

ENGLISH

- Device safety is only guaranteed when the safety and usage instructions are respected, so keep them handy. Make sure these instructions are received by the installer and end user.

- This product must only be used for the purpose for which it was designed. Any other form of use should be considered improper and/or dangerous. If you have any doubts, contact the GEWISS SAT technical support service.

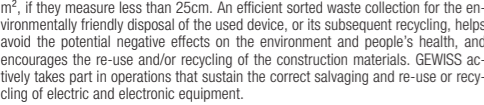
- The product must not be modified. Any modification will annul the warranty and may make the product dangerous.

- The manufacturer cannot be held liable for any damage if the product is improperly or incorrectly used or tampered with.

- Contact point indicated for the purposes of fulfilling the applicable EU directives and regulations:

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If the crossed-out bin symbol appears on the equipment or packaging, this means the product must not be included with other general waste at the end of its working life. The user must take the worn product to a sorted waste centre, or return it to the retailer when purchasing a new one. Products for disposal can be consigned free of charge (without any new purchase obligation) to retailers with a sales area of at least 400 m², if they measure less than 25cm. An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials. GEWISS actively takes part in operations that sustain the correct salvaging and re-use or recycling of electric and electronic equipment.



PACK CONTENTS

1 EASY dimmer actuator for LED - DIN rail mounting
1 Bus terminal
1 Cover with screw
1 User and Installation Manual

BRIEFLY

The EASY dimmer actuators for LEDs powered with continuous voltage (Vdc) - DIN rail mounted, are devices for adjusting the brightness for max. 4 single colour LEDs or LED RGB[W] strips and spotlights. They are available in two versions:

- CVD (constant voltage control) for controlling single colour or RGB[W] strips;
- CCD (constant current control) for controlling power LEDs (single colour or RGB[W]).
The dimmer actuators are powered by the BUS line and are equipped with 4 two-toned front LEDs that indicate the status of the outputs, 4 front control button keys for testing the outputs, 1 red LED for signalling any faults, 1 relay contact for controlling the network voltage of the LED auxiliary power supply, 4 independent output channels.
The dimmer actuator is assembled on a DIN rail, inside electric boards or junction boxes.

FUNCTIONS

The dimmer actuator can be configured with the Easy controller to perform one of the following functions:

ON/OFF SWITCHING (*)

The dimmer actuator activates the corresponding channel to the last stored brightness value or deactivates it (0%) when it receives the ON/OFF commands sent, for example, from a contacts interface or a push-button panel configured in Cyclical ON/OFF switching mode or Fronts management mode.

RGB[W] RELATIVE BRIGHTNESS CONTROL (*)

This is used to increase or decrease the brightness level of the channel based on the commands received from other KNX devices. When a stop command is received, the control is stopped and the brightness level that has been reached is maintained. If the load type is RGBW (or RGB + 1 single colour), it is possible to regulate colour brightness.

RGB[W] ABSOLUTE BRIGHTNESS CONTROL (*)

This is used to set the absolute percentage brightness value defined by the command that was received. The brightness value is reached over a ramp. If the load type is RGBW (or RGB + 1 single colour), it is possible to regulate colour brightness.

SCENES (*)

The dimmer actuator can memorise and manage up to 8 scenes. The light intensity values can be memorised and called up via Easy devices or conventional push-buttons connected to the BUS via a contacts interface. You can create a maximum of 8 scenes, with varying light intensity values. When it receives the command, the dimmer brings the load to the value previously set.

COLOUR SEQUENCES AND LIGHT SEQUENCES

If the load type is RGBW (or RGB + 1 single colour), it is possible to manage 5 pre-configured colour sequences (single colour strobe, single colour blinking, colour brightness scale, rainbow, rainbow strobe). If the load type is single colour, it is possible to manage 2 different preconfigured light sequences for each channel (strobe and blinking).

PRIORITY COMMAND (FORCING) (*)

The dimmer actuator activates the corresponding channel to the last stored brightness value or deactivates it (0%) on the basis of the command (ON or OFF) transmitted by the device that sends the priority command. Until it receives a command to annul the forcing, the dimmer ignores all the other commands received (including commands from the front push-button). If no other commands are received, at the end of the forcing the actuator will return to the status it had before the forcing activation. Otherwise, it will assume the status of the last command that was received.

TIMED SWITCHING (STAIR RAISER LIGHT) (*)

The dimmer actuator activates the corresponding channel to the last stored brightness value for the time specified by the Activation time parameter and then deactivates it (brightness value 0%) when this period has elapsed. For instance, this is the setting for the stair raiser light. If the dimmer actuator receives a new ON command with timing during the activation period, the time count starts again from the beginning. If an OFF command is sent before the time has elapsed, the light will be switched off. With the Pre-warning time parameter, you can enable the switch-off pre-warning; in this case, the device decreases the light intensity value for the set time leading up to switch-off. You can therefore send a new timing command before the light switches off completely.

(*) for each single channel and the 4 channels simultaneously

	Channel status indicator LED	Fault signalling LED
No fault, load piloted	Fixed GREEN	Off
No fault, load off	Off	Off
Overheating	Off	Fixed RED
Returns below the temperature threshold after overheating	Flashing GREEN	Fixed RED
Reset test after overheating	Flashing RED	Fixed RED
Auxiliary voltage polarity inversion	Off	Flashing RED
Absence of auxiliary voltage	Flashing YELLOW	Fixed RED



IT Seguire le istruzioni e conservarle per la consegna all'utente finale. Evitare qualsiasi uso improprio, manomissioni e modifiche. Rispettare le vigenti norme sugli impianti e conserver pour la livraison à l'utilisateur final. Éviter tout usage impropre, interventions illicites et modifications. Respecter les normes en vigueur sur les installations

INSTALLATION

ATTENTION: the device must only be installed by qualified personnel, observing the current regulations and guidelines for KNX installations.

RECOMMENDATIONS FOR INSTALLING THE KNX

- The length of the BUS line between the dimmer actuator and the power supply unit must not exceed 350 metres.
- The length of the BUS line between the dimmer actuator and the furthest KNX device must not exceed 700 metres.
- To avoid unwanted signals and overvoltages, do not use ring circuits.
- Keep a distance of at least 4mm between the individually insulated cables of the BUS line and those of the electricity line (figure **C**)
- Do not damage the electrical continuity conductor of the shielding (figure **D**).



ATTENTION: the unused BUS signal cables, and the electrical continuity conductor, must never touch any live elements or the earthing conductor!

ASSEMBLY ON THE DIN RAIL

Assemble the dimmer on a 35mm DIN rail in the following way (figure **E**):

- Insert the upper device coupling in the DIN rail.
- Rotate the device, then lock it in place on the DIN rail by means of the fixing tab.

ELECTRIC CONNECTIONS



ATTENTION: disconnect the mains voltage before connecting the device to the electricity supply!

Figure **B** shows a diagram of the electrical connections.

- Connect the red wire of the BUS cable to the red clamp (+) of the terminal, and the black wire to the black clamp (-). Up to 4 BUS lines can be connected to the BUS terminal (same coloured wires on the same terminal) (figure **F**).
- Insulate the shield, the electrical continuity conductor, and the other white and yellow wires of the BUS cable (if a 4-conductor BUS cable is being used), that are not necessary (figure **D**).
- Insert the BUS clamp in the pins of the device. The correct connection direction is determined by the fixing rails. Insulate the BUS terminal with the special cover, that must be screwed onto the device. The cover guarantees the minimum separation distance of 4mm between the power cables and the BUS cables (figure **G**).
- Connect the load to the relevant screw terminals underneath the actuator, making sure the current limits specified in the Technical Data are not exceeded.

USE OF THE PUSH-BUTTONS FOR LOCAL COMMAND

The front test push-buttons (figure **A**) are used to perform the cyclical ON/OFF switching of the channels or brightness control from 0% to 100% and vice versa each time they are pressed (default setting).

The local commands are executed also if a priority command is active.

BEHAVIOUR UPON THE FAILURE AND RESETTNG OF THE BUS POWER SUPPLY

If the BUS voltage falls below 18 V DC for more than 1.5 ms, the dimmer switches all the output channels to OFF (brightness value 0%). The behaviour of the output channels can be configured when the BUS voltage fails, by observing the following procedure.

Accessing configuration mode:

- press the button key for programming: red LED for programming turns on;
- press local command push-buttons 1 and 4 simultaneously for at least 3 seconds;
- wait until the 4 green status LEDs start to blink.

Once the configuration phase has started, all channels are deactivated (brightness value 0%) and the LEDs will show the current configuration status for each channel (as per the table).

Status LED 1..4	Channel status when voltage fails
Off	Brightness 0%
Fixed GREEN	Brightness 100%
Blinking green (1 Hz)	As before voltage drop

You can modify the setting of the each channel using the relative button key, in order to scroll through the three available configurations in sequence. If the selected load is RGBW, the setting concerns all the colours for which the LEDs must be aligned and pressing any local push-button associated with the channels will change the setting for all colours.

If the selected load is RGB + single colour, LEDs 1, 2 and 3 must be aligned signalling the setting of the RGB channel and pressing any local push-button associated with channels 1, 2 and 3 will change the setting of the three colours; the setting for channel 4 can be changed using the corresponding button key.

Quitting configuration mode:

- to save the new settings: press the programming push-button;
- to quit without saving the settings: wait 10 seconds (from the last pressing of a push-button).

The end of configuration mode is signalled by the switching off of the programming LED. When you have quit the configuration phase, the channels will be restored to the status they held prior to that phase.

During this configuration phase, the messages from the BUS are ignored (they will be managed after you have quit the configuration phase).

BEHAVIOUR UPON FAILURE AND RESETTING OF THE LED AUXILIARY POWER SUPPLY

Upon failure of the auxiliary power supply, the dimmer switches all the output channels to OFF (brightness value 0%). While there is no auxiliary power supply, the dimmer continues to process the commands as if the network was present, respecting the relative priorities; when the auxiliary power supply is restored, the dimmer implements the last command received.

The behaviour when the auxiliary power supply is restored is not executed if the power supply failed while the overheating alarm was in progress.

SELECTION OF THE LOAD TO BE CONTROLLED AND THE PILOT CURRENT

The pilot current and the load to be controlled can be set according to the following procedure.

Accessing configuration mode:

- press the button key for programming: red LED for programming turns on;
- press local command push-buttons 2 and 3 simultaneously for at least 3 seconds;
- wait for the 4 green status LEDs start to blink.

Once the configuration phase has started, all channels are deactivated (brightness value 0%) and the LEDs relative to channels 1, 2 and 3 will show the current configuration status of the pilot current (as per the table).

Pilot current	LEDs 1	LEDs 2	LEDs 3
350 mA	fixed red	off	off
500 mA	off	fixed red	off
700 mA	off	off	fixed red

The setting can be changed using the relative button key.

The LED relative to channel 4 displays the current configuration status of the load to be controlled, as per the table:

Load to be controlled	LEDs 4
RGBW	fixed yellow
single colour	blinking yellow (1 Hz)
RGB + single colour	blinking green (1 Hz)

You can modify the setting using the relative button key, in order to scroll the two available configurations in sequence.

Quitting configuration mode:

- to save the new settings: press the programming push-button;
- to quit without saving the settings: wait 10 seconds (from the last pressing of a push-button).

The end of configuration mode is signalled by the switching off of the programming LED.

When you have quit the configuration phase, the channels will be restored to the status they held prior to that phase.

During this configuration phase, the messages from the BUS are ignored (they will be managed after you have quit the configuration phase).

OVERHEATING

Any possible overheating is signalled by a fixed red fault signalling light on the front LED. While overheating, the dimmer outputs are fixed and equal to 10% and every command received from the BUS is ignored. Once the cause for overheating has been removed and the normal operating temperature is reached, the output channel LEDS will flash green. Normal operation can be restored and the overheating signal can be deactivated as follows:

- using the front output test button keys. The controlled channel goes to the maximum brightness value and, after approx. 5 seconds if the temperature remains under the alarm value, the fault signalling LED turns off and the status LED returns to the condition it was in before overheating. During the reset operation (about 5 seconds) the fault signalling LED remains fixed red, whereas the status LEDs all start to flash red;

- sending a command via BUS. If the temperature has gone below the alarm value, the dimmer will perform a test, independently of the received command, bringing all the outputs to the maximum brightness values. After approx. 5 seconds, if the temperature remains under the alarm value, the fault signalling LED will turn off and the dimmer will execute the last command received. During the reset operation (about 5 seconds) the fault signalling LED remains fixed red, whereas the status LEDs all flash red.

MAINTENANCE

Use a dry cloth if cleaning is required.

SETTING THE PARAMETERS AND PROGRAMMING WITH EASY CONTROLLER

Detailed information about the procedure for programming the dimmer with the Easy configurator can be found in the Programming Manual for the Easy devices with Easy Controller (www.gewiss.com).

PROGRAMMING WITH ETS
<p>The device can be configured with the ETS software. Detailed information about the configuration parameters and their values can be found in the Technical Manual (www.gewiss.com).</p>

TECHNICAL DATA
<p>Communication KNX BUS</p> <p>Power supply Via KNX BUS, 29 V DC SELV</p> <p>Auxiliary power supply CVD LED version: 12...24V dc CCD LED version: 12...48V dc</p>

<p>BUS cable KNX TP1</p> <p>Current absorption by the BUS 10 mA max</p>

Maximum output current CVD LED version: the maximum current for the channel is determined based on the type of wiring performed and the effective number of channels used as shown in the following table:

No. of channels used	Wiring 1 (figure B)	Wiring 2 (figure B)
2	4A	4A
3	3A	4A
4	2.5A	3A

CCD LED version: current of 350-500-700mA for every output channel

<p>Command elements</p> <p>1 miniature programming button key</p> <p>4 front output test button keys</p>
<p>Visualisation elements</p> <p>1 red programming LED</p> <p>1 red fault signalling LED</p> <p>4 two-toned output status signalling LEDs (1 for each channel)</p>

<p>Maximum dispersible power 4W max</p> <p>Implementation elements 1 6A relay contact for controlling the mains voltage of the LED auxiliary power supply</p> <p>CVD LED version: 4 PWM outputs with constant voltage control; Frequency: 400Hz (with ETS: 200Hz, 260Hz, 400Hz); common anode load control; short-circuit protected output</p> <p>CCD LED version: 4 PWM outputs with constant current control; frequency: 400Hz (with ETS: 200Hz, 260Hz, 400Hz); short-circuit protected output</p>
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<p>Usage environment Dry, indoor places</p> <p>Operating temperature -5 ÷ +45°C</p> <p>Storage temperature -25 ÷ +55°C</p> <p>Relative humidity Max 93% (non condensation)</p> <p>BUS connection 2-pin coupling terminal - Ø 1 mm</p> <p>Electric connections Screw terminals - max. cable section 2.5 mm²</p>
<p>Degree of protection IP20</p> <p>Size 4 DIN modules</p> <p>Standard references Low Voltage Directive 2014/35/EU Electromagnetic Compatibility Directive 2014/30/EU; EN50428, EN50090-2-2, EN61347-1, EN61347-2-13</p>

<p>Certifications KNX</p>

FRANÇAIS

- La sécurité de l'appareil n'est garantie que si les consignes de sécurité et d'utilisation sont observées ; aussi, s'avère-t-il nécessaire de les conserver. S'assurer que ces consignes ont été reçues par l'installateur et par l'utilisateur final.

- Ce produit est uniquement destiné à l'usage pour lequel il a été expressément conçu. Toute autre utilisation est considérée comme impropre et/ou dangereuse. En cas de doute, contacter le service d'assistance technique SAT GEWISS.

- Le produit ne doit pas être modifié. Toute modification invalide la garantie et peut rendre le produit dangereux.

- Le constructeur ne peut être tenu pour responsable des dommages éventuels dérivant d'un usage impropre, erroné ou bien d'une altération du produit acheté.

- Point de contact indiqué en application des directives et des réglementations UE applicables :

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le symbole de la poubelle barrée, là où il est reporté sur l'appareil ou l'emballage, indique que le produit en fin de vie doit être collecté séparément des autres déchets. Au terme de la durée de vie du produit, l'utilisateur devra se charger de le remettre à un centre de collecte séparée ou bien au revendeur lors de l'achat d'un nouveau produit. Il est possible de remettre gratuitement, sans obligation d'achat, les produits à éliminer de dimensions inférieures à 25 cm aux revendeurs dont la surface de vente est d'au moins 400 m². La collecte différenciée et l'envoi successif de l'appareil en fin de vie au recyclage, au traitement et à l'élimination compatible avec l'environnement contribue à éviter les effets négatifs sur l'environnement et sur la santé et favorise le réemploi et/ou le recyclage des matières de l'appareil. Gewiss participe activement aux opérations favorisant le réemploi, le recyclage et la récupération des appareils électriques et électroniques

CCONTENU DE LA CONFECTION
<p>1 Actionneur variateur pour LED EASY - sur rail DIN</p> <p>1 Borne bus</p> <p>1 Couverture à vis</p> <p>1 Manuel d'installation et d'utilisation</p>

EN SYNTHÈSE

Les actionneurs variateurs EASY pour LED alimentés en courant continu (V cc) - sur rail DIN sont des dispositifs de réglage de la luminosité de 4 LED monochromatiques au maximum ou de bandes et de spots à LED RGB[W]. Ils sont disponibles en deux versions : - CVD (contrôlé à tension constante) pour le réglage de bandes RGB[W] ou monochrome ; - CCD (contrôlé à intensité constante) pour le réglage de LED de puissance (RGB[W] ou monochrome). Les actionneurs variateurs d'intensité lumineuse sont alimentés par la ligne bus et sont dotés de 4 voyants bicolors en façade indiquant l'état des sorties, de 4 touches de commande en façade de test des sorties, d'un voyant rouge de signalisation des défauts, d'un contact du relais pour le pilotage de la tension du réseau de l'alimentation auxiliaire des LED, de 4 canaux de sortie indépendants.

L'actionneur variateur est monté sur rail DIN, à l'intérieur de tableaux électriques ou de boîtes de dérivation.

FONCTIONS
<p>L'actionneur variateur peut être configuré à l'aide de l'Easy Controller afin d'exécuter l'une des fonctions suivantes :</p> <p>COMMUTATION ON/OFF (*)</p> <p>L'actionneur variateur activé, à la dernière valeur de luminosité mémorisée, ou désactive (0%) le canal correspondant lorsqu'il reçoit des commandes ON/OFF envoyées, par exemple, par une interface à contacts ou un tableau de commande, configurés en mode Lit Commutation cyclique ON/OFF ou en Gestion des fronts.</p>

RÉGLAGE RELATIF DE LA LUMINOSITÉ RGB[W] (*)
Permet d'incrémenter ou de décrémer la valeur de la luminosité du canal en fonction des commandes reçues d'autres dispositifs KNX. À la réception de la commande STOP, le réglage est arrêté et la valeur de luminosité atteinte est maintenue. Si le type de charge est RGBW (ou RGB + 1 monochrome), on pourra régler la brillance de la couleur.

RÉGLAGE ABSOLU DE LA LUMINOSITÉ RGB[W] (*)
Permet d'imposer la valeur absolue en pourcentage de la luminosité, définie par la commande reçue. La valeur de la luminosité est atteinte à travers une rampe. Si le type de charge est RGBW (ou RGB + 1 monochrome), on pourra régler la brillance de la couleur.

SCÉNARIOS (*)

L'actionneur du variateur permet de mémoriser et de gérer 8 scénarios au maximum. Les valeurs de luminosité peuvent être mémorisées et rappelées à l'aide des dispositifs Easy ou des boutons-poussoirs traditionnels raccordés au bus à travers une interface à contacts. On pourra créer jusqu'à 8 scénarios avec des valeurs de luminosité librement choisies. À la réception de la commande, le variateur porte la charge à la valeur de la luminosité précédemment imposée.

SÉQUENCES COULEUR ET SÉQUENCES LUMINEUSES
Permet d'imposer la valeur absolue en pourcentage de la luminosité, définie par la commande reçue. La valeur de la luminosité est atteinte à travers une rampe. Si le type de charge est RGBW (ou RGB + 1 monochrome), on pourra régler 5 séquences de couleur prédéfinies (strobe monochrome, clignotement monochrome, échelle de brillance de la couleur, rainbow, strobo rainbow). Si le type de charge est monochrome, on pourra gérer, pour chaque canal, 2 séquences lumineuses prédéfinies (strobe et clignotement).

COMMANDE PRIORITAIRE (FORÇAGE) (*)

L'actionneur variateur activé à la dernière valeur de luminosité mémorisée ou désactive (0%) le canal correspondant en fonction de la commande (ON ou OFF) transmise par le dispositif qui envoie la commande prioritaire. Tant qu'il ne reçoit pas une commande d'annulation du forçage, le variateur ignore toutes les autres commandes reçues, y compris la commande du bouton-poussoir frontal. Si aucune autre commande n'est reçue, l'actionneur retourne, au terme du forçage, à l'état précédent l'activation. Dans le cas contraire, l'état assumé correspond à la dernière commande reçue.

COMMUTATION TEMPORISÉE (LUMIÈRE DES ESCALIERS) (*)
L'actionneur variateur active le canal correspondant à la dernière valeur de luminosité mémorisée sur la durée déterminée par le paramètre Temps d'activation, et le désactive (valeur de luminosité 0%) lorsque ce temps est écoulé. C'est le type de réglage de la lumière des escaliers, par exemple.Si, lors de cette durée d'activation, l'actionneur variateur reçoit une nouvelle commande ON avec temporisation, le décompte de la durée repart du début. Si une commande OFF est envoyée avant que le temps ne se soit écoulé, la lumière est éteinte. Avec le paramètre Temps de préavis, on pourra habiller le préavis de coupure : dans ce cas, le dispositif diminue la valeur de luminosité sur la durée imposée jusqu'à la coupure. On pourra donc envoyer une nouvelle commande de temporisation avant que la lumière ne s'éteigne.

(*) de chaque canal et des 4 canaux simultanément

SIGNALISATIONS DES VOYANTS EN FAÇADE		
	Voyant d'état du canal	Voyant de signalisation des défauts
Aucun défaut, charge pilotée	VERT fixe	Éteint
Aucun défaut, charge éteinte	Éteint	Éteint
Surchauffe	Éteint	ROUGE fixe
Retour sous le seuil de température après surchauffe	VERT clignotant	ROUGE fixe
Test de réarmement après surchauffe	ROUGE clignotant	ROUGE fixe
Inversion de polarité de la tension auxiliaire	Éteint	ROUGE clignotant
Absence de la tension auxiliaire	JAUNE clignotant	ROUGE fixe

INSTALLATION



ATTENTION: l'installation du dispositif doit uniquement être réalisée par un personnel qualifié, en observant la réglementation en vigueur et les lignes directrices relatives aux installations KNX.

CONSIGNES D'INSTALLATION KNX

- La longueur de la ligne du bus entre l'actionneur variateur et l'alimentation ne doit pas dépasser 350 mètres.
- La longueur de la ligne du bus entre l'actionneur variateur et le dispositif KNX le plus éloigné ne doit pas dépasser 700 mètres.
- Pour éviter les signaux et les surtensions involontaires, ne pas créer de circuits en boucle.
- Maintenir une distance d'au moins 4 mm entre les câbles de la ligne du bus isolés individuellement et les câbles de la ligne électrique (figure **C**)
- Ne pas détériorer le conducteur de continuité électrique du blindage (figure **D**).



ATTENTION: les câbles de signal du bus non utilisés et le conducteur de continuité électrique ne doivent jamais toucher des éléments sous tension ou le conducteur de terre !

MONTAGE SUR RAIL DIN

Monter le variateur sur un rail DIN de 35 mm de la manière suivante (figure **E**) :

- Insérer l'accrochage supérieur du dispositif sur le rail DIN.
- Tourner le dispositif et le bloquer sur le rail DIN en agissant sur la languette de fixation.

CONNEXIONS ÉLECTRIQUES



ATTENTION: couper la tension de réseau avant