IC100, IC2000, IC2000p+, IC100kp+ - SMART, IC Astro - SMART

Twilight switches

IC100

Adjustable from 2 to 100 lux.
It comes with a wall-mounted cell.

IC2000

Adjustable from 2 to 2000 lux. It comes with a standard wall-mounted or switchboard cell.

IC2000p+

It has 3 customisable pre-set programs and 3 setting ranges from 2 to 2100 lux.
Its 4 keys and large screen facilitate its programming.
It comes with a wall-mounted cell.

IC Astro - SMART

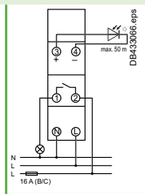
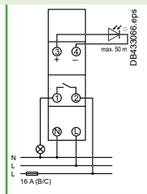
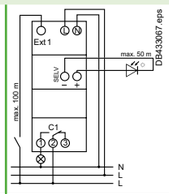
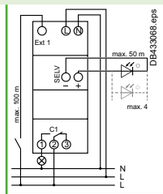
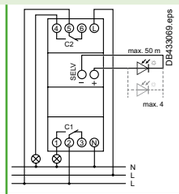
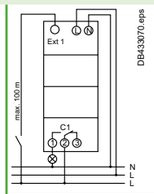
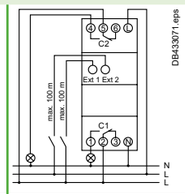
It operates without photoelectric cell and calculates sunrise and sunset times according to its geographic position.
Programming can be done by using the app Acti9 Light and Time Switch.

IC100kp+ - SMART

Adjustable from 1 to 99000 lux.
Its 4 keys and large screen facilitate its programming.
It comes with a digital wall-mounted and a memory key.
Programming can be done by using the app Acti9 Light and Time Switch.

IC100, IC2000, IC2000p+, IC100kp+ - SMART, IC Astro - SMART (cont.)

Selection table

	IC100	IC2000		IC2000p+	IC100kp+ 1c - SMART	IC100kp+ 2c - SMART	IC Astro 1c - SMART	IC Astro 2c - SMART
	 CCT15482_CCT15263-35.eps	 CCT15285_CCT15262-35.eps		 CCT15483_CCT15263-35.eps	 CCT15494_CCT15260-35.eps	 CCT15495_CCT15260-35.eps	 CCT15225-35.eps	 CCT15245-35.eps
Function								
	The IC100 controls closing of a contact when brightness decreases and drops below the selected threshold. It controls opening of a contact when brightness increases and rises above the selected threshold	The IC2000 control closing of a contact when brightness decreases and drops below the selected threshold. They control opening of a contact when brightness increases and rises above the selected threshold		The IC2000p+ controls lighting according to brightness and time. If brightness drops below the set threshold (twilight function: IC) and if the time program allows relay closing (time switch function), then the lighting circuit is activated	The IC100kp+ 1c/2c - SMART control lighting according to brightness and time. If brightness drops below the set threshold (twilight function: IC) and if the time program allows relay closing (time switch function), then the lighting circuit is activated Programming can be done on the device, with the Kit LTS Software (CCT15860) and Memory stick (CCT15861), with the smartphone app Acti9 Light and Time Switch via Bluetooth stick (CCT15862) (see "Accessories selection table")		The IC Astro astronomic programmable twilight switch is used to start and stop an electric load (e.g. lighting) according to sunrise and sunset times, without a brightness detector.Sunrise and sunset times are calculated automatically by the IC Astro according to the geographic parameters configured by the user Programming can be done on the device, with the Kit LTS Software (CCT15860) and Memory stick (CCT15861), with the smartphone app Acti9 Light and Time Switch via Bluetooth stick (CCT15862) (see "Accessories selection table")	
Wiring diagrams								
	 DB433066.eps	 DB433066.eps		 DB433067.eps	 DB433068.eps	 DB433069.eps	 DB433070.eps	 DB433071.eps
Catalogue numbers	**CCT15482**	**CCT15285**	**CCT15369**	**CCT15483** (1)	**CCT15494** (3)	**CCT15495** (3)	**CCT15225** (4)	**CCT15245** (4)
Technical specifications								
Delivered with	Outdoor light sensor (**CCT15263**)	Indoor light sensor (**CCT15262**)	Outdoor light sensor (**CCT15263**)	Outdoor light sensor (**CCT15263**)	Digital outdoor light sensor (**CCT15260**)		–	–
Optional accessories	Indoor light sensor (**CCT15262**)	Indoor light sensor (**CCT15262**) Outdoor light sensor (**CCT15263**)	Indoor light sensor (**CCT15262**) Outdoor light sensor (**CCT15263**)	Indoor light sensor (**CCT15262**)	Smarthone app Acti9 Light and Time Switch, and Bluetooth stick **(CCT15862)** Programming kit for PC (**CCT15860**), Memory stick (**CCT15861**) Digital outdoor light sensor (**CCT15260**), Digital indoor light sensor (**CCT15261**)		Smarthone app Acti9 Light and Time Switch, and Bluetooth stick **(CCT15862)** Programming kit for PC (**CCT15860**), Memory stick (**CCT15861**)	
Adjustable brightness threshold	2 to 100 lx	2 to 2000 lx		2 to 2000 lx	1 to 99000 lx		According to sunrise/sunset times	
Voltage rating (Ue) (+10 %, -15 %)	230 V AC, 50/60 Hz	230 V AC, 50/60 Hz		230 V AC, 50/60 Hz	230 V AC, 50/60 Hz		230 V AC, 50/60 Hz	
Consumption	< 0.5 W	< 0.5 W		< 0.5 W	< 0.8 W		< 0.5 W	
Operating temperature	-30°C to +55°C	-30°C to +55°C		-25°C to +55°C (2)	-25°C to +55°C (2)		-30°C to +55°C (2)	
Width (9 mm modules)	2	2		5	5		5	
Insulation class	Class II	Class II		Class II	Class II		Class II	
Degree of protection	IP20	IP20		IP20	IP20		IP20	
Output contact rating (under 250 VAC) cos φ = 1	16 A	16 A		16 A	16 A		16 A	
Output contact rating (under 250 VAC) cos φ = 0.6	10 A	10 A		10 A	10 A		10 A	
Time delays (On and Off)	20 s (On) 80 s (Off)	20 s (On) 80 s (Off)		Adjustable from 20 to 140 s	Adjustable from 0 to 59 min.		Difference in sunset and/or sunrise times adjustable separately by ±120 min.	
Operating accuracy	–	–		0.25 s/day (25°C)	0.25 s/day (25°C)		0.25 s/day (25°C)	
Monitoring indicator light, not time delayed, lit when brightness is less than the threshold	Red	Red		–	–		–	
Contact switching indicator light	Green	Green		–	–		–	
LCD liquid crystal display	–	–		Back-lit	Back-lit		Back-lit	
Program saving by lithium battery	–	–		■	■		■	
Operating reserve	–	–		10 years	10 years		10 years	
Location for instruction manual on front face	–	–		■	■		■	
Cabling test function with a push-button on front face	–	–		■	–		–	
Number of channels	1	1		1	1	2	1	2
Control by brightness detection	■	■		■	■		–	
Coupling with weekly programming	–	–		56 switching times Minimum time between 2 switching operations: 1 min	84 switching times Minimum time between 2 switching operations: 1 min		84 switching times Minimum time between 2 switching operations: 1 min	
Control by calculation of sunrise/sunset times	–	–		–	–		■	

(1) en, fr, nl, it, ru, hu, es, bg, ro, pl, de, cz, hr, uk, pt, da, fi, sv.
(2) The LCD display is only fully functional at temperature from +5°C to +55 °C.

Twilight switches
www.se.com
IC100, IC2000, IC2000p+, IC100kp+ - SMART, IC Astro - SMART (cont.)

(2) The LCD display is only fully functional at temperature from +5°C to +55 °C.
(3) en, fr, ru, es, it, nl, da, hr, sl, pl, hu, de, ro, pt, cz, sv, no, fi.
(4) en, fr, da, nl, tr, no, es, sv, ro, hr, ru, pl, pt, sl,bg, de, hu, it.

Version : 3.1 - 08/04/2022
LSB02323EN

Twilight switches
IC100, IC2000, IC2000p+,
IC100kp+ - SMART, IC Astro - SMART (cont.)
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Accessories selection table

	Wall-mounted cell	Switchboard cell	Digital wall-mounted cell	Digital switchboard cell	Bluetooth stick for IC/IC Astro SMART	Programming kit for PC	Memory key
	 CCT15263-25.eps	 CCT15262-25.eps	 P116858-30.eps	 P116859-30.eps		 P93580-20.eps	 P93581-8_13.eps
Function							
	Wall-mounted photoelectric cell	Switchboard photoelectric cell	Digital wall-mounted photoelectric cell	Digital wall-mounted photoelectric cell	In conjunction with the smartphone app *Acti9 Light and Time switch* IC100kp+ - SMART and IC Astro - SMART can be programmed	Consists of a programming device	Saving and duplicating programs
Mounting							
	■ Delivered with its fixing device for IC100, IC2000 outdoor, IC2000p+ ■ Cell connection: by double insulation 2-conductor cable, not to be laid next to mains cables or water ducts, maximum length: 50 m	■ Delivered with its fixing device for IC100, IC2000, IC200p+ ■ Cell connection: by double insulation 2-conductor cable, not to be laid next to mains cables or water ducts, maximum length: 50 m	■ Delivered with its fixing device. ■ Cell connection: □ by double insulation 2-conductor cable: - 0.5 - 2.5 mm² for **CCT15260** - 0.25 - 1.5 mm² for **CCT15261** □ Not to be laid next to mains cables or water ducts, maximum length: - 100 m (2 x 1.5 mm²) - 50 m (2 x 0.75 mm²)		Located on front face	Content: CD Rom, adapter, one memory stick and 2 m USB cable. Compatible with: IC Astro 1c - SMART IC Astro 2c - SMART IC 100kp+ 1c - SMART IC 100kp+ 2c - SMART	–
Catalogue no.	**CCT15263**	**CCT15262**	**CCT15260**	**CCT15261**	**CCT15862**	**CCT15860**	**CCT15861**
Technical spécifications							
Degree of protection	IP55	IP66 (front) IP40 (rear)	IP55	IP66 (front) IP40 (rear)	–	–	–
Operating temperature	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C	-30 °C ... +55 °C	–	–
Horizontally orientable	–	90°	90°	90°	–	–	–

Load table

Type of lighting (230 V AC)		**Max. power** (for higher power, relay with a contactor)				
		IC100	**IC2000**	**IC2000p+**	**IC Astro**	**IC100kp+ - SMART**
Incandescent and halogen lamps		2600 W	2600 W	2600 W	2600 W	2600 W
LED lamps	Power for one lamp < 2 W	30 W	30 W	30 W	30 W	30 W
	Power for one lamp from 2 to 8 W	200 W	200 W	200 W	200 W	200 W
Non-corrected / serial-corrected / dual mounted fluorescent tubes with conventional ballast		2300 VA	2300 VA	2300 VA	2300 VA	2300 VA
Parallel corrected fluorescent tubes with conventional ballast		730 VA	730 VA	730 VA	730 VA	730 VA
Fluocompact lamps with electronic ballast		170 W	170 W	170 W	170 W	170 W

Specific technical data

IC2000p+	
External input	
Voltage rating (Ue)	230 V AC +10 % -15 %
Frequency	50/60 Hz
Consumption	<500 mW
Cable length	max. 100 m
IC100kp+, IC Astro - SMART	
Programming accessories	■ Programming kit for PC consists of a CDROM, adapter, one memory stick and 2 m USB cable ■ Memory key for saving and duplicating programs ■ Programming with the smartphone app *Acti9 Light and Time Switch* https://acti9lts.azurewebsites.net via Bluetooth stick (CCT15862)
External inputs	
External inputs for external control with a standard switch or a push-button	■ 1 input "Ext" for 1 channel versions ■ 2 inputs "Ext1" and "Ext2"for 2 channels versions
Voltage rating (Ue)	230 V AC +10 % -15 %
Frequency	50/60 Hz
Consumption	<500 mW
Cable length	max. 100 m

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IC2000p+, IC Astro - SMART
Practicle advices

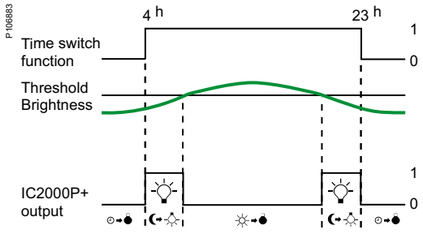


Fig. 1.

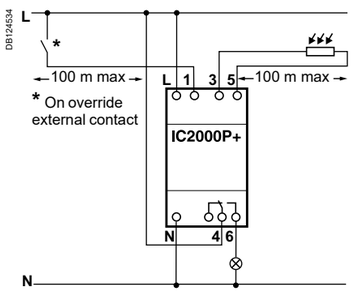


Fig. 2.

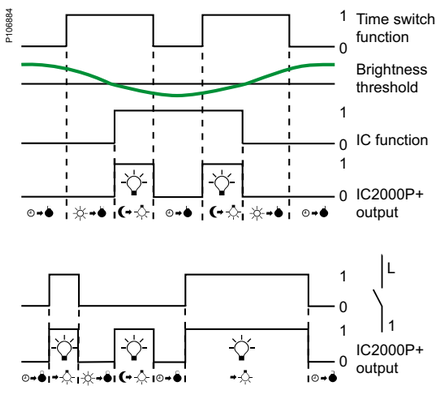


Fig. 3.

IC2000p+
The IC 2000p+ uses its time programming to define lighting On and Off periods:
- According to three pre-set time programs:
  - "DAYPROG": On time programming from 7 am to 8 pm a validation of the IC function from 7 am to 8 pm,
  - "NIGHTPROG": On time programming from 5 am to 8 am and from 6 pm to 11 pm a validation of the IC function on these two operating periods,
  - "EMPTYPROG": Off time programming throughout the day a no validation of the IC function. These programs can be modified if necessary.
- According to a customised operating period, with possibility of copying to the other days.

It is equipped with the following functions:
- consideration of periods of absence (holidays),
- temporary or permanent On or Off override,
- remote control of lighting override by NO external contact,
- consideration of change to “summer/winter” time, automatic or manual,
- permanent liquid crystal display: of time and minutes, of day of the week, of the contact output status and current program.

Example
Lighting of a shop window, in the evening, at a time variable according to brightness and switch-off at a set time (e.g. 11 pm). Then in the morning, lighting at a set time (e.g. 4 am) and switch-off at a time variable according to brightness (see Fig. 1).

Configuration
This consists of recording in the memory:
- The language.
- The year, month, day and time.
- One of the 3 pre-set programs:
  - "DAYPROG": "On" time programming from 7 am to 8 pm ➡ validation of the IC function from 7 am to 8 pm,
  - "NIGHTPROG": "On" time programming from 5 am to 8 am and from 6 pm to 11 pm ➡ validation of the IC function on these two operating periods,
  - "EMPTYPROG": "Off" time programming throughout the day ➡ no validation of the IC function. These programs can be modified.
- The brightness threshold. Once this phase is over, your IC 2000P+ operates in AUTO mode according to the items you have chosen.

Programming
The IC2000P+ is used to manage time programs. It allows:
- Creation of a new program with the possibility of copying to the other days.
- Viewing programs in memory.
- Modification of a program in memory, of the time, date, summer/winter time.
- Partial or total deletion of the program (date, time and language are kept).
- Modification of the brightness threshold.
- Separate setting of the time delay on switch-on and switch-off.

Move to On/Off override
- Press briefly (< 2 s) and simultaneously the 2 keys "**-**", "**+**" (value setting and navigation keys) on the front face to move to "MAN ON" or "MAN OFF".
- Press the keys for more than 2 s to move to "PERM ON" or "PERM OFF".
- Supply of terminal 1 overrides the IC 2000P+ output to the "On" position.

This external override takes priority over the product On/Off override function (see Fig. 2, 3).

IC2000p+, IC Astro - SMART (cont.)
Practicle advices

Fig. 3.

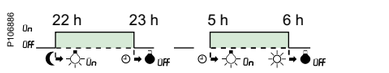


Fig. 4.

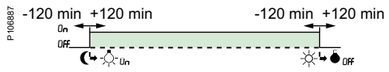


Fig. 5.

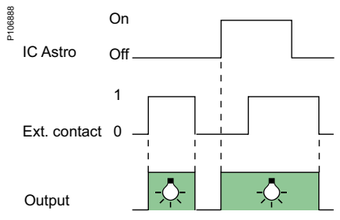


Fig. 6.

IC Astro - SMART
The IC Astro - SMART is configured according to the place of installation.
- The place of installation of the IC Astro can be configured:
  - either by selecting a country and a town,
  - or by its geographic coordinates (latitude, longitude).
- The IC Astro allows:
  - addition or deletion of a switch-off/switch-on switching operation (Off-On) between the sunset and sunrise times,
  - different programmes each day,
  - difference in sunset and/or sunrise times, adjustable separately by ±120 min. according to local constraints (mountains, buildings, etc.),
  - consideration of periods of absence (holidays),
  - remote control of lighting override by external standard switch or push-button via the external input (1 external input per channel),
  - re-initialisation of programmes,
  - automatic switching to “summer-winter” time,
  - permanent display by liquid crystals: hours and minutes, day of the week, contact output status, and current programme,
  - manual waiver of the lighting On/Off programme, permanently or temporarily (up to the next switching operation).
  - back-lighting of the screen.

Example
Automatically lighting On and Off a shop window in Paris according to sunset and sunrise, example the 20th June.
- At night (10 pm) the lighting switch-on.
- At the morning (6 am) the lighting switch-off.

Configuration
This consists of writing in the memory:
- The language.
- The place of installation, either:
  - by its position (Argentina, China, etc.) and by the closest town,
  - by its geographic coordinates (latitude, longitude, time difference with respect to GMT) (a map is provided with the product).
- The year, month, day and time.
- Once this phase is complete, IC Astro will calculate the sunrise and sunset times and propose a default programme (operation from sunset to sunrise) (see Fig. 3).

Programming an Off period
The IC Astro offers the possibility of adding an "Off" period (programmed switch-off and switch-on) inside the programme, between the sunrise and sunset times (by default it is proposed from 11 pm to 5 am) (see Fig. 4).

Modifying programming and configuration
The twilight switch allows:
- Creation of a new customised programme with possibility of copying onto the other days.
- Display of programmes in memory.
- Deletion, modification or addition of an automatic or programmed switching operation.
- Partial or total deletion of the programme (date, time and language are kept).
- Modification of time, date, summer/winter time.
- Temporary cancellation of the "On" periods by configuring start and end dates and Times of absence (holidays).
- Adjustment of difference in sunset and/or sunrise times by ± 120 min. according to local constraints (mountains, buildings, etc.) (see Fig. 5).

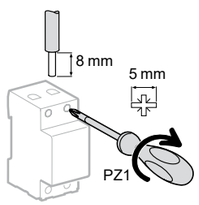
Move to On/Off override
- Briefly press (<2 s) at the same time on the 2 keys "**-**", "**+**": (value setting and navigation keys) on the front face to move to "ON TEMP" or "OFF TEMP".
- Hold down (>2 s) the keys to move to "ON PERM" or "OFF PERM".
- The supply of input 5 forces the IC Astro output to the “ON” position.

This override takes priority over the product On/Off override function (see Fig. 6).

IC100, IC2000, IC2000p+, IC100kp+ - SMART, IC Astro - SMART (cont.)

Connection

DB123132



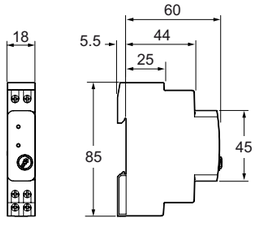
Type	Copper cables	
	Rigid / Flexible	With ferrule
		
IC100, IC2000p+ IC2000, IC Astro - SMART, IC100kp+ - SMART	2 x 0.5 - 2.5 mm²	1 x 1.5 mm²

Weight (g)

Twilight switches	1C	2C
IC100	111	
IC2000	87.5 (indoor), 111 (outdoor)	
IC2000p+	150	
IC Astro - SMART	115	141
IC100kp+ - SMART	134	138

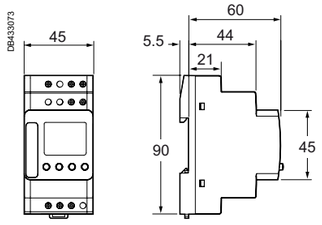
Dimensions (mm)

DB433072



IC100 / IC2000

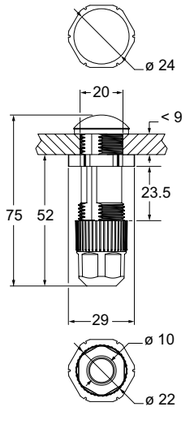
DB433073



IC2000p+ / IC Astro - SMART / IC100kp+ - SMART

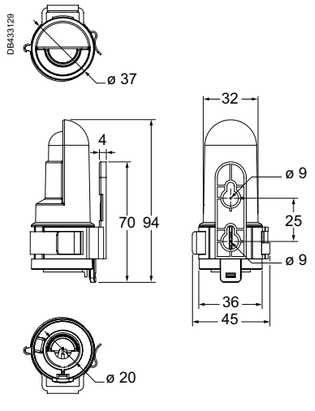
Cells

DB433128



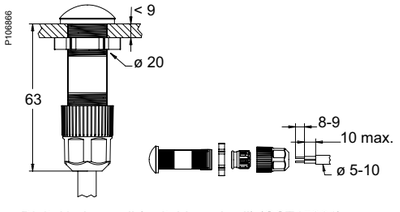
Standard indoor cell (switchboard cell) (CCT15262)

DB433129



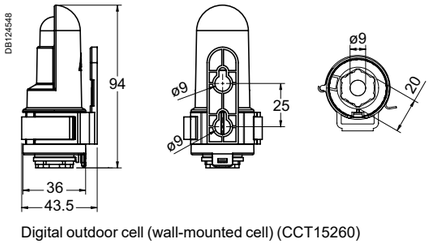
Outdoor cell (wall-mounted cell) (delivered with IC100, IC2000p+) (CCT15263)

P106866



Digital indoor cell (switchboard cell) (CCT15261)

DB124548



Digital outdoor cell (wall-mounted cell) (CCT15260)

Twilight switches
www.se.com
IC100, IC2000, IC2000p+, IC100kp+ - SMART, IC Astro - SMART (cont.)

Indice	Date	Modification	Name
3.1	08/04/2022	BLE Memory stick added	UWT
3.0	21/05/2019	New charte and products update	Sonovision
2.2	4/11/2014	Deleted IC100k products - Add LED lamp load table	Sedoc
2.1	3/11/2014	Changed CCT15268 and 15281 IP page 4	Sedoc
2.0	19/05/2011	InDesign CS5	Sedoc
1.0	30/03/2011	Creation	Sedoc