

Digital time switches
[Programmable time switches]

DIN-rail mounting
70 mm

DIN-rail mounting
35 mm

DIN-rail mounting
17,5 mm

19"-housing

Switchboard panel
and wall mounting

Switchboard panel



Chart digital time switches

weekly program, astro/solar program, yearly program

weekly program *week^{prog}*

Digital time switch		Mechanical design	Front dims in mm	Memory location	Relay / Channel	Data-key	Pulse / Timer	Cycle	Add-ons	Page
SC 08.11 pro	paladin 172 110 pro	DIN-rail mounting	17,5 x 45	46	kanal 1 channel	data	pulse			14 / 15
SC 18.10 pro	paladin 170 410 pro	DIN-rail mounting	35 x 45	30	kanal 1 channel		pulse			16 / 17
SC 28.X1 pro	paladin 172 4X1 pro	DIN-rail mounting	35 x 45	46	kanal 1/2 channel	data pro	pulse			18 / 19
SC 28.X2 pro	paladin 172 4X2 pro	DIN-rail mounting	35 x 45	100	kanal 1/2 channel	data pro	pulse	cycle	Extern*	20 / 21
SC 88.X0 pro	paladin 179 4X0 pro	DIN-rail mounting	71,5 x 45	300	kanal 1-4 channel	data pro	pulse	cycle	Extern dcf [®]	22 / 23
SC 24.10		Switchboard panel	48 x 48	30	kanal 1 channel		pulse		Extern	24 / 25
SC 44.X1 pro		Switchboard panel Wall mounting	72 x 72	46	kanal 1/2 channel	data pro	pulse			26 / 27
SC 83.X0 pro		19"-housing	76 x 128	300	kanal 2/4 channel	data pro	pulse	cycle	dcf [®]	28 / 29

Housing colour

*one channel time switch

astro / solar program *astro^{prog}*

Digital time switch		Mechanical design	Front dims in mm	Memory location	Relay / Channel	Data-key	Pulse / Timer	Cycle	Add-ons	Page
SC 08.13 pro	paladin 172 113 pro	DIN-rail mounting	17,5 x 45	60	kanal 1 channel	data				30 / 31
SC 28.X3 pro	paladin 172 4X3 pro	DIN-rail mounting	35 x 45	60	kanal 1/2 channel					32 / 33
SC 28.X4 pro	paladin 172 4X4 pro	DIN-rail mounting	35 x 45	100	kanal 1/2 channel	data pro			Extern*	34 / 35

Housing colour

*one channel time switch

yearly program *year^{prog}*

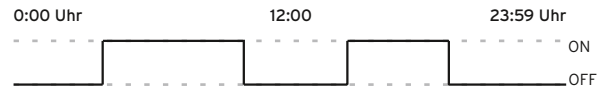
Digital time switch		Mechanical design	Front dims in mm	Memory location	Relay / Channel	Data-key	Pulse / Timer	Cycle	Add-ons	Page
SC 28.19 pro	paladin 172 419 pro	DIN-rail mounting	35 x 45	300	kanal 1 channel	data pro	pulse	cycle	dcf [®]	36 / 37
SC 98.X0 pro	paladin 179 6X0 pro	DIN-rail mounting	71,5 x 45	300	kanal 1-4 channel	data pro	pulse	cycle	Extern dcf [®]	38 / 39
SC 93.X0 pro		19"-housing	76 x 128	300	kanal 2/4 channel	data pro	pulse	cycle	dcf [®]	40 / 41

Housing colour

Functional overview / meaning of pictograms

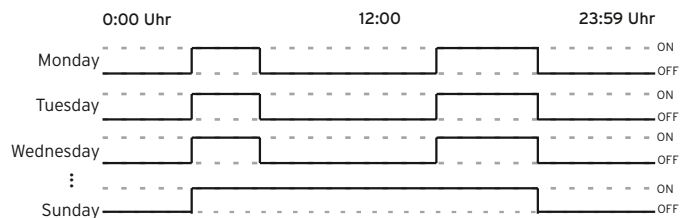
Daily program *24h^{prog}*

Irrespective of the day of the week the same switching program is carried out each day. Multiple switching functions can be programmed within 24h.



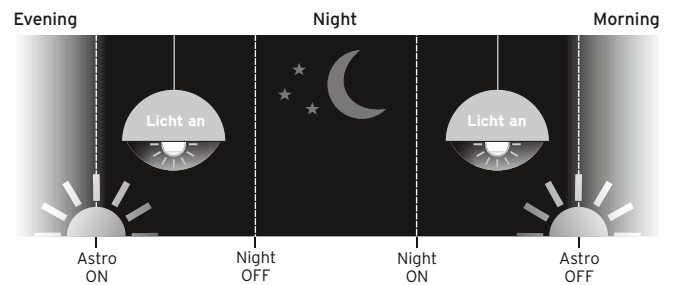
Weekly program *week^{prog}*

Depending on the day of the week (Mo - Su) different daily programs can be configured. Unrestricted block programming allows a free choice of days of the week within one switching function. The choice of switching functions is the following: ON, OFF, permanent by date (holiday), pulse (pulse not available in astro time switches).



Astro program / Solar program *astr^o*

Astronomical or solar time switches can be used as an alternative to twilight switches (also known as photo-electric or day/night switch). When using an astro time switch NO light sensor is needed. By means of "astro switching times" the time switch automatically calculates the start of dusk in the evening or the beginning of dawn in the morning and calculates the time for sunset and sunrise respectively. This calculation is updated each day throughout the whole year. Additionally, conventional switching functions of a weekly time switch can be programmed (ON, OFF, (holiday) permanent by date).



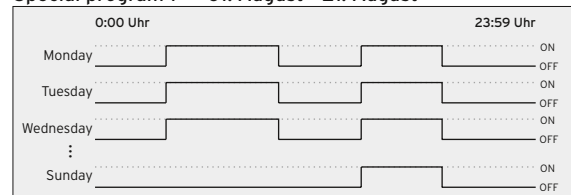
Offset: A chronological offset can be entered. This offset customises the astro switching times. Therefore the time switch can execute an astro switching time either before or after sunset/sunrise or, if the offset is left at zero, exactly at sunrise/sunset.

Position/location: To guarantee exact calculation of local sunset and sunrise times, you can easily enter your approximate geographical position by choosing one of the pre-defined cities or alternatively your exact geographical position by entering the geographical coordinates (longitude and latitude).

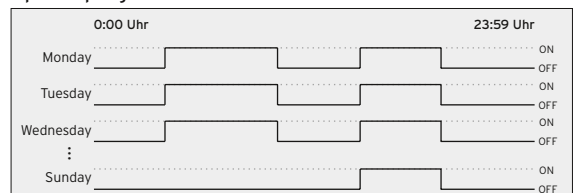
Yearly program *year^{prog}*

Yearly time switches are suitable to achieve more sophisticated time controls compared to standard weekly programs. By means of special (weekly) programs different weekly programs can be carried out within different periods during the year (from start date to end date).

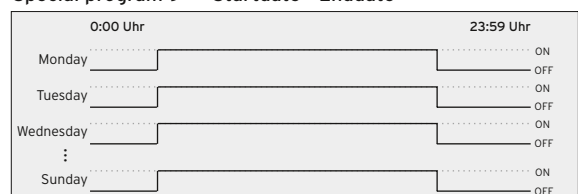
Special program 1 => 01. August - 21. August



Special program 1 => Startdate - Enddate



Special program 9 => Startdate - Enddate



Easter function: One additional function when carrying out a special weekly program is the so called Easter function. If you selected it for a period with start date and end date, these dates are shifted by the shift of Easter holiday for successive years (Gaussian Easter formula). This function is applicable for holidays e.g. Carnival, Ash Wednesday, Palm Sunday, Maundy Thursday, Good Friday, Easter Day, Pentecost, Feast of Corpus Christi.

Extra switching time: A further feature is the so called extra switching time. Single switching times can be programmed for a specific date (e.g. Anniversary). The residual switching program remains unaffected. A helpful add-on is the option "weekday function". If you assign this to your extra switching time the shift of this weekday of the month will be taken into account for successive years. E.g.: A switching time that should be carried out every 2nd Saturday of February every year.

Permanent by date (holiday function)

You have the possibility to switch a channel during a period (from start date to end date) permanently ON or OFF.

Pulse function 

The pulse function is a function for a switching time with defined pulse length ranging from 00:01 to 59:59 mm:ss.
[SC 24 => 01 to 59 ss]

Timer function 

(Only for manual and external trigger signals)

The timer function can only be started by an external signal (external input) or by the channel buttons of the time switch. The switching performance is identical to the pulse function. The pulse length is greater and ranges from 0:00:01 h:mm:ss to 9:59:59 h:mm:ss. The timer function is also known under following terms: On-pulse or Single shot.

Cycle function 

The cycle function can be used to program a continuous ON-OFF-ON-OFF..... switching time. The time switch operates then as an asymmetrical recycler (pulse/pause). The independently adjustable max pulse/pause lengths are 9:59:59 h:mm:ss. 4 different memory locations are reserved for 4 different cycles.

Channel button

You can assign different switching functions to each single channel. This function is carried out when either pressing the corresponding channel button of the time switch or optionally by addressing the channel from the external input. The different switching functions are the following: ON/OFF (predefined setting, see also "manual override"), cycle, timer, permanent.

External input 

The external input can be used as external trigger for different functions (ON/OFF, cycle, timer, permanent) [SC 24 => ON/OFF]. The signal connected to the external input can be of type "switch" or "push-button".

Staircase lighting timer: When using the timer function and advanced warning function.

Glow lamp load of the external input: Max. 75mA (Used to supply the glow lamp in suitable light switches) (Not available in 70 mm version)

Advance warning function 

A useful function for lighting applications according DIN 18015-2. Two-fold flashing warns of darkness.

Radio controlled clock 

Some time switches can be controlled by radio receiver FU 20 pro (accessory). The time switch is then synchronised to the time standard signal DCF77. The transmitter is located close to Frankfurt/Main (Mainflingen). The range is approx. 1500 km.

Data-key function 

Time switches with this function can be programmed by data-key DKpro (accessory).

The functions are as follows:

- Data back-up of the time switch
- Programming the time switch with the pre-programmed key program
- Time switch executes only the key program

Programming package PP 50 pro:

A useful accessory for the Data-key is the programming package PP 50 pro. You can easily program your switching program with the PC and transfer it to the time switch with the data-key.

Removable programming module: 

No Data-key needed to transfer the program between the PC and the time switch. The removable module of the time switch SC 08.1X pro / paladin 172 11X pro can be easily used to transfer the program between the time switch and the programming adapter PP 50 pro.

PIN-Code 

Security by PIN-coding.

Display with back light 

For a better contrast of displayed symbols, digits and letters.

Permanently ON and OFF (manual)

By pressing the corresponding channel button for more than 3 sec. the channel is permanently switched ON or OFF.

Manual override

By pushing the channel button the corresponding channel will change its status.

Time counter 

Time switches with integrated time counter are counting operation hours and the number of switchings of each channel as well as the operation hours of the time switch.