Article number: 6410100

TR 641 top2 Article number: 6410100

Description



- Digital time switch with yearly and astronomical time program
- 1 channel
- External input
 - Connectable sensors (external selector switch, sequence timer)
 - Connectable switches (ON or OFF permanent switching)
- DuoFix spring terminals
 - For 2 conductors each
 - Wire or strand (with or without wire end sleeve)
 - Wire diameter: 0.5 2.5 mm²
 - Button for releasing plug-in connection
- Text-oriented user guidance in display
 - Preset date and time
 - fully operable without mains connection
- 800 memory locations
- Interface for OBELISK top2 memory card (PC programming)
 - 2. insertable switching program
 - Copying programs
 - Storing programs
- 8 year power reserve (lithium battery)
- Zero-cross switching for relay-saving switching and high lamp loads (not with 24 V devices)
- Automatic summer/winter time changeover
 - can be deactivated
 - Date rule options are already stored for Europe, the USA and other countries
 - own date rule options or changeover around set dates are available
- ON-OFF switching times
- Pulse program
- Cycle program
- Extensive yearly clock functions
 - Basic weekly program and 14 different weekly programs with priority levels and date ranges
 - Permanent ON / permanent OFF with highest priority via date range program option
 - fixed and variable public holidays, public holidays dependent on Easter, day and date ranges with serial pattern
 - Public holiday database for Germany including all Federal states, Switzerland, France etc.
 - Program simulation on clock display
 - Graphic program simulation with 12 month overview for all channels on PC
- Astronomical time switch function (automatic calculation of sunrise and sunset times for the whole year)
 - Offset for adjusting of sunrise and sunset times
 - Position data via coordinates or country/city lists can be programmed
 - Optional production of own city list (favourites) and a table with own astronomical times on PC
 - Fixed ON-OFF switching times can be programmed (e.g. night time interruption)
 - Simulation of astronomical switching times (calculated astronomical times and programmed ON/OFF switching times) for the whole year
 - various astronomical setting options (evening ON mornings OFF or evenings OFF - mornings ON, astronomical pulse)
- Switching preselection
- Permanent switching ON/OFF
- Count-down timer
- Integrated operating hour counter
 - Reset option
 - Service function for monitoring maintenance intervals
- Holiday program
- 2 random programs

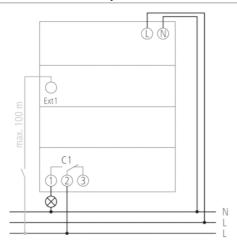
- Display back light (can be turned off)
- PIN coding

Technical data

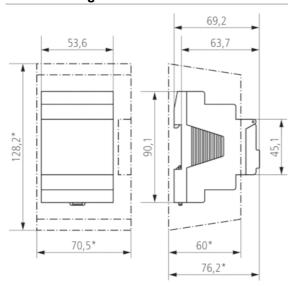
Frequency 50 – 60 Hz Width 3 modules Installation type DIN rail Type of contact Changeover contact Switching output Phase-independent Opening width < 3 mm Program Yearly program, Astronomical program Program functions ON-OFF, Pulse, Cycle Number of channels 1 External inputs 1 Number of memory locations 800 Power reserve 8 years Switching capacity at 250 V AC, cos φ = 16 A 1 Switching capacity at 250 V AC, cos φ = 0.6 10 A Incandescent/halogen lamp load 230 V 2600 W Incandescent/halogen lamp load 120 V 1800 W Energy saving lamps 230 V 37 x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W Energy saving lamps 120 V 18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W LED lamp < 2 W 50 W LED lamp < 8 W 200 W Switching capacity min. ca. 10 mA Shortest switching times 1 s Time basis Quartz Stand-b	Operating voltage	110 – 240 V AC
DIN rail	Frequency	50 – 60 Hz
Type of contact Switching output Opening width Yearly program, Astronomical program Program Yearly program, Astronomical program Program Inuctions ON-OFF, Pulse, Cycle Number of channels 1 Steternal inputs Number of memory locations 800 Power reserve 8 years Switching capacity at 250 V AC, cos φ = 16 A Switching capacity at 250 V AC, cos φ = 10 A Incandescent/halogen lamp load 230 V Incandescent/halogen lamp load 120 V Incandescent/halogen lamp 120 V Ineary saving lamps 230 V Ineary saving lamps 120 V Is x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W Energy saving lamps 120 V Is X 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W LED lamp < 2 W Switching capacity min. LED lamp ≥ 8 W Switching capacity min. Shortest switching times 1 s Time accuracy at 25 °C ≤ ± 0.5 s/day (quartz) Time basis Quartz Stand-by consumption Capacity loss max. Hemory card supplied — Type of connection New Jeep Capacity in Incandescent New Jeep Capacity in Incandescent LED lamp > 8 W LED lamp > 8 W LED lamp > 8 W Switching capacity min. Ca. 10 mA Shortest switching times 1 s Time accuracy at 25 °C ≤ ± 0.5 s/day (quartz) Time basis Quartz Stand-by consumption Capacity loss max. H, 1 W Memory card supplied — Type of connection DuoFix spring terminals Keyboards 4 touch buttons Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection P 20 Protection class Il according to EN 60 730-1	Width	3 modules
Switching output Phase-independent Opening width < 3 mm	Installation type	DIN rail
Opening width < 3 mm	Type of contact	Changeover contact
Program Yearly program, Astronomical program Program functions ON-OFF, Pulse, Cycle Number of channels 1 External inputs 1 Number of memory locations 800 Power reserve 8 years Switching capacity at 250 V AC, cos φ = 0,6 16 A Incandescent/halogen lamp load 230 V 2600 W Incandescent/halogen lamp load 120 V 1300 W Energy saving lamps 230 V 37 x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W Energy saving lamps 120 V 18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W LED lamp < 2 W	Switching output	Phase-independent Phase-independent
Program functions ON-OFF, Pulse, Cycle Number of channels 1 External inputs 1 Number of memory locations 800 Power reserve 8 years Switching capacity at 250 V AC, cos φ = 0.6 16 A Switching capacity at 250 V AC, cos φ = 0.6 10 A Incandescent/halogen lamp load 230 V 2600 W Incandescent/halogen lamp load 120 V 1300 W Energy saving lamps 230 V 37 x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W Energy saving lamps 120 V 18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W LED lamp < 2 W	Opening width	< 3 mm
Number of channels 1 External inputs 1 Number of memory locations 800 Power reserve 8 years Switching capacity at 250 V AC, cos φ = 10 A 16 A Switching capacity at 250 V AC, cos φ = 10,6 10 A Incandescent/halogen lamp load 230 V 2600 W Incandescent/halogen lamp load 120 V 1300 W Energy saving lamps 230 V 37 x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W Energy saving lamps 120 V 18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W LED lamp < 2 W	Program	Yearly program, Astronomical program
External inputs 1 Number of memory locations 800 Power reserve 8 years Switching capacity at 250 V AC, cos φ = 16 A Switching capacity at 250 V AC, cos φ = 10 A Switching capacity at 250 V AC, cos φ = 10 A Incandescent/halogen lamp load 230 V Incandescent/halogen lamp load 120 V Incandescent/halogen lamp load 120 V Energy saving lamps 230 V Energy saving lamps 120 V Energy saving lamps 120 V LED lamp < 2 W LED lamp < 2 W LED lamp > 8 W Switching capacity min. Shortest switching times 1 s Time accuracy at 25 °C S± 0.5 s/day (quartz) Time basis Quartz Stand-by consumption -0.6 W Capacity loss max. 1,1 W Memory card supplied - Type of connection DuoFix spring terminals Keyboards Hossin at a cacording to EN 60 730-1	Program functions	ON-OFF, Pulse, Cycle
Number of memory locations 800 Power reserve 8 years Switching capacity at 250 V AC, cos φ = 10 A 16 A Switching capacity at 250 V AC, cos φ = 0,6 10 A Incandescent/halogen lamp load 230 V 2600 W Incandescent/halogen lamp load 120 V 1300 W Energy saving lamps 230 V 37 x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W Energy saving lamps 120 V 18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W LED lamp < 2 W	Number of channels	1
Power reserve 8 years Switching capacity at 250 V AC, cos φ = 1 16 A Switching capacity at 250 V AC, cos φ = 0.6 10 A Incandescent/halogen lamp load 230 V 2600 W Incandescent/halogen lamp load 120 V 1300 W Energy saving lamps 230 V 37 x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W Energy saving lamps 120 V 18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W LED lamp < 2 W	External inputs	1
Switching capacity at 250 V AC, cos φ = 1 Switching capacity at 250 V AC, cos φ = 0,6 Incandescent/halogen lamp load 230 V Incandescent/halogen lamp load 120	Number of memory locations	800
1 Switching capacity at 250 V AC, cos φ = 0,6	Power reserve	8 years
0,6 Incandescent/halogen lamp load 230 V Incandescent/halogen lamp load 120 V 1300 W Energy saving lamps 230 V 37 x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W Energy saving lamps 120 V 18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W LED lamp < 2 W	1	16 A
Incandescent/halogen lamp load 120 V 1300 W Energy saving lamps 230 V 37 x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W Energy saving lamps 120 V 18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W LED lamp < 2 W		10 A
Energy saving lamps 230 V 37 x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W Energy saving lamps 120 V 18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W LED lamp < 2 W	Incandescent/halogen lamp load 230 V	2600 W
Energy saving lamps 120 V 18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W LED lamp < 2 W	Incandescent/halogen lamp load 120 V	1300 W
LED lamp < 2 W LED lamp 2-8 W LED lamp > 8 W Switching capacity min. Shortest switching times 1 s Time accuracy at 25 °C Stand-by consumption Capacity loss max. 1,1 W Memory card supplied Type of connection Capacity our buffer spring terminals Keyboards Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	Energy saving lamps 230 V	37 x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W
LED lamp 2-8 W LED lamp > 8 W Switching capacity min. ca. 10 mA Shortest switching times 1 s Time accuracy at 25 °C Stand-by consumption Capacity loss max. 1,1 W Memory card supplied Type of connection DuoFix spring terminals Keyboards Housing and insulation material Protection class 180 W 200 W 200 W Switching capacity min. ca. 10 mA Shortest switching times 1 s Stand-by consumption Capacity (quartz) Stand-by consumption -0,6 W Capacity loss max. 1,1 W Memory card supplied - Type of connection DuoFix spring terminals High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	Energy saving lamps 120 V	18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W
LED lamp > 8 W Switching capacity min. ca. 10 mA Shortest switching times 1 s Time accuracy at 25 °C ≤±0.5 s/day (quartz) Time basis Quartz Stand-by consumption ~0,6 W Capacity loss max. 1,1 W Memory card supplied — Type of connection DuoFix spring terminals Keyboards 4 touch buttons Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	LED lamp < 2 W	50 W
Switching capacity min. Shortest switching times 1 s Time accuracy at 25 °C ≤±0.5 s/day (quartz) Time basis Quartz Stand-by consumption ~0,6 W Capacity loss max. 1,1 W Memory card supplied — Type of connection DuoFix spring terminals Keyboards 4 touch buttons Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	LED lamp 2-8 W	180 W
Shortest switching times 1 s Time accuracy at 25 °C ≤± 0.5 s/day (quartz) Time basis Quartz Stand-by consumption Capacity loss max. 1,1 W Memory card supplied Type of connection DuoFix spring terminals Keyboards 4 touch buttons Housing and insulation material Type of protection IP 20 Protection class I s 1 s 1 s 1 s 1 s 1 s 1 s 1	LED lamp > 8 W	200 W
Time accuracy at 25 °C ≤ ± 0.5 s/day (quartz) Time basis Quartz Stand-by consumption ~0,6 W Capacity loss max. 1,1 W Memory card supplied — Type of connection DuoFix spring terminals Keyboards 4 touch buttons Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	Switching capacity min.	ca. 10 mA
Time basis Quartz Stand-by consumption ~0,6 W Capacity loss max. 1,1 W Memory card supplied — Type of connection DuoFix spring terminals Keyboards 4 touch buttons Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	Shortest switching times	1 s
Stand-by consumption ~0,6 W Capacity loss max. 1,1 W Memory card supplied — Type of connection DuoFix spring terminals Keyboards 4 touch buttons Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	Time accuracy at 25 °C	≤ ± 0.5 s/day (quartz)
Capacity loss max. 1,1 W Memory card supplied Type of connection DuoFix spring terminals Keyboards 4 touch buttons Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	Time basis	Quartz
Memory card supplied — Type of connection DuoFix spring terminals Keyboards 4 touch buttons Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	Stand-by consumption	~0,6 W
Type of connection DuoFix spring terminals Keyboards 4 touch buttons Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	Capacity loss max.	1,1 W
Keyboards 4 touch buttons Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	Memory card supplied	_
Housing and insulation material High-temperature resistant, self-extinguishing thermoplastic Type of protection IP 20 Protection class II according to EN 60 730-1	Type of connection	DuoFix spring terminals
Type of protection IP 20 Protection class II according to EN 60 730-1	Keyboards	4 touch buttons
Protection class II according to EN 60 730-1	Housing and insulation material	High-temperature resistant, self-extinguishing thermoplastic
-	Type of protection	IP 20
Ambient temperature -30 °C +45 °C	Protection class	II according to EN 60 730-1
	Ambient temperature	-30 °C +45 °C

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Connection example



Scale drawings



Accessories

Wall mounting kit 52,5 mm

■ Article number: 9070050 Details ► www.theben.de



Front panel kit

■ Article number: 9070001 Details ► www.theben.de



PC set OBELISK top2

■ Article number: 9070409 Details ► www.theben.de



Memory card OBELISK top2

■ Article number: 9070404 Details ► www.theben.de

