securing power in industrial applications

Training booklet 2013
Training courses

Uninterruptible Power Supply (UPS) systems from GUTOR are designed to individual customer requirements. Our customized courses train technical staff to maintain and service these UPS systems, based on specific onsite system requirements.

Training courses are conducted in facilities located in Switzerland, Malaysia and UAE are equipped with up-to-date audiovisual aids and test equipment. Customers are introduced to important operating and service-related aspects and gain valuable expertise on UPS systems. Furthermore, participants are able to simulate different modes of operation and functions on these test equipments.

Granted a training system is installed, GUTOR may conduct on-site training courses upon customer request. Live systems cannot be used for training purposes.

GUTOR recommends training courses to all UPS system customers with systems onsite.

www.gutor.com

Our customers testify...

Ontario Power Generation Inc. (Canada)  Shell E & P Ireland Ltd. (Ireland)

The course was very well presented and of excellent quality - well done.

Well balanced course of practical demonstration & book-work.

The training was a mind opener in regards to UPS systems.

Overall it was an excellent programme.

West Africa Gas Pipeline Company Ltd. (Nigeria)  Emirates Aluminium (UAE)
## 3 reasons to choose training

1. **Optimize the operation of your UPS to best safety mastery.**

2. **Train confident action and decision making in case of emergency.**

3. **Acquire level 1-2 training for timely and efficient intervention and risk management.**

## Contents

### About GUTOR training courses
- System overview
- Training centers
- Training courses

### Standard courses
- GUTOR UPS introduction
- GUTOR maintenance

### Customized courses
- Level 1
- Level 1-2
- Level 1-3

### General information & registration:
- Good to know
- Locations
- Registration
GUTOR system overview

GUTOR stands for highest quality and reliability. Our products are the result of long lasting experience, expertise, and solid technical know-how.

With GUTOR you’re not buying only a product, you’re buying a solution and safety for your business.

The GUTOR product range is designed for heavy industrial applications, including UPS systems, inverters, rectifiers / chargers and SMPS modular systems. Our engineered to order (ETO) approach ensures every system is precisely customized to fit specific customer needs and requirements.

PxW AC UPS system
- PEW 5 – 200 kVA single phase
- PDW 10 – 220 kVA three phase
- Higher ratings on request

SDC rectifier / battery charger
- >24–220 V
- >25–1200 A

WxW AC inverter system
- WEW 5–200 kVA single phase
- WDW 10–220 kVA three phase
- Higher ratings on request

PXP AC UPS system
- PXP 1000 5–160 kVA single phase
- PXP 3000 5–160 kVA three phase
Our professional training centers

GUTOR Electronic LLC, world leader in UPS systems, your partner in training.
Our goal: Acquire new skills, share our experience and provide professionals with all tools necessary for best working conditions.

- Wettingen, Switzerland
- Abu Dhabi, UAE
- Selangor, Malaysia

• Training center
Our training courses

"Standardized or customized high quality training"

For whom are our courses designed?
GUTOR UPS introduction: For new employees having no prior knowledge of UPS systems
GUTOR maintenance: Employees who require theoretical information
Level courses: End-users, who work with the system on regular basis.

What is the aim of our courses?
To become proficient in order to have real autonomy in maintenance of UPS systems

Where are our courses held?
• Courses held in Wettingen (Switzerland), Abu Dhabi (UAE) or Selangor (Malaysia)
• At client site, granted a system is installed there

What language is used?
Language of the training is English (other languages on request)

What are the benefits?
• Trained operation staff will operate the system in a safe and confident manner
• Well maintained and failure reduced systems extend the overall life time of UPS systems
• Furthermore, our technical support can handle malfunction request quicker and more efficiently, if the person on-site is trained

Courses overview
Introduction to the world of GUTOR UPS systems

Participants will acquire basic knowledge on GUTOR UPS system network topologies. In addition, the instructor will explain different configurations of the UPS systems, including batteries. This training is intended for new employees with no prior knowledge of UPS systems.

Content

- Tasks and functions of a UPS system
- Topologies
  - UPS (PxW, PXP)
  - Charger (SDC)
  - Inverter (WxW)
- Configuration
  - Redundant
  - Hot standby, etc
- Environmental impact
- Operation
  - Functional description
  - Starting a UPS system
  - GUTOR front panel
- Remote Monitoring
  - Relay board
  - MODBUS-converter
  - Network management card
- Batteries
  - Types
  - Configuration
  - Battery test

Target audience
New employees with no prior knowledge of UPS systems

Required skills
No prior knowledge required

Duration
2.5 Days

Location and dates
Training center UAE
FEB 12-15 | JUN 11-13 | OCT 8-10

Training center MY
APR 3-5 | AUG 14-16 | NOV 27-29

Price
CHF 1950.- per participant
Training requires attendance of a minimum of 4 participants

Certificate of attendance
Training documentation
GUTOR maintenance - standard training

How to maintain a system

During this standard theoretical course, participants receive information about different operation modes. In addition, the instructor will explain how to operate the system and how to perform regular maintenance work. This training is intended for employees who require theoretical information about UPS operation and maintenance.

Content

- Explanation of system principles and various operation modes
- Explanation of the control panel
- Necessary maintenance work and intervals

Target audience

Employees who require theoretical information

Required skills

Participants need a solid education in electronics

Duration

SDC: 2 days
PxW: 2 days

Location and dates

Training center UAE
PxW: FEB 17-18 | JUN 16-17 | OCT 13-14
SDC: FEB 19-20 | JUN 18-19 | OCT 15-16

Training center MY
PxW: APR 8-9 | AUG 19-20 | DEC 2-3
SDC: APR 10-11 | AUG 21-22 | DEC 4-5

Price

CHF 2028.- per participant (two days)
Training requires attendance of a minimum of 4 participants
Level 1 - customized training

Operation | system principles | practical exercises

This course consists of two parts. The first, theoretical part, introduces participants to various system operation modes and provides information on how the system is built. During the second, practical part, the training instructor demonstrates how to operate the system in a safe and confident manner.

Content

- Information concerning specific characteristics of GUTOR systems
- Explanation of system principles and various operating modes
- Detailed explanation of the control panel and its signals
- Introduction to safe operation of the system (switching on – changing modes – switching off)
- Practical session

GUTOR certifications, valid for 3 years
Training documentation

Target audience
End-user operation staff

Required skills
Participants need a solid education in electronics

Location
Training Center Switzerland, Malaysia, UAE or at client site, granted a training system is installed

Duration
SDC, WxW and PXP: two days
PxW: three days
Two different systems: three days
Three different systems on request

Dates
According to client wishes and instructor availability

Price
On request, depending on how many types of UPS systems the customer owns (SDC, WxW, PxW, PXP)

Number of participants
2 to 8 persons per session
Level 1-2 - customized training

Maintenance | hardware | settings | batteries | trouble shooting

This course builds on information provided during Level 1 training. Participants acquire important functions of major UPS components, including overall monitoring and system control. In addition, participants receive knowledge which will enable them to carry out maintenance work, including information regarding replacement of components and parts. Upon completion of this course, participants will be capable to repair simple system errors.

Target audience
End-user operation and maintenance staff

Required skills
Participants need a solid education in electronics.

Location
Training Center Switzerland, Malaysia, UAE or at client site, granted a training system is installed

Duration
SDC, WxW: four days
PXP: three days
PxW: five days
Two different systems: six days
Three different systems on request

Dates
According to client wishes and instructor availability.

Price
On request, depending on how many types of UPS systems the customer owns (SDC, WxW, PxW, PXP)

Number of participants
2 to 8 persons per session

Content
• Content received from level 1
• Detailed information concerning system principles
• Description of components and their function (rectifier, controller, interface, ..)
• Explanation of circuit diagrams and technical data
• Necessary maintenance work and maintenance intervals
• Troubleshooting minor system errors
• Battery information
• Practical session

GUTOR certification, valid for 3 years
Training documentation
Level 1-3 - customized training

Configuration | calibration | extensive trouble shooting

In Level 3 training participants learn how to analyze and repair system errors. In addition, the instructor explains how the system can be configured and calibrated. Upon completion of this course, participants will be capable to perform most repair and maintenance work independently.

Target audience
End-user and maintenance staff, who would be able to solve most repair work by themselves

Required skills
Participants need a solid education in electronics.

Location
Training center Switzerland, Training center Malaysia

Duration
SDC: five days
WxW: six days
PXP: four days
PxW: seven days
Two different systems: nine days
Three different systems on request

Dates
According to client wishes and instructor availability

Price
On request, depending on how many types of UPS systems the customer owns (SDC, WxW, PxW, PXP)

Number of participants
2 to 5 persons per session

Content
• Content received from Level 1-2
• Configuration and settings of system software
• Additional information concerning the controller (RAM1, VQs, GALs)
• Calibration of the system
• Troubleshooting minor and major system errors
• Practical session

GUTOR certification, valid for 3 years
Training documentation
Practical information

Good to know

Welcome
At your arrival, our coordinators will do their utmost to facilitate your stay.

Lunch time
You are kindly invited to have lunch with your course instructor, in a restaurant located in the vicinity of our Training Center.

Courses held in the client’s premises
We can tailor special courses to your specific needs, to be held in your own facility.

General agenda
At the opening of the course you will receive technical documentation and at the end of the course a satisfaction enquiry and a certificate.

Phone calls
In case of emergency or unexpected event, you can be called at:
- Switzerland: +41 (0)56 437 34 34
- Malaysia: +60 (0)3 5569 0331
- UAE: +971 (0)2 443 89 93
Messages received will be forwarded during the breaks.
How to find us

By car from Zurich Airport
1. Follow the green 'Autobahn' (highway / freeway) signs towards BERN / BASEL.
2. Drive in this direction for approx. 25km, always following the signs for BERN / BASEL.
3. Take the exit no. 56 for Wettingen-Ost / Würenlos (past the Shell service station)
4. At the intersection with traffic lights, turn left towards WETTINGEN and BADEN. At the next following intersection with traffic lights, turn left again and continue down the road.
5. At the roundabout drive straight through, take the second exit (straight ahead).
6. Turn left into the next street (Hardstrasse).
7. GUTOR is situated on the right side of the street.

By public transport
1. Take the direct train connection to BADEN.
2. From BADEN take the RVBW-Bus connection no. 7 to WETTINGEN Tägerhard.
3. Exit at the bus stop Tägerhard.
4. Walk 150m along Tägerhardstrasse towards Hardstrasse.
5. Turn right into Hardstrasse.
6. GUTOR is situated on the left (after 250m).

GUTOR Electronic LLC
Hardstrasse 74
CH-5430 Wettingen | Switzerland
P +41 (0)56 437 34 34
F +41 (0)56 437 34 44
gutor-training-ch@schneider-electric.com
GPS location: N 47°27’25.65", E 8°20’14"
Practical information

Training center Malaysia

How to find us

By car from KLIA Airport
Estimated 46km, 40min
1. Head southwest toward Jalan Pekeliling: 1.9km
2. Continue straight onto Lebuhraya Klia Extension: 11.1km
3. Keep left at the fork and merge onto Lebuhraya Utara - Selatan Hubungan Tengah: 27.4km
4. Slight left toward Persiaran Jubli Perak: 600m
5. Turn right onto Persiaran Jubli Perak: 1.8km
6. Continue onto Jalan Subang: 800m
7. Slight right onto Persiaran Kerjaya: 600m
8. Turn left onto Jalan Kontraktor U1/14: 1.1km
9. Turn right onto Jalan Jurukur U1/19: Destination will be on the right 550m

By car from KL City
Estimated 26km, 34min
1. Head southwest on Jalan Bukit Bintang toward Jalan Pudu: 88 m
2. Continue onto Jalan Pudu: 800m
3. Keep right at the fork: 200m
4. Continue onto Jalan Tun Tan Cheng Lock: 220m
5. Turn left onto Jalan Tun H S Lee: 500m
6. Slight right to stay on Jalan Tun H S Lee: 190m
7. Turn left onto Jalan Syed Putra: 3.3km
8. Slight right to stay on Jalan Syed Putra: 350m
9. Take the ramp on the right onto Lebuhraya Pantai Baru: 3.0km
10. Take the ramp onto Lebuhraya Pantai Baru: 11.0km
11. Continue onto Jalan Subang Utama: 900m
12. Continue onto Persiaran Tujuan: 700m
13. Merge onto Jalan Pengaturcara: 850m
14. Turn left onto Persiaran Kerjaya: 2.3km
15. Turn right onto Jalan Kontraktor U1/14: 1.1km
16. Turn right onto Jalan Jurukur U1/19: Destination will be on the right 550m
Practical information

Training center UAE

How to find us

By car from Abu Dhabi International Airport, Sheik Maktoum Bin Rashid Road - Abu Dhabi, United Arab Emirates
1. Head northwest: 1.7km
2. Turn left toward Abu Dhabi-Dubai Rd/E 10: 3.4km
3. Turn left toward Abu Dhabi-Dubai Rd/E 10: 230m
4. Turn right onto Abu Dhabi-Dubai Rd/E 10: 2.2km
5. Take the exit: 2.7km
6. Turn right: 500m
7. Take the ramp onto Shahama - Dubai Road: 1.3km
8. Take exit Shahama - Dubai toward Abu Dhabi-Dubai Road/E 10: 400m
9. Take exit Abu Dhabi to merge onto Abu Dhabi-Dubai Road/E 10: 14.6km
10. Take the exit onto Abu Dhabi – Al Ain Road/E 22: 4.6km
11. Take the exit onto E 7: 5.2km
12. Turn right: 45m
13. Take the 1st right: 130m
14. Take the 1st left: 300m
15. Take the 1st right: 170m

GUTOR Electronic LLC
Schneider Electric Industries SA
Beside SEHA/Emirates ID and Daman Office,
Unit 13 Ground Floor | Mussafah M4, Plot 12
PO Box 29580 | Mussafah, Abu Dhabi
United Arab Emirates
P +971 (0)2 443 89 93
F +971 (0)2 443 89 92
gutor-training-ae@schneider-electric.com
GPS location: N 24° 21' 58.18", E 54° 31' 16.31
Offer and registration

Please send your purchase order form or your offer request by mail:
gutor-training-ch@schneider-electric.com or by Fax +41 (0)56 437 34 21
gutor-training-my@schneider-electric.com or by Fax +60 (0)3 5569 0332
gutor-training-ae@schneider-electric.com or by Fax +971 (0)2 443 89 92

Ordering our standard trainings: GUTOR UPS introduction / GUTOR maintenance

Your purchase order must contain the following information:

Company details:
> Company name
> Name of the person in charge
> Address
> Telephone
> Email

Trainee details:
> Name of the training
> Date of the training
> Name of the trainees
> Price (exclusive of VAT)
> Total Price (exclusive of taxes)

Admin details:
> Bill to address
> Purchasing department contact

Offer for our customized trainings: Level 1, Level 1-2, Level 1-3

Each level training course, as well as the documentation, are individually tailored based on the customer's installed fleet. Therefore please let us know the specific Gutor order # (find it on the GUTOR label fixed inside the front door of each system as well as on the manuals).

Required information for customized offers:

Company details:
> Company name
> Name of the person in charge
> Address
> Telephone
> Email

Training details:
> GUTOR order #
> System type (SDC, PxW, WxW, PXP)
> Number of participants
> Location
> Requested date

Admin details:
> Bill to address
> Purchasing department contact