

Tokyo, Japan -August 4, 2022

Yokogawa Test & Measurement Expands Product Lineup for AQ7280 OTDR Series of High-Performance Optical Fiber Testing Instruments

**- Meets the need for faster communications
by streamlining the development of optical fibers and cables -**

Yokogawa Test & Measurement Corporation announces the release of the AQ7286A, AQ7286H, and AQ7286J optical time domain reflectometer (OTDR) units and the AQ3550 optical switch box for the AQ7280 OTDR series of high-performance fiber optic testing instruments. Sale of the new products will commence on August 5.

These new products include the AQ7286A, AQ7286H, and AQ7286J OTDR units, which are designed to be paired with an OTDR mainframe to create an AQ7280 modular OTDR, a high-performance testing instrument that is ideal for use in the optical fiber and cable evaluation process. The other new product is the AQ3550 optical switch box, which enables efficient switching between connections when evaluating fiber-optic cables on the production line.

Through the release of these new products, Yokogawa Test & Measurement is helping to improve optical pulse testing precision and efficiency for the development of high-quality and high-capacity optical communications systems.



AQ7280 OTDR mainframe with new OTDR units and new optical switch box

Development Background

Driven by factors such as the widening use of smartphones, expansion of cloud services, and streaming of video, fiber optic communication networks and data centers are being built to handle ever greater volumes of transmitted data, necessitating the development of fiber optic cables that allow for ever greater speed and bandwidth. Progress is being made in the development of homogenous fiber-optic cables for the transmission of fine optical signals over large distances with minimal loss, and in the development of complex high density fiber-optic cables with several thousand optical fibers inside a single cable.

Yokogawa Test & Measurement's OTDRs are used to build and maintain fiber-optic communication networks, and their reliability and user-friendliness are held in very high regard by

our customers. Leveraging our technologies, we have developed three new OTDR units for the laboratory and production line testing of optical fibers and cables that have been developed based on the latest standards for next-generation communications, and have also developed an optical switch box that streamlines the evaluation of multi-fiber cables.

Features of New Products

1. OTDR units: International standard-compliant measurement accuracy

The three new OTDR units all comply with the wavelength tolerance defined in the IEC 60793-1-40 international standard for the measurement of optical fiber attenuation. The wavelength tolerance can be held to within $\pm 15\text{nm}$ (standard) or $\pm 10\text{nm}$ (option) of the wavelength, meaning they can be used in the research and development of optical fibers, which are subject to rigorous inspection requirements.

2. AQ3550 optical switch box: Improved efficiency with multi-fiber cable evaluation

As OTDRs have been limited to the evaluation of single optical fibers, manufacturing inspections and communication evaluation tests of multi-fiber cables have conventionally required installed optical fibers to be replaced one at a time. The AQ3550 has an MPO connector* that can connect up to 12 optical fibers to an output port, allowing them to be evaluated one after the other by an OTDR. Users can freely switch between the connected fibers using the touch screen on the AQ7280 mainframe. This saves time by reducing the frequency with which such connection work must be performed, and speeds up the evaluation of thousands of optical fibers.

*An optical connector comprised of multiple optical fibers

<List of Models>

Three OTDR units for different measurement needs

Model	Wavelength (nm)	Dynamic range (dB) (typical)	Use
AQ7286A	1,310/1,550	42/40	Capable of emitting the two main communication wavelengths for evaluation testing of fiber-optic cables.
AQ7286H	1,310/1,550/1,625	42/40/39	In addition to the two main communication wavelengths, this model is capable of evaluation testing in the 1,625nm wavelength, which is the longest of the wavelength in the fiber-optic communications region, and the second most frequently tested wavelength after the two main communication wavelengths.
AQ7286J	1,310/1,383/ 1,550/1,625	42/39/40/39	In addition to the two main communication wavelengths and the 1,625nm wavelength, this model is also capable of evaluation testing at 1,383nm, which is the absorption wavelength (water-peak wavelength) of OH ions in the optical fiber. It can be used for inspection and testing in the manufacturing of optical-fibers and cables. It is also effective in the evaluation of fiber-optic cables used in communication networks that rely on

			wavelength-division multiplexing to transmit optical signals at different wavelengths on a single optical fiber.
--	--	--	------------------------------------------------------------------------------------------------------------------

Optical switch box that enables the sequential measurement up to 12 optical fibers by an OTDR

Model	Wavelength (nm)	Port Configuration	Use
AQ3550	1,260 - 1,650	1 x 12	For the efficient testing of multi-fiber cables

Major Target Users

- Optical fiber manufacturers
- Research institutions

Main Uses

- Optical communication inspection in optical fiber production
- Optical communication inspection in fiber-optic cable production
- Identification of failure locations in fiber-optic cables

About Yokogawa

Yokogawa provides advanced solutions in the areas of measurement, control, and information to customers across a broad range of industries, including energy, chemicals, materials, pharmaceuticals, and food. Yokogawa addresses customer issues regarding the optimization of production, assets, and the supply chain with the effective application of digital technologies, enabling the transition to autonomous operations. Founded in Tokyo in 1915, Yokogawa continues to work toward a sustainable society through its 17,000+ employees in a global network of 122 companies spanning 61 countries.

For more information, visit www.yokogawa.com

The names of corporations, organizations, products, services and logos herein are either registered trademarks or trademarks of Yokogawa Test & Measurement Corporation or their respective holders.