

TECHNICAL SPECIFICATION TY-04.2

OPTICAL TIME DOMAIN REFLECTOMETER – OTDR

1. GENERAL DESCRIPTION

The requested OTDR instrument must have the following properties and characteristics:

- 1.1. Portable.
- 1.2. Easy to use and robust for field usage.
- 1.3. Modular construction for future module expansion (addition/replacement) in order to enhance the functionalities and the features of the equipment.
- 1.4. Power level meter, CW LASER source and Visual Fault Locator (VFL) must 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 :	256.000
2.9	Distance:	1,25 to 320 km
2.10	Distance accuracy (m)	±(0,75+0,001% x distance + sampling resolution)
2.11	Event dead zone :	0,8 m
2.12	Attenuation dead zone :	4m

3. POWER LEVEL METER

3.1	Calibrated Wavelengths :	1310, 1490, 1550, 1625 nm
3.2	Power level :	+5 ως -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 :	≈ 650 nm
5.2	Output power :	1 mW

6. GENERAL CHARACTERISTICS

6.1. DISPLAY

- 6.1.1. TFT touch screen at least 6,5 inches
- 6.1.2. Resolution at least 640 x 480
- 6.1.3. Visibility under direct sunlight

6.2. POWER SUPPLY

- 6.2.1. Power supply AC - input 100 - 240 V, 50 - 60 Hz.
- 6.2.2. Rechargeable Li-ion battery with at least 8 hours endurance.
- 6.2.3. Power supply DC - car charger adapter (12V DC) must be included.

6.3. INTERFACES

Two (2) USB ports and one (1) RJ-45 Ethernet port.

6.4. MEMORY

Ability to store at least 1000 measurement results.

6.5. ENVIRONMENTAL

- 6.5.1. Operation temperature: from 0 °C to +40 °C.
- 6.5.2. Relative humidity up to 95% non-condensing.

6.6. WEIGHT

Up to 3,5 Kg

6.7. SAFETY OTDR LASER 21CFR Class 1

7. WARRANTY

At least two (2) year warranty must be offered.

8. ACCESSORIES

Carrying case must be offered.

9. TRAINING

One (1) day training of at least five (5) IPTO personnel, at a technical level, must be included in the offer.