Televes®

QUARTERLY NEWSLETTER

INFO

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LED lighting and the night sky: Why does it need to be protected?

Artificial light has transformed the way we live and work, but it has also had a negative impact on the environment. Excessive nighttime light can affect wildlife, interfere with human sleep patterns and harm the quality of the night sky. The need for **environmentally friendly LED lighting** is more important than ever.

The night sky is a valuable natural resource that is being lost due to light pollution. Artificial light not only affects people's ability to see the stars and other celestial objects, but can also interfere with bird migration, reptile reproduction and insect orientation. In addition, excessive nighttime light can disrupt sleep patterns and decrease melatonin production in humans, which can have a negative impact on health and well-being.

LED lighting can be an effective solution to the problem of light pollution if used responsibly. LED lights are more energy efficient and last longer than traditional lights, which means less maintenance and lower CO_2 emissions. However, many LED products are not designed to minimize nighttime light. Therefore, it is important to choose environmentally friendly LED products that minimize nighttime light by using technologies such as beam angle control, intensity limiting and hue compensation.

Governments and communities can take action to protect the night sky and reduce light pollution. They can establish regulations to limit the amount and intensity of nighttime light, promote the adoption of environmentally friendly technologies, and encourage education about the impacts of artificial light. In addition, communities can create designated “dark skies” where celestial objects can be appreciated in their maximum splendor. **Manufacturers have a very important role to play** in this fight. They can make the commitment to innovation aligned with competitive prices, and thus enable organizations to consider this type of projects.

This concern led Televes to seek the opinion of one of the most qualified people in the world to talk about lighting that respects the night sky. **Antonia Varela, PhD in Astrophysics at the Institute of Astrophysics of the Canary Islands and president of the Starlight Foundation**, sat down with Televes to share her view of trends related to responsible and sustainable lighting. It is a conversation of great value that we would like to share with you ■

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Televes interview with Antonia Varela

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MEETING POINT

March 23	**CAI Evolving Connectivity** (Birmingham, United Kingdom)
April 15	**Nab Show** (Las Vegas, USA)

televes@televes.com
www.televes.com

Miguel Duro
Testing Laboratory Systems Manager

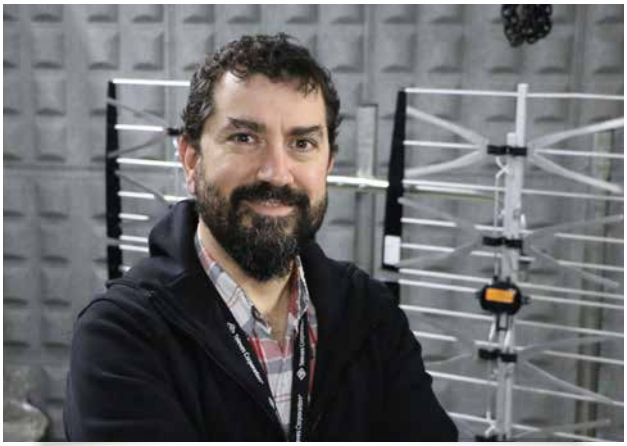
Televes has its own testing laboratory. There, the necessary tests are carried out in order to conform with current regulations of all products manufactured and marketed by Televes. Products undergo tests above the legal requirements to ensure their longevity at full performance.

How would you describe your work at Televes?

In the laboratory we provide support for the marketing of the products and perform the tests needed to verify it, both for the companies within the corporation and for external companies. I prepare the necessary equipment for each test and the automation of the measurements. I organize the laboratory operations and the coordination with the design and production departments so as to make the transfer of information and results as agile as possible.

How long have you been with the company? How would you describe your career so far?

I started in 2006 as a measurement technician for environmental and vibration testing. I have become specialized in the automation of our processes and the management of project



In a quickly changing legislative environment, we must be ever-more proactive to stay ahead of developments

information. It is a fundamental part of my activity to ensure a constant and updated flow of information during all the processes of placing products on the market.

What is the most satisfying part of your job?

Reducing measurement times by increasing the reliability of the results. We have made major progress in the implementation of the ISO 17025 standard for testing laboratories. This will be a highlight in recognition of our work methodology, quality and the impartiality of the laboratory.

What about the most difficult?

We've been seeing a quickly-evolving legislative framework in recent years, so we have to be ever-more proactive in providing the laboratory with the processes and resources needed to stay ahead of developments in highly disruptive technological environments. We have to constantly seek out very systematic work methodologies against a backdrop of more limited investment.

In your opinion, what are the company's core values?

One of Televes' strengths is its diversification of markets based on technological know-how. It does this while maintaining outstanding product quality and relying on its own state-of-the-art industrial infrastructure at all levels of design, development and manufacturing ■

Televes Corporation®

ISO 50001 CERTIFICATION, A GUARANTEE OF COMMITMENT TO ENERGY EFFICIENCY AND SUSTAINABILITY

Televes Corporation companies continue to make progress in the ongoing optimization of sustainability in all possible areas. The latest step in this direction has been taken by Televes and GCE with the **achievement of ISO 50001 certification**, which is the most widely used corporate energy management standard in the world. It was created to **help organizations implement an energy policy and properly manage the energy aspects of their activities**.

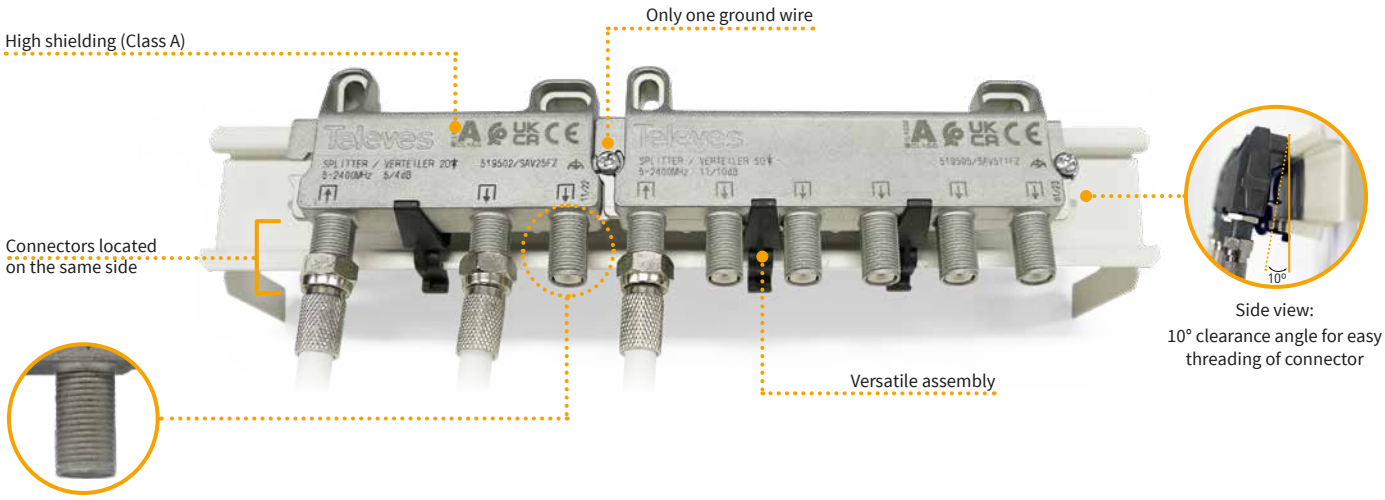
This certification provides a series of tools designed to **identify activities that consume the most energy** and represent an "energy and economic drain." Once located, organizations activate an **action plan to minimize the consumption of energy** in their own facilities and systems in an integrated manner, while maximizing their energy efficiency.

At Televes and GCE, we have followed a plan to improve all our material manufacturing processes in order to significantly reduce the energy consumption of our production centers. We have created and implemented a series of new energy efficiency criteria in our activities and **committed to the use of more sustainable materials in our solutions**.

With ISO 50001, we are able to maximize our energy efficiency, thus reducing the environmental impact of our activity and, in particular, **CO_2 emissions into the atmosphere**. An achievement which, against the current social and economic backdrop, with energy prices shattering historical records, will also generate quantifiable savings in energy consumption throughout the organization ■

F Series splitters and taps

New range of passive products for TV distribution, 100% Made in Europe



Our new range of F Series splitters and taps is characterized mainly by its **high reliability**, due to its **100% European design and manufacturing**. This provides total control over the manufacturing process through robotic lines, improved product quality and greater flexibility in design, allowing it to be adapted to the requirements of the facility.

These devices have **low through and shunt losses**, thanks to improved electrical performance and the use of advanced component miniaturization technology. In addition, the **tap levels remain balanced** over the entire SMATV frequency band (5...2400MHz), even in installations with long cable runs, by offering high flatness over the entire frequency band. Its **high shielding (class A)**, which inhibits external electromagnetic interference, is achieved through the Zamak construction of its chassis.

Its mechanical design also offers great advantages that facilitate the installation of these devices. The most outstanding feature is its **versatile assembly**. In addition to its classic wall mounting, it can also be installed on rack plates or even on DIN rails. Also, when wall-mounted, the threading of the connectors becomes much easier and smoother due to the slight **10° clearance angle** formed between the connector and the wall, which allows fingers to pass through comfortably. The **F connectors have more thread run than is usual**, which can enable installation of the device in, for example, rack plates, without taking away space for wire threading.

Another benefit of its mechanics is its **enhanced use and organization of space**, especially in files and cabinets. This is due to two features: the ability to pass the **wiring** through **its rear** and the alignment of its **connectors on the same side of** the device.

Lastly, the entire range of F-Series passive products can be daisy-chained together using the grounding screw, allowing them to **share a single ground wire**.

The range of taps includes 2-, 4-, 6- and up to 8-tap devices, with different tap loss options for installation on different floors. The range of splitters includes 2, 3, 4, 5, 6 and 8 outputs ■

IDEA

How to manage the channel list in an IPTV project from T.0X streamers

In many cases, hotels want televisions in common areas (such as cafeterias, restaurants or gyms) to have a **simple TV service**, rather than a complete interactive TV system.

The T.0X series IP streamers can generate and manage the channel list remotely for **compatible hospitality TVs from LG (Pro:Centric) and Samsung (Tizen) or our Nemesis v2 set top box (STBs)**. In this way, and with equipment already available in the establishment, service that is better suited to these spaces can be offered.

To do this, it would suffice to activate the Pro:Centric/Tizen option in the web interface of the master streamers, and set up the TVs or STBs to retrieve the channel list directly from the URL generated by them. Thus, when the players (TVs or STBs) start up, they retrieve the channel list and one can easily change channels using the

remote control. In addition, any change in the order or composition of this channel list is automatically updated in the connected players, thus allowing for **unified, simple remote management of the channel list** ■

How do you program our SmartKom smart amplifier?

The SmartKom amplifier filters, mixes and amplifies TV channels. It is easy to program in one of two ways:

AUTOMATIC CONFIGURATION

When long pressing (+5 seconds) the "AUTOSCAN" button on the front of the mast unit or on the power supply, the unit performs a channel search on the inputs (providing power if necessary), programs them in the filters, and consecutively adjusts their output levels to the best possible level.

A short press of this same button (<3 seconds), keeps the programmed channels and simply re-adjusts their levels.

During this process, the installer can keep track of the status of the unit by means of its LED indicator. It starts flashing slowly when searching for channels, flashes faster when adjusting levels and stays on continuously to indicate that the auto-configuration is complete.

This auto-configuration can be performed without connecting the SmartKom to the included power supply if the installer prefers to power it locally with a field meter. However, once the amplifier is installed, the power source is necessary to keep it functioning.

MANUAL CONFIGURATION

You can download the ASuite App on your smartphone to fully configure the unit, including channel programming parameters, output level, manual level adjustment, power on/off on the inputs, import/export configurations, etc.

To do this, the installation of the power supply supplied with the SmartKom is required, as it includes the wireless Bluetooth communication required by the ASuite App to connect to the unit. We recommend verifying that the Bluetooth of the unit is turned on whenever the unit is to be connected, since it turns off after two hours of operation to optimize its energy efficiency. If you try to connect to the source and its Bluetooth is off, ASuite gives a warning that no devices have been found. If this happens, simply disconnect and connect the power supply to the mains to re-activate the Bluetooth and press "SCAN" on the device selection menu of the app ■

TELEVES FACILITIES

GRAN LUXOR VILLAGE (BENIDORM, ALACANT – SPAIN)

The Grand Luxor Village complex is located in Benidorm and offers guests **designer stays in a spectacular setting that transports you to the heart of Egypt**. Its 102 themed villas are equipped with Televes technological solutions aimed at offering guests a unique experience with personalized entertainment services.

Through GPON technology, guests have a quality Wi-Fi connection, a wide range of IP channels and interactive television that includes functionalities such as making requests to reception, or obtaining information of interest without leaving the villa. A new form of staff-guest interaction that adds value to this landmark resort ■

CES
(LAS VEGAS, NEVADA, USA)
5-8 JANUARY

Our US subsidiary presented all the solutions for the new NextGenTV television generation. They mainly highlighted the functionalities of the SmartKom smart amplifier, thus confirming that Televes is positioning itself as a key player in the cord cutting and the migration to ATSC 3.0 in the US.

FENITEL TELECOM#22
(MADRID, SPAIN)
DECEMBER 13-14

Event organized by FENITEL* in which the main players in the sector discuss efficient digitalization and sustainability. Miguel Ángel Sánchez, director of the central area, Sebastián Pantoja, director of strategic programs, and José Luis Fernández Carnero, general director of strategy presented Televes' vision for enabling the Connected Building in the smart city.

SBC (Smart Builiding Conference)
(BARCELONA, CATALONIA)
JANUARY 31 TO FEBRUARY 3

Televes had the opportunity to share its vision of the communications infrastructures that make up a Connected Building, via a presentation by our general manager of strategy, José Luis Fernández Carnero ■

** FENITEL: Federación Española de Instaladores de Telecomunicaciones*

Correct lighting of a soccer field

Achieve optimal results with Flex Projectors

No one today doubts the immediate cost-effectiveness of switching to LED in sports facilities, especially in the highly favorable environment for subsidies throughout Spain. When switching to LED lighting in a soccer field, it is essential to seek out **the advice from professionals who can study the project and ensure proper scale for the facilities**and carry out lighting simulations prior to the installation work. Otherwise, the result runs a very high risk of being low quality, with less-than-desired illumination levels, poor uniformity, shadows, glare and even light pollution. In addition, these problems could arise over time, such as premature breakdowns, early light degradation or even color changes in light sources.

To ensure an optimal result, the following factors must be taken into account:

FACTORS

Desired illumination levels. An upgrade may entail a change of requirement.

Number of operating hours to ensure the return on investment based on the savings obtained.

The shape and design of the installationas well as other elements present, such as columns, pillars or other obstacles, which can condition the points of light and influence the investment.

It is equally important to comply with both general and specific regulations in force for each class:

CURRENT REGULATIONS

National regulations: NIDE regulations of the High Council for Sports (*Consejo Superior Español de Deportes*).

Regulations of national and international sports federations.

Energy efficiency regulations of outdoor lighting installations.

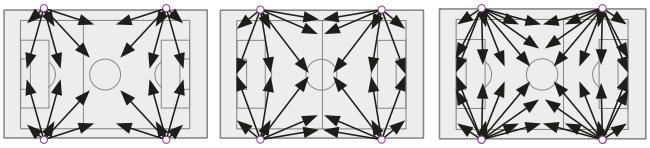
UNE EN 12193:2020.

REQUIREMENTS BY CLASS

Class III: Amateur competitions, training and school use: **E_m 75 lux and U_0 0.5**.

Class II: Regional competitions, high level training: **E_m 200 lux and U_0: 0.6**.

Class I: National and international competitions: **E_m 500 lux, U_0 0.7 and CRI > 80**.



Class III Class II Class I

Each project is different, and Televes has a technical office to offer advice on the design of professional lighting to ensure that the results are as expected. ■

Televes

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en.televes.com/smartkom

SmartKom

Filters, mixes, amplifies and balances at the touch of a button

READJUST AUTOSCAN

Intelligent mast amplifier that combine the functions
of a TV installation, by filtering, mixing, amplifying and balancing the DTT signal
with just pressing a button.

DESIGNED FOR TV DISTRIBUTION IN FAMILY HOUSES

- All in one
- Automatic adjusment
- High channel selectivity
- Rejection of 4G/5G signals
- Configuration with ASuite