

ITYS ES

Solution for electrical substations

from 1000 to 3000 VA - Electrical Substation

Prime



GAMME 560/PSD

High protection and high availability

- The ITYS ES series is a range of compact UPS systems available in 1000, 2000 and 3000 VA models with on-line double conversion technology (VFI) with sinusoidal absorption.
- ITYS ES guarantees permanent regulation of the output voltage and frequency. This technology is compatible with all IT and industrial applications and operating environments, installations with generator sets included.
- Wide tolerance on input voltage ensures that switchovers to battery mode are infrequent, significantly prolonging battery lifetime.
- Wide operating ambient temperature up to 45°C.
- Standard Over Voltage Control Device (OVCD) protects the UPS and the load from dangerous mains peak-voltages.
- UPS models with tropicalised (Conformal Coating) boards.

Straightforward to install and easy to use

- The UPS is shipped ready for connection with internal batteries connected and charged.
- ITYS ES, with the manual bypass option

is easy to install without any special plant engineering preparation, as it is equipped with built-in thermal protection.

- The LCD monitoring/control panel and a buzzer make the equipment extremely easy and intuitive to use. The graphic indicating the power distribution path shows at a glance whether or not the system is working as it should.
- Battery efficiency can be tested via the control panel or using dedicated software.

Operating efficiency and versatility

- The versatility of these models makes them suitable for protecting critical devices in the industrial field.
- The standard equipment and communication accessories have been specially designed to satisfy the typical needs of installation or use in transformer cabins (i.e. tropicalized boards).
- In situations where automatic power management procedures are required, the communication software can be used to programme scheduled start-up and shutdown times.
- Restarting the UPS from the battery to power the DG before closing the main isolator.

The solution for

- > Control devices
- > Electric lines

Compliance with standards

- > IEC 62040-1
- > IEC 62040-2
- > IEC 62040-3

Certifications



Tech info

The CEI 016 STANDARD for auxiliary cabin equipment requires an uninterrupted power supply to the control circuits for the General Protection and Medium Voltage Switch.

The control circuits for the General Protection, Medium Voltage Switch and coil must be powered by the same auxiliary voltage when there is no power. The power supply must be guaranteed for a back-up time of 1 hour, either by the UPS or by buffer batteries.

The Medium Voltage Switch must be powered up by skilled personnel if out of service for a long time due to maintenance or failure.

It is necessary to power the General Protection before closing the Medium Voltage Switch.

The required protection comprises:

- Mains power cuts due to poor maintenance of the user's system.
- Inappropriate tripping of the Medium Voltage Switch because of faults in the trip circuit.
- Alert signalling if the Medium Voltage Switch trips due to a power failure (system with regular maintenance).

UPS - Technical data

| ITYS ES | | | |
|---|---|---------------------|-----------------------------|
| Model | ITY3-TW010B-ES | ITY3-TW010B-ES | ITY3-TW030K-ES |
| Sn [VA] | 1000 | 2000 | 3000 |
| Pn [W] | 1000 | 2000 | 3000 |
| Input/output | 1/1 | | |
| INPUT | | | |
| Rated voltage | 230 V (1ph) 110±300 V; (160±300 V @100% load) | | |
| Rated frequency | 40-70Hz (50/60 Hz +/-5% Auto-Selectable) | | |
| Power factor | >0,99 | | |
| OUTPUT | | | |
| Rated voltage | 220 / 230 / 240 V (± 1 %) | | |
| Rated frequency | 50/60 Hz (± 0.1 Hz in battery mode) | | |
| Overload | up to 105% continuously; 125% x 3 min; 150% x 30 sec | | |
| Crest factor | 3:1 | | |
| Connections | 4 x IEC 320 (C13) | 8 x IEC 320 (C13) | 8 x IEC 320 (C13) + 1 (C19) |
| BATTERIES | | | |
| Type | sealed lead-acid maintenance free - expected lifetime 3-5 years | | |
| Back-up time ⁽¹⁾ | 12 minutes | 16 minutes | 23 minutes |
| Sized for a back-up time of | 108 minutes @ 50 W | 130 minutes @ 150 W | 156 minutes @ 300 W |
| Back-up time ⁽²⁾ + switching back on | 60 minutes @ 50 W | 60 minutes @ 150 W | 60 minutes @ 300 W |
| Battery test | • | • | • |
| COMMUNICATION | | | |
| Interfaces | RS232 - USB - Dry contact | | |
| Ethernet adapter | NET VISION (TCP / IP & SNMP) optional card | | |
| Local communication software | Local View | | |
| EFFICIENCY | | | |
| Online mode | up to 93% | | |
| ENVIRONMENT | | | |
| Ambient service temperature | from 0 °C to +40 °C (up to 45 °C ⁽⁴⁾) | | |
| Relative humidity | < 95 % non-condensing | | |
| Maximum altitude | 1000 m without de-rating | | |
| Noise level at 1 m | < 50 dBA | | |
| UPS | | | |
| Dimensions W x D x H | 145 x 404 x 224 mm | 192 x 428 x 322 mm | 384 x 428 x 322 mm |
| Weight | 14,4 kg | 26 kg | 49,3 kg |
| Degree of protection | IP20 | | |
| COMPLIANCE WITH STANDARDS | | | |
| Safety | IEC/EN 62040-1, AS 62040.1.1, AS 62040.1.2 | | |
| EMC | IEC/EN 62040-2, AS 62040.2 | | |
| Product declaration | CE, RCM (E2376) | | |
| ITYS ES - Manual bypass ⁽³⁾ | | | |
| Sn [VA] | 1000 | 2000 | 3000 |
| INPUT | | | |
| Type of terminals | CBD6 | | |
| Wire size | 6 mm ² max | | |
| BYPASS | | | |
| Switching positions | 1: UPS - 2: MAINS | | |
| Switching time | 6 ms max | | |
| LOAD OUTPUT | | | |
| Type of terminals | CBD6 | | |
| Wire size | 6 mm ² max | | |
| UPS SUPPLY OUTPUT | | | |
| Type of socket | IEC 320 10 A | IEC 320 16 A | |
| SURGE ARRESTORS (on request) | | | |
| Type | "L" in compliance with CEI EN 61643-11 | | |
| L/N pulse current | 40 kA (8/20) max | | |
| VAC N/GND | 255 V max | | |
| VAC L/N | 320 V max | | |

(1) @75 % of rated load (models with internal batteries) PF 0.7.

(2) Factory setting: back-up time limited to 60 minutes to permit subsequent restarting with battery.

(3) Upon request.

(4) Conditions apply.

Standard communication features

- Embedded dry-contact interface.
- Input mains switch breaker.
- Power off the UPS remotely.
- Internal temperature sensor.
- 1 slot for communication options.
- USB port for UPS management based on HID protocol.
- MODBUS RTU (RS232).
- LOCAL VIEW software for local UPS monitoring and shutdown for Windows, Linux and MAC Osx.
- Clear and uncluttered LCD interface for easy UPS monitoring, even for less specialist users.

Communication options

- Dry-contact card.
- NET VISION: professional WEB/SNMP Ethernet interface for secure UPS monitoring and remote automatic shutdown.
- Environmental Monitoring Device (EMD).
- REMOTE VIEW PRO supervision software.

Manual bypass (option)

- Specially designed for ITYS ES, the manual bypass option enables:
- simplified installation: connection to the system is made with industrial grade terminals, while connection to the UPS is via the pre-wired plug and socket supplied.
- easy maintenance and uninterrupted operation: thanks to the manual bypass isolator it is possible to service or replace the UPS while maintaining the power supply to the devices downstream in complete safety for the operator. This operation has been specially devised to be simple to carry out, even in an emergency.
- increased level of equipment immunity to surge voltages, typical for this type of application, thanks to suitable surge arrestors included in addition to standard UPS protection.

