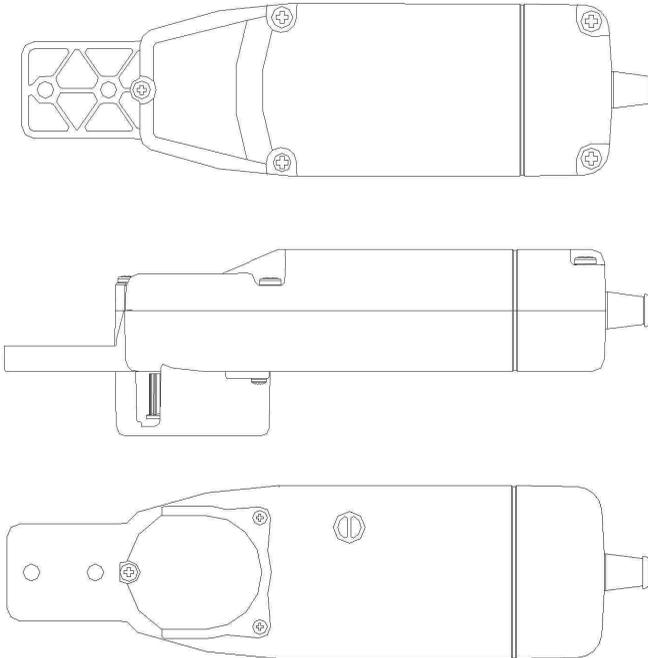


SLIDING SHUTTERS ACTUATOR



USE AND INSTALLATION MANUAL

English Version

This manual is a part of the kit and has to be warded in a adequate way in order to maintain its integrity and to permit the consultation during the entire life of device.

Have a precise consulting of this manual before any intervention to the device.

The Fabricator has the capability di afford changes to the production and to the manual , without the onus of updating to the precedent versions of productions and manuals.

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1. INTRODUCTION

Dear Customer,

Giving thanks to You choosing our product, we recommend to You to follow meticulously the indications of this manual that will give to You an optimal support for a good using and to maintain the device characteristics unchanged in time.

CHIAROSCURO SAS by Girelli Marco & C.

2. GENERAL INFORMATIONS

This users manual is an integral part of the device kit and is an essential support during the montage and during the use of this device. Read it all and meticulously before starting the montage. In case of resale this manual has to attend with the device. Is FORBIDDEN the partial or total replication of this document without a specific written authorization of CHIAROSCURO SAS.

2.1 Definitions and Symbols

The following paragraphs relates a series of definitions, terminologies and symbols that You will find during the reading of this manual .

Symbol	Description
	Operator: (O.) Operator without specific competences, who can use the device in normal condition of using and can do simple operations of maintenance.
	Electromechanical Dealer: (E.D.) technician who has the competences to install mechanical - hydraulic - pneumatic devices and who can accomplish regulations, maintenances or repairs and can work in presence of High Voltage inside , derivation boxes and electrical installations .
	Homebuilder Technician: (H.T.) Qualified technician commissioned by the homebuilder disposal to do complicated operations in particular situations or, however, what arranged with the user. Expertness depends by the cases, mechanic and/or electric and/or electronic and/or software.
	Note: Indicate important indications or information contained in the users manual, for the best way to use the device.
	Danger: Indicate a situation that could cause injuries, at least lethal, or serious damages to health.
	Attention: Indicate a situation that could cause, directly or indirectly, damages to people, things and circumambieny with physical and economic consequences.
	Advertence: Indicate that is necessary to follow with particular attention the manual in that moment. Inobservance of this indication could cause malfunctions or danger conditions or damages.

3. PRODUCER ID CODES

The label fixed on lateral side of device, contain all the identify data of the product SLIDE 80. Fig.3.1 Example of label (the data on it are fictional, real data are reported on the real label on the device).



Pic. 3.1

Production Week and Year of selling

Model Commercial name of device

Electrical protection Identify graduation of IP

Streight Identify the maximum strength (in Newton)

Power Supply Kind of electric supply in Volt

Power Identify the maximum absorbed power in Watt

Temperature of operation Identify the temperature of operation



It's forbidden to remove or modify the label. In case of damaged label contact the producer.

3.1 Technical assistance and ordinary maintenance

To indicate faults of device contact the Customer service:

CHIAROSCURO SAS by Girelli Marco & C.

C.So General A.Cantore 23 - 38068 Ala (TN) Italy.

Tel: +39 0464 424715 fax: +39 0464 712027

email: info@chiaroscuro.eu site: www.chiaroscuro.eu

For communications or information requests or replacement parts send us the module “order replacement parts, fault indications, information” reported on the **Attached # 1**. (Pag. 17)



For the maintenance of warranty the customer has to follow scrupulously the instructions of the users manual. In other cases the warranty will expire (read the warranty rules at the end of manual).



The producer, in order to adapt the device to the technologic progress and for productive requirements can, unannounced, afford modifications without the updating of the production and the foregoing manuals.

Also if the illustrations in this manual are a little bit different by the device that you have, the safety and the functioning instructions of the device are guaranteed.

4. FEATURES AND DATA SHEETS

	110 ÷ 230Vac	24Vdc
Maximum pushing and traction strength	145 N	
Maximum Width	7,5 m	
Power supply	110 ÷ 230 Vac	24 Vdc
Currency absorption at nominal load	~ 0,18 ÷ 0,08 A	~ 0,83 A
Wide traslation speed	~ 90 mm/s	
Acceleration/deceleration ramp	Yes	
Impact force detecting obstacle	< 150 N	
Dual electrical isolation	Yes	Low Voltage
Duty cycle	20 Cicles / Hour	
Temperature of operation	-20 °C / +60 °C	
Protection degree electrical device	IP 55	
Stroke-ends regulation	Auto determinating position	
Parallel powering of motors	Max 10	
Dead man functioning	Yes, requesting	
Reversible pulley	Yes, requesting	
Positional contact	Yes, Requesting	
Lenght of power cable	1,5 m	
Dimensions	200 x 54 x 38 mm	150 x 50 x 38 mm
Weight	0,830 Kg	0,620 Kg
Maximum lenght of command cable	< 3 m	
Radio control	Yes, requesting	

4.1 Law Reference

The law references producing this device are the sequels:

Slide 80 230 Vac	Slide 80 24 Vdc
<ul style="list-style-type: none"> - 2004/108/CE Directive EMC - 2006/95/CE Directive LVD - 2006/42/CE Machines Directive - 2011/65/CE Directive RoHS2 	<ul style="list-style-type: none"> - 2004/108/CE Directive EMC - 2006/42/CE Machines Directive - 2011/65/CE Directive RoHS2

National and harmonized technical Laws applies respecting the laws above are:

Slide 80 230 Vac	Slide 80 24 Vdc
<ul style="list-style-type: none"> - EN 60335-1 (2008_07) - EN 60335-2-103 (2003_08)/A11(2009_07). - EN 55014-1 (2008_01)/A1 (2010_10)/A2 (2012_02) - EN 55014-2 (1998_10)/A1 (2002_09)/A2 (2009_09) 	<ul style="list-style-type: none"> - EN 60335-1 (2008_07)¹ - EN 60335-2-103 (2003_08)/A11(2009_07). - EN 55014-1 (2008_01)/A1 (2010_10)/A2 (2012_02) - EN 55014-2 (1998_10)/A1 (2002_09)/A2 (2009_09)

On request of Customer is available a version of the SLIDE 80 system equipped with radio receiver module and n. 2 radio controller at 433MHz band that has all the characteristics specified in the directive 1999/5/CE (Radio devices and telecommunications devices).

¹ The articles of law EN 60335 related to the electric risks are not applied because our devices are power supplied with a very low tension system security type SELV.

5. GENERALITY

The SLIDE 80 is an automatic actuator to open – close sliding shutters, is an high performances not reversible motor paired with high endurance resin gears.

The possibility to open/close the shutters with very simple remote controls or with an home automation system, can permit the user to optimize the protection offer by the shutters in several weather conditions (ex. hot, cold, rain, snow).

6. RECEIVING AND STORAGING

6.1 To control at the receiving of device

Remove the packaging when receive the device ensuring the integrity of content.

Kit includes:

- Motor with plate for rails with internal defile max 15mm	Pcs	1
- Belt T5H10	M	10
- Dragging straight bracket	Pcs	2
- Tensioner with free return pinion	Pcs	1
- Users Manual	Pcs	1



At receiving, if the product is damaged and/or with missing and/or with defect or malfunctions, don't try to repair it but contacting the Customer Care reporting model, code and device serial number (see Pic.3.1. Label at pg. 6).

6.2 Storing



Not using the device for long periods, store the device in a dry, clean place.



To store for more than 24 month by the matriculation ,CHIAROSCURO SAS give the warranty expected by General Selling Conditions.

7. MECHANICAL MOUNTING INSTRUCTIONS



Electromechanical Dealer: (E.D.) technician who has the competences to install mechanical - hydraulic - pneumatic devices and who can accomplish regulations, maintenances or repairs and can work in presence of High Voltage inside, derivation boxes and electrical installations.

The montage has to be done by a certified Electromechanical Dealer. CHIAROSCURO SAS doesn't have responsibilities for bad installations and/or installations done by not certified operators.

7.1 Necessary for Installation

To proceed with installation needs the sequel instruments:

- Screwdriver for hexagonal screw #4 ;
- Screwdriver for slotted screw 1 x 5,5 ;
- Electrician clippers ;
- Tester screwdriver ;
- Permanent marker fine ;
- DIN 7505/B Chipboard screw with cylindrical head 3,5 x 25 Pz 2 ;
- Single pole terminal 2,5 ;
- Cables probe .



The SLIDE 80 is not equipped of the instruments above, but are necessary for a good workbench installation.

P.P.E. or other are responsibility of E.D. in function of the field installation

7.2 To Verify for a good installation

Once verified the package content, it's possible to proceed to verify the dimensions required to install our automation.

If during the design phase was not followed the automation measures and data sheet, will be the Electromechanical Dealer (E.D.) to find a possible solution and adapt to the situation.

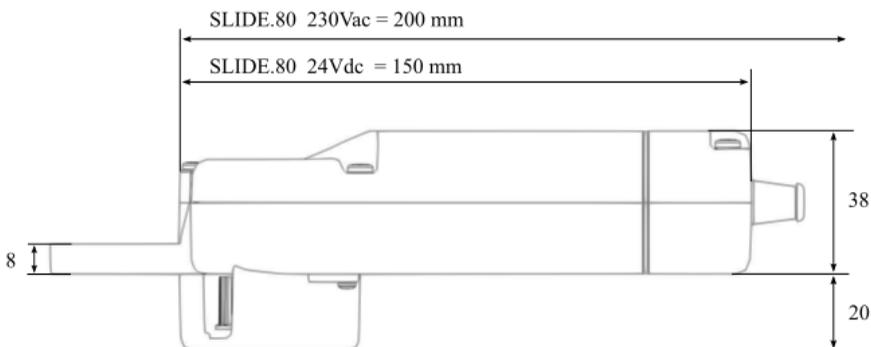
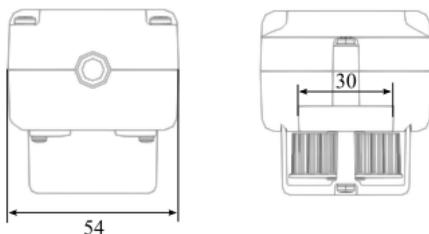
In case of doubts contact the Homebuilder Technician (H.T.) that will give support in order to find a solution.



SLIDE 80 is a specific product for sliding shutters. Any other use is not warranted the functioning and the compatibility with CE mark

7.3 Sizes Verify

Verify that the engine housing groove or the space over the rail are enough install the product, otherwise the installation could abridge the run of shutter.



Measures in millimeters
Side of motor positioning right or left



Verify that the electrical preparation and all the parameters are respected like the technical schedule at page 7

7.4 Motor Installation

In the next steps it will explained the necessary operations to install correctly the automation on the rails.



Caution, following the users manual of sliding shutters system chosen, proceed to the mechanic installation of the shutters. Is binding to insert the wheels and the stoppers at reverse way or cutting the wheel retaining clips, in order to prevent the block of the wheels into the stopper. Without this shrewdness, wheels will stick around the stoppers and at the start the SLIDE.80 will recognize that block like an obstacle. The order to follow is: stopper/wheel/wheel/stopper.



The order of the components inserting into the rail is :

- Single shutter : stopper/wheel/wheel/stopper ;
- Double shutters: stopper/wheel/wheel/stopper/wheel/wheel .

7.4.1 Fixing the motor to the rail

Open the clamp and insert the motor in the rail. Respect parallelism between the lower part of the rail and the motor, screw the EN ISO 4762 M5x16 with the n°4 hexagonal screwdriver until the screws are totally clenched.



Repeat the same operation with the tensioner pulley at the opposite extremity, going inside the rail 2cm from the border.



Caution, fix just the part without pulley (the internal one without pulley) and leave the screws of the block with pulley unfixed (the external one with pulley). Afterwards tension the belt acting on the extremely part of the block with a screwdriver for slotted screws.

7.4.2 Positioning and fixing the belt

Before to proceed it's necessary to understand how is built the belt tensioner and its function with the dragging bracket. The belt tensioner is made by:

- Dragging straight bracket Pz 2 ;
- Free pulley block Pz 1 ;
- Contrast clamp Pz 1 ;

The belt dragging has triple functions: junction function between the two edges of belt (dragging bracket), belt tensioner (free pulley block + contrast clamp) as well as shutter fixing to transmit the sliding movement (dragging bracket).



Disassemble the anti-bounce cap of the free pulley and the same with cap of motor.

Put the belt on the motor pulley taking care to assemble again the cap. Do the same operation with the free pulley.

The caps will clamp the belt.

Bring the motor-side edge of belt (edge A) to the center of rail and clasp it in the middle of the dragging bracket, starting right this the belt trip. Going on with the belt trip bring the edge B (the one who comes from the free pulley) arrive at the dragging bracket.

From the interception of the edges of belt, cut with clippers the edge B adjacent at the edge A

Close the clamp of the dragging bracket with the n°4 hexagonal screwdriver.

To tension the belt trip, has to unscrew with the screwdriver for slotted screws 1X5,5 the threaded shaft (M8 screw dimension) that made up the belt tensioner, in order to turn away the free pulley block from the clamp contrast block which was fixed before and now make a contrast.

Reached the correct tension of belt, fix with the n°4 hexagonal the free pulley block.



7.4.3 Completion of the mechanic installation of sliding system

To complete the mechanic installation it's enough to proceed following the users manual of the sliding shutters paying attention and avoiding to make damages at the automation.

7.4.4 Fixing the dragging bracket to the shutter

Fin in a middle position, with the chipboard screws 3,5 x 25 - DIN 7505/B, the bracket to the shutter. For a double shutters system make the same operation on the opposite side of the belt in order to have a correct movement of the shutters.



For the double shutters system, if the shutters doesn't have the same run, the automation will do the shortest run.

7.5 ELECTRICAL CONNECTIONS

This work has to be done by a qualified Electromechanical Dealer. CHIAROSCURO SAS doesn't have responsibilities in the case of bad installation and/or mistakes made by not qualified operators.



The proper functioning of device and the safety requirements are guaranteed only if it's connected to certified electrical system that respect the applicable laws (in Italy DLgs. 37/2008²).

The producer doesn't have responsibilities for any damage to the device or at other people caused by the use of a non-compliant electrical system, or caused by an electrical system that doesn't respect the applicable laws .

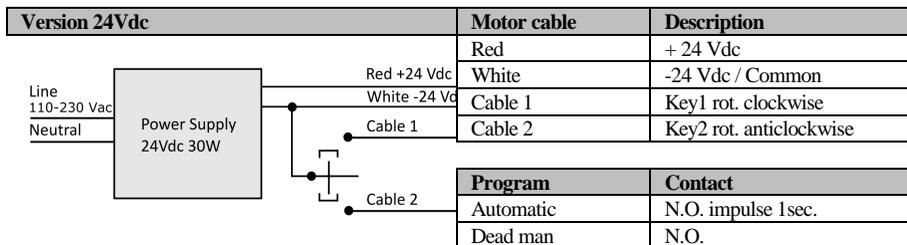
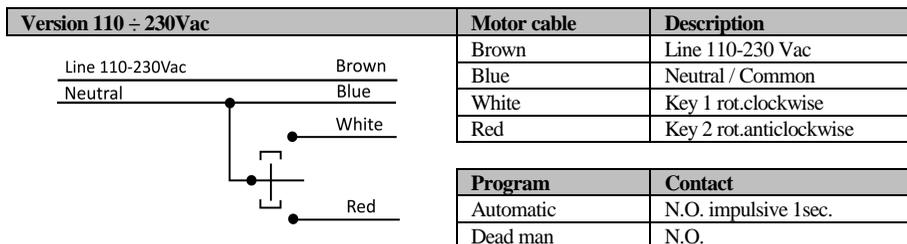


If the device behavior doesn't reflect what is reported above, don't use the automation and contact the Customer Care service of CHIAROSCURO SAS. It's hardly forbidden to open the case of the device except written authorizations of CHIAROSCURO SAS. Not respecting this rule will cause the immediately decay of warranty.



The predisposition of the electrical system is responsibility if the electromechanical dealer. CHIAROSCURO SAS doesn't have the responsibility for system lacks. All the information to make a good work are at disposal, it's a buyer burden request it in a formal way.

7.5.1 Electrical Scheme



² ORDINANZA 22 January 2008 - , n. 37 Rule in reference to the execution of the article 11-quaterdecies, subparagraph 13, letter a) of thr law n. 248 of 2 December 2005, describing reorgasnization of disposal about installation activities of implants inside the buildings.

7.5.2 Configuration Slide.80

SLIDE.80 has 6 different configurations.

Product Code	Power Supply	Program	Command
SL.80-230	110 – 230Vac	Automatic	Wire
SL.80-230R	110 – 230Vac	Automatic	Wire + Radio
SL.80-230UP	110 – 230Vac	Dead man	Wire
SL.80-24	24Vdc	Automatic	Wire
SL.80-24R	24Vdc	Automatic	Wire + Radio
SL.80-24UP	24Vdc	Dead man	Wire

7.5.3 Dead Man Program

In the following list will be described in order all the phases about the Dead Man program that will be executed at every power on. Normally opened contact.

Phase	Proper Operation
Phase 1 Power - ON	At power on for the first 3" the device will make a test. During this phase the device will emit a BEEP for 2" Commands will not accept in this phase.
Phase 2 Run	T1= clockwise rotation T2= anticlockwise rotation Running at constant speed

Error Acoustic	Error Description
No BEEP	No power supply or motor broken
Long BEEP 5"	Fault
Siren 4"	Overcoming safety threshold
Long BEEP 5"	Fault

7.5.4 Automatic Program

In the scheme beneath will be explained, all the phases of the Automatic program that the device will perform at every power on. Impulsive contact 1 sec. Normally opened.

Phase	Proper Operation
Phase 1 Power - ON	At power on for the first 3" the device will make a test. During this phase the device will emit a BEEP for 2" Commands will not accept in this phase.
Phase 2 Learning	At the first command (Open or Close) device will make an automatic movement in both directions impossible to interrupt
Phase 3 Run	T1= clockwise rotation T2= anticlockwise rotation run < 50cm slow move run >50cm speed profile

Error Reports	Error Description
No BEEP	No power supply or motor broken
Long BEEP 5"	Fault
Siren 4"	Overcoming safety threshold
Long BEEP 5"	Fault
Long BEEP 5"	Fault
4" Siren emitted	Overcoming safety threshold



In cases of error contact our Customer Care service reporting model, product code and serial number (look at pic.3.1. Device Label).



In cases of defects and/or malfunctioning, don't try to repair the device but contact our Customer Service reporting model, product code and serial number (look at pic.3.1. Device Label).

8. MAINTENANCE



All the operations described in the next paragraphs has to be carry out with the device turned off (switch attributable to device OFF position).

8.1 Periodical maintenance



Exploiter : Clean periodically the device casing using a soft cloth with moisten with neutral and not aggressive soaps and wipe up with a dry soth.
To maintain clean and without obstacles the shutters moving area.



Electromechanical Dealer : Verify the tension of belt.
Adjust and regulate possible beddings of the shutters.

8.2 Special maintenance



Exploiter : Contact the Electromechanical Dealer in of breakages or malfunctioning



Electromechanical Dealer : Find the malfunction and, if it's necessary contact our Customer Care reporting model, product code and serial number (look at pic.3.1. Device Label).
Use the form "service request – supplies" at page 26

9. DRAWBACKS AND ANOMALIES

Faults List :

E.D. has to keep updated this list making maintenance operations

Date	Operator	Drawback	Possible cause



If the service intervention didn't solve the problem stop all the operations and contact the Customer Care.



It's hardly forbidden to open the case of the device except written authorizations of CHIAROSCURO SAS. Not respecting this rule will cause the immediately decay of warranty.

10. DISPATCHING



USERS INFORMATIONS

At the senses of art. 13 del Law Decree 25 July 2005, n. 151 "Execution of the Directives 2002/95/CE, 2002/96/CE and 2003/108/CE, related to reduction of using di dangerous substances inside electric and electronic devices, and dispatching refuses" The symbol of strikethrough dumpster on the device denote that at the end of its life has to be dispatch a part by other refuses. For this reason the user has to deliver the device, in all its integrity, at the suitable electronic and electric devices recycling centers, or deliver to the retailer at the moment of buying a new same type device in a one to one reason. A condign dispatching to starting for the dismissed device a recycling process, for an recycling compatibility dispatching contributes to avoid possible and negative effect for the nature and for health and support the recycle of the materials that this device is composed. Unauthorized dispatch of this product imply the application of the administrative penalties expected by the law.

11. -ATTACHED.1 – SERVICE REQUEST - SUPPLIES

For the kind attention

CHIAROSCURO SAS di Girelli Marco & C.
C.So General A.Cantore 23 - 38061 Ala (TN) Italy.
Tel: +39 0464 424715 fax: +39 0464 712027
email: info@chiaroscuro.eu sito: www.chiaroscuro.eu

Date _____

Customer:	Model:
Locality:	Code:
Address:	Serial:
Phone:	
Fax :	Transmitted by

Supplies List:

Article Code	Q.ty	Description/Note

Buyer stamp and Signature

Cod. 151116	CHIAROSCURO SAS di Girelli Marco & C. C.So General A.Cantore 23 - 38061 Ala (TN) Italy P.I. IT01527050221	Pag. 15di 16
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12. COMPATIBILITY CERTIFICATION TO  MARK

CHIAROSCURO SAS di Girelli Marco & C.
 C.So General A.Cantore 23 - 38061 Ala (TN) Italy.
 Tel: +39 0464 424715 fax: +39 0464 712027
 email: info@chiaroscuro.eu site: www.chiaroscuro.eu

Declares that the electric product

Model SLIDE 80
Description Actuator designed to move sliding shutters systems

In accordance with the laws that transpose the following directives and following amendments:

Slide 80 230 Vac	Slide 80 24 Vdc
<ul style="list-style-type: none"> - 2004/108/CE Directive EMC - 2006/95/CE Directive LVD - 2006/42/CE Machines Directive - 2011/65/CE Directive RoHS2 	<ul style="list-style-type: none"> - 2004/108/CE Directive EMC - 2006/42/CE Machines Directive 2011/65/CE Directive RoHS2

The compatibility is legitimate provided that the actuator SLIDE 80 it's exclusively used for expected applications and the installation has to be done following step by step the users manual.

ALA, 27/08/2015



 Marco Girelli
 Legal Representat

13. WARRANTY**CONDITIONS AND RESTRICTIONS:**

CHIAROSCURO SAS gives for this device **12 month warranty**.

The warranty begins by the date of purchasing on the fiscal document at the moment of device delivering. CHIAROSCURO SAS agrees free repair or substitution of the parts that, in the warranty period could present manufacturing defects, warranty not includes any way of refund by direct or indirect damages to people or things. During the period of the warranty, if the Customer want a repair done by CHIAROSCURO SAS technicians will be necessary to send a formal wrote request to CHIAROSCURO SAS. In that case all the related costs (travel, food and accommodation) will be at Customer's burden. For technical interventions caused by defects or failures non clearly attributable to the materials or to the manufacture, all the cost of transfer, di repair and/or substitution of all parts will be charged to the Customer. CHIAROSCURO SAS exclude the extension of warranty after a technical intervention on device. In case of return of some device parts, customer could send this parts only after an explicit wrote authorization by CHIAROSCURO SAS. Costs relates to packaging and shipping are Customer burdens (except different accordance with CHIAROSCURO SAS). In the same way are excluded by warranty accidental shipping damages, carelessness, inappropriate use, a use different by the users manual rules or for any other phenomena that it doesn't depends by a normal use of this device. Warranty will decay if the device will be repaired by unauthorized people or if will be used unauthorized equipment or unauthorized accessories not approved before by CHIAROSCURO SAS or in case of removing or changing of the serial number during the warranty period. Warranty will decay immediately in case of delay of missing payment (partial included) by Customer CHIAROSCURO SAS doesn't have any responsibility for accidental damages to people or things, caused by a bad use, non-compliant use or imperfect use of this device.

For any possible dispute the competence is delegate to Jurisdiction of TRENTO (ITALY).

Cod. 151116	CHIAROSCURO SAS di Girelli Marco & C. C.So General A.Cantore 23 - 38061 Ala (TN) Italy P.I. IT01527050221	Pag. 16di 16
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