

New Ribbon Fiber Splicer TYPE-72M12

1. Outline

With the recent expansion of cloud services, countries around the world are facing a pressing need for building data centers. Optical fiber cables for data center applications now comprise of thousands of core optical fibers. There is a noticeable tendency for these cables to be made even denser by increasing the number of core optical fiber cores, for example, from 1728 to 3456. As optical fiber cables become increasingly dense, data center construction companies have high expectation for a device that improves work efficiency through mass fusion splicing of ribbon fibers.

To meet these users' new expectations, Sumitomo Electric Industries, Ltd. has developed a new ribbon fiber splicer TYPE-72M12 (Photo 1) that both saves optical fiber splicing/heating time and reduces workloads.



Photo 1. External appearance

2. Features

The TYPE-72M12 product specifications are shown in Table 1. Under the concept of pursuing work efficiency, the new splicer has been developed to (1) reduce working time through high-speed splicing/heating, (2) reduce the number of fiber re-loading with an anti-offset function, (3) create an intuitive user interface, and (4) lighten the administrator's burden by means of a fusion splicer management system.

2-1 High-speed splicing/heating

Equipped with two cameras for observation of optical fiber splicing, TYPE-72M12 features an improved image processing method and optimized arc condition. As a result, this new splicer achieves the world's shortest splicing time

Table 1. Major product specifications

Item	New splicer TYPE-72M12	Conventional splicer TYPE-71M12
Splice loss (typical)	SMF: 0.05 dB	SMF: 0.05 dB
Splice time (typical)*1	11 sec	14 sec
Heating time (typical)*2	35 sec	55 sec
Splicing/heating cycles per battery	180	110
Anti-offset function	Active-ACAS	ACAS
Monitor size	5 in.	4.1 in.
Touch input system	Electrostatic	Pressure sensitive
Wireless LAN connectivity	Provided	-
Fusion splicer management system	w	-

*1 When using Sumitomo Electric SMF12c optical fiber ribbon.

*2 When using Sumitomo Electric FPS-6 sleeves.

on 12 core fiber ribbon of only 11 seconds.

For heating, a new structure that maximizes the contact area is adopted to boost the heat transfer efficiency between the heat-shrinkable fiber protection sleeve and the heater. As a result, the new splicer achieves the world's shortest heating time of 35 seconds. In addition, the dual heater structure inherited from conventional splicers makes it possible to further enhance multi-person work efficiency.

2-2 Anti-offset function (Active-ACAS)

In developing the new splicer, we further evolved the auto clamping adjustment system (ACAS) function that automatically optimizes fiber clamping pressure according to the fiber counts, thus suppressing any offset. The evolved ACAS function measures the amount of fiber offset and then automatically raises/lowers the fiber clamp and slides the fibers according to the amount of measured offset. In this way, the new ACAS function minimizes splicing errors attributable to fiber offset and reduces the number of fiber re-loads.

2-3 User interface

The large 5-inch touchscreen built into the new splicer significantly enhances the visibility of fiber images and measurement data displayed on the screen before and after fibers are spliced. In addition, the TYPE-72M12 was developed with an intuitive and user-friendly operating system (scrolling, multi-touch, etc.) similar to smartphones.

2-4 Fusion splicer management system (SumiCloud)

The wireless LAN function equipped in the new optical fiber fusion splicer enables data communication with a smartphone or tablet. In addition, this splicer is the first ribbon splicer to be linked with a fusion splicer management system, "SumiCloud." This management system makes the

administrator's job easier by visualizing the work site and generating various reports using the splice data, (can also list other features such as location coordinates,) at the work site.

- ACAS (auto clamping adjustment system) is patented by Sumitomo Electric Industries, Ltd.
- SumiCloud is a trademark or registered trademark of Sumitomo Electric Industries, Ltd.