

SERVICE OF MV, LV TECHNOLOGIES

# **Training course CZ028**REF54\_ in UniGear ZS1 switchgears



#### Goal

The goal of the program is learning REF 54\_ operation, setting and configuration in UniGear ZS1 switchgear.

## Participant profile

The goal of the program is learning REF 542plus operation, setting and configuration in UniGear ZS1 switchgear.

## **Prerequisites and Recommendations**

The course is biult 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 and protection relays.

# **Learning Objectives**

Upon completion students will be able to:

- operate and set REF 54\_via HMI
- operate, set and configure REF 542plus via configuration tool

# **Modules**

The course is composed of following modules:

CZ002 - Operation and setting of REF 54\_in UniGear ZS1 switchgear

CZ006 - Programming of REF 54\_ in UniGear ZS1 switchgear

# Course duration

2 days

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SERVICE OF MV, LV TECHNOLOGIES

# Training module CZ002

# Operation and setting of REF 54\_ in UniGear ZS1 switchgear



#### Goal

The course is aimed at learning REF 54\_relay operation and setting via HMI in UniGear ZS1 switchgear.

## Participant profile

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

## **Prerequisites and Recommendations**

The course is built for beginners in the primary air insulated switchgears operation and maintenance. Students shall have a basic knowledge of electrical switchgears and protection relays.

# **Learning Objectives**

Upon completion students will be able to:

- understand the basics of hardware of REF 54\_
- recognize the option/variant of REF 54 suitable for particular application
- understand the operation of REF 54\_
- · operate the circuit breaker via REF 54\_
- do the setting of REF 54\_ via HMI

# **Main Topics**

The course contains following topics

- REF 54\_introduction, hardware
- HMI operation of REF 54\_
- setting the parameters of REF 54\_ via HMI

# **Module Duration**

1 day

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SERVICE OF MV, LV TECHNOLOGIES

# **Training module CZ006**Programming of REF 54\_ in UniGear ZS1 switchgear



#### Goal

The aim of the course is to learn REF 54\_relay operation, setting and configuration in UniGear ZS1 switchgear.

## Participant profile

The training is targeted to service engineers, testing and maintenance personnel, external consultants and electrical engineers.

## **Prerequisites and Recommendations**

The course is set up for personnel with basic experience in REF 54\_ operation in UniGear ZS1 switchgear. Students shall know the REF 54\_ feeder terminal human machine interface.

# **Learning Objectives**

Upon completion students will be able to:

- understand the operation and setting of REF 54\_using configuration tool
- understand the configuration of REF 54\_in UniGear ZS1 application

# **Main Topics**

The course contains following topics

- REF 54\_ configuration tool introduction
- setting of REF 54\_ via Configuration tool
- reading the configuration of REF 54\_
- working online and testing the configuration of REF 54\_

# **Module Duration**

1 day

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