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Avvertenza! Fare installare solo da un elettricista qualificato.
Warning! Installation by person with electrotechnical expertise only.
Warnung! Installation nur durch elektrotechnische Fachkraft.

February 2020
2CSM441043D0202



QR Code for online User Manual.

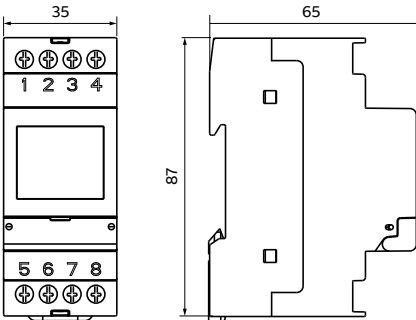
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1.Packaging Content

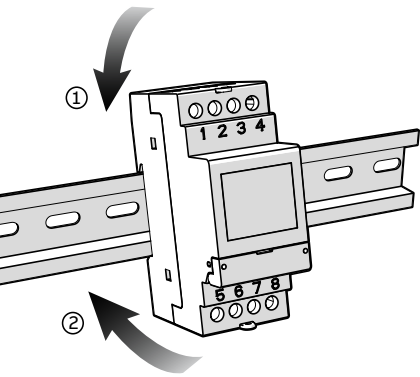
- Astronomical digital time switch DWTL1
- Installation manual

2.Mounting

2.1.Dimensions (mm)

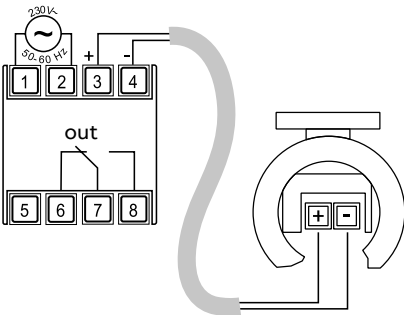


2.2.Mounting



2.3.Wiring diagram

DWTL1: 1 channel

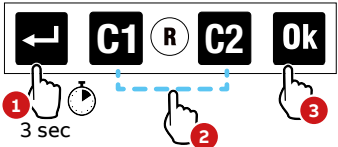


5.First commissioning

5.1.Access the menu



5.2.Setting language

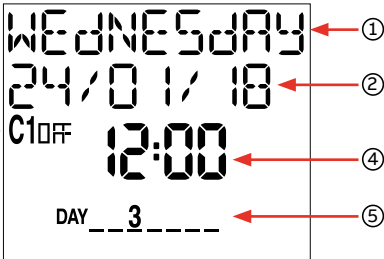


5.3.Standard settings

Setting	Description
Date	Format: DD/MM/YY 1st day of the week: Monday Country: France
Astronomical coordinates	City: Paris Latitude: North (48° 51' 36") Longitude: East (2° 21' 00") Start of daylight saving time (DST): last Sunday of March at 02:00 o'clock End of daylight saving time (DST): last Sunday of October at 03:00 o'clock Sunrise: +0:00
Time correction:	Sunset: + 0:00
Time zone:	+1:00 UTC
Parameters of the twilight probe	Threshold: 100 lux Hysteresis: 10 lux Delay: 11 second
Random switchings:	Minimum: 1 minute Maximum: 5 minutes -ON duration: 1 minute
Cycle switching	-OFF duration: 1 minute
PIN protection:	Disabled (---)
Bluetooth	Disabled (Password: 000000)

To activate Bluetooth interface, password must be set different from 000000 in the Bluetooth menu.

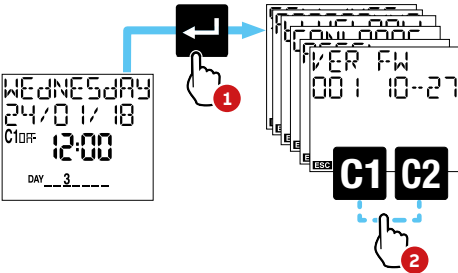
6.Initial page



Description
1 Information messages: day of the week, or product identification code and serial number, or battery status.
2 Date
3 Relay 1 status (ON/OFF)
4 Hour
5 Day of the week

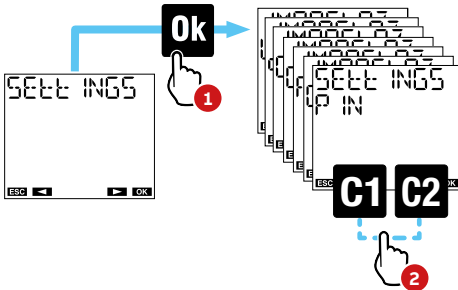
If the DWTL1 switch is not powered from the mains, the information messages will show the text: NO REFE

7.Menu description



Menu	Description
Settings	Allows to view and eventually modify the general operation settings as indicated in point 8.Settings.
Program	Allows to create a new program, check created programs, change or delete a created program, copy all created programs of channel 1 on channel 2 and vice versa.
Bluetooth	Allows to enable or disable the Bluetooth interface and to change the password used to associate devices
Hour counter	Allows to display the hours of usage (relay on) of connected load(s).
Twilight	Allows to set the operating parameters of the external probe
Reset	Allows to restore the initial state of the device
Firmware menu	Shows the firmware installed in the device

8.Settings



Setting	Description
Language	Language setting.
Date	Date settings.
Time	Hour, minute and time zone setting.
Daylight saving time	Daylight saving time (DST) and winter time (CET) automatic setting.
Astronomical coordinates	Setting of geographical coordinates of the installation place.
Random switchings setting	It allows to set the minimum and maximum random switching duration of the channel where it is activated.
Cyclic function setting	It allows to set the minimum and maximum switching cycle of the channel where it is activated
Protection PIN	The protection code is used to lock the keyboard and prevent changes by unauthorized persons

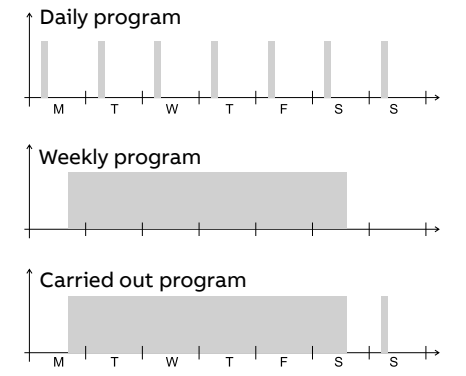
9.“DBT Timer” app download

- Connect the Smartphone to a time switch:
1. Activate Bluetooth on the digital time switch;
 2. Activate Bluetooth on the Smartphone;
 3. To associate a new device, press the symbol in the upper right corner on the App;
 4. Select the device from the list;
 5. Insert the password to pair the device (default password must be changed).

- With the APP it is possible to:
- Create new program
 - Change settings
 - View parameters and create give a name to the device
 - Manually control the relay output(s) and activate the random and cyclic function

11.Priority list on/off

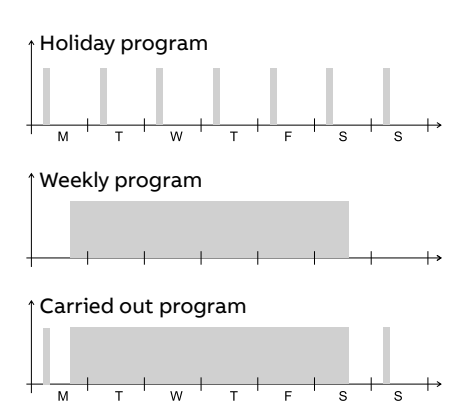
In case in which, on the same channel, on/off programs are provided with different period (daily or weekly) to carry out in the same day, only the program with the highest priority is executed.



From this example it's possible to see that the daily event on Monday is not carried out because in the same day it is provided the beginning of the week program (even if the daily program of Monday begins and ends before the beginning of the weekly program). Instead, the daily program of Sunday is carried out because it's the only one running for that day.

12.Holiday program

The holiday program just begins and ends exactly at the specified times.



13.Programs priority

The priority programs defines how DWTL1 manages the case in which programs with different period are running at the same time (1 indicates higher priority).

Program	Date*	Weekly	Daily
Holiday		1	
Pulse			2
On/Off		3	4

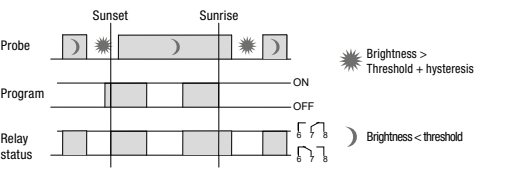
* Date: select day, month, year (program carried “only once in the life of the product”). If the month is not specified, the program is carried out all days xx of all months of the specified year.

14.Technical data

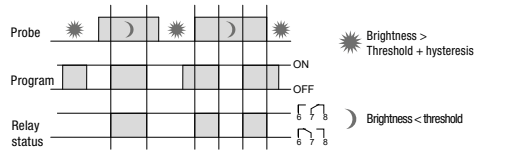
Power supply	[V]	230 Vac (-15% ÷ +10%)
Frequency	[Hz]	50-60 Hz
Power consumption		
DWTL1	2W (6 VA)	
Back up battery	Use only batteries of Lithium battery 3V, CR2032 (replaceable)	
Output		
DWTL1	1 monostable change- over relay with maximum switchable load of 16A / 250 V	
Parameters of the twilight probe	threshold: 3 ÷ 500 lux hysteresis: 1 ÷ 50 lux delay: 1 second ÷ 30 minutes	
Max cable section of terminal block	2,5 mm²	
Display	LCD with backligthing (active with AC power supply)	
Communication interface	Bluetooth BLE 4.2 (active with main power supply)	
Storable programs		
DWA1	120 events	
Operating temperature	-20 ÷ 50°C	
Operating humidity	20 ÷ 90% non condensing	
Storage temperature	-25 ÷ +70°C	
Operating frequency bend	2400-2483,5 MHz	
Maximum transmitted radio frequency power	4 dBm	
Modules	2 DIN modules	
Protection degree	IP20	
Insulation	Reinforced between accessible parts (front) and all the other terminals.	

DWTL1 can be configured as a switch “astronomical with probe“ or as “programmable twilight“. The following diagrams show the operation in the case.

 The device leaves the factory configured as “astronomical with“ and the set program 1.



Astronomical operation during the night and with daytime switching on thanks to the twilight probe if the brightness falls below threshold.



Programmable twilight operation with switching on when the brightness falls below the threshold and only if the programming requires it.

Hereby, ABB S.p.A. declares that the radio equipments type DWTL1 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:



DWTL1 documentation

(EN) English

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 **Warning** – Working with high voltage is potentially lethal. Persons subjected to high voltage may suffer cardiac arrest, burn injuries, or other severe injuries. To avoid such injuries, make sure to disconnect the power supply before you start the installation.

Electrical equipment should only be installed, accessed, serviced and maintained by qualified electrical personnel.

 **Warning** – For safety reasons it is recommended that the equipment is installed in a way that makes it impossible to reach or touch the terminal blocks by accident.

The best way to make a safe installation is to install the unit in an enclosure. Further, access to the equipment should be limited through use of lock and key, controlled by qualified electrical personnel.

(PT) Português

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 **Aviso** – Efetuar trabalhos em alta tensão é potencialmente fatal. Os indivíduos sujeitos a alta tensão podem sofrer paragens cardíacas, ferimentos por queimaduras, ou outros ferimentos graves. Para evitar esse tipo de ferimentos, certifique-se de que desliga a fonte de alimentação antes de iniciar a instalação. Apenas os eletricitistas qualificados devem instalar, aceder, prestar assistência e efetuar a manutenção de equipamentos elétricos.

 **Aviso** – Por motivos de segurança, recomenda-se que o equipamento seja instalado de forma a que seja impossível tocar ou alcançar os bornes de ligação acidentalmente. A melhor forma de garantir uma instalação segura é instalar a unidade no interior de um quadro. Além disso, o acesso ao equipamento deve estar limitado à utilização de um cadeado e de uma chave, controlados apenas por um eletricista qualificado.

(DE) Deutsch

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 **Warnung** – Aus Sicherheitsgründen wird empfohlen, dass die Geräte so installiert werden, dass ein zufälliges Berühren der Anschlussklemmen nicht möglich ist. Die beste Möglichkeit für eine sichere Installation ist die Installation in einem Gehäuse. Außerdem muss der Zugang zu den Geräten mithilfe eines Schlosses und Schlüssels eingeschränkt werden und von qualifizierten Elektrofacharbeitern überwacht werden.

(RU) Русский

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 **Предостережение** – По соображениям безопасности рекомендуется установка

оборудования таким образом, чтобы исключить возможность случайного касания клеммных колодок. Лучший способ безопасной установки – это установка в корпусе. Кроме того, доступ к оборудованию должен быть ограничен путем использования замка.

(FR) Français

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 **Avertissement** – Travailler avec une alimentation en haute tension est potentiellement mortelle. Les personnes exposées à une haute tension peuvent subir un arrêt cardiaque, des brûlures, ou d'autres blessures graves. Pour éviter tous ces risques de blessures, assurez-vous de débrancher la source d'alimentation électrique avant de démonter l'installation. Seul un électricien qualifié est autorisé à installer, intervenir, entretenir et à effectuer des opérations de maintenance sur les équipements électriques.

 **Avertissement** – Pour des raisons de sécurité, il recommande d'installer l'équipement de manière à ce qu'il soit impossible d'atteindre ou de toucher le bornier de raccordement par accident. Le meilleur moyen de réaliser une installation sûre consiste à installer l'équipement dans un boîtier. De plus, l'accès à l'équipement doit être limité et doit s'effectuer au moyen d'un verrou et d'une clé, contrôlés par un électricien qualifié.

(ZH) 简体中文

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电气设备只能由合格的电气人员进行安装、接触、维修和维护。

 **警告** – 为安全起见，建议采用如下安装方式，即端子不会被无意中碰到或接触到。

最安全的安装方式是将该装置安装在配电箱中。此外只有通过使用由合格电气人员掌握的锁和钥匙才能接触到电表。

(ES) Español

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 **Advertencia** – Trabajar con alta tensión es potencialmente letal. Las personas sometidas a alta tensión pueden sufrir un paro cardíaco, quemaduras u otras lesiones graves. Para evitar este tipo de lesiones, asegúrese de desconectar el suministro eléctrico antes de iniciar la instalación. El equipo eléctrico únicamente debe ser instalado por personal cualificado, que será el único que podrá acceder al mismo y realizar tareas de servicio y mantenimiento.

 **Advertencia** – Por motivos de seguridad se recomienda instalar el equipo de modo que sea imposible alcanzar o tocar los bloques de terminales de forma accidental.

La mejor manera de efectuar una instalación segura es instalar la unidad en un envoltente. Además, el acceso al equipo debe restringirse mediante llave y debe ser controlado por el personal eléctrico cualificado.

(DA) Dansk

Advarsel

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 **Advarsel** – Arbejde med højspænding kan være livstruende. Personer, der udsættes for højspænding kan opleve hjertestop, forbrændinger og andre alvorlige kvæstelser. For at undgå disse kvæstelser skal du afbryde strømforsyningen, før du starter på installationen. Det elektriske udstyr må udelukkende installeres, være opfattet af tilladelse til adgang, inspektion og vedligeholdelse af kvalificerede faglærte elektrikere.

 **Advarsel** – Af sikkerhedsmæssige årsager anbefales det at installere udstyret på en sådan måde, at det er umuligt at nå eller berøre klemlisten ved en fejltagelse.

Den bedste måde at sikre installationen på er, at installere enheden i et lukket kabinet. Desuden skal adgang til udstyret begrænses ved brug af lås med en nøgle, som opbevares af kvalificerede faglærte elektrikere.

(IT) Italiano

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 **Avvertenza** – Lavorare con l'alta tensione è potenzialmente letale. Le persone colpite da alta tensione possono soffrire di arresto cardiaco, lesioni da ustione ed altre lesioni gravi. Per evitare queste lesioni, disconnettere l'alimentazione prima di dare inizio all'installazione. L'apparecchiatura elettrica deve essere installata, sottoposta ad accesso, ispezione e manutenzione esclusivamente da personale elettrico qualificato.

 **Avvertenza** – Per motivi di sicurezza si consiglia di installare l'apparecchiatura in modo tale da rendere impossibile raggiungere o toccare per sbaglio le morsettiere.

Il modo migliore per rendere sicura l'installazione è quello di installare l'unità in un quadro chiuso. Inoltre, l'accesso all'apparecchiatura dovrà essere limitato dall'uso di serratura, con chiave sotto il controllo di personale elettrico qualificato.

عربي (AR)

إخلاء المسؤولية

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 **تحذير** – العمل بالجهد العالي قد يكون مميتا. وقد يعاني الأشخاص الذين يتعرضون للجهد العالي من سكتة قلبية أو حروق أو إصابات خطيرة أخرى. وتجنب مثل هذه الإصابات، تأكد من قطع الكهرباء قبل البدء في التركيب.

ويجب أن يقوم بتركيب وتناول وخدمة وصيانة المعدات الكهربائية أخصائي كهرباء مؤهلين فقط.

 **تحذير** – ولدواعي السلامة فمن المستحسن أن يتم تركيب هذه المعدة بطريقة تجعل من المستحيل للوصول إليها أو لمس مجموعة التوصيلات عن طريق الصدفة.

وأفضل طريقة للتركيب الأمن هو تركيب الوحدة في علبة.

وعلاوة على ذلك، يجب أن يقتصر الوصول

إلى المعدة من خلال استخدام قفل وفمفتاح تحت رقابة أخصائي كهرباء مؤهلين.

تنبيه – احرص على خول أي سواثل في العداد لأنها قد تت.

ABB