

Amplificador / Multiplexor óptico con alimentación Amplifier / Multiplexer Optical with power unit

Ref. 769611

Art. Nr. OLTWDMA32



Introducción / Introduction

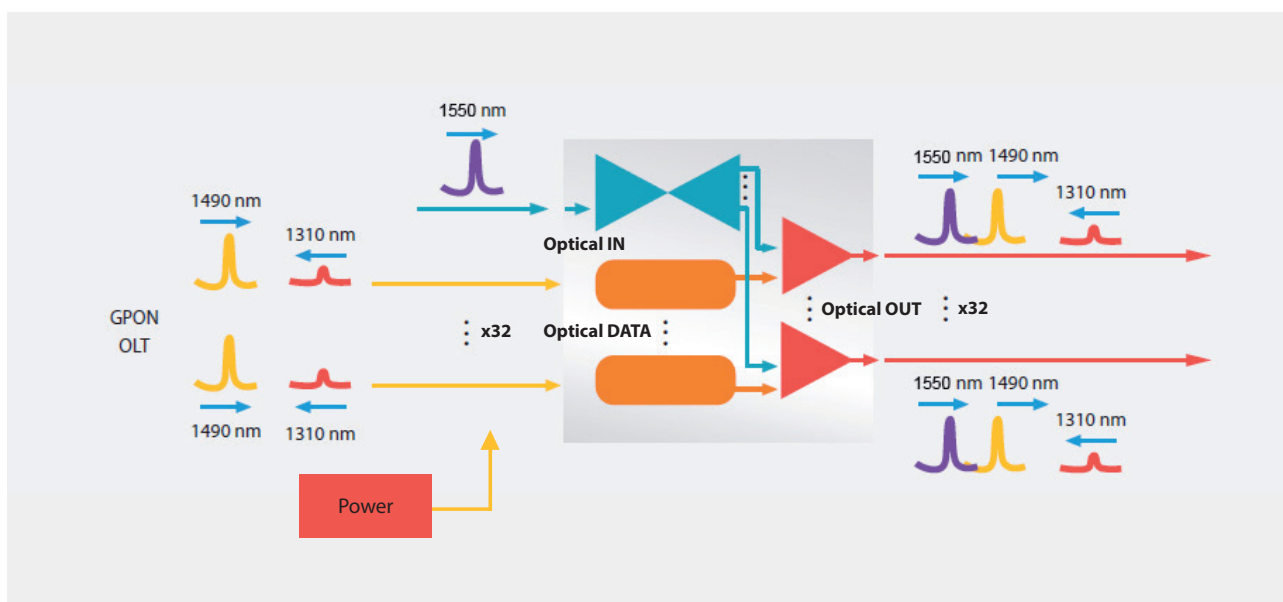
Este dispositivo se compone de: Un multiplexor de longitud de onda (1550nm + 1490/1310nm), un amplificador óptico de tecnología YEDFA y dos fuentes de alimentación intercambiables en un chasis formato rack de 2U, diseñado para funcionar con las OLTs de la gama FibreData.

Las dos fuentes de alimentación son intercambiables en caliente para proporcionar redundancia al amplificador óptico.

This device comprises: A wavelength multiplexer (1550nm + 1490/1310nm), an optical amplifier with YEDFA technology and two swappable power supplies in a 2U rack format, designed to work with the OLTs of the FibreData range.

The two power supplies are hot-swappable to provide redundancy to optical amplifier.

Diagrama de bloques / Blocks diagram



ES Importantes instrucciones de seguridad

Condiciones generales de instalación

1. Lea las instrucciones.
2. Conserve estas instrucciones.
3. Preste atención a todas las advertencias.
4. Siga todas las instrucciones.
5. No utilice este aparato cerca del agua.
6. Limpie la unidad sólo con un paño seco.
7. No bloquee las aberturas de ventilación. Realizar la instalación de acuerdo con las instrucciones del fabricante.
8. No la instale cerca de fuentes de calor tales como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que produzcan calor.
9. No anule la característica de seguridad del enchufe polarizado tiene dos patillas planas, una más ancha que la otra. Un enchufe con toma de tierra tiene dos patillas planas y una tercera de conexión a tierra. La patilla ancha o la tercera patilla, están pensadas para su seguridad. Si el enchufe suministrado no encaja en su toma, consulte con un electricista para que reemplace la toma corriente obsoleta.
10. Utilice solamente los aditamentos/accesorios especificados por el fabricante.
11. No pise ni pellizque el cable de red; tenga especial cuidado con las clavijas, tomas de corriente y en el punto del cual salen del aparato.
12. Desenchufe este aparato durante las tormentas eléctricas o cuando no lo utilice durante largos períodos de tiempo.
13. Use únicamente la carretilla, plataforma, trípode, soporte o tableros especificados por el fabricante, o vendidos con el aparato. Cuando se usa una carretilla, tenga cuidado al mover el conjunto carretilla/aparatos para evitar lesiones en caso de vuelco.

14. Solicite todas las reparaciones a personal de servicio cualificado. Solicite una reparación cuando el aparato se haya dañado de cualquiera forma, se ha derramado líquido o han caído objetos dentro del aparato, el aparato ha sido expuesto a la lluvia o humedad, no funciona normalmente, o haya sufrido una caída.

Atención

- Para reducir el riesgo de fuego o choque eléctrico, no exponer el equipo a la lluvia o a la humedad.
- El aparato no debe ser expuesto a caídas o salpicaduras de agua. No situar objetos o recipientes llenos de líquidos, como jarrones, sobre o cerca del aparato.

Cómo utilizar el equipo de forma segura

- La tensión de red de este producto ha de ser: 99-264V ~ 50/60Hz.
- En el caso de que cualquier líquido u objeto caigan dentro del aparato, debe de ponerse en contacto con el servicio técnico.
- Para desenchar el equipo de la red, tire siempre de la clavija, nunca del cable.
- No enchufe el equipo a la red eléctrica hasta que todas las demás conexiones hayan sido realizadas.
- La toma de red eléctrica debe estar cerca del equipo y ser fácilmente accesible.
- No quitar la tapa del equipo sin desconectarlo de la red.

Instalación segura

- La temperatura ambiente no debe superar los 45°C.
- No situar el equipo cerca de fuentes de calor o en ambientes de humedad elevada.

- No situar el equipo donde pueda estar sometido a fuertes vibraciones o sacudidas.
- Deje un espacio libre alrededor del aparato para proporcionar una ventilación adecuada.
- No situar sobre el aparato fuentes de llama desnuda, tales como velas encendidas.

Precauciones de conexionado:

- Tratar con sumo cuidado la punta desprotegida de los conectores, pequeños arañazos, rascaduras, impurezas y/o partículas de suciedad, aceites, grasas, sudor, etc.. Pueden degradar significativamente la señal.
- Para la limpieza de la punta de los conectores, frotar (sin ejercer presión) con una toallita de limpieza con base en alcohol isopropílico, específica para la limpieza de elementos ópticos. Antes de realizar la conexión dejar secar totalmente el alcohol.
- Reservar las tapas de conectores y capuchones de los cables para futuras operaciones de extracción/protección de los mismos.
- Colocar siempre las tapas protectoras a los conectores de los equipos que no estén conectados a cables para evitar que el haz láser pueda alcanzar los ojos.
- Evite en lo posible el encendido del transmisor sin tener la fibra conectada a dicho transmisor.

Precauciones de Seguridad

Aviso.-

Este producto emite un rayo de luz invisible láser. Evite exponerse a la radiación láser. El uso de aparatos de ayuda visual (por ejemplo binoculares, lupas, etc.) puede aumentar el peligro a los ojos



Acorde a EN 60825-1: 2014

Emisión máxima de radiación láser: 20dBm
Longitud de onda emitida: 1550nm

Precaución

- El uso de controles o ajustes, así como procedimientos diferentes a los especificados en este manual puede provocar la exposición de partes del cuerpo a radiaciones nocivas.
- Lea y siga las instrucciones en este manual cuidadosamente, retenga este manual para referencia futura.
- No utilice los equipos de forma no conforme con estas instrucciones de operación ni bajo cualquier condición que exceda las especificaciones ambientales estipuladas.
- El usuario no puede dar servicio técnico a estos equipos. Para asistencia técnica contacte con nuestro departamento de asistencia técnica.
- El rayo láser no debe ser apuntado a las personas y/o animales intencionadamente.

Simbología



Equipo diseñado para uso en interiores.



Precaución, peligro de descargar eléctrica.



El equipo cumple los requerimientos del marcado CE.

EN Important Safety Instructions

Caution Statements

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Only use attachments/accessories specified by the manufacturer.
11. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit the apparatus.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Warning

- Reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
- Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Safe operation

- Power requirements for this product are 99 - 264V ~ 50/60 Hz.
- Should any liquid or object fall into the equipment, please refer to qualified personnel for service.
- To disconnect the equipment from the mains pull the plug never the cable.
- It is strongly recommended not to connect the equipment to the mains until all connections have been done.
- Do not connect the equipment to the mains until it has been screwed to the wall.
- The socket outlet shall be installed near the equipment and shall be easily accessible.
- Do not take the cover off the equipment without disconnecting it from the mains.

Safe installation

- Ambient temperature should not be higher than 113°F.
- Do not place the equipment near heat sources or in a highly humid environment.
- Do not place the equipment in a place where it can suffer vibrations or shocks.
- Please allow air circulation around the equipment.
- Do not place naked flames, such as lighted candles on or near the product.

Handling optical connections:

- An SC/APC single mode fiber cable must be used. Remove the protective cover from the optical connector on the unit and the cap on the cable connector.

- Carefully align the guides on both connectors when plugging a cable to the device, then push the connector all the way in.
- Take special care to avoid damaging the unprotected ends of the connectors, as small scratches, impurities and/or particles of dirt, oil, grease, sweat, etc. may significantly affect the quality of the signal.
- To clean the ends of the connectors, gently rub with a lint-free lens cleaning cloth, dampened using additive-free isopropyl alcohol. Make sure the alcohol evaporates fully before connecting. Keep the connector covers and cable caps in a safe place in case they are needed in the future. Always fit the covers on the connectors of devices that are not connected to cables to prevent the laser beam from damaging the eyes.
- Do not turn the transmitter on without a fiber optic cable connected to it.

Safety precautions

Warning.-

This product emits an invisible laser beam. Avoid contact with laser radiation. The use of equipment such as binoculars or magnifying glasses may increase damage caused to the eyes.



According to EN 60825-1: 2014

Maximum Output: 20dBm
Emitted Wavelength (s): 1550nm

Caution

- The use of the equipment in any other way than the specified in this manual may lead to exposure to harmful radiation.
- Do not use the equipment in any way that does not comply with the operating instructions or in any

conditions that exceed the stipulated atmospheric specifications.

- Never point the laser beam at people or animals.

Class B equipment

EEU

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Symbology



Equipment designed for indoor use.



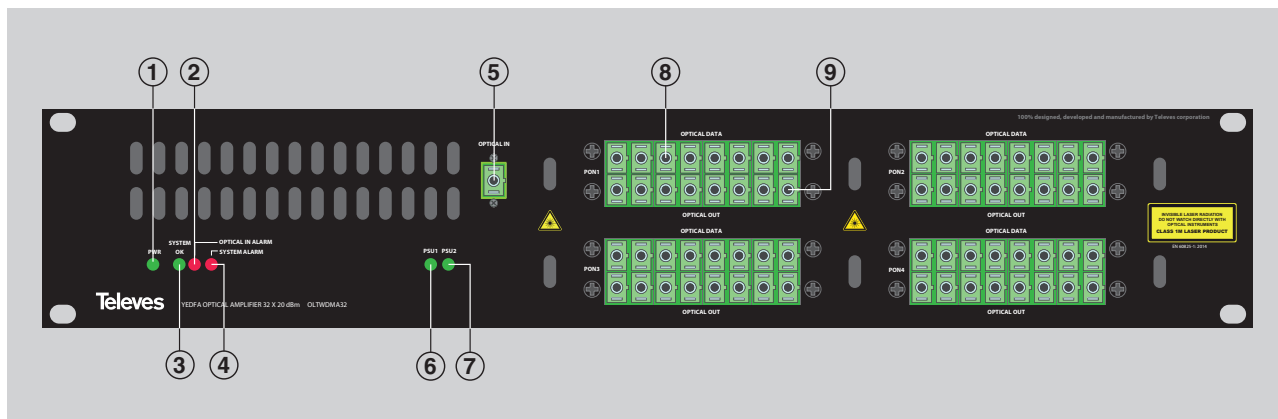
Caution, risk of electrical shock.



The equipment complies with the requirements of the CE mark.

Descripción de producto / Mechanical overview:

Descripción panel frontal / Front panel description

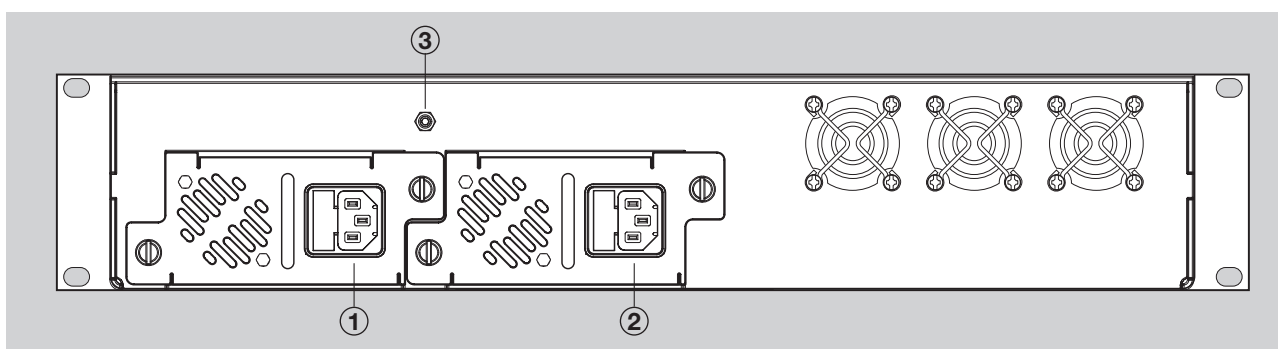


- 1.- LED de encendido
Power LED
- 2.- Alarma de entrada óptica
LED optical input alarm
- 3.- LED de estado (verde cuando está OK)
LED status OK (green when system OK)
- 4.- Alarma
LED system error indication
- 5.- Entrada RF overlay
Input RF overlay
- 6.- Funcionamiento de la fuente de alimentación PSU1 OK
Operation of PSU1 power supply unit OK

- 7.- Funcionamiento de la fuente de alimentación PSU2 OK
Operation of PSU2 power supply unit OK
- 8.- Puertos conexión OLT
OLT connection ports
- 9.- Puertos conexión red GPON
GPON network connection ports

2 Optical IN alarm	3 System OK	4 System alarm	Resultado/result
●	OFF	●	No hay potencia óptica de entrada RF/ <i>No RF input optical power</i>
OFF	OFF	●	Hay potencia óptica de entrada RF y fallo en el sistema/ <i>RF optical input power and system failure</i>
OFF	●	OFF	Funcionamiento correcto/ <i>Correct operation</i>

Descripción panel trasero / Rear panel description



- 1.- Conexión PSU1 a la red
PSU1 mains connection
- 2.- Conexión PSU2 a la red
PSU2 mains connection
- 3.- Conexión a tierra
Ground connection

Fuente de alimentación / Power supply unit

Fuente intercambiable en caliente
Hot Swapping OLT power supply



Especificaciones técnicas / Technical specifications

Ópticas Optical	Número de puertos / Ports number		1 RF Overlay @ Optical IN 32 GPON @ Optical DATA 32 (GPON + RF Overlay) @ Optical OUT
	Longitud de onda de trabajo Operating wave length	nm	1310 ± 20 @ Upstream 1490 ± 20 @ Downstream 1548 ... 1565 @ RF Overlay
	Entrada RF Overlay / Input RF overlay	dBm	-5 ... +10
	Potencia de salida RF overlay Output power RF overlay	dBm	20 @ 1550 nm
	Uniformidad / Uniformity	dB	0,5
	Figura de ruido / Noise figure	dB	5 (Pin= 0 dBm @ 1550 nm)
	Pérdida de inserción (1310 & 1490nm) Insertion loss (1310 & 1490nm)	dB	<1
	Conectores entrada-salida / Optical connector	type	SC/APC
	Pérdidas de retorno / Return loss	dB	>40
General	Tensión entrada / Input power	V~	99 - 264
	Frecuencia / Frequency range	Hz	50/60
	Consumo máx. entrada / Max. input consumption	mA~	600
	Potencia máx. entrada / Max. input power	W	55
	Temperatura de funcionamiento Working temperature	°C / °F	-5 ... + 45 / + 23 ... + 113
	Humedad funcionamiento / Humidity	%	10 ... 95
	Dimensiones / Dimensions	mm / in	483 x 88 x 440 / 19.02" x 3.46" x 17.32"
	Peso / Weight	Kg / lb	15,2 / 33,51
	Índice de protección / Protection Index	IP	20

Televes Limited Warranty

Televes S.A guarantees this product as per legislation applicable for this type of product at the time and in the country of purchase.

- (A) Televes warrants, only to the original Purchaser, all Products be free from any defect in materials or workmanship for a period of two (2) years from the date of original purchase, unless otherwise specified.
- (B) Televes shall, free of charge and in its sole discretion, either repair, replace with a new or factory reconditioned equivalent, or refund the purchase price of the Product(s), that has been determined by Televes to be defective in material or workmanship, subject to the limits of this warranty.
- (C) This warranty excludes any damage or inoperability resulting from:

- (I) use or installation that is not in strict compliance with the written instructions and specifications;
- (II) any modification or alteration performed by any third party not authorized in writing by Televes;
- (III) service or repair performed by any third party not authorized in writing by Televes;
- (IV) misuse, abuse, intentional harm, or lack of reasonable care;
- (V) fire, ice, snow, rain, wind, water, volcano, excessive heat or cold, lightning, flood, power surge, earthquake, or any other acts of God;
- (VI) war, crime, strike, riot, electro-magnetic pulse, or any other acts beyond the control of Televes;
- (VII) shipping.
- (D) All claims under the terms of this warranty must be made in writing, by the original Purchaser, within fourteen (14) days of the defect being known to the Purchaser. Such claims shall be accompanied by a description of any material facts related to

the claimed defect and the invoice or other proof of original purchase date and price. If Televes so requests, the Purchaser shall, at Purchaser's expense, deliver the claimed Product(s) to Televes, within 14 days of the date of the return authorization. Under no circumstances shall the Product(s) be returned to Televes without a return authorization.

- (E) Any refund to the Purchaser, shall be limited to the purchase price of the Product(s), excluding any applicable taxes, duties, freight costs, removal costs, installation costs, or any other charges incident to the purchase of the product.
- (F) Any damage caused by shipper shall be claimed with the shipper in accordance with the shipper's policies and procedures.
- (G) Televes shall in no event and under no circumstances be liable or responsible for any consequential, indirect, incidental, punitive, direct or special damages

based upon breach of warranty, breach of contract, negligence, strict tort liability or otherwise or any other legal theory, arising directly or indirectly from the sale, use, installation or failure of any product acquired by Purchaser from Televes.

- (H) This limited warranty extends to the original Purchaser and cannot be assigned or transferred to any other party without the prior express written permission of Televes, which permission Televes may withhold for any reason or for no reason at all.
- (I) Televes will not assume any liabilities for any other warranties, whether statutory, express or implied, made by any other person.
- (J) Televes reserves the right to modify or discontinue this warranty at Televes' sole discretion without notification. No other warranties are expressed or implied.

DECLARACIÓN DE CONFORMIDAD ■ DECLARATION OF CONFORMITY ■ DECLARAÇÃO DE CONFORMIDADE ■ DECLARATION DE CONFORMITE ■ DICHIARAZIONE DI CONFORMITÀ ■ DEKLARACJA ZGODNOŚCI ■ KONFORMITÄTSEKTLÄRUNG ■ ΠΙΣΤΟΠΟΙΗΤΙΚΟ ΣΥΜΜΟΡΦΩΣΗΣ ■ FÖRSÄKRAN OM ÖVERENSSTÄMMELSE ■ ДЕКЛАРАЦИЯ СООТВЕТСТВИЯ ■ قة باطام لآ نايب

► <https://doc.televes.com>



01030817-001