

# TECHNICAL SPECIFICATION TY-04.1

## OPTICAL TIME DOMAIN REFLECTOMETER - OTDR

### 1. GENERAL DESCRIPTION

Portable OTDR instrument. It shall have the following properties and characteristics:

- 1.1. easy to use and robust for field usage
- 1.2. modular construction for future module addition/replacement in order to be able to perform other measurements apart from OTDR
- 1.3. level meter, CW LASER source and Visual Fault Locator (VFL) shall be incorporated

### 2. Single Mode (SM) OTDR

2.1. Wavelength	1310 ±20 / 1550 ±20 / 1625 ±20 nm
2.2. Dynamic range	41/40/40 dB
2.3. Pulse width	5 ns to 20 µs
2.4. Linearity	± 0,03 dB/dB
2.5. Sampling resolution	from 4cm
2.6. Loss resolution	0,001 dB
2.7. Loss threshold	0,01 dB
2.8. Sampling points	up to 256.000
2.9. Distance	1,25 to 320 km
2.10. Distance accuracy (m)	±(0,75+0,001%×distance+sampling resolution)
2.11. Event dead zone	0,8 m
2.12. Attenuation dead zone	4 m

### 3. LEVEL METER

3.1. Calibrated wavelengths	1310 / 1490 / 1550 / 1625 nm
3.2. Power level	+5 to -55 dBm
3.3. Accuracy	± 5 %

### 4. CW LASER SOURCE

4.1. Calibrated wavelengths	1310 / 1550 / 1625 nm
4.2. Output power	-4,5 dBm

## 5. VISUAL FAULT LOCATOR (VFL)

- 5.1. Wavelength ~ 635 nm
- 5.2. Output power 1 mW

## 6. GENERAL CHARACTERISTICS

### 6.1. SCREEN

6.1.1. TFT touchscreen at least 6,5 in

6.1.2. Resolution 640 x 480

6.1.3. Visibility under direct sunlight

### 6.2. POWER SUPPLY

6.2.1. Power supply – charger input 100 – 240 VAC 50 – 60 HZ

6.2.2. Rechargeable Li-ion battery with at least 8 hours endurance

### 6.3. INTERCONNECTIONS

6.3.1. 2 USB ports and RJ-45 ethernet port

### 6.4. MEMORY

Able to store at least 1000 measurement results

### 6.5. ENVIRONMENTAL

6.5.1. Operation temperature 0 °C to +40 °C

6.5.2. Humidity up to 95% non-condensing

### 6.6. WEIGHT

Up to 3,5 Kg

6.7. SAFETY OTDR LASER 21CFR Class 1

## 7. CONTRACTOR OBLIGATIONS

7.1. On-site (Koumoundourou High Voltage Center in Neoktista Aspropyrgos area) practical training of 5-person technical group on the instrument usage, duration 4 hours.