



## TR 642 top2 RC digital time switch controls street lighting



TR 642 top2 RC

### More efficient due to astronomical function

Upper Swabian baroque, delightful landscape against an Alpine backdrop – Bad Schussenried in the district of Biberach stands out. The monastery town, with its 8,500 inhabitants, also counts as an energy-efficient community. As a competitor for the European Energy Award it has set itself the target of reducing its CO<sub>2</sub> emissions by 50 % by 2020. All measures for the economical and environmentally-friendly use of energy count. Street lighting was therefore examined closely for potential energy savings. After all, some 1,500 lights consume 600,000 kWh per annum. This is due to be halved. It's not just a question of switching off as safety takes priority. So the town council has opted, firstly, for energy-efficient lighting and, secondly, for needsdriven control to save electricity. The latter has been achieved by using TR 642 top2 RC digital time switches with 365-day and astronomical programs.

### Function

- Reduce CO<sub>2</sub> emissions by 50 %
- Reduce annual consumption (kWh) by 50 %
- Use of energy-efficient lighting
- Improved control and optimisation of energy consumption

### Solution

- Weekly and yearly program
- Astro program
- 2 channels
- Automatic summer/winter time changeover
- Intuitive OBELISK top2 program software
- Program input via OBELISK top2 memory card
- Time synchronisation with DCF receiver
- Optional LAN module for remote inquiry



Energy-efficient, safe and atmospheric: lighting in Bad Schussenried.

### Decentralised time control

Until now, the street lighting in the three urban and surrounding districts were switched on and off by twilight switches. As this process functioned unreliably in practice due to other unpredictable factors and it was not possible to switch off temporarily during the night, it was decided to seek another solution. Ripple control receivers were out of the question as the mains power supply was unsuitable. Therefore, decentralised control components were called for to take account of the daily changes in sunrise and sunset times, the time of day, the days of the week and the calendar.

The responsible electrical contractor Thomas Jaster did not have to think about it for long. He already had very good experience of Theben control technology and he opted for TR 642 top2 RC digital time switches with annual and astronomical programs. These 365-day time switches for distributor installation offer a lot of beneficial functions for the economical operation of street lighting.

"It's good the software is intuitive and easy to configure as it saves us a lot of time with creating and reworking programs on an annual basis."

Thomas JASTER  
electrical contractors  
Bad Schussenried

### Light according to program

The astronomical program now ensures that the lights turn on at sunset and off at sunrise every day. As the time switches have two channels, a section of lighting is now switched off in the night from 00.30 and 04.30, while the rest remains on to provide

basic lighting. This saves energy and meets safety requirements at the same time. The different conditions that apply such as town centre lighting, highway lighting in residential areas or isolated properties can be met by different weekly and yearly programs with priority levels, public holidays, school holidays etc.

### OBELISK top2 software saves time

15 different programs are now available. The switching times set in the software are thereby used to calculate and minimise energy costs. The programs have to be entered on the time switches in situ via the OBELISK top2 memory card. He and his colleagues would be helped by wireless remote input and even remote monitoring. The time switches can be upgraded but there is still no data network for it. However, centralised management is a target for future projects, not least to improve control of energy consumption.



Visualisation and management of different programs on PC via OBELISK top2 software.

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<b>Project</b>	Street lighting
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