ITYS ES

Solution for electrical substations
from 1000 to 3000 VA



Function
Compact tower UPS system saves space in the operating environment.

Advantages

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
> Industry

Strong points
> High protection and high availability
> Straightforward to install and easy to use
> Operating efficiency and versatility

Conformity to standards
> IEC 62040-1
> IEC 62040-2
> IEC 62040-3
> CEI 016
> RCM (E2376)

Certifications and attestations

Tech info

The IEC 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).

General characteristics

- UPS models with tropicalised (Conformal Coating) boards.
- Embedded dry-contact interface.
- Input mains switch breaker.
- Connection for battery extension modules.
- Power off the UPS remotely.
- Internal temperature sensor.

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.

Electrical options

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.



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Technical data

	ITYS ES		
Model	ITY3-TW010B-ES	ITY3-TW020B-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), UKCA		
	ITYS ES - Manual bypass (3)		
Sn [VA]	1000	2000	3000
INPUT			
Type of terminals	CBD6		
Wire size	6 mm² max		
BYPASS			
Switching positions	1: UPS - 2: MAINS		
Switching time	6 ms max		
LOAD OUTPUT			
Type of terminals	CBD6		
Wire size	6 mm² 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.