

### **Training course CZ036**

## Operation and maintenance of UniGear ZS1 and 550



#### Goal

The goal of the program is learning UniGear ZS1 and UniGear 550 operation and maintenance

#### Participant profile

Service engineers, operation and maintenance personnel and external consultants are the target audience for this training

#### **Prerequisites and Recommendations**

The course is set up for beginners in the UniGear ZS1 and 550 switchgear maintenance, operation and servicing, technicians as well as maintenance engineers. Students shall have a basic knowledge of electrical switchgears.

#### **Learning Objectives**

Upon completion students will be able to:

- · operate UniGear ZS1 and 550, understand switchgear interlocks
- · provide routine switchgear maintenance

#### Modules

The course is composed of following modules:

O401 - UniGear ZS1switchgear introduction

O402 - UniGear ZS1 operation

O406 - UniGear ZS1 installation and maintenance

O426 - UniGear 550 operation and maintenance

#### **Course duration**

2 days

ABB s.r.o.



# **Training module O401**UniGear ZS1 switchgear introduction



#### Goal

The goal of the course is to familiarize with UniGear ZS1 switchgear design variants and basic application constraints.

#### Participant profile

The training is targeted to ABB salesmen, external consultants and electrical engineers.

#### **Prerequisites and Recommendations**

The course is built for beginners in the primary air insulated switchgears engineering and sales. Students shall have a basic knowledge of electrical switchgears.

#### **Learning Objectives**

Upon completion students will be able to:

- understand the basics of design of UniGear ZS1 switchgear
- · recognize the option/variant of UniGear ZS1 switchgear suitable for particular application

#### **Main Topics**

The course contains following topics:

- · overview of UniGear ZS1 design variants
- UniGear ZS1 available parameter
- overview of metering and switching apparatus applicable in UniGear ZS1

#### **Module duration**

1/2 day

ABB s.r.o.

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# **Training module O402**UniGear ZS1 operation



#### Goal

The course is aimed at learning UniGear ZS1 switchgear interlocks and basic operation of apparatus.

#### Participant profile

Service engineers, operation and maintenance personnel, ABB salesmen and external consultants are the target audience for this Training.

#### **Prerequisites and Recommendations**

The course is set up for beginners in the UniGear ZS1 switchgear maintenance, operation and servicing, technicians as well as maintenance engineers. Students shall have a basic knowledge of electrical switchgears.

#### **Learning Objectives**

Upon completion students will be able to:

- understand the standard interlocks in UniGear ZS1
- operate the switchgear, circuit breaker and earthing switch

#### **Main Topics**

The course contains following topics:

- interlocks in UniGear ZS1
- locking facilities in UniGear ZS1
- · operation of UniGear ZS1 with VD4 circuit breaker
- practical exercise on panel sample

#### **Module duration**

1/2 day

ABB s.r.o.



## Training module O406 UniGear ZS1 installation and maintenance



#### Goal

The aim of the course is to learn installation prerequisites, installation techniques and basic maintenance for UniGear ZS1 switchgear.

#### Participant profile

Training participants are usually service engineers, installation and maintenance personnel of electrical installation or operation companies.

#### **Prerequisites and Recommendations**

The course is set up for engineers experienced in UniGear ZS1 switchgear operation. Students shall be able to operate the switchgear and apparatus.

#### **Learning Objectives**

Upon completion students will be able to:

- evaluate site conditions prior to switchgear installation
- · supervise and lead switchgear installation on site
- do the basic maintenance for switchgear and apparatus

#### **Main Topics**

The course contains following topics

- installation pre-requisites
- recommended methods for switchgear erection
- · power and control cable installation
- manufacturer recommendation for maintenance of UniGear ZS1

#### **Module duration**

1/2 day

#### ABB s.r.o.



# **Training module O426**UniGear 550 operation and maintenance



#### Goal

The aim of the course is to learn operation and maintenance specific for UniGear 550 switchgear.

#### Participant profile

Training participants are usually service engineers, installation and maintenance personnel of electrical installation or operation companies.

#### **Prerequisites and Recommendations**

The course is set up for engineers experienced in UniGear ZS1 switchgear operation., installation and maintenance. The course covers UniGear 550 differencies against UniGear ZS1.

#### **Learning Objectives**

Upon completion students will be able to:

- operate UniGear 550
- supervise installation of UniGear 550
- provide maintenance for UniGear 550

#### **Main Topics**

The course contains following topics

- UniGear 550 overview and structure
- operation of UniGear 550
- Interlocks and locks in UniGear 550
- Installation and maintenance specific for UniGear 550

#### **Module duration**

1/2 day

#### ABB s.r.o.