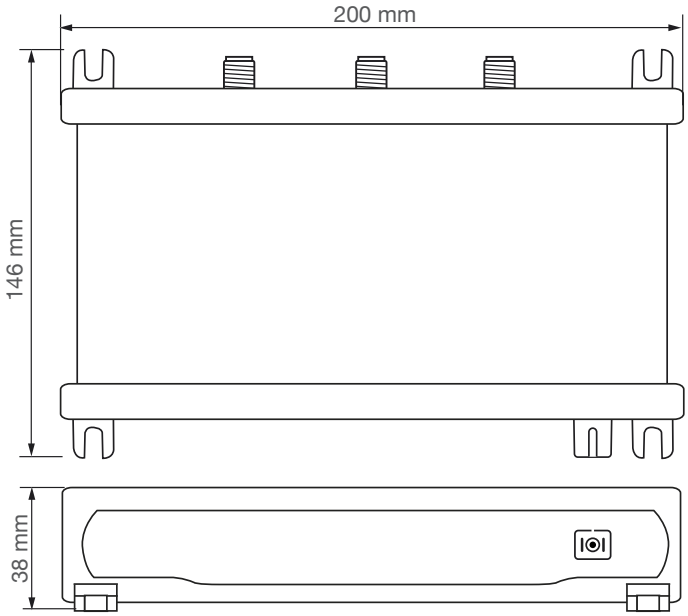
LEM ELETTRONICA®

TXWBTe

Optical Transmitter
User manual

- Multi-wavelength system
- Wide Band LNB inputs
- SAT inputs with A.G.C.
- Supplied with power supply



Ready for UHDTV

MADE IN ITALY

Rel. 1.2

MODEL		TXWBTe
RF INPUTS	n°	3
OPTICAL OUTPUT	n°	1
OPTICAL		
OUTPUT WAVELENGTH	nm	1310 - 1330 - 1550
LASER TYPE		UN-COOLED MULTI QUANTUM DFB
LASER CLASS		1M, EN 60825-1
OUTPUT POWER	dBm	6
OUTPUT CONNECTOR		SC/APC
RETURN LOSS	dB	>40
SATELLITE		
INPUTS BANDWIDTH (for Wide Band LNB)	MHz	250... 2.400
INPUT RANGE LEVEL	dBµV	70... 90
A.C.G. RANGE	dB	20
INPUT RETURN LOSS	dB	>12
LNB REMOTE FEEDING		4,50W (15VDC/300mA)
TV TERRESTRIAL		
INPUT BANDWIDTH	MHz	80... 900
INPUT LEVEL FOR 32 MUX	dBµV	85... 90
OTHERS		
DC INPUT VOLTAGE	V	12... 20
MAX. POWER CONSUMPTION W/O EXTERNAL LOAD	W	2,8
MAX. POWER CONSUMPTION WITH EXTERNAL LOAD	W	7,3
SHORT-CIRCUIT PROTECTION		ONLY SAT INPUTS
DIMENSIONS	mm	146x200x38
OPERATING TEMPERATURE	°C	0... +50

DESCRIPTION OF SYMBOLS AND ELECTRICAL SAFETY	
CE	The equipment complies with the CE requirements
	The equipment is designed for indoor use only
	Equipment grounding terminal
	This symbol indicates that the equipment complies with the class II equipment safety requirements
	To avoid the risk of electric shock, do not open the equipment.
	Invisible Laser Radiation avoid direct exposure to beam
INVISIBLE LASER RADIATION DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS CLASS 1M LASER PRODUCTS	Class 1M laser product. Do not watch directly with optical instruments
	The equipment is compliant with RoHS 2011/65EU
	Dispose according to local authorities recycling processes

Safety instructions

1. Read carefully these instructions
2. Keep these instructions
3. Heed all warnings
4. Follow all instructions
5. Do not expose this apparatus to extreme temperatures
6. Do not install this apparatus near water or expose to rain and moisture
7. Place the apparatus in a dry and well-aired location
8. Install the unit on a vertical wall, or in a waterproof cabinet with a minimum IP55 rating, and fix it safely using the provided fixing plugs
9. Do not install the unit lying flat or on its top
10. Connect the power adapter cord to a detachable power supply socket
11. Unplug the apparatus during lighting storms or when unused for long time
12. Only use accessories specified by the manufacturer
13. Do not remove the cover without disconnecting from the mains first
14. Ambient temperature should not be lower than 0°C and higher than 50°C
15. Please allow air circulation around the apparatus

Installation warnings

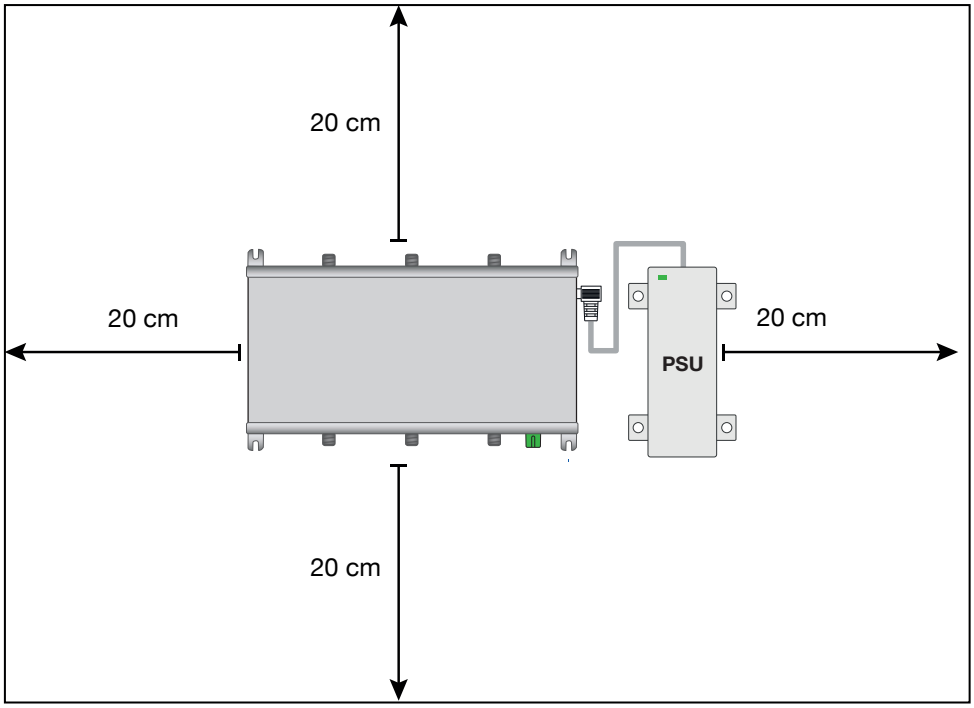
INVISIBLE LASER RADIATION
DO NOT VIEW DIRECTLY WITH
OPTICAL INSTRUMENTS
CLASS 1M LASER PRODUCTS

Place the apparatus and the power supplier in a dry and well-aired location

Install the unit on a vertical wall, or in a waterproof cabinet with a minimum IP55 rating.

Use only the power supplier provided with the amplifier.

The use of not-original power suppliers determines the not-compliance of the product and can cause malfunctions and void the warranty



TXWBTe DESCRIPTION

Box Content

01 **TXWBTe** Optical transmitter

01 Power supplier unit YS12V-120100E.J

01 User manual

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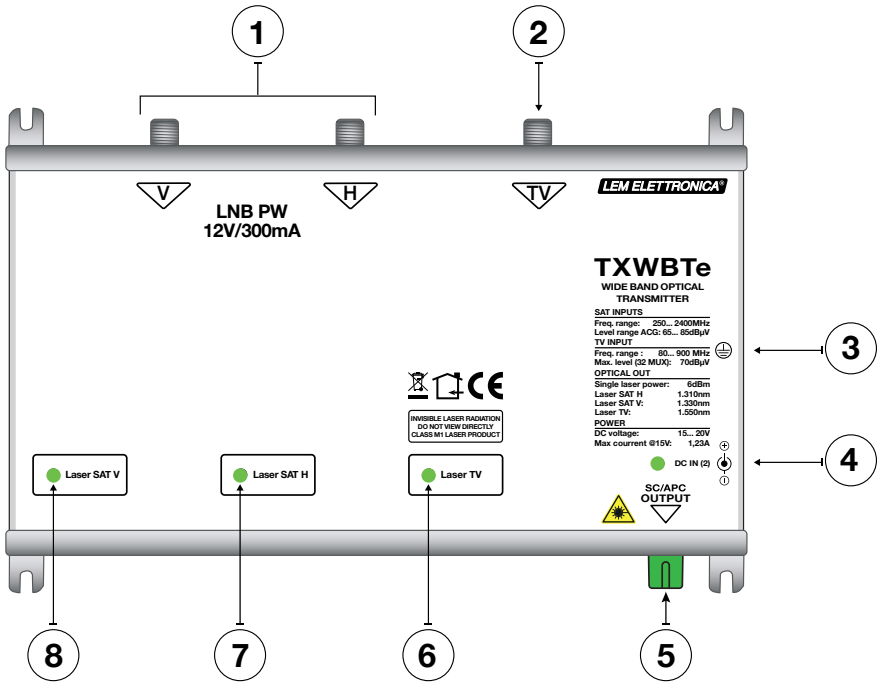
1. **Wide Band LNB V - H inputs**
2. **Terrestrial Input (DTT, FM, DAB)**
3. **Earth terminal**
4. **DC Input and power Led**
5. **SC/APC Optical Output**
6. **Terrestrial TV Laser status LED**
7. **Satellite H Laser status LED**
8. **Satellite V Laser status LED**



The TXWBTe optical transmitter enables the distribution of satellite and terrestrial TV signals (DVB-T/T2, FM, and DAB) over a single single-mode optical fiber.

LED MONITOR DESCRIPTION

DC Input Led

OFF= No power at the DC input

Green= DC Power

Laser Led

OFF= Laser switched OFF

Green= Laser switched ON

Red= Laser malfunction

Requirements for V and H Wideband LNB inputs

To compensate for variable propagation conditions of satellite RF signal levels, the V and H inputs of the **TXWBTe** transmitter are equipped with automatic gain control (AGC). For optimal performance of the **TXWBTe** optical transmitter, the transponders received from the Wideband LNB must be pre-equalized and have a signal level between **70 and 90 dBµV.**

In the presence of long coaxial cable runs between the Wideband LNB and the **TXWBTe** transmitter, it is necessary to use a wideband input amplifier such as the **ASW2/30**, which features gain and slope adjustment.

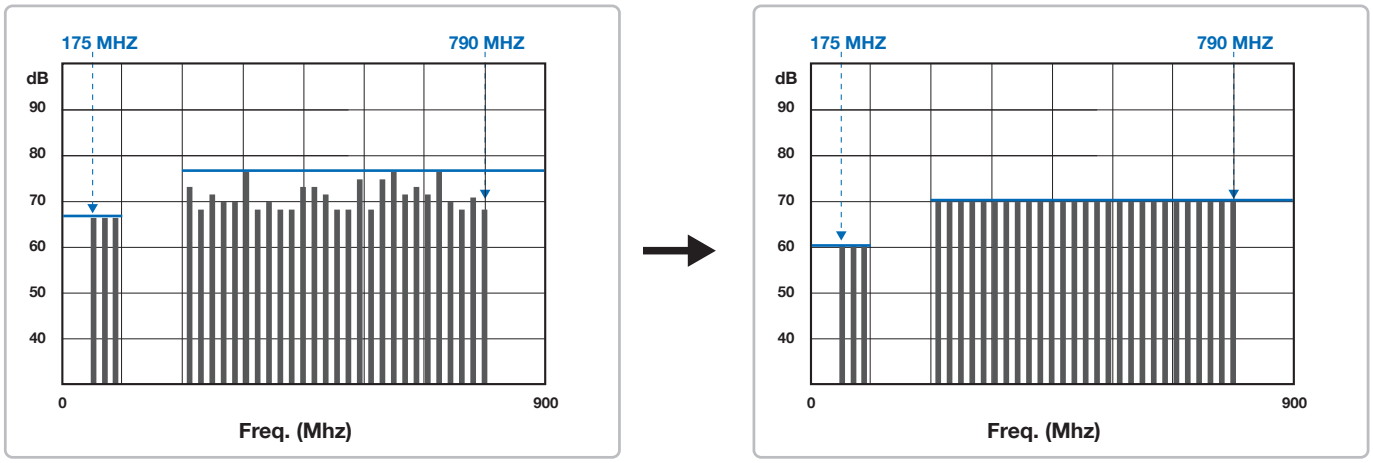
Terrestrial TV input adjustment

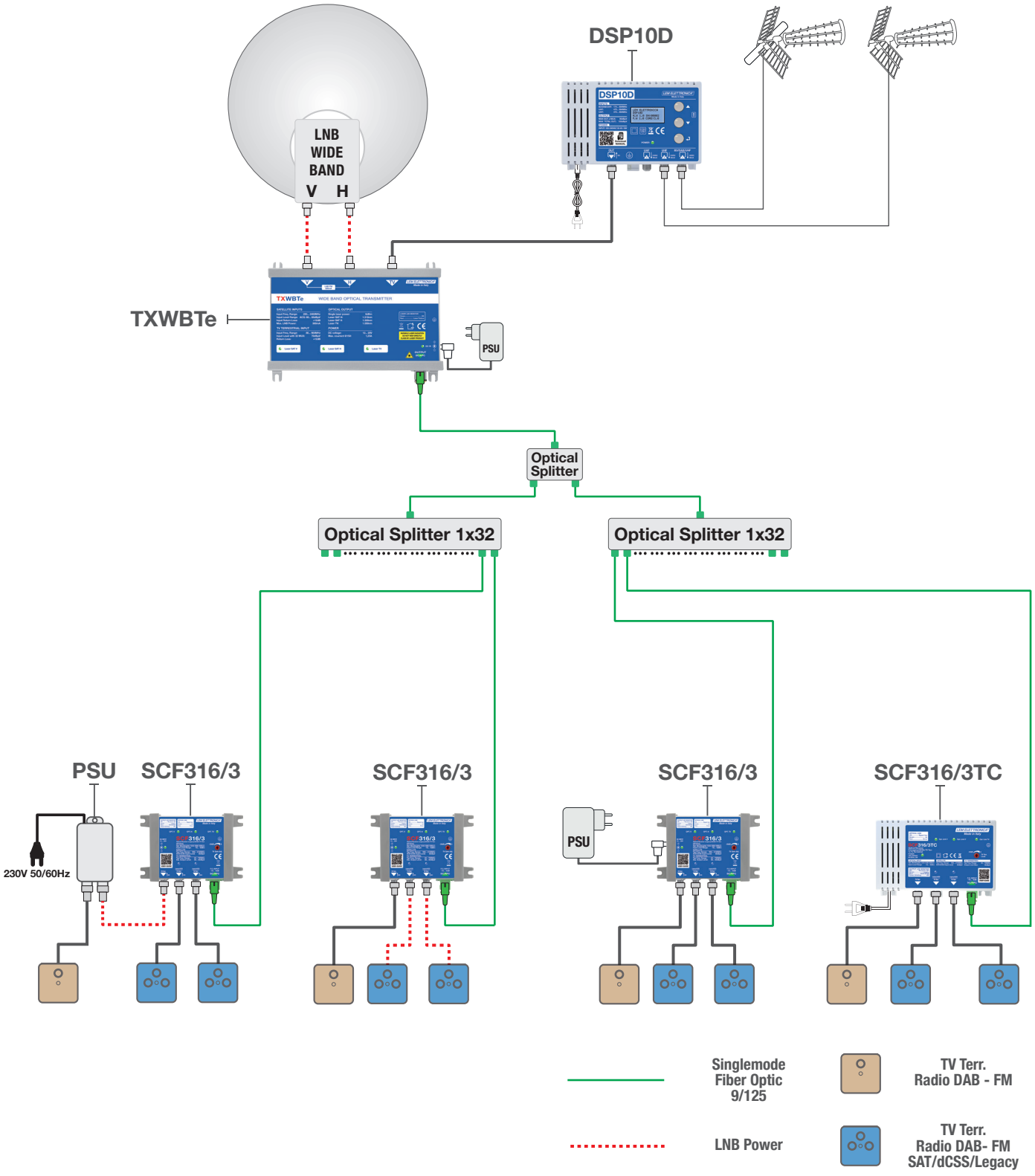
Terrestrial TV level adjustment

For optimal operation, the MUX received at the terrestrial TV input of the transmitter must be properly equalized and have a signal level between **85 and 90 dBµV.**

For this reason, it is recommended to use programmable headends specifically designed for optical transmitters, such as the **DSP20evo or DSP10D.**

Note: VHF FM and DAB signals must be at least 10 dB lower than the UHF TV signals.



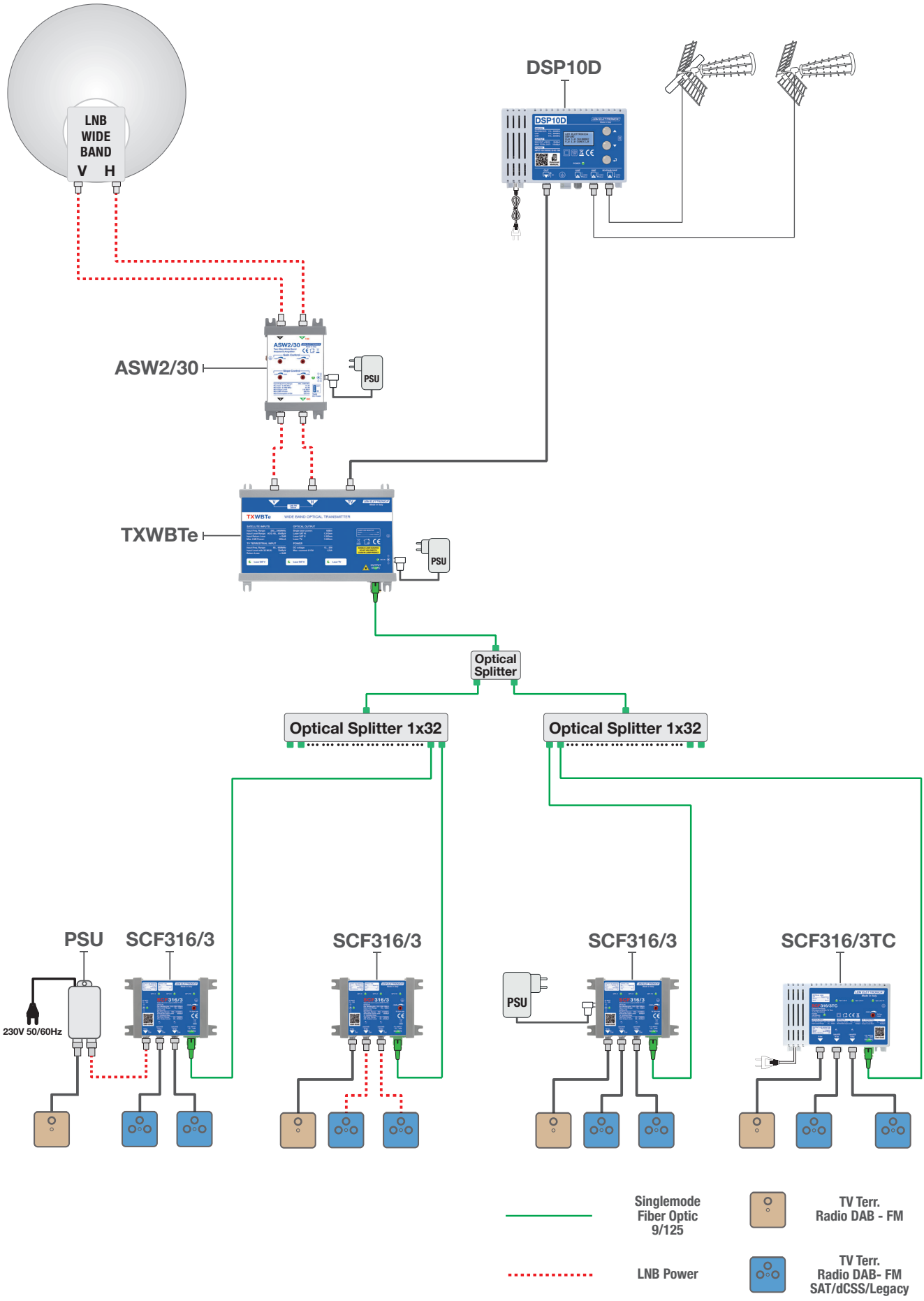


Distribution of signals from a single satellite and terrestrial TV over a single optical fiber using SCF316 series optical multiswitches.

The signals transmitted via satellite from a single orbital position are received by a Wideband LNB, while terrestrial signals (DTT, FM, DAB) are filtered and equalized by a **DSP10D** programmable headend.

The **TXWBTe** transmitter converts these signals into optical format, enabling distribution over a single single-mode optical fiber.

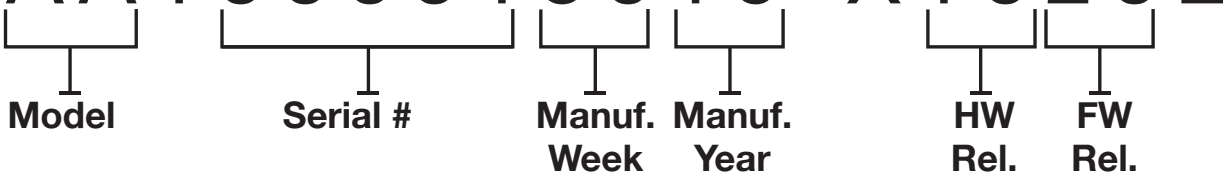
Signal reception is handled by **SCF316** series multiswitches, which convert the optical signal back to electrical, making it available again over coaxial cable.



Distribution of signals from a single satellite and terrestrial TV over a single optical fiber using SCF316 series optical multiswitches.

The signals transmitted via satellite from a single orbital position are received by a Wideband LNB. To compensate for attenuation loss and signal imbalance caused by long coaxial cables, a Wideband ASW2/30 amplifier is used. Terrestrial signals (DTT, FM, DAB) are filtered and equalized by a DSP10D programmable headend. The TXWBTe transmitter converts the signals into optical format, allowing distribution over a single single-mode optical fiber. Signal reception is handled by SCF316 series receivers, which convert the optical signal back to electrical, making it available again over coaxial cable.

Label with serial and tracking data



LEM ELETTRONICA srl · Via Grezze, 38 · 25015 Desenzano d/G · Italy
Tel. +39 0309120006 · Fax. +39 0309123035 · info@lemelettronica.it
www.lemelettronica.it