$)	2000 W	2500 W
Maximum AC output power ($P_{acmax} @ \cos\phi=1$)	2200 W ⁽³⁾	2750 W ⁽⁴⁾
Rated grid AC voltage (V_{acr})	230 V	
AC voltage range	180...264 V ⁽¹⁾	
Maximum output AC current ($I_{ac,max}$)	10.5 A	12.5 A
Contributory fault current	16.0 A	
Rated frequency (f_r)	50 Hz / 60 Hz	
Frequency range ($f_{min}...f_{max}$)	47...53 Hz / 57...63 Hz ⁽²⁾	
Nominal power factor and adjustable range	> 0.990 ⁽⁸⁾	
Total harmonic distortion	< 2%	
AC connection type	Screw terminal block	
Output protection		
Anti-islanding protection	According to local standard	
Maximum AC overcurrent protection	15.0 A	
Output over voltage protection - varistor	2 (L - N / L - PE)	

Block diagram of UNO-2.0/2.5-I-OUTD-W



Technical data and types

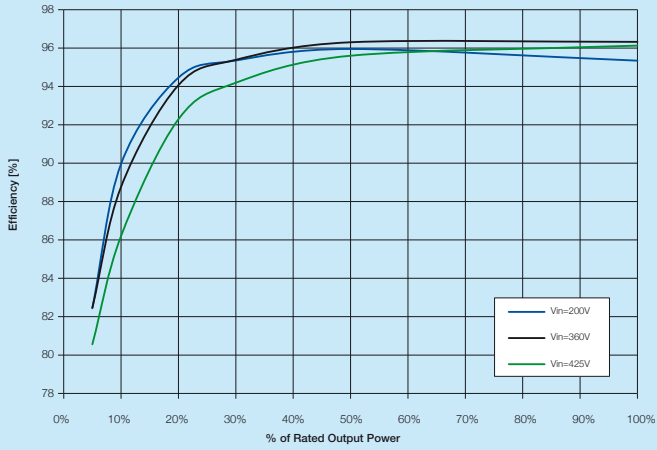
Type code	UNO-2.0-I-OUTD-W	UNO-2.5-I-OUTD-W
Operating performance		
Maximum efficiency (η_{max})	96.3%	
Stand-by consumption	< 8.0 W ⁽⁷⁾	
Feed in power threshold	24.0 W	
Communication		
Wired local monitoring	PVI-USB-RS232_485 (opt.)	
Remote monitoring	VSN300 Wifi Logger Card ⁽⁹⁾ (opt.), PVI-AEC-EVO (opt.), VSN700 Data Logger (opt.)	
Wireless local monitoring	VSN300 Wifi Logger Card ⁽⁹⁾ (opt.)	
User interface	Graphic display	
Environmental		
Ambient temperature range	-25...+60°C (-13...+ 140°F) with derating above 50°C (122°F)	-25...+60°C (-13...+ 140°F) with derating above 45°C (113°F)
Noise emission	< 50 db(A) @ 1 m	
Maximum operating altitude without derating	2000 m (6560 ft)	
Physical		
Environmental protection rating	IP 65	
Cooling	Natural	
Dimension (H x W x D)	518 mm x 367 mm x 161 mm (20.4 in x 14.4 in x 6.3 in)	
Weight	< 17 kg (37.4 lb)	
Safety		
Isolation level	HF transformer	
Marking	CE (50 Hz only)	
Safety and EMC standard	EN 50178, EN62109-1, EN62109-2, AS/NZS3100, AS/NZS 60950, EN61000-6-2, EN61000-6-3, EN61000-3-2, EN61000-3-3	
Grid standard	CEI 0-21 ⁽⁶⁾ , VDE 0126-1-1, VDE-AR-N 4105 ⁽⁶⁾ , G83/2, EN 50438 (not for all national appendices), RD1699, AS 4777, C10/11, IEC 61727, ABNT NBR 16149, CLC/FprTS 50549	
Available products variants		
Standard	UNO-2.0-I-OUTD-W	UNO-2.5-I-OUTD-W

1. The AC voltage range may vary depending on specific country grid standard
2. The Frequency range may vary depending on specific country grid standard
3. Limited to 2000 W for Germany
4. Limited to 2500 W for Germany
5. Limited to plant power ≤ 3 kW

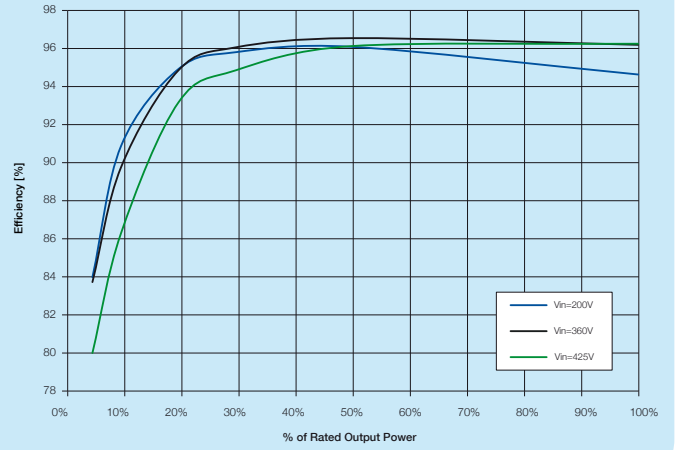
6. Limited to plant power ≤ 3.68 kVA
7. Sleep mode consumption < 0.6 W
8. The unit has not reactive power capability
9. Check availability before to order

Remark. Features not specifically listed in the present data sheet are not included in the product

Efficiency curves of UNO-2.0-I-OUTD-W



Efficiency curves of UNO-2.5-I-OUTD-W



Support and service

ABB supports its customers with a dedicated, global service organization in more than 60 countries and strong regional and national technical partner networks providing the complete range of life cycle services.

For more information please contact your local ABB representative or visit:

www.abb.com/converters-inverters

www.abb.com/windpower

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