

Optical Fiber Visual Fault Locator, Field Heavy-Duty

The following operation instructions are intended to be used with the following Signamax products:

OFVFL-3

NOTES:

Pictures of the products shown in these instructions used for example purposes only; actual products may be different in dimensions and design details.

1 SAFETY RULES

Class IIIa lasers used in Signamax Optical Fiber Visual Fault Locators (VFL) are mostly dangerous in combination with optical instruments which change the beam diameter or power density, though even without optical instrument enhancement direct contact with the eye for over two minutes may cause serious damage to the retina.

Users should never put their eyes at the level of the plane where the beams are in case of reflected beams.



2 Battery installation and replacement

Unscrew the golden blind cap ① located on one of the VFL's ends.

Insert two AA-size batteries ② with both "-" ends pointing toward the cap.

Screw the cap back.

When inserting batteries, hold the VFL with the laser emitter pointing away from your eyes or use the emitter protection cap ③ in order to avoid possible injury.

Red light ⑥ indicates low batteries.



3 Choosing operation mode

In order to turn the VFL on press the PWR button ④; to choose one of the operation modes, press the MOD button ⑤.

Operation state of the VFL is indicated with the help of a small green light ⑥ located next to the MOD button.



DO NOT CHECK VFL'S OPERATION STATE LOOKING INTO THE EMITTER OUTLET.

Every consecutive depression of the MOD button will switch the VFL into one of its operation modes: "continuous" - "pulse".

Continuous operation mode provides steady beam and can be used during termination procedures to control optical fiber insertion into a connector's ferrule or mechanical splice.

Pulse operation mode provides better contrast and readability in environments with high illumination levels (e.g., sunlight outdoors) and can be used for fiber identification and fault location.

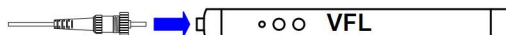
4 Connecting VFL to cabling

In order to connect the VFL to a cabling, first make sure you are using the right adapter:

OFVFL-3 works with 2.5-mm connector ferrules (ST-style connectors - ST, FC, SC)

OFVFL-3-1 is an optional adapter for 1.25-mm connector ferrules (LC-style connectors)

Checking compatibility of the VFL's adapter and the connector by trying to insert the connector into the adapter may damage the end surface of the connector if it's diameter is larger than that of the adapter.

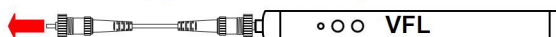


Insert the connector all the way into the adapter and turn the VFL on.

5 Basic functions

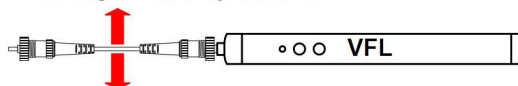
VFL can be a useful tool in a number of various applications. Its principle of operation is based on the fact that visible light being reflected or deflected from its original pass within the optical fiber can be visually detected by the operator. That phenomenon allows to identify fibers within bundles or cables, locate breaks in fibers, identify damaged/dirty connectors, and facilitate fiber termination and splicing. Below a few examples of the most basic VFL's functions are explained.

Checking optical fiber continuity



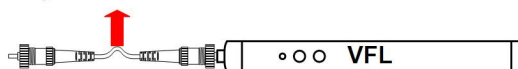
Non-scattered light beam should be visible on the remote connector's end when the optical fiber transmission line is intact. Absence of light would mean there is a gap (broken fiber, bad/misaligned connectors, etc.) somewhere in the transmission line.

Locating breaks in optical fiber



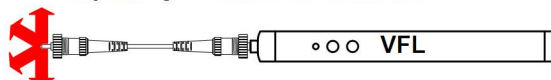
Light scattered at the point of the fiber break passes through the cable jacket (light-colored (yellow and orange) PVC plastics) and can be detected visually.

Optical fiber identification



When optical fiber is bent below a certain radius, light leaves the fiber core, passes through the cable jacket and can be detected visually.

Dirty/damaged connector identification



Light reflected from dirty or damaged optical fiber connector's tip is visible in a scattered pattern. Some portion of light may be back-reflected illuminating the connector's ferrule.