

SERVICE OF MV, LV TECHNOLOGIES

Training course CZ032

Operation and maintenance of UniGear ZS1 and MCC

**Goal:**

The goal of the program is learning UniGear ZS1 and UniGear MCC 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 MCC 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 MCC, understand switchgear interlocks
- provide routine switchgear maintenance

Modules

The course is composed of following modules:

- O401 - UniGear ZS1 switchgear introduction
- O402 - UniGear ZS1 operation
- O406 - UniGear ZS1 installation and maintenance
- O419 - UniGear MCC operation and maintenance

Course duration

2 days

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SERVICE OF MV, LV TECHNOLOGIES

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

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SERVICE OF MV, LV TECHNOLOGIES

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

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SERVICE OF MV, LV TECHNOLOGIES

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

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SERVICE OF MV, LV TECHNOLOGIES

Training module O419

UniGear MCC operation and maintenance



Goal:

The aim of the course is to learn operation and maintenance specific for UniGear MCC 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 MCC aspects different to UniGear ZS1 single busbar systems.

Learning Objectives

Upon completion students will be able to:

- operate UniGear MCC
- supervise installation of UniGear MCC
- provide maintenance UniGear MCC

Main Topics

The course contains following topics

- UniGear MCC overview and structure
- operation, interlocks and locks specific for UniGear MCC
- troubleshooting for common situations
- manufacturer recommendation for maintenance of UniGear MCC

Module duration

1/2 day

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