VAISALA

Vaisala Power Supply Unit PSU501, Vaisala Power Supply Unit PSU502, Vaisala Solar Panel 20 W SOL501/ SOL502

Vaisala Beacon Station BWS500 allows for versatile powering options with AC (mains) powering, DC powering with a solar panel, or external DC powering. The mounting options are similarly versatile: mast, tripod, and wall mounting are available.

Versatile powering options

The powering options are designed to ensure uninterrupted power supply (UPS) at the site for Vaisala Beacon Station.

For those looking for a portable solution, the obvious choice is the solar panel together with the power supply unit for DC power PSU502. In case AC (mains) power is available on site, the power supply unit for AC (mains) power PSU501 can be used.

PSU501 for AC (mains) power

PSU501 installation requires a licensed expert such as an electrician. The PSU501 enclosure contains a battery, and an AC (mains) power cable is connected to the **AC in** connector in the power supply unit.

PSU502 for DC power

PSU502 is for cases when AC (mains) power is unavailable. It is designed to be used together with Vaisala Solar Panel. The PSU502 enclosure contains a battery that the solar panel charges.

Vaisala Solar Panel 20 W

Vaisala Solar Panel comes in 2 variants to allow mounting on a mast or tripod.

The use of the solar panel can be considered in locations with a sufficient amount of sunlight.

The solar panel can be used only with the non-heated version of Vaisala Weather Transmitter WXT536.

Technical Data

Powering options

Vaisala Solar Panel 20 W [1]	SOL501/SOL502
Vaisala power supply unit for AC (mains) power	PSU501
Vaisala power supply unit for DC power [2]	PSU502

1) Power supply unit not included. Select the compatible power supply unit PSU502.
2) Use with Vaisala Solar Panel 20 W or standalone with your own external DC power.

PSU501 and PSU502 mounting options

Mast mounting kit for pole masts Ø 60 ... 200 mm (2.36 ... 7.87 in), includes mounting brackets, steel band, accessories, and 5-mm Allen key	ASM213841
Tripod mounting kit, includes mounting brackets and accessories	ASM213954
Wall mounting kit, includes mounting plate, screws, and wall plugs	ASM213949
Cable, PSU501/PSU502 to gateway [1]	–
AC (mains) power connector [2]	–

1) Delivered with each power supply unit PSU501/PSU502.
2) Delivered with each power supply unit PSU501.

PSU501 specifications

Battery type	Value-regulated lead-acid (VLRA) battery
Input power	100 - 240 VAC 50 - 60 Hz 800 mA
AC (mains) fuse, internal (nonreplaceable)	T 3.15
AC (mains) cable connection	• Conductor cross section (flexible): 0.75 ... 2.5 mm^2 (AWG 20 ... 14) • Cable lead-through: for 6 ... 12.5 mm (0.24 ... 0.49 in) cable
Nominal output voltage	24 V In backup mode: 10.5 - 15.6 V
Nominal battery capacity	12 VDC 7 Ah
Expected battery lifetime	3 ... 5 years
Operating temperature	−40 ... +55 °C (−40 ...+131 °F)
Dimensions (H × W × L)	244.5 × 164.2 × 101.0 mm (9.63 × 6.46 × 3.98 in)
Weight	3.5 kg (7.7 lb)
IP rating	IP65
Material, enclosure	Polycarbonate

1) The capacity of the backup battery degrades in cold temperatures.

PSU501 compliance

EU directives	EMC, LVD, RoHS
Compliance marks	CE, UKCA, RCM
EMC compatibility	IEC / EN / BS EN 61326-1, industrial environment CISPR 32 / EN 55032 / BS EN 55032, Class B FCC 15B
Electrical safety	IEC 61010-1
Cold	IEC 60068-2-1
Dry heat	IEC 60068-2-2
Vibration	IEC 60068-2-6 IEC 60068-2-64
Change of temperature	IEC 60068-2-14
Damp heat, cyclic	IEC 60068-2-30
Rough handling	IEC 60068-2-31
Damp heat	IEC 60068-2-78

PSU502 specifications

Battery type	Value-regulated lead-acid (VLRA) battery
Input power	15 - 32 VDC Max. 2 A
Nominal battery capacity	12 VDC 7 Ah
Maximum storage time	3 months at room temperature before first-time use
Operating temperature	−40 ... +55 °C (−40 ... +131 °F) [1]
Operating humidity	0 ... 100 %RH, non-condensing
Dimensions (H × W × L)	244.5 × 164.2 × 101.0 mm (9.63 × 6.46 × 3.98 in)
Weight	3.5 kg (7.7 lb)
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SOL501/SOL502 specifications

Nominal voltage	12 VDC
Maximum power	20 W
Voltage at maximum power (Vmpp), typical	18.5 V
Current at maximum power (Impp), typical	1.09 A
Open-circuit voltage	22.6 V
Short-circuit current (Isc), typical	1.19 A
Dimensions (H × W × D), without mounting frame	440 × 350 × 49.6 mm (17.32 × 13.78 × 1.95 in)
Dimensions (H × W × D), including mounting frame	377.5 × 350 × 319.7 mm (14.86 × 13.78 × 12.59 in)
Weight, including mounting frame	4.3 kg (9.5 lb)
Weight, including mounting frame and power supply unit PSU502	7.8 kg (17.2 lb)

Solar panel options

Solar panel for tripod mounting, includes mounting brackets, cable, and accessories	SOL501
Solar panel for pole masts Ø 60 ... 200 mm (2.36 ... 7.87 in), includes solar panel holder, mounting brackets, steel band, cable, and accessories	SOL502

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