

GIS Switzerland Training

Level 2 Field Service Engineer Training

For GIS types: ELK-04 / 145; ELK 04 / 170
ELK-14 / 245C; ELK-14 / 300; ELK-3 / 420; ELK-3 / 420C

TRAINING CENTER SWITZERLAND – COURSE DESCRIPTION

PREPARED BY	STATUS	SECURITY LEVEL		
Nina Rathke	Approved	Internal		
APPROVED BY	APPROVAL DATE			
Zsofia Fodor	2022-10-20			
OWNER	DOCUMENT KIND			
Head of Training Function	Agenda			
TITLE				
GIS-L2-ELK-04_145; ELK 04_170; ELK-14_245C; ELK-14_300; ELK-3_420; ELK-3_420C-Training Agenda				
OWNING ORGANIZATION	DOCUMENT ID	REV.	LANG.	PAGE
CH-Zurich-2657-Field Service	2GHE001284	A	en	1/4
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Course goal:

This is the recommended course for LSC with a small installed Base (IB) and/or a customer service agreement in place where fast reaction time is needed.

The course covers GIS type ELK-04 Alive, ELK-14 / 300 and ELK-3 / 420.

Prerequisites:

- Good English skills (written and spoken)
- Attended the required local Health & Safety Training

This is a theoretical and practical training course.

Participants must bring their own notebook and PSE (Safety shoes)

Main learning objectives:

- Functions and features of GIS switching components and operating mechanisms
- Troubleshooting of HMB-1/-2, HMB-4/-8 and HMC-4 operating mechanism
- SF₆-Gas handling and measuring with analyzer
- Gas monitoring devices exchange and test
- BAC/BAE control card exchange
- Flange treatment (outdoor GIS)
- Failure reporting

Certification:

This Level 2 training is part of the GIS Field Service Engineer Certification program.

After passing an exam after the training, a certificate is issued, valid for 3 years.

Duration:

8 days

Enrolments:

Send your request to

GIS-GCB_Training@hitachienergy.com

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Approved	Internal	2GHE001284	A	en	2/4

Day	Subject	Location
1	Welcome / Introduction to Hitachi Energy Switzerland Training Center	Classroom
	<ul style="list-style-type: none"> ❖ Health & Safety rules for Training Center visitors ❖ Training Introduction / Presentation ❖ Certification Process ❖ Hitachi Energy Switzerland GIS-Product Portfolio 	
	Electromagnetic induction when working on high voltage switchgear	
2	Introduction to all main components of the product	Classroom Training field
	<ul style="list-style-type: none"> ❖ Circuit-breaker ❖ Circuit-breaker operating mechanisms 	
	Introduction to all main components of the product (continuation)	
3	BAC / BAE	Classroom
	<ul style="list-style-type: none"> ❖ Disconnecter (DS), earthing switch (ES) operating mechanism ❖ Fast earthing switch (FAES) operating mechanism ❖ Schematics diagram for CB, ES and DS operating mechanism/drive 	
	SF₆-Gas	
4	<ul style="list-style-type: none"> ❖ SF₆-gas properties ❖ SF₆-gas handling (no SF₆-gas certificate) ❖ SF₆-gas limit values and measuring with SF₆-gas analyzer ❖ Leak detection 	Classroom Training field
	Density monitor	
	<ul style="list-style-type: none"> ❖ Exchange and on-site testing of density monitors 	
5	HMB-4/-8, HMC-4 troubleshooting	Classroom
	<ul style="list-style-type: none"> ❖ Handling of interlocking device ❖ Oil handling and filling ❖ Check of pump motor carbon brushes ❖ Manual charging with mobile charging unit 	
	HMB-4/-8, HMC-4 troubleshooting continuation	
5	<ul style="list-style-type: none"> ❖ Handling of interlocking device ❖ Oil handling and filling ❖ Check of pump motor carbon brushes ❖ Manual charging with mobile charging unit 	Classroom
	Week review	
	Q and A session	

Day	Subject	Location
6	On-Site visit of a Substation (e.g. Laufenburg ELK-14/300) Identify components according to single line and gas diagram	On Site
7	HMB-1/-2 troubleshooting <ul style="list-style-type: none"> ❖ Handling of interlocking device ❖ Oil handling and filling ❖ Check of pump motor carbon brushes Manual charging with mobile charging unit	Training field
8	Flange treatment <ul style="list-style-type: none"> ❖ Correct flange treatment and retreatment for outdoor GIS CORRECT FAILURE REPORTING / TROUBLESHOOTING Final Q and A session Hand-over of certificates (if examination was passed) End of training	Classroom Training field