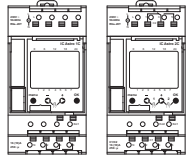**Schneider Electric**

IC Astro

Operating instructions

Art. no.
1C: CCT15223, CCT15224
2C: CCT15243, CCT15244

For your safety

⚠ **DANGER**
Risk of serious damage to property and personal injury, e.g. from fire or electric shock, due to incorrect electrical installation.

Safe electrical installation can only be ensured if the person in question can prove basic knowledge in the following areas:
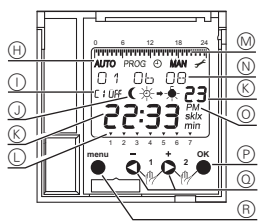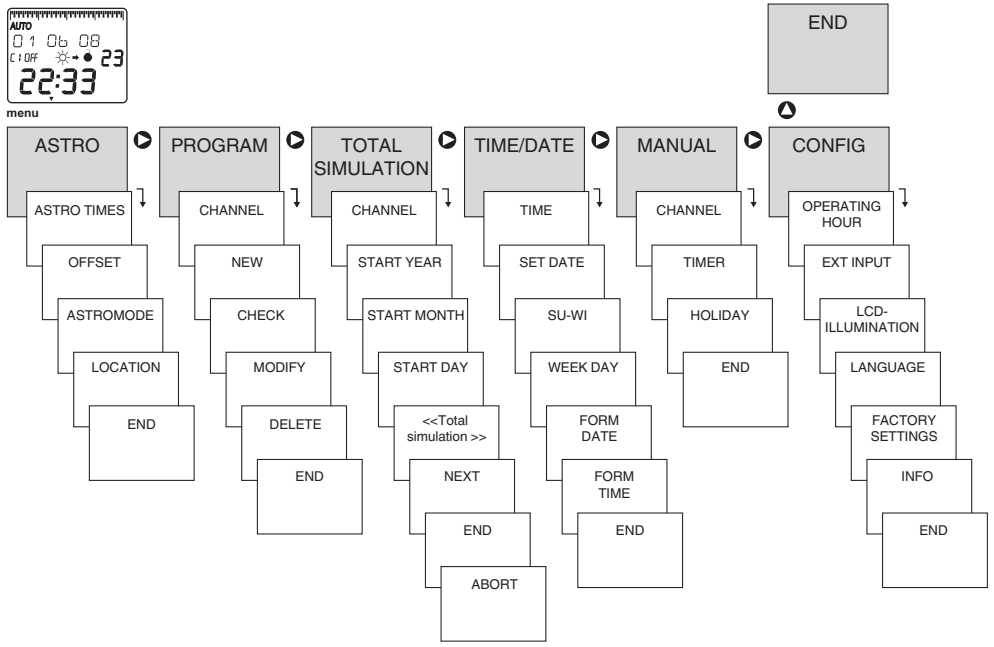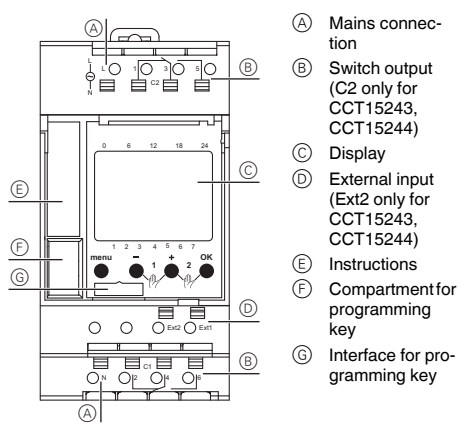- Connection to installation networks
- Connecting several electrical devices
- Laying electric cables

These skills and experience are normally only possessed by skilled professionals who are trained in the field of electrical installation technology. If these minimum requirements are not met or are disregarded in any way, you will be solely liable for any damage to property or personal injury.

Getting to know IC Astro

IC Astro is an astronomical time switch that calculates the exact switching times for sunrise and sunset depending on location and time zone. Independently of this, 84 fixed switching times can be programmed. The device has one external input per channel to which you can connect buttons or switches. It is installed in electrical distributions on a TH35 DIN rail according to EN 60715. The device can be programmed on the device itself or via Kit LTS software. The programming key is used to transmit the data.

Product details

(A) Mains connection
(B) Switch output (C2 only for CCT15243, CCT15244)
(C) Display
(D) External input (Ext2 only for CCT15243, CCT15244)
(E) Instructions
(F) Compartment for programming key
(G) Interface for programming key

IC Astro menu structure

(H) Operating modes
(I) Channel status (alternating C1/C2)
(J) Display: Sunrise/sunset, program, lamp on/off
(K) Time display
(L) Week days from 1-7 (day 1 = Monday)
(M) Visualisation of the programmed On periods
(N) Date display
(O) "PM": Afternoon

Push-buttons:
(P) "OK": Confirm selection, save selection
(Q) "-", "+": Navigation and setting keys
(R) "menu": Call up menu, cancel and exit backwards step by step

Mounting IC Astro

① Position the IC Astro on the DIN rail.
② Connect cables:
- Remove 8 mm (max. 9 mm) of insulation
- Open the plug-in terminal with a screwdriver and plug in the cable at a 45° angle. (max. 2 cables per plug-in terminal)

	C1			C2		
OFF	2	4	6	1	3	5
ON	2	4	6	1	3	5

③ Connect the button/switch to the external input. (Cable length: max. 100 m)
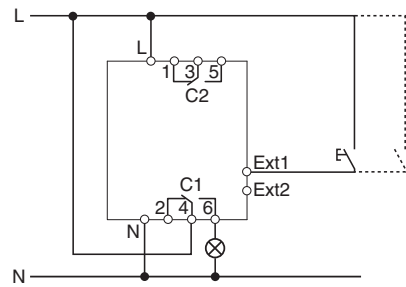④ Connect the mains voltage.

Putting IC Astro into operation

For initial operation, proceed as follows:
① Select language (German, English, ...).
② Select between "Retain programs" or "Delete".
③ Enter installation location:
– Select country and city or
– Input coordinates (latitude, longitude and time zone)
④ Select date format (D/M/Y, M/D/Y, Y/M/D).
⑤ Set year, month, day.
⑥ Select time format (24 h, 12 h).
⑦ Set hour, minute.
⑧ Select summer time/winter time.
– EUROPE
– GB/IRL/P (Great Britain/Ireland/Portugal)
– FIN/GR/TR (Finland/Greece/Turkey)
– CDN/USA (Canada/USA)
– FREE RULE (choice of month, week, day and time)
– FIX DATE (selection of month, date and time)
– NONE

IC Astro uses the specifications to calculate exact switching times for sunrise and sunset.

This device is ready for operation.

Setting IC Astro

ℹ You can make the settings of the IC Astro directly on the device or you can use Kit LTS, art. no. CCT15860, with the associated software (newest version: www.schneider-electric.com).

ASTRO menu
In the ASTRO menu you can check and alter Astro times, Offset, Astromode and Location.
- Astro times
  Display of the Astro times (sunrise and sunset) for the current day and per channel.
- Offset
  With the Offset you can shift the calculated Astro times per channel by +/- 2 h. With it, you can adapt the Astro switching times to the local circumstances (e.g. mountains, tall buildings, etc.).
- Astromode
  Three Astro switching times per channel are available:
  – Eve-On ☾→☼, Morning-Off ☼→●
  – Eve-Off ☾→●, Morning-On ☼→☼
  – Astro inactive
    Program-On ○→☼, Program-Off ○→●
    Astro times are not effective, only programmed switching times are active.

- **Location**
  To set the installation location of the device, select a country and a city or enter the coordinates.

  ℹ️ With the programming key you can add 10 cities (favourites). (See software description for Kit LTS)

PROGRAM menu
In the PROGRAM menu you can program, check, change and delete switching times per channel.
- Programming new switching time
  You have two options:
  – Off period (e.g. as overnight interruption)
  – On period (e.g. as daytime switch-on)
A switching time always consists of a start and end time (hour, minute, week day) that you can copy to other week days.

TOTAL SIMULATION menu
In the TOTAL SIMULATION menu you can view the switching behaviour per channel. That means Astro switching times and programmed switching times starting from a selectable start date (year, month, day) are displayed.

TIME/DATE menu
In the TIME/DATE menu you can:
- Set the time (hour, minute)
- Set the date (year, month, day)
- Select summer time/winter time (see list in the section "Putting IC Astro into operation")
- Define first day of the week (e.g. Monday for Europe)
- Select Form date (D/M/Y, M/D/Y, Y/M/D)
- Select Form time (24 h, 12 h)

MANUAL menu
In the MANUAL menu you can:
- Set the timer
  You can switch "On" or "Off" for an adjustable time (hours, minutes). You can also stop the timer early while the time is running.
- Define holidays
  You can switch "On" or "Off" for an adjustable period of time from ... to ... (year, month, day, hour). You can then check, change and delete the holiday settings.

CONFIG menu
In the CONFIG menu you can adjust and check the operating hours counter, external inputs, LCD illumination, language, factory settings and info.
- Operating hours counter
  Display of the operating hours per channel. If necessary, you can reset the counter to zero.
- External input
  IC Astro has one external input per channel to which you can connect a button or switch.

  Functions when connecting a button:
  – Override
    In the manual switching, the current channel status is reversed, namely up to the next Astro switching or programmed switching.
  – Timer
    At the push of a button you switch the relevant channel "On" or "Off" for an adjustable time (hours, minutes). You can stop the timer early while the time is running by pressing the button and holding it for >3 s.
  – Staircase light
    At the push of a button you switch the relevant channel "On" for an adjustable time (minutes).
    Additional settings of the staircase light:
    – Resettable
      At the push of a button within the running time, the time sequence starts again.
    – Early cutout
      At the push of a button within the running time, the time sequence is cancelled.
  Functions when connecting a switch:
  – Perm On
    When you actuate the switch, the channel is switched on permanently.
  – Perm Off
    When you actuate the switch, the channel is switched off permanently.
  – Only Astro
    When you actuate the switch, only the astronomical switching times are in effect.

  ℹ️ When the switch is actuated, the programmed switching times are not in effect.

- LCD illumination
  – After 1 minute off
    Lighting goes off 1 minute after the last actuation of the buttons.

  – Always on

- Select language (German, English, ...)
- Load factory set
  Then you have to put the device into operation again (see section "Putting IC Astro into operation").
- Info (specifications for the service hotline)
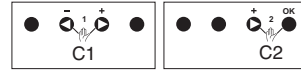
Operating IC Astro

Manual and permanent switching
You can operate IC Astro by a key combination. Manual and permanent switching are available for you.

ℹ️ If a switch is connected to the external input, the "Perm ON" and "Perm OFF" function of the switch have priority over the manual operation on the device.

Key combination for channel 1 (C1), channel 2 (C2)

- Manual switching
  In the manual switching, the current channel status is reversed, namely up to the next Astro switching or programmed switching.
  – Activating and cancelling manual switching:
    Briefly press both buttons at the same time.
- Permanent switching
  In permanent switching, the channel is switched on or off permanently.
  – Activating permanent switching:
    Press both buttons 2 s long at the same time.
  – Cancelling permanent switching:
    Briefly press both buttons at the same time.

ℹ️ In permanent switching, the programmed switching times are not in effect.

Reset
You can reset the device with a key combination. Then you have to put the device into operation again (see section "Putting IC Astro into operation").

Key combination for reset

– Briefly press all four buttons at the same time.

Using the programming key

To make it easier to program the device, you can use the programming key after you have programmed it with the Kit LTS software.
- Plug the programming key into the interface
  You have four options:
  – Copy key -> TSWI
    You can choose between "Copy program" (copies only programmed switching times) or "Copy all data" (copies programmed switching times and all settings).
  – Copy TSWI -> Key
    All programmed switching times an settings are copied onto the programming key.
  – Run key
    You can use this to start the programmed switching times on the programming key.
  – Check key
    You can check the Offset, Astromode, Location and Program of the programming key.

Technical data

Nominal voltage:	AC 230 V (+10% / -15%)
Frequency:	50/60 Hz
Nominal current:	16 A, cos φ = 1
	10 A, cos φ = 0.6
Minimum load:	100 mA, 12 V ≈, ohmic
Incandescent lamps:	AC 230 V, max. 2600 W
Halogen lamps:	AC 230 V, max. 2600 W
Fluorescent tubes:	AC 230 V, max. 2300 VA
Fluorescent lamps with electronic ballast:	max. 730 W (80 μF), parallel-compensated
Compact fluorescent lamps with electronic ballast:	24 x 7 W, 15 x 11 W, 8 x 20 W
Mercury- and sodium-vapour lamps:	max. 400 VA (42 μF), parallel-compensated
LED lamps:	max. 30 W (LEDs <2 W)
	max. 100 W (LEDs 2-8 W)
Motors:	max. 2300 VA
Switch output:	phase-independent (zero crossing switching)
Power consumption:	1C = max. 0.8 W
	2C = max. 0.8 W
Ambient temperature:	-25 °C to +45 °C
Connecting terminals:	2 x 0.5 - max. 2.5 mm², fixed and flexible wires
Ext. input, cable length:	max. 100 m
Battery life:	6 years
Mode of operation:	Type 1 STU according to IEC/EN 60730-2-7
Degree of pollution:	2
Protection class:	II per EN 60730-1 when installed correctly
Type of protection:	IP 20 in accordance with EN 60529

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If you have technical questions, please contact the Customer Care Center in your country.
www.schneider-electric.com