Grid-tied, 3-phase, dual MPPT transformerless PV Inverter

M80U



The power behind competitiveness

Delta Commercial Series

Product Features

- Two stage topology with wide input operation range, 200 to 1000 Vdc
- Allows 0-90° tilt-mount installation
- Dual MPP tracker inputs
- Superior efficiency performance, 98.8% peak & 98.5% CEC
- Wiring box capable of landing up to 18 strings via fused inputs (_122)
- NEMA 4X outdoor rated enclosure
- Ergonomics grip design
- Integral DC Arc fault detector
- Integral AC & DC disconnects
- Integral type 2 SPDs at AC & DC terminals
- String monitoring (_122)

DELTA

Smarter. Greener. Together.

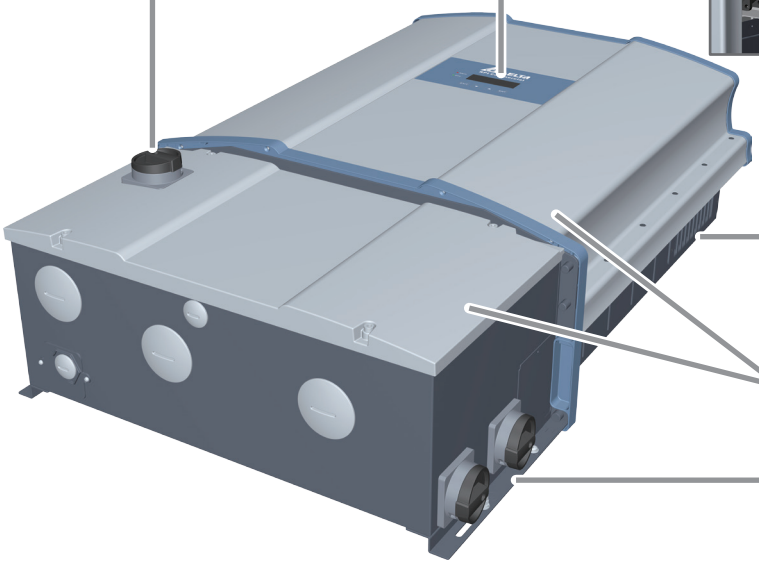
Delta M80U

IP68 Swappable Fan Kit



AC Switch

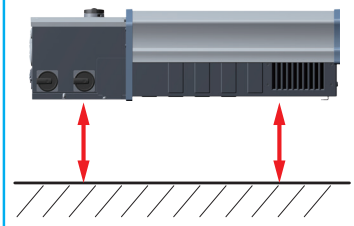
Digital Display



NEMA 4X

DC Switches

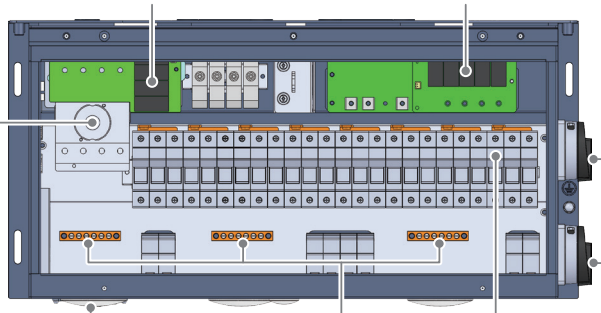
Horizontal Installation



Maintain a height ≥ 12” (30.5cm) from mounting surface

Wiring Box Configurations

M80U_120



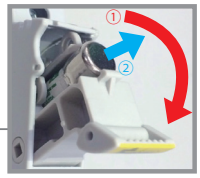
Type2 AC SPD

Type2 DC SPD

AC switch

DC Switches

Finger-safe fuse holders

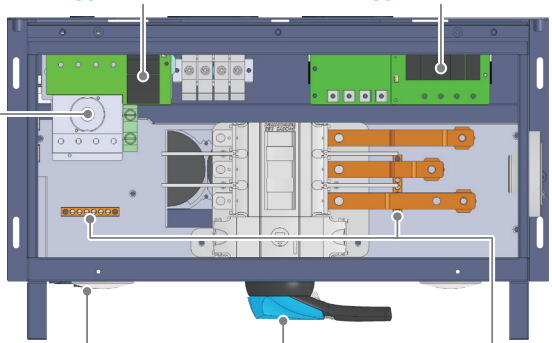


RS-485
EPO
Dry contact
Wifi (optional)

Ground bars, 3pl

String fuse (16 strings)

M80U_121



Type2 AC SPD

Type2 DC SPD

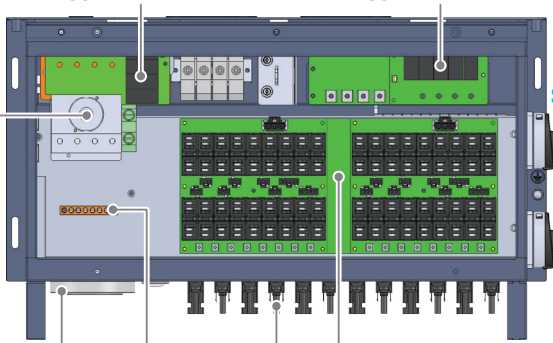
AC switch

DC switch

RS-485
EPO
Dry Contact
Wifi (optional)

Ground Bars 2pl

M80U_122



Type 2 AC SPD

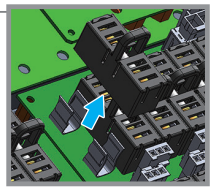
Type 2 DC SPD

DC Switches

AC switch

Grounding Bar

Fuse holder type DC



RS-485
EPO
Dry Contact
Wifi (optional)

MC4 connector (18 strings)

Outstanding performance

M80U have excellent efficiency performance, peak 98.8% and CEC 98.5%.



Benefits with M80U

Multi-application:
Designed for commercial, industrial and utility applications.

All-in-one Design:
String fuses, surge protection devices, DC switches and arc fault detection circuit are integrated into the design.

Saving on Space Cost:
Horizontal mounting allows under array location without need for additional housing.

2 MPP Trackers:
The use of two MPP trackers provides greater flexibility in PV array configuration leading to a maximized yield.

String monitoring function:
The string monitoring function can precisely record real-time current value up to 18 strings via RS-485 interface.

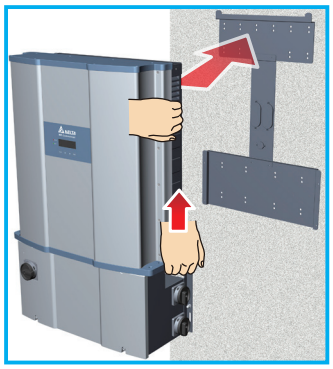
IDC1		(A)
1 : 1.6	4 : 1.6	
2 : 1.6	5 : 1.7	
3 : 1.6	6 : 1.7	

IDC1	(A)
7 : 1.6	
8 : 1.6	
9 : 1.6	

IDC2		(A)
1 : 1.4	4 : 1.6	
2 : 1.6	5 : 1.6	
3 : 1.5	6 : 1.6	

IDC2	(A)
7 : 1.0	
8 : 1.6	
9 : 1.6	

Easy Installation:
Ergonomic grip design provides easy installation or removal by the installer. For additional flexibility, eye bolts are provided to allow for lifting using crane.





Delta Commercial Series

Model		M80U_120	M80U_121	M80U_122
DC Input				
Max. input voltage		1000V (per NEC)		
Operating voltage range		200-1000V		
Start voltage		>250V		
V_{MPP} range for $P_{OUT-RATED}$		600 - 800 V		
Rated voltage		710V		
Number of MPP trackers		2		
Current limit, I_{MP-MAX} /MPPT		70A/MPPT		
Allowable array I_{SC-MAX} /MPPT		108A/MPPT		
Connection type		16 pr. Fuse holders	2pr. Terminal blocks	18 pr. MC4 connectors
Allowable conductors		#8~#14 AWG, Cu only	#1/0~#3/0 AWG, Cu/Al	#10~#12 AWG, Cu only
Surge protection, DC side		SPD Type II 10kA (8 x 20us)		
Combiner fuses		32 x 15A	Not Provisioned	36 x 15A
DC disconnect switch		Yes		
String current monitor		Not Provisioned	Not Provisioned	Yes
AC Output				
Rated output power		80kVA (@TAMB ≤ 40°C, VIN ≥ 600VDC)		
Max. output power		83kVA (@TAMB ≤ 40°C, VIN ≥ 650VDC)		
Max. output current		100A		
Grid configuration		480/277V (3P-4W/Y) or 480V (3P-3W/Δ)		
Inverter connection		3W or 4W programmable		
Operating voltage range		±10%		
Operating frequency range		50/60 Hz		
Power factor		Unity at P_{RATED}; adjustable: [0.8 ind ~0.8 cap]		
Surge protection, AC side		SPD Type II 10kA (8 x 20us)		
THD		<3%		
Connection type		AC Switch & Terminal block #1~#2/0		
Night time consumption		<3W		
Efficiency				
Peak efficiency		98.8%		
CEC efficiency		98.5%		
Euro Efficiency		98.5%		
Information				
Comm port | Protocol		RS-485 | Delta or Sunspec		
Display		20 x4 line LCD		
Regulation				
		UL1741 SA, UL1741, UL1998, UL 1699B, IEEE1547, IEEE1547.1 CSA C22.2, FCC Part 15 (Class B)		
General Data				
Smart inverter functionality		Voltage/Frequency Ride through, Volt/Var, Volt/Watt, Power curtailment, Frequency/Watt		
Operating temp. range		-13°~140°F (-25°~60°C)		
Protection level		NEMA 4X		
Operating elevation		<9800ft (<3000m)		
Cooling		Forced air cooling with Smart Fan Control		
Dimension (W x H x D) (in)		24.2 x 36.3 x 10.8		24.2 x 38.8 x 10.8
Weight (lb)	W/ Wiring box	182.8	176.2	187.4
	W/O Wiring box	149.9		
	Shipping weight	249.1	246.9	253.5

- All specifications are subject to change without prior notice.

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