



SICLIMAT™

Uninterruptible Power Supply

USV

Ensures an uninterrupted supply of power to the SICLIMAT X-OS operator station in the event of mains interference or power failure.

Use

The single-phase USP is simply connected between the mains supply and the electrical load. The standard serial port is used for communication with the X-OS. The USPs are the "on-line" type, i.e. the connected electrical loads are powered continuously by the USP, isolated from any mains interference and free of interruption.

In normal operation a rectifier converts the AC mains voltage into a DC voltage which supplies the electrical energy for the inverter. At the same time, the internal battery is kept fully charged.

The inverter powers the connected loads with a very stable sinusoidal AC voltage. With extreme long-term overload or load short-circuits, the system switches to the internal bypass. This happens when the output-voltage tolerances are exceeded (change-over criterion).

Visual and audible alarms indicate the current operational status, which is transferred to the connected computer via the integral computer port. With a partially discharged battery, an audible warning is triggered when the remaining hold-up time (at nominal load) drops to only 3 minutes.

Connecting the X-OS to the USP

It is strongly recommended that every X-OS should be connected to a USP. This ensures an uninterrupted power supply during normal operation. In the event of mains interference, brief interruptions are fully covered by the USP. Longer-lasting mains interruptions lead to an orderly shut-down of the X-OS to prevent the loss of data. The response times can be defined by the user. The required software is part of the basic SICLIMAT X software package. The system re-boots automatically when the mains power is restored.

Connection of additional devices

In principle, other devices may be connected to the USP in addition to the X-OS. The increased power consumption results in shorter hold-up times.

Ordering

When ordering, please specify the quantity, product name and type code.

| <i>Type</i> | <i>Order No.</i> | <i>Specification No.</i> |
|----------------|----------------------|--------------------------|
| USV-A07 | 6FL4301-4NA32 | 15/46003 |
| USV-A10 | 6FL4301-4NA33 | 15/46004 |
| USV-A20 | 6FL4301-4NA34 | 15/46005 |
| USV-A30 | 6FL4301-4NA35 | 15/46006 |

The package comprises:

Uninterruptible power supply, mains cable, 5 m serial plug-in cable and installation instructions.

Technical data

| | Type | USV-A07/USV-A10/USV-A20/USV-A30 |
|---------------------------------|---|--|
| Data | Communications software | The required software is part of the basic SICLIMAT X software package. |
| | Battery | Internal, sealed lead-acid battery |
| | Nominal power (where $\cos \varphi = 0.7_{ind}$) | 700VA/ 1000VA/ 2000VA/ 3000VA |
| | Hold-up time at nominal load | 6min/ 7min/ 10min/ 6min |
| | Hold-up time at half load | 17min/ 21min/ 26min/ 17min |
| | Overload capability | 130 % for up to 1.5s, 110 % for up to 10s, short-circuit proof |
| | Power supply | Input (single phase) |
| Voltage range | | 160 ... 276V 184 ... 276 V |
| Frequency | | 50/60Hz +/-5% (automatic frequency recognition) |
| Output (single-phase) | | |
| Voltage and frequency | | 208, 220, 230, 240V +/- 3%, 50/60Hz, as input frequency |
| Frequency tolerance | | With mains power: as for input frequency In event of mains failure: +/-0.5% |
| Total harmonic distortion (THD) | | Linear load: < 4% non-linear load: < 7% |
| Efficiency | | > 83% |
| Min. mains fuse rating | | 6A/ 10A/ 12A/ 16A |
| Admissible crest factor | | 3 |
| Connections/interfaces | | Interface |
| | Data cable | 5m serial from UPS to X-OS |
| | Output sockets | 4 x IEC 320, 10A/2 x IEC 320, 10A/ 4 x IEC 320, 16A/2 x IEC 320, 16A |
| | Dimensions/weight | Dimensions (H x W x D) |
| Weight | | 13kg/ 16kg/ 34kg |
| Ambient conditions | Ambient temperature | Operation: +15...+32°C Storage: -15...+40°C |
| | Relative humidity | 20...90% rh, non-condensing |
| | Cooling method | F (fan-cooled) |
| | Installed height | Up to 3000m above sea-level; max. temperature is reduced above 1500m |
| | Noise level | ≤ 41dB(A)/ -15...+40°C |
| | Interference immunity | IEC 801-2 Level 4, IEC 801-3 Level 3, IEC 801-4 Level 4, IEC 801-5 Level 2 |
| | Product safety | Tested to |
| Radio interference suppression | | EN 50091-2, Class B, equivalent to EN 55022, Class B |
| Protection standard | | IP 20 |

