

100% UP TO DATE WITH TRAININGS



Trainings 2023

- Optical fiber measurements on Swisscom networks according to ETOP_1816
- FastReporter3 training
- Fiber optic basic training on measurement technology
- Weekly maintenance of splicing and measurement equipment
- Workshop Test & Measurement Automation with Python

TRAINING

Fit in optical fiber measurements on Swisscom networks according to ETOP_1816

Description

At the beginning all relevant basics of the different Swisscom network topologies such as FTTS, FTTO, FTTH, XGS-PON are discussed. This includes, among other things, the different fiber types, splitters, limit values and Swisscom's requirements for measurement documentation.

The correct handling of the measuring equipment such as fiber launch, fiber inspection camera, OTDR is in the foreground of the practical training. Typical errors in the fiber optic cabling are identified and localized. The participants learn how to maintain the measuring equipment, keep it up to date and how to operate the corresponding software applications efficiently.

Agenda

- Basics Swisscom network topologies
 - > FTTS, FTTO, FTTH, XGS-PON
 - > Safety at work and handling of optical fibers
- Theory of fiber optic measurement
 - > Basic terms OTDR and OTDR measurement results interpretation
- Practical fiber optic measurement
 - > Handling of measuring instruments: Setting and operation (manual input of identification) plus measurement with testflow
 - > Configuration of OTDR software
 - > Practice: Different use cases (joints, BEP, OTO) with focus on interpretation and efficiency

Duration

1 day from 8:00 am till 16:30 pm

Location

Training at Computer Controls AG Training Center in Otelfingen or Prilly

Audience

Technicians who install optic fibre cable systems, carry out acceptance measurements and localise and evaluate faults

Requirements

Technical education, basic knowledge of fiber optic technology

Goal

Participants will be able to carry out acceptance measurements on fiber optic networks themselves. Typical faults in fiber optic cabling are recognised and localised according to Swisscom Guideline ETOP_1816.

Material

Training documents (pdf) and calculation tools

Completion

Training certificate and confirmation of participation for safety briefing

Inclusive

Break & lunch catering

Dates

12.01.23 | 19.01.23 | 24.01.23 | 21.02.23 | 02.03.23 | 16.03.23 | 21.03.23
25.04.23 | 23.05.23 | 27.06.23 | 22.08.23 | 26.09.23 | 24.10.23 | 28.11.23



TRAINING

FastReporter3 Software

Description

For this training, real measurement data is provided or alternatively the exercises are done using the customer's existing measurement data. This enables participants to generate templates (also in German) for automatic report generation based on the requirements of the DIN/EN standards. At the beginning the requirements for an acceptance measurement, different measurement methods and the reference to standardization or the special requirements of network operators are defined. In addition, the fibre optic cable parameters, and basics relevant for acceptance are explained. The training is divided into the following topic blocks: Operating elements, project management, customer project templates, measurement data analysis and documentation creation. Tasks are explained using practical examples. Practical exercises of all participants as well as the creation of an acceptance protocol from A to Z for a customer project conclude the training.

Agenda

- Introduction acceptance measurement requirements & measurement methods, examples of limit values of network drivers and DIN/EN standards
- Introduction Software FastReporter3
 - > Operating elements and functions
 - > Data and project management
 - > Personalize & create project templates with limit values for customer projects
 - > Evaluation of individual measurement results, e.g., OTDR uni- and bi-directional measurement data mapped to cable plan
- Report generation with output setting and format (pdf, xls)
- Handover of acceptance protocol incl. measured values to customer

Duration

1 day from 8:00 am till 16:30 pm

Location

Training at Computer Controls AG Training Center in Otelfingen or Prilly

Audience

Technicians who install optic fibre cable systems, carry out acceptance measurements, and localise and evaluate faults

Nice to have

Provide own measurement data from projects

Goal

Participants will learn how to effectively use the FastReporter3 software for quick creation of clear and reliable acceptance reports for fibre optic cable systems

Material

Training materials and sample templates for report generation based on DIN/EN standards

Completion

Training certificate and confirmation of participation

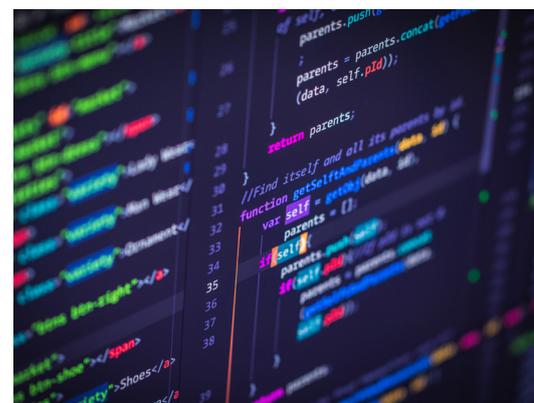
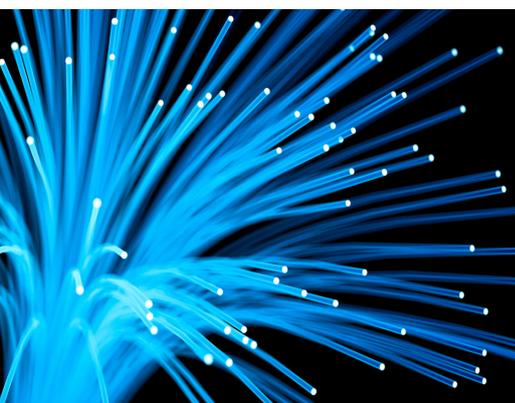
Inclusive

Break & lunch catering

Dates

26.01.23 | 24.02.23 | 30.03.23 | 27.04.23 | 11.05.23

29.06.23 | 24.08.23 | 28.09.23 | 26.10.23 | 30.11.23



TRAINING

Fiber optic basic training on measurement technology

Description

In the context of rapid digitalisation and the constant demand for data throughput and higher speeds, high-performance communication networks are needed. The ideal medium for data transport are fiber optic networks. This has been proven and further developed over the past decades. In this training, participants learn the basics of measurement technology. Among other subjects, the following questions will be answered: How does an optical fiber work? What types of optical fibers are there? What measurement methodology is used to determine them? and What test and measurement procedures are available?

Agenda

- Function and physical basis of optical fibers
- Overview of fiber types and their optical properties
- Measuring and testing procedures
- Standards and guidelines
- Network architecture
- Bakom Standard
- Practical exercises

Duration

1 day from 8:00 am till 16:30 pm

Location

Training at Computer Controls AG Training Center in Otelfingen or Prilly

Audience

Newcomers and career changers as fiber optic technicians as well as fiber optic technicians who want to learn the basics of measurement technology and understand measurements.

Requirements

Technical understanding

Goal

Participants get an overview of fiber optic technology, its data transmission capability and know the basics of measurement techniques

Material

Training materials on paper (pdf)

Completion

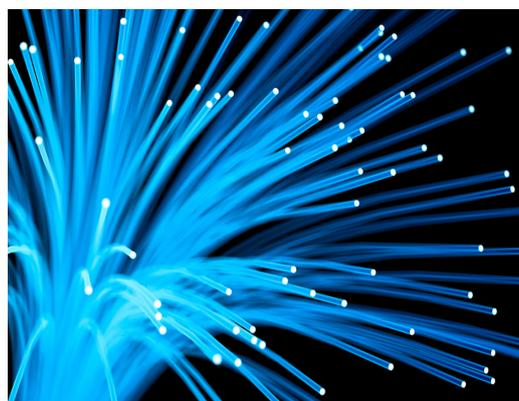
Training certificate

Inclusive

Break & lunch catering

Dates

11.01.23 | 18.01.23 | 22.02.23 | 01.03.23
15.03.23 | 24.05.23 | 23.08.23 | 29.11.23



TRAINING

Weekly maintenance of splicing and measurement equipment

Description

For high-quality operations in the fiber optic infrastructure, it is mandatory that splicing and measuring devices are regularly calibrated and in faultless condition. In this workshop, participants will learn which weekly cleaning and checks are to be carried out on splicing and measuring devices.

Agenda

■ Splicing device

- > Selection of the correct cleaning products
- > External cleaning of instrument and transport case
- > Cleaning of fiber optic overlays and down holder, V-groove, and optical lenses
- > Replacing electrodes and performing instrument self-test
- > Splice settings on the device and general operation settings
- > Read out of data and use of accessories

■ Cleaver

- > External cleaning of instrument and removal of fiber optic residues
- > Cleaning of fiber optic overlays and cleaver blade
- > Checking cleaver blade and cut
- > Operation settings of cleaver

■ OTDR

- > External cleaning of device
- > Checking and cleaning the ferrules (OTDR and fiber launch)
- > Operation settings on the OTDR and software update
- > Check calibration date
- > Data formats and data storage

Duration

2 to 3 hours

Location

On-site training at the customer's premises

Audience

Splice fitters, measurement technicians and fiber optic technicians

Requirements

Practical experience in splicing and fiber optic measurement technology

Goal

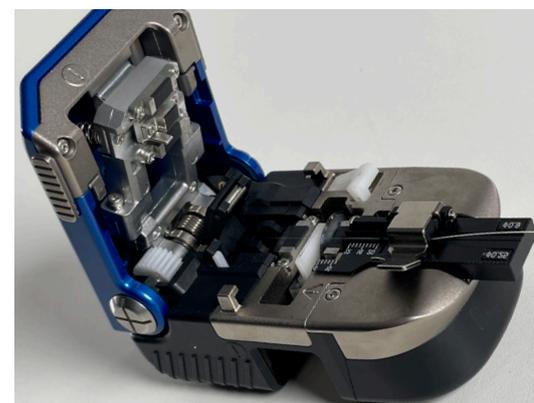
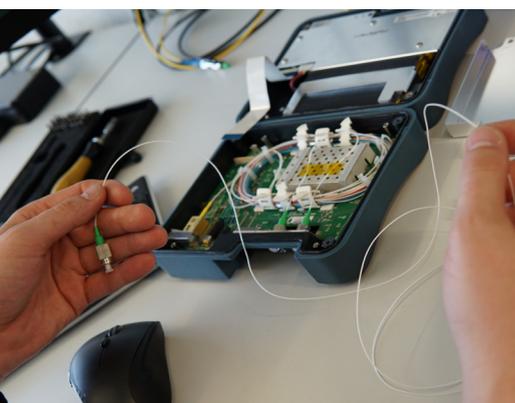
Participants will be able to carry out cleaning and maintenance work

Material

Own splicing or measuring device, if available

Dates

On demand



HANDS-ON WORKSHOP

Agile Test & Measurement Automation with Python

Description

In this workshop we focus on instrument automation with Python. After completing this session, you will gain a good understanding of remote instrument control and you're able to write a Python script that automates a simple measurement on any instrument. You will learn to find the necessary resources to expand and adapt your testing-solution to your own requirements and needs.

In an environment of growing test automation complexity many engineers gravitate towards agile languages like Python instead of using proprietary software solutions. Python is free and open source, provides an enormous support base, and the ability for Python users to both inspect and improve its codebase. Python is a cross-platform language, it supports Windows, Mac OS, and Linux and runs on many hardware-platforms from small embedded systems like Raspberry PI or Arduino to PCs and supercomputers. The versatility, wide adoption in industry and other communities, and vast set of packages, makes Python the perfect candidate for test and measurement automation.

Agenda

- Learn basic concepts and needed components like SCPI, VISA, communication interfaces
- Install needed software and drivers
- Create a simple Python script to control multiple instruments. This serves as a template for your own projects
- Timing control to synchronize measurements

Duration 1 day

Location Presence training in Otelfingen/Zurich

Audience Test-Engineers, R&D Engineers

Prerequisites Basic Python knowledge or basic programming skills

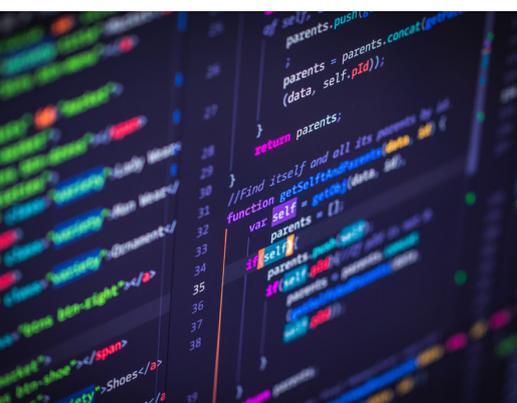
Aim Good understanding of remote instrument control by writing a Python script that automates simple measurements on any instrument

Material Bring your own laptop computer, Windows 10 and at least one available USB port needed

Closure Training certificate and confirmation of participation

Included Break & lunch catering & instruments to test your scripts are provided for the duration of the workshop

Dates 09.03.23 | 15.06.23 | 07.09.23 | 16.11.23





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Oder kontaktieren Sie unser Training Center direkt:



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