

Field Service Engineer Training (Level 4) ELK-14 / 300 & ELK-3 / 420

HIGH VOLTAGE PRODUCTS – COURSE DESCRIPTION

PREPARED BY	STATUS	SECURITY LEVEL		
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APPROVED BY	APPROVAL DATE			
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OWNER	DOCUMENT KIND			
Head of Training Center	Agenda			
TITLE				
GIS-L4-ELK14_300&ELK3_420-Training Agenda				
OWNING ORGANIZATION	DOCUMENT ID	REV.	LANG.	PAGE
CH-Zurich-2657-Field Service	2GHE004406	A	en	1/4
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This is an in-depth training about the overhaul of the SP circuit breaker, the TK combined disconnecter and earthing switch, and the BAC & BAE operating mechanisms.

The duration of this course is ten working days.

The agenda can be altered depending on current requirements and the individual's needs.

Content of training lessons

- Safety introduction:
 - training center risks
 - safety requirements when working on electrical systems >1kV
- Practical training on SP circuit breaker
- Removal and reinstallation of HMB operating mechanism
- Re-coating of linear movement bushing
- Resistance measurement of arcing chambers
- overhaul of TK combined disconnecter earthing switch
- overhaul of BAC operating mechanism
- overhaul of BAE fast acting earthing switch

writing an overhaul report

IT infrastructure

- **Please ensure you have “Admin rights” on your Laptop.**
- **Participants must bring their own notebook and PSE (Safety shoes)**

Prerequisites for course participants:

- E-Learning CHS222e
- E-Learning CHS232e
- E-Learning CHS243e
- SF₆-Gas-handling course with certificate (only for Europe)

Course type

The training consists of both classroom lessons and hands-on practical sessions.

This training is part of the Field Service Engineer Certification program and is prerequisite to obtain Level 4 certification on:

“ELK-14 / 300 and ELK-3 / 420”

A certificate will be issued if the certification requirements are fulfilled as described in the Global PGHV- GIS certification process (1HC0127705).

Course goals

To acquire:

- basic knowledge about SP circuit breaker overhaul
- TK combined disconnecter earthing switch overhaul
- BAC overhaul
- BAE overhaul

Enrollment

Send your request to the training coordinator (GIS-GCB_Training@hitachienergy.com). The training schedule is published once a year and communicated to the LSC's in the fall of the prior year.

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DAY 1

Welcome and introduction to training center

Health & Safety rules for PGHV-ZN Training Centre visitors

Electromagnetic induction when working on high voltage switchgear

Introduction to product main components

- Circuit breaker type SP
 - Disconnecter earthing switch
 - fast acting earthing switch
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DAY 2

Practical training

- removal of HMB operating mechanism
 - opening of circuit breaker
 - dismounting of the arcing chambers
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DAY 3

Practical training

- overhauling the arcing chambers
 - re-coating of the linear movement bushing
 - re-assembling of SP circuit breaker
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DAY 4

Practical training

- re-assembling of SP circuit breaker
 - resistance measurement on arcing chambers
 - re-installation of arcing chambers
-

DAY 5

Practical training

- adjustment and re-installation of operating mechanism

week review

Q and A session

DAY 6

Practical Training

- removal and re-installation of SP14 MEPU arcing chamber

Note: an overhaul of the MEPU arcing chamber is not foreseen

DAY 7

Practical training

- removal of BAC operating mechanisms
 - overhaul of TK combined disconnect and earthing switch
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DAY 8

Practical training

- overhaul of BAC operating mechanisms
 - re-installation of BAC operating mechanism
 - troubleshooting on BAC operating mechanisms
-

DAY 9

Practical training

- removal of BAE fast acting earthing switch
 - Overhaul of BAE fast acting earthing switch
 - re-installation of BAE
-

DAY 10

Field service documentation**Final Q and A session**

All recommissioning topics will be trained in a separate training.