ABB SINGLE-PHASE INVERTERS

UNO-DM-2.0/3.3/4.0/5.0-TL-PLUS-(S)B-Q^

The new UNO-DM-PLUS single-phase inverter family, with power ratings from 2.0 to 5.0 kW, is the optimal solution for residential installations.

The new design wraps European quality and engineering into a lightweight and compact package, includes a streamlined physical design with a reduced component count.

The dual maximum power point trackers allow for installations with different orientation. With embedded wireless connectivity and smart grid capabilities, it provides homeowners with advanced monitoring, control and maintenance.

All service software is embedded within the inverter and wirelessly accessible using any smart device or PC. This reduces the operation and maintenance burden for installers and associated costs for home owners.

^Manufactured under trademark licence agreement by FIMER Group.

SUITABLE FOR INSTALLATIONS WITH TWO DIFFERENT ORIENTATIONS~

~This feature excludes model UNO-DM-2.0-TL-PLUS-(S)B-Q

HOW YOU BENEFIT

HIGH EFFICIENCY

Transformerless technology for high efficiency of up to 97.4%, generating more power from your PV system.

FLEXIBLE DESIGN

Offers a wide range of features to enable an economical solution for a variety of installation conditions.

SAFE OPERATION

External AC & DC connections allow a quick installation without the need of opening the inverter cover.

INNOVATIVE

Built in Wi-Fi enables wireless access to the embedded Web User Interface and free system monitoring on Aurora Vision.

SOLAHART WARRANTY

Enjoy a 10-year warranty, for peace of mind.*

Technical Data

MODEL [1] MODEL WITH "S" INDICATES BUILT-IN DC SWITCH	UNO-DM-2.0-TL-PLUS-(S)B-Q	UNO-DM-3.3-TL-PLUS-(S)B-Q	UNO-DM-4.0-TL-PLUS-(S)B-Q	UNO-DM-5.0-TL-PLUS-(S)B-Q
Input Side				
Absolute Max. DC input voltage ($V_{max, abs}$)	600 V			
Start-up DC input voltage (V_{start})	150 V (adj. 100...250 V)	200 V (adj. 120...350 V)		
Operating DC input voltage range	0.7 x V_{start}...580 V (min 90 V)			
Rated DC input voltage (V_{dcr})	300 V	360 V		
Rated DC input power (P_{dcr})	2500 W	3500 W	4250 W	5150 W
Number of independent MPPT	1	2	2	2
Max. DC input power for each MPPT	2500 W	2000 W	3000 W	3500 W
DC input voltage range with parallel config of MPPT at P_{acr}	210...480 V	170...480 V	130...530 V	145...480 V
DC power limitation with parallel config of MPPT	N/A	Linear derating from Max to Null [530 V≤V_{MPPT}≤580 V]		Linear derating from Max to Null [480 V≤V_{MPPT}≤580 V]
DC power limitation for each MPPT with independent configuration of MPPT at P_{acr}	N/A	2000 W [200 V≤V_{MPPT}≤530 V] other channel: P_{dcr}-2000 W	3000 W [190 V≤V_{MPPT}≤530 V] other channel: P_{dcr}-3000 W	On MPPT 1: 3500 W [185 V≤V_{MPPT}≤480 V] On MPPT 2: Pdcr-3500 W [145 V≤V_{MPPT}≤480 V] or 3500 W (305V≤V_{MPPT}≤480 V) with no power on MPPT1
Max DC input current (I_{dcmax}) / for each MPPT (I_{max})	10.0 A	20.0 / 10.0 A	32.0 / 16.0 A	30.5/19-11.5 A (MPPT1 - MPPT2)
Max. input short circuit current for each MPPT	12.5 A	12.5 / 25.0 A	20.0 / 40.0 A	22.0 / 44.0 A
Number of DC input pairs for each MPPT	1			
DC connection type	MC4 Connectors			
Input Protection				
Reverse polarity protection	Yes, from limited current source			
Input over voltage protection for each MPPT-varistor	YES			
DC Switch rating for each MPPT (with DC switch)	25 A / 600 V			
Output Side				
AC grid connection type	Single-phase			
Rated AC power (P_{acr} @cosΦ=1)	2000 W	3300 W	4000 W	5000 W
Max. AC output power (P_{acmax} @cosΦ=1)	2000 W	3300 W	4000 W	5000 W
Max. apparent power (S_{max})	2000 VA	3300 VA	4000 VA	5000 VA
Rated AC grid voltage ($V_{ac,r}$) / AC voltage range [2]	230 V / 180...264 V			
Max. AC output current ($I_{ac,max}$)	10.0 A	14.5 A	17.2 A	22.0 A
Contributory fault current	12.0 A	16.0 A	19.0 A	24.0 A
Rated output frequency (f_r) [3]	50 Hz			
Output frequency range (f_{min}...f_{max}) [3]	47...53 Hz			
Nominal power factor and adjustable range	> 0.995, adj. ± 0.1 - 1 (over/under excited)			
Total current harmonic distortion	< 3%			
AC connection type	Female connector from panel			
Output Protection				
Anti-islanding protection	According to local standard			
Max. external AC overcurrent protection	16.0 A	20.0 A	25.0 A	32.0 A
Output overvoltage protection - varistor	2 (L - N / L - PE)			
Operating Performance				
Max efficiency (ηmax) / Weighted Euro efficiency	96.7% / 95.0%	97.0% / 96.5%	97.0% / 96.5%	97.4% / 97.0%
Feed in power threshold / Night consumption	8 W / <0.4 W			
Safety				
Isolation level	Transformerless			
Marking	CE , RCM			
Safety and EMC standard	EN 50178, IEC/EN 62109-1, IEC/EN 62109-2, AS/NZS 3100, EN 61000-6-1, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3		IEC/EN 62109-1, IEC/EN 62109-2, AS/NZS 4777.2, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-11, EN 61000-3-12	
Grid standard [4]	CEI 0-21, DIN V VDE V 0126-1-1, VDE-AR-N 4105, G83/2, G59/3, RD 413, ITC-BT-40, AS/NZS 4777.2, C10/11, IEC 61727, IEC 62116			
Environmental				
Ambient temperature range	-25...+60°C with derating above 50°C			-25...+60°C with derating above 45°C
Relative humidity | Acoustic noise emission level	0...100 % condensing | < 50 dB (A) @ 1 m			
Max. operating altitude without derating	2000 m			

Physical	
Environmental protection rating	IP 65
Cooling	Natural
Dimensions (H x W x D)	553 x 418 x 175 mm
Weight	15 kg
Mounting system	Wall bracket

Embedded Communication and Warranty	
Interface [4]	Wireless
Protocol	ModBus TCP (SunSpec)
Commissioning tool	Web UI
Monitoring	Plant Portfolio Manager and Plant Viewer
Solahart Warranty	10 Years*

[1] Inverter models with "S" are delivered with Built-in DC safety switch. [2]The AC voltage range may vary depending on specific country grid standard. [3]The Frequency range may vary depending on specific country grid standard; CE is valid for 50Hz only. [4]As per IEEE 802.11 b/g/n standard. *For full details see Solahart Owner's Guide & Installation Instructions.