BM4024 / BM4000

Swing gate opener

IS0190A03MM_03-10-2012

EN - Addendum to the BIG METRO manual

IT - Addendum al manuale BIG METRO

FR - Addendum au manuel BIG METRO

ES - Addendum al manual BIG METRO

DE - Nachtrag zur Anleitung BIG METRO

PL - Załącznik do instrukcji BIG METRO

NL - Addendum bij de handleiding BIG METRO

Nice SpA
Oderzo TV Italia
info@niceforyou.com
www.niceforyou.com

Nice

EN - **Warning for models BM4024 and BM4000**: the paragraphs “Product application limits”, “Electrical Connections” and “Product Technical Specifications”, reported in this addendum, replace those of the “BIG METRO” instruction manual.

IT - **Avvertenza per i modelli BM4024 e BM4000**: i paragrafi “Limiti d’impiego del prodotto”, “Collegamenti elettrici” e “Caratteristiche tecniche del prodotto”, riportati nel presente addendum, sostituiscono quelli del manuale istruzioni “BIG METRO”.

FR - **Avertissement pour les modèles BM4024 et BM4000** : les paragraphes « Limites d’utilisations du produit », « Branchements électriques » et « Caractéristiques techniques du produit », rapportées dans le présent addendum, remplacent ceux du manuel d’instructions « BIG METRO ».

ES - **Advertencia para los modelos BM4024 y BM4000**: los apartados “Límites de empleo del producto”, “Conexiones eléctricas” y “Características técnicas del producto”, indicados en el presente anexo, sustituyen a los que se encuentran en el manual de instrucciones de “BIG METRO”.

DE - **Hinweis für die Modelle BM4024 und BM4000**: Die Kapitel „Nutzungsgrenzen des Produktes“, „Elektrische Anschüsse“ und „Technische Eigenschaften des Produktes“ in diesem Anhang ersetzen die entsprechenden Kapitel in der Bedienungsanleitung „BIG METRO“.

PL - **Ostrzeżenie dla modeli BM4024 i BM4000**: rozdziały „Ograniczenia w zastosowaniu urządzenia”, „Połączenia elektryczne” oraz „Parametry techniczne urządzenia” przedstawione w niniejszym dodatku zastępują odpowiednie rozdziały znajdujące się w instrukcji „BIG METRO”.

NL - **Alleen voor de modellen BM4024 en BM4000**: de paragrafen “Gebruikslimieten van het product”, “Elektrische aansluitingen” en “Technische gegevens van het product” van deze bijlage vervangen de corresponderende paragrafen in de “BIG METRO”-gebruikershandleiding.

EN 3.3 - Limits of use for the product

Before installing the product, check that the gate panel has dimensions and weight that lie within the limits given in **graph 1**; also evaluate the climatic conditions (e.g. strong wind) present in the place of installation: they can greatly reduce the values given in the graph.

IT 3.3 - Limiti d'impiego del prodotto

Prima di eseguire l'installazione del prodotto, verificare che l'anta del cancello abbia dimensioni e peso rientranti nei limiti riportati nel **grafico 1**; valutare anche le condizioni climatiche (es. vento forte) presenti nel luogo d'installazione: queste possono ridurre notevolmente i valori riportati nel grafico.

FR 3.3 - Limites d'utilisation du produit

Avant d'installer le produit, vérifier que le vantail du portail présente des dimensions et un poids compris dans les limites reprises au **graphique 1**; évaluer aussi les conditions climatiques (ex. vent fort) existantes dans le lieu d'installation: elles peuvent réduire considérablement les valeurs reprises sur le graphique.

ES 3.3 - Límites de uso del producto

Antes de instalar el producto, controle que las dimensiones y el peso de la hoja de la cancela estén dentro de los límites que se muestran en el **gráfico 1**; evalúe también las condiciones climáticas (ej. viento fuerte) presentes en el lugar de la instalación: ya que pueden reducir considerablemente los valores mostrados en el gráfico.

DE 3.3 - Einsatzgrenzen des Produkts

Vor der Installation des Produkts ist zu prüfen, ob Abmessungen und Gewicht des Torflügels innerhalb der in **Diagramm 1**; angegebenen Grenzen liegen; zu berücksichtigen sind auch die klimatischen Bedingungen (z. B. starker Wind), die am Installationsort vorherrschen und die im Diagramm angegebenen Werte deutlich verringern können.

PL 3.3 - Ograniczenia związane z użyciem produktu

Przed zamontowaniem produktu należy sprawdzić, czy wymiary i ciężar skrzydła bramki znajdują się w zakresie granic wskazanych na **wykresie 1**; należy oszacować również warunki klimatyczne (np. silny wiatr) w miejscu montażu: które mogą znacznie ograniczyć wartości wskazane na wykresie.

NL 3.3 - Gebruikslimieten van het product

Alvorens het product te installeren, moet gecontroleerd worden of de vleugel van het hek de afmetingen en het gewicht heeft die zich binnen de limieten van **grafiek 1** bevinden. Beoordeel ook de klimaatsomstandigheden (bijvoorbeeld sterke wind) in de plaats van installatie: deze kunnen de waarden in de grafiek aanzienlijk verlagen.

EN 5 - Electrical Connections

For BM4000, connect the cables as follows:

- **Black** = "open" phase
- **Brown** = "close" phase
- **Grey** = Common
- **Yellow/Green** = ⏚

IT 5 - Collegamenti elettrici

Per il BM4000, collegare i cavi nel modo seguente:

- **Nero** = Fase "apre"
- **Marrone** = Fase "chiude"
- **Grigio** = Comune
- **Giallo/Verde** = ⏚

FR 5 - Branchements électriques

Pour le modèle BM4000, brancher les câbles comme suit :

- **Noir** = phase « ouverture »
- **Marron** = phase « fermeture »
- **Gris** = commun
- **Jaune/Vert** = ⏚

ES 5 - Conexiones eléctricas

Para el BM4000 conecte los cables de la siguiente manera:

- **Negro** = Fase "abrir"
- **Marrón** = Fase "cerrar"
- **Gris** = Común
- **Amarillo/Verde** = ⏚

DE 5 - Elektrische Anschüsse

Für BM4000, die Kabel wie folgt anschließen:

- **Schwarz** = Phase "öffnet"
- **Braun** = Phase "schließt"
- **Grau** = Gemeinsam
- **Gelb/Grün** = ⏚

PL 5 - Połączenia elektryczne

Dla BM4000, podłącz przewody w następujący sposób:

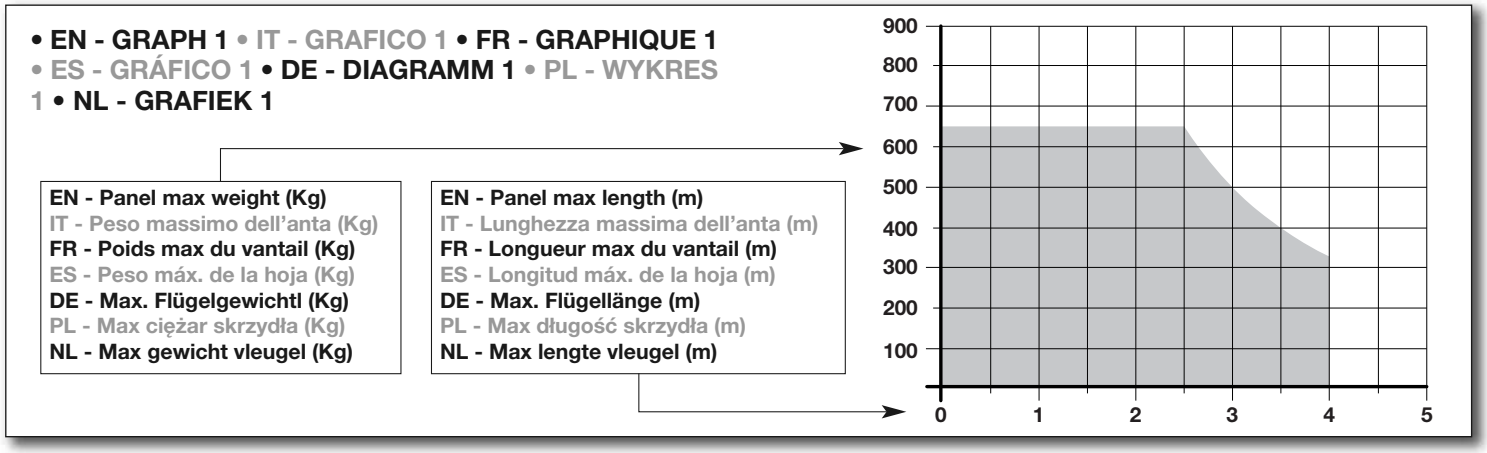
- **Czarny** = Faza "otwiera"
- **Brązowy** = Faza "zamyka"
- **Szary** = Wspólny
- **Żółto/zielony** = ⏚

NL 5 - Elektrische aansluitingen

Sluit voor de BM4000 de kabels als volgt aan:

- **Zwart** = Fase "open"
- **Bruin** = Fase "sluit"
- **Grijs** = Gemeenschappelijk
- **Groengeel** = ⏚

• EN - GRAPH 1 • IT - GRAFICO 1 • FR - GRAPHIQUE 1 • ES - GRÁFICO 1 • DE - DIAGRAMM 1 • PL - WYKRES 1 • NL - GRAFIEK 1



EN - PRODUCT TECHNICAL FEATURES

RECOMMENDATIONS: • All technical features stated make reference at a room temperature of 20°C (± 5°C). • Nice S.p.a. reserves the right to modify the product at any time it deems necessary, however maintaining the same functionality and destination of use.

	BM4024	BM4000
Type	Electro-mechanical dear motors for gates and doors with hinged panels	
Power input	24 V ⎓	230 V ~
Peak absorption	5 A	1,5 A
Maximum absorption	1,5 A	1 A
Peak Power	120 W	340 W
Maximum power	36 W	180 W
Capacitor incorporated	–	7µF
Protection rating	IP 67	
Run	from 0° to 110° or 360°	
Idle speed	1 rpm (1,25 rpm*)	0,85 rpm
Speed at nominal torque	0,85 rpm	0,65 rpm
Maximum torque	300 Nm	500 Nm
Nominal torque	75 Nm	125 Nm
Functioning temperature	from -20°C to +50°C	
Cycles/hour at the nominal torque	60	20
Dimensions	375 mm x 225 mm x h 110 mm	
Weight	12,5 Kg	14,3 Kg

* *Value refers to a power supply voltage of 30V.*

IT - CARATTERISTICHE TECNICHE DEL PRODOTTO

AVVERTENZE: • Tutte le caratteristiche tecniche riportate, sono riferite ad una temperatura ambientale di 20°C (± 5°C). • Nice S.p.a. si riserva il diritto di apportare modifiche al prodotto in qualsiasi momento lo riterrà necessario, mantenendone comunque la stessa funzionalità e destinazione d'uso.

	BM4024	BM4000
Tipologia	Motoriduttore elettromeccanico per cancelli o portoni ad ante battenti	
Alimentazione	24 V ⎓	230 V ~
Assorbimento di picco	5 A	1,5 A
Assorbimento massimo	1,5 A	1 A
Potenza di picco	120 W	340 W
Potenza massima	36 W	180 W
Condensatore incorporato	–	7µF
Grado di protezione	IP 67	
Corsa	da 0° a 110° oppure 360°	
Velocità a vuoto	1 rpm (1,25 rpm*)	0,85 rpm
Velocità alla coppia nominale	0,85 rpm	0,65 rpm
Coppia massima	300 Nm	500 Nm
Coppia nominale	75 Nm	125 Nm
Temperatura di funzionamento	da -20 °C a +50 °C	
Cicli/ora alla coppia nominale	60	20
Dimensioni	375 mm x 225 mm x h 110 mm	
Peso	12,5 Kg	14,3 Kg

* *Valore riferito a una tensione di alimentazione di 30V.*

FR - CARACTÉRISTIQUES TECHNIQUES DU PRODUIT

MISES EN GARDE : • Toutes les caractéristiques techniques reprises se réfèrent à une température ambiante de 20°C (± 5°C). • Nice S.p.a. se réserve le droit d'apporter des modifications au produit à chaque fois qu'elle le jugera nécessaire, tout en conservant cependant ses fonctions et sa destination d'usage.

	BM4024	BM4000
Type	Motoréducteur électromécanique pour portails ou portes battantes à vantaux	
Alimentation	24 V ⎓	230 V ~
Absorption de pic	5 A	1,5 A
Absorption maximale	1,5 A	1 A
Puissance de pic	120 W	340 W
Puissance maximale	36 W	180 W
Condensateur incorporé	–	7µF
Degré de protection	IP 67	
Course	de 0° à 110° ou de 360°	
Vitesse à vide	1 rpm (1,25 rpm*)	0,85 rpm
Vitesse au couple nominal	0,85 rpm	0,65 rpm
Couple maximum	300 Nm	500 Nm
Couple nominal	75 Nm	125 Nm
Température de fonctionnement	de -20 °C à +50 °C	
Cycles/heure au couple nominal	60	20
Dimensions	375 mm x 225 mm x h 110 mm	
Poids	12,5 Kg	14,3 Kg

* *Valeur référence à une alimentation de 30V.*

ES - CARACTERÍSTICAS TÉCNICAS DEL PRODUCTO

ADVERTENCIAS: • Todas las características técnicas indicadas se refieren a una temperatura ambiental de 20 °C (± 5 °C). • Nice S.p.a. se reserva el derecho a modificar el producto cuando lo considere necesario, conservando sin embargo la misma funcionalidad y destino de uso.

	BM4024	BM4000
Tipo	Motorreductor electromecánico para cancelas o portales de hojas batientes	
Alimentación	24 V ⎓	230 V ~
Consumo de pico	5 A	1,5 A
Consumo máximo	1,5 A	1 A
Potencia de pico	120 W	340 W
Potencia máxima	36 W	180 W
Condensador incorporado	–	7µF
Grado de protección	IP 67	
Movimiento	desde 0 hasta 110° o 360°	
Velocidad en vacío	1 rpm (1,25 rpm*)	0,85 rpm
Velocidad en par nominal	0,85 rpm	0,65 rpm
Par máximo	300 Nm	500 Nm
Par nominal	75 Nm	125 Nm
Temperatura de funcionamiento	de -20 °C a +50 °C	
Ciclos/hora en par nominal	60	20
Dimensiones	375 mm x 225 mm x h 110 mm	
Peso	12,5 Kg	14,3 Kg

* *Valor referido a una tensión de alimentación de 30 V.*

DE - TECHNISCHE DATEN DES PRODUKTS

HINWEISE: • Alle angegebenen technischen Daten beziehen sich auf eine Umgebungstemperatur von 20°C (± 5°C). • Nice S.p.a. behält sich das Recht vor, jederzeit am Produkt Änderungen vorzunehmen, wenn dies für erforderlich gehalten wird, dabei aber dessen Funktionen und bestimmungsgemäßer Gebrauch gleich bleiben.

	BM4024	BM4000
Geräteart	Elektromagnetischer Getriebemotor-Antrieb für Tore mit Torflügeln	
Stromversorgung	24 V ⎓	230 V ~
Spitzenstromaufnahme	5 A	1,5 A
Höchststromaufnahme	1,5 A	1 A
Spitzenleistung	120 W	340 W
Höchstleistung	36 W	180 W
Eingebauter Kondensator	–	7µF
Schutzklasse	IP 67	
Weg	0° bis 90°110° oder 360°	
Leerlaufdrehzahl	1 U/min (1,25 U/min*)	0,85 U/min
Drehzahl bei Nenndrehmoment	0,85 U/min	0,65 U/min
Maximales Drehmoment	300 Nm	500 Nm
Nenndrehmoment	75 Nm	125 Nm
Betriebstemperatur	-20 °C bis +50 °C	
Zyklen pro Std. bei Nenndrehmoment	60	20
Abmessungen	375 mm x 225 mm x h 110 mm	
Gewicht	12,5 Kg	14,3 Kg

* *Wert bezieht sich auf eine Versorgungsspannung von 30V.*

PL - CECHY TECHNICZNE PRODUKTU

UWAGI: • Wszystkie podane cechy techniczne, odnoszą się do temperatury otoczenia 20°C (± 5°C). • Nice S.p.a. zastrzega sobie prawo wprowadzenia zmian w produkcie w jakimkolwiek momencie, gdy uzna to za konieczne, zachowując jednocześnie jego funkcjonalność i przeznaczenie..

	BM4024	BM4000
Typologia	Siłownik elektromechaniczny do bramek lub bram skrzydłowych	
Zasilanie	24 V ⎓	230 V ~
Pobór szczytowy	5 A	1,5 A
Pobór maksymalny	1,5 A	1 A
Moc szczytowa	120 W	340 W
Moc maksymalna	36 W	180 W
Kondensator wbudowany	–	7µF
Stopień ochrony	IP 67	
Bieg	od 0° do 110° lub 360°	
Prędkość na biegu jałowym	1 rpm (1,25 rpm*)	0,85 rpm
Prędkość z momentem znamionowym	0,85 rpm	0,65 rpm
Moment maksymalny	300 Nm	500 Nm
Moment znamionowy	75 Nm	125 Nm
Temperatura funkcjonowania	od -20 °C do +50 °C	
Cykle/godzinę z momentem znam.	60	20
Wymiary	375 mm x 225 mm x h 110 mm	
Ciężar	12,5 Kg	14,3 Kg

* *Wartość dotyczy napięcia zasilania 30 V.*

NL - TECHNISCHE KENMERKEN VAN HET PRODUCT

WAARSCHUWINGEN: • Voor alle technische kenmerken die vermeld worden, wordt uitgegaan van een omgevingstemperatuur van 20°C (± 5°C). • Nice S.p.a. behoudt zich het recht voor om op ieder gewenst moment dat zij noodzakelijk acht wijzigingen op het product aan te brengen waarbij de werking en de gebruiksbestemming hoe dan ook gehandhaafd blijven.

	BM4024	BM4000
Typologie	Elektromechanische reductiemotor voor hekken of poorten met scharnierende hekvleugels	
Voeding	24 V ⎓	230 V ~
Piekabsorptie	5 A	1,5 A
Maximumabsorptie	1,5 A	1 A
Piekvermogen	120 W	340 W
Maximumvermogen	36 W	180 W
Ingebouwde condensator	–	7µF
Beschermklasse	IP 67	
Bewegingstraject	van 0° tot 110° of 360°	
Snelheid bij nullast	1 rpm (1,25 rpm*)	0,85 rpm
Snelheid bij het nominale koppel	0,85 rpm	0,65 rpm
Maximumkoppel	300 Nm	500 Nm
Nominaal koppel	75 Nm	125 Nm
Werktemperatuur	van -20 °C tot +50 °C	
Cycli/uur bij nominaal koppel	60	20
Afmetingen	375 mm x 225 mm x h 110 mm	
Gewicht	12,5 Kg	14,3 Kg

* *Waarde voor een voedingsspanning van 30V.*

BIG METRO

Swing gate opener

EN - Instructions and warnings for installation and use

IT - Istruzioni ed avvertenze per l'installazione e l'uso

FR - Instructions et avertissements pour l'installation et l'utilisation

ES - Instrucciones y advertencias para la instalación y el uso

DE - Installierungs-und Gebrauchsanleitungen und Hinweise

PL - Instrukcje i ostrzeżenia do instalacji i użytkowania

NL - Aanwijzingen en aanbevelingen voor installatie en gebruik

Nice

1 GENERAL SAFETY WARNINGS AND PRECAUTIONS

Recommendations regarding safety

- **ATTENTION! – This manual contains important instructions and recommendations regarding the safety of persons.** Incorrect installation can cause serious injury. Read the manual completely before starting work. If in doubt, suspend the installation and request clarifications from the Nice After-sales Assistance.
- **ATTENTION! – Important instructions: keep this manual for any future maintenance interventions and product disposal.**
- **ATTENTION! – In compliance with the most recent European Legislation, the realisation of an automatic door or gate must respect the Standards envisioned by the 2006/42/CE Directive (ex 98/37/CE) (Machinery Directive) and in particular, the EN 12445; EN 12453; EN 12635 and EN 13241-1 Standards, which allow to declare conformity of the automation. Considering this, all product installation, connection, inspection and maintenance operations must only be performed by a qualified and skilled technician!**

Recommendations for installation

- Before starting installation, check whether this product is suitable to automate your gate or door (see chapter 3 and the "Product technical features"). If it is not suitable, DO NOT proceed with installation.
- **All installation and maintenance operations must take place with the automation disconnected from the electric power input.** If the power input disconnection device is not visible from the place where the automation is positioned, before starting work, affix a sign onto the disconnection device that states "ATTENTION! MAINTENANCE IN PROGRESS".
- Handle the automation with care during installation, preventing crushing, blows, falls or contact with liquids of any nature. Do not place the product near to heat sources or expose it to naked flames. All of these actions can damage it and be cause of malfunctioning or dangerous situations. If this occurs, suspend installation immediately and contact the Nice After-sales Assistance.
- Do not modify any product parts. Unauthorised operations can only cause malfunctioning. The manufacturer declines liability for damage deriving from arbitrary modifications to the product.
- If the gate or door to be automated has a pedestrian door the plant must be set up with a control system that prevents functioning of the motor when the pedestrian door is open.
- The product packaging material must be disposed of in compliance with local legislation.

2 DESCRIPTION OF THE PRODUCT AND DESTINATION OF USE

This product is destined to be used to automate gates or doors with hinged panels.

ATTENTION! – Any use different to that described and in environmental conditions different to those stated in this manual must be considered improper and prohibited!

The product is an electro-mechanical gear motor, with a 24 Vdc motor. The gear motor is powered by the external control unit, to which it must be connected.

If the electric energy is interrupted *(black-out)*, the gate panels can be moved by releasing the gear motor using the relevant wrench; to perform the manual manoeuvre, see chapter 8.

The product is available in the version

- BM5024 with encoder, suitable for MC824H control units.

Do not use gear motors with incompatible control units.

3 INSTALLATION

3.1 - Preliminary checks on installation

Before performing installation, check the integrity of the product components, the adequacy of the model chosen and the suitability of the environment destined for installation.

IMPORTANT – The gear motor cannot automate a manual gate that does not have an efficient and safe mechanical structure. Moreover, it cannot solve defects caused by incorrect installation or bad maintenance of the gate itself.

3.2 - Suitability of the gate to automate and the surrounding environment

• Check that the gate mechanical structure is suitable to be automated and complies with the Standards in force on the territory *(if necessary, refer to the data given on the gate label)*.

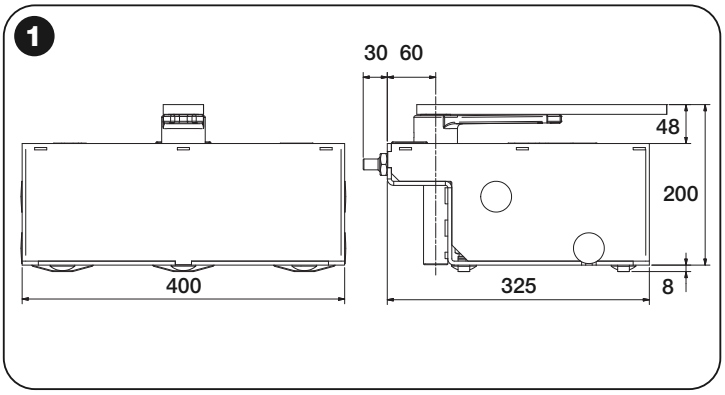
• Moving the gate panel manually in *Opening* and in *Closure*, check that the movement takes place with the same and constant friction in all points of the run *(there must not be moments of greater effort)*.

• Check that the gate panel stays in equilibrium, i.e. that is does not move if taken manually into any position and left.

• Check that the space around the gear motor allows to manually release the gate panels easily and safely.

• Envision end run retainers on the ground both for opening and closure of the gate.

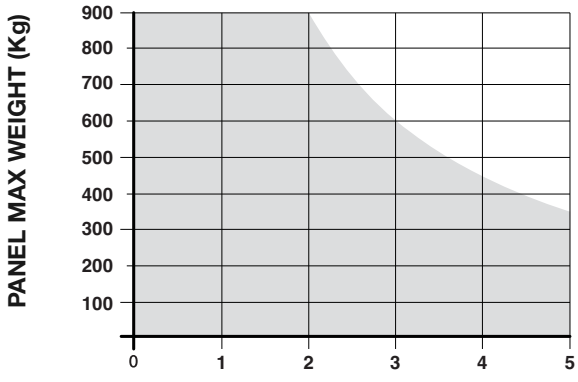
• Check that the gear motor fixing area is compatible with the clearance of the latter (**fig. 1**).



3.3 - Limits of use for the product

Before installing the product, check that the gate panel has dimensions and weight that lie within the limits given in **graph 1**; also evaluate the climatic conditions (e.g. strong wind) present in the place of installation. They can greatly reduce the values given in the graph.

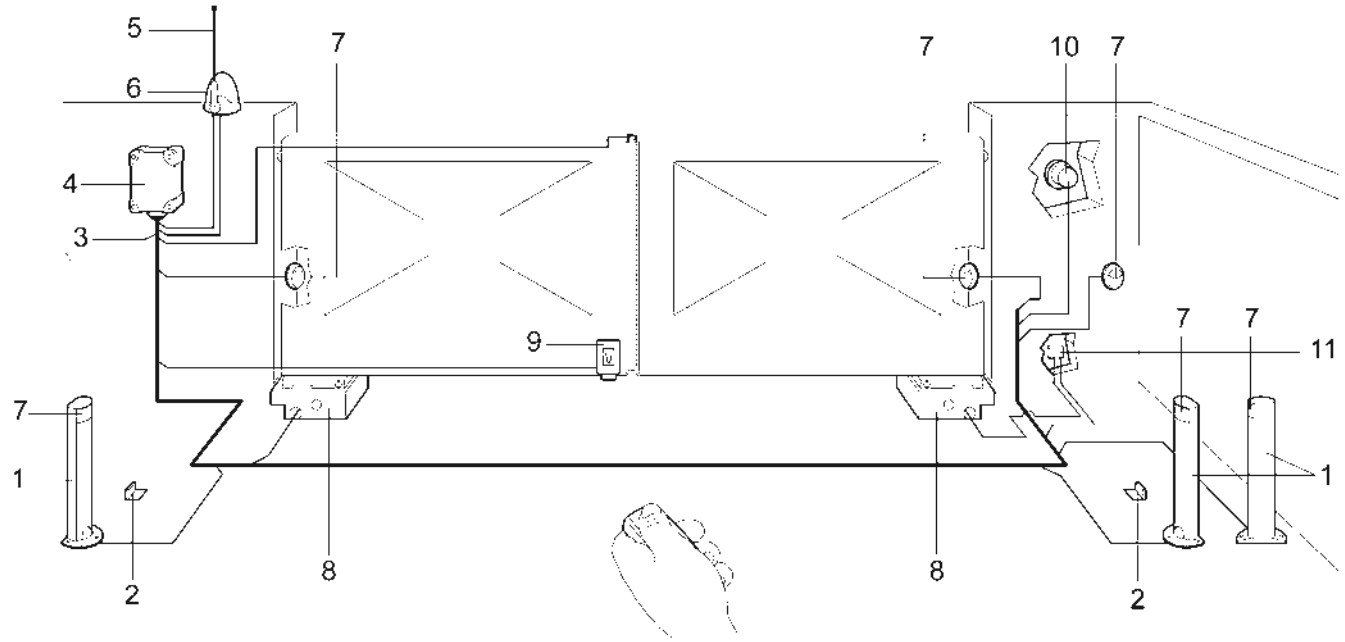
GRAPH 1



3.4 - Set-up for installation

Fig. 2 shows an example of automated plant realised with Nice components. These components are positioned according to the typical and usual layout. With reference to **fig. 2**, establish the approximate position where each component envisioned in the plant will be installed and the most appropriate connection layout.

2

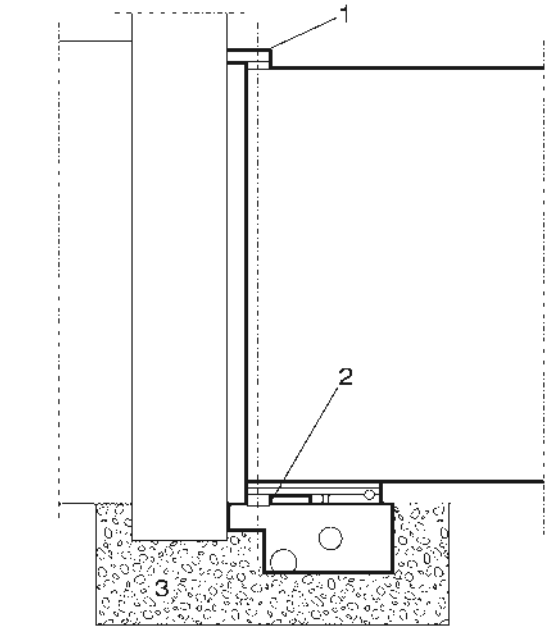


1 Photocell post
2 Pair of opening stops
3 230V line
4 Control panel (electrical panel)
5 Aerial
6 Flashing light
7 Photocell
8 Box with BIG METRO actuator
9 Vertical electric lock
10 Key-operated selector switch or digital keypad
11 Connector block (not supplied)

3.5 - Mounting: Overall Dimensions and Positioning of Foundation Box

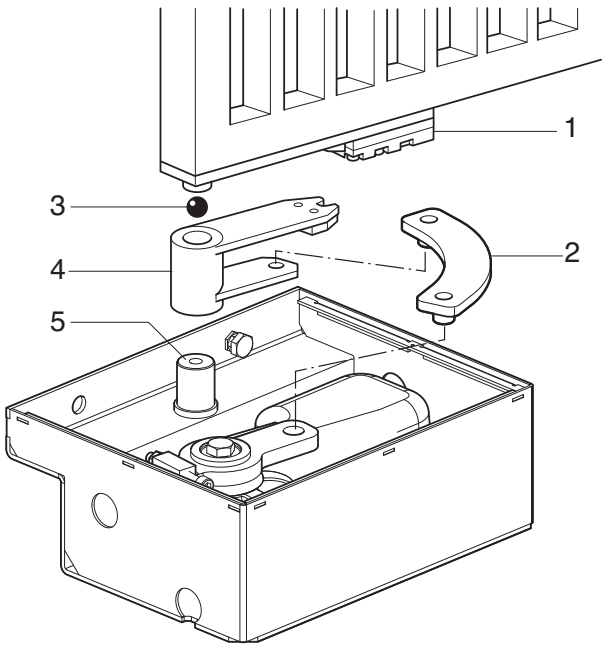
1 Dig a generously sized foundation pit to house the foundation box (**fig. 3**): prepare a drain pipeline for draining off water and avoid the build-up of water.
2 If the gate is equipped with its own mechanical stops (**fig. 2**) skip directly to point 3. Otherwise secure the opening limiter accessory to the box (see paragraph 4).
3 Place the box inside the foundation hole; the stud must be aligned with the axis of the hinge (**fig. 3**).
4 Provide a duct for the electrical cables and a drainage pipe.
5 Bury the foundation box in concrete, making sure it is set level.
6 Mount the control bracket on the box's stud along with the ball (**fig. 4**).
7 Set the gate leaf on the release lever and weld them securely.
8 Grease using a suitable grease nozzle.

3



1- Hinge 2- Pin 3- Concrete

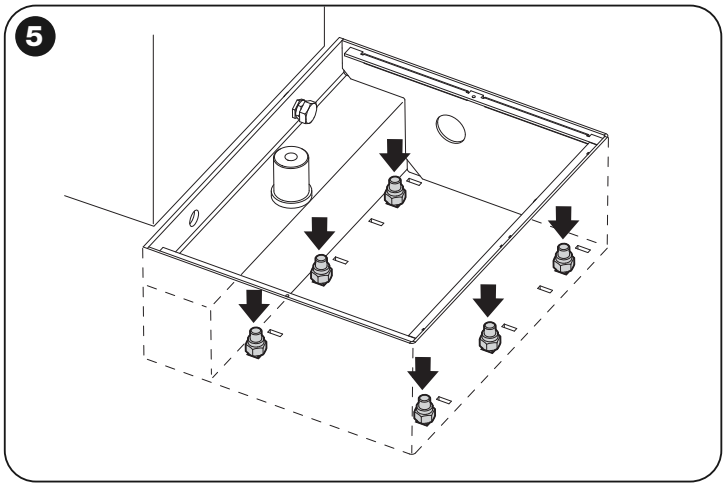
4



Release lever
2 Connecting lever
3 Ball
4 Control bracket
5 Pin

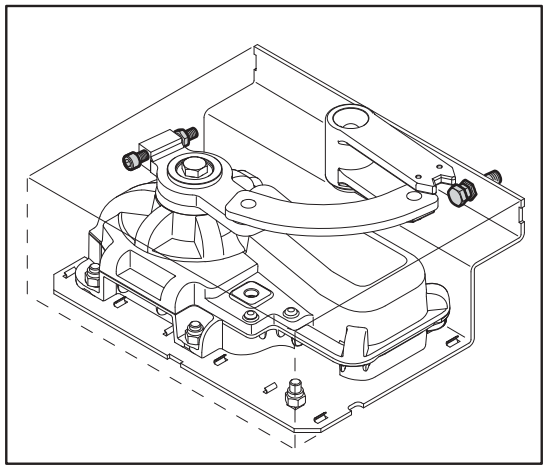
3.6 - Installation of BIG METRO Gearmotor

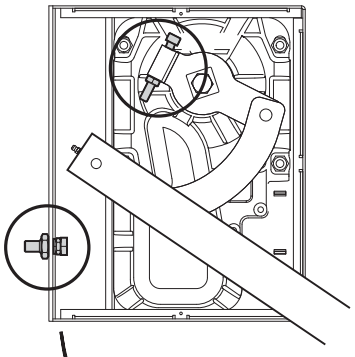
1 Remove the nuts and washers shown in the figure on the right (**fig. 5**).
2 Place the gearmotor inside the foundation box making sure it faces the correct direction.
3 Secure the gearmotor with the previously removed washers and nuts.
4 Connect the gearmotor to the gate by means of the connecting lever (2) (**fig. 4**).

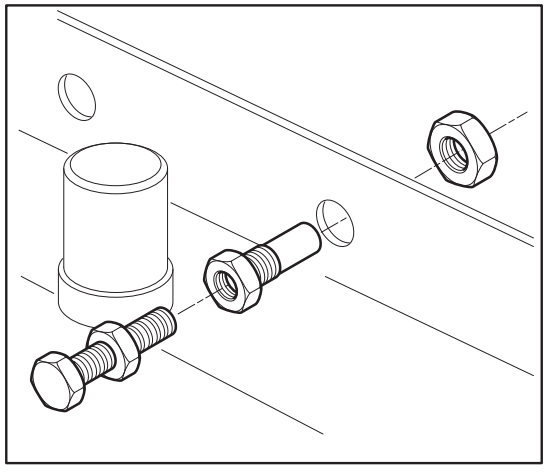


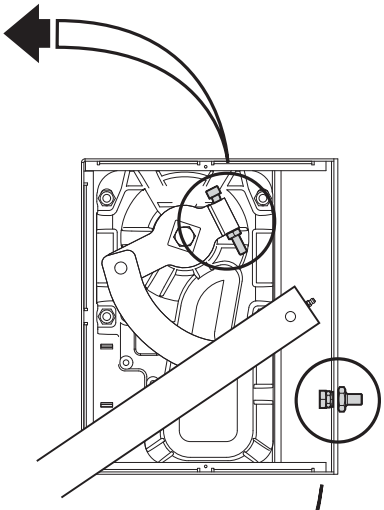
4 POSITION OF LIMIT SWITCHES

Closing limit switch (supplied with the motor) mount as shown in the figure









Opening limit switch (supplied with the motor) mount as shown in the figure

5 ELECTRIC CONNECTIONS

Recommendations:

- The gear motor is supplied with an electric power input cable measuring 2 m. Therefore, if a greater distance must be covered to perform the electric connections, a diversion box must be used (not supplied). **IMPORTANT! – It is prohibited to join the electric cable inside the foundation case.**
- **Make the electric connections with the mains power input disconnected.**

To connect the power input cable to the control unit, see the manual regarding the latter and the following indications:

Blu wire	= 24 V motor power input
Brown wire	= 24 V motor power input
Black wire	= Encoder
Grey wire	= Encoder
Yellow/Green wire	= Earth

6 INSPECTION AND COMMISSIONING

Testing of the entire system must be conducted by experienced and qualified personnel, who must establish what tests are necessary depending on the risks involved. To test BIG METRO proceed as follows:

- close the gate;
- disconnect the power supply to the control unit;
- release the gearmotor from the gate leaf as shown in paragraph “Manual release device (Key and Lever-Operated Release)” in Chapter “Instructions and Warnings for Users of the BIG METRO Gearmotor”;
- open the gate manually all the way;
- make sure the gate opens and closes smoothly without any points of friction;
- make sure that the gate, when stopped in any position and released, does not display a tendency to start moving again;
- make sure that the safety systems and mechanical stops are in good working order;
- make sure that the screw connections are properly tightened;
- clean the inside of the box and make sure that the drain operates properly;
- when all the checks have been completed, re-connect the gearmotor and power the control unit;
- BIG METRO is not equipped with any torque adjustment device, therefore this operation is performed by the control unit;
- measure the impact force as provided by the EN12453 and EN12445 standards.

7 PRODUCT MAINTENANCE

BIG METRO does not require any special maintenance; however, routine checks conducted every six months at least will ensure the long life of the gearmotor as well as the correct and safe operation of the system.

Maintenance consists simply in repeating the testing procedure.

DISPOSAL OF THE PRODUCT

This product is an integral part of the automation system, and should therefore be disposed of together with it.

As for the installation operations, even at the end of this product’s life span, the dismantling operations must be carried out by qualified experts.

This product is made up of various types of materials: some can be recycled while others need to be disposed of. Find out about the recycling or disposal systems envisaged by your local regulations for this product category.

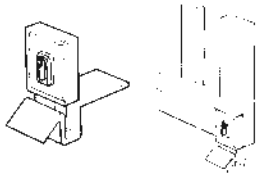
Important! – Parts of the product could contain pollutants or hazardous substances which, if released into the environment, could cause harmful effects to the environment itself as well as to human health.

As indicated by the symbol opposite, throwing away this product as domestic waste is strictly forbidden. So dispose of it as differentiated waste, in accordance with your local regulations, or return the product to the retailer when you purchase a new equivalent product.

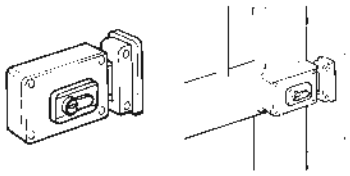
Important! – the local applicable regulations may envisage heavy sanctions in the event of illegal disposal of this product.

8 ACCESSORIES ON REQUEST

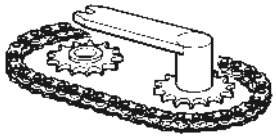
PLA10 Vertical electric lock 12 Vac



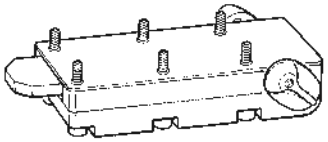
PLA11 Horizontal electric lock 12 Vac



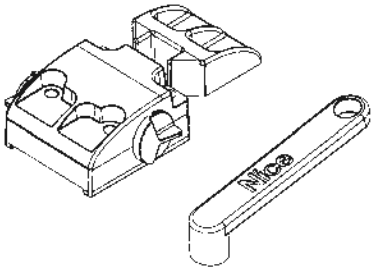
BMA1 360° opening device



MEA2 Key-operated release mechanism



MEA2 Key-operated release mechanism



9 MANUALLY RELEASING THE GEARMOTOR

Perform the manual operation in the event of a power failure or system malfunction.

MEA2 Type KEY-Operated Release (fig. 6)

A Pull down the lock cover as shown in the figure.
B Insert the key and rotate it 90° clockwise.
C Move the gate manually (**fig. 8**).

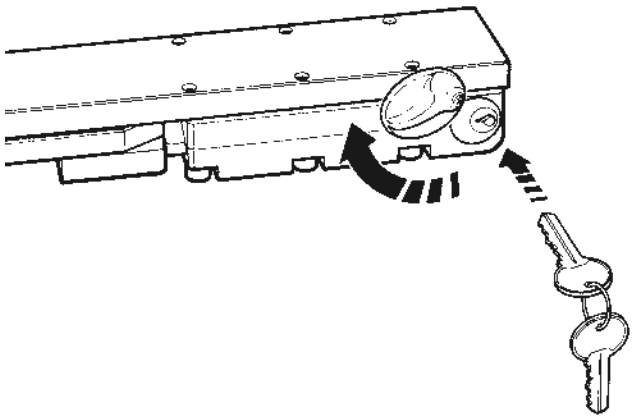
⚠ The system will revert to automatic operation upon the first electrical manoeuvre.

MEA3 Type Lever-Operated Release (fig. 7)

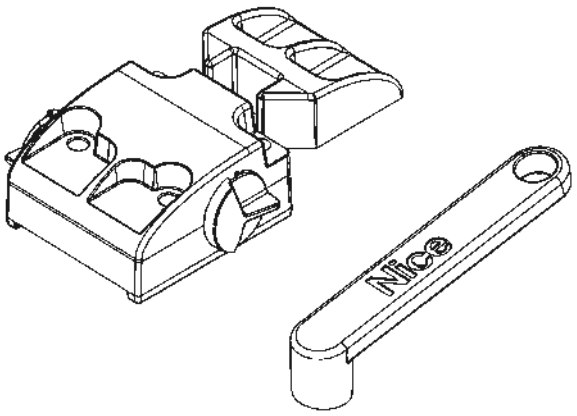
A Pull down the lock cover as shown in the figure.
B Insert the key and rotate it 90° clockwise.
C Move the gate manually (**fig. 8**).

⚠ The system will revert to automatic operation upon the first electrical manoeuvre.

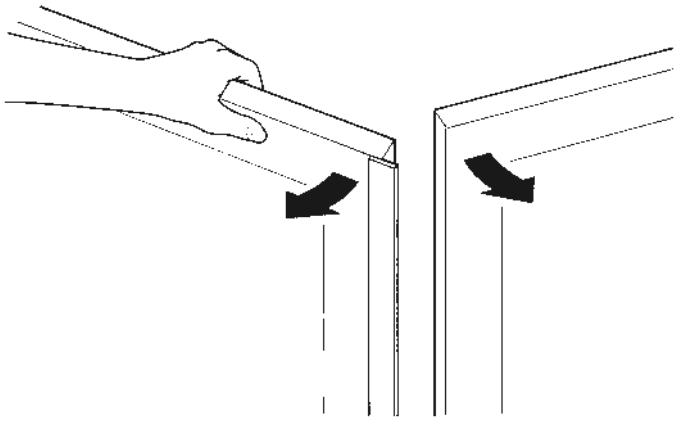
6



7



8



PRODUCT TECHNICAL FEATURES

RECOMMENDATIONS: • All technical features stated make reference at a room temperature of 20°C (± 5°C). • Nice S.p.a. reserves the right to modify the product at any time it deems necessary, however maintaining the same functionality and destination of use.

■ **Type**	Electro-mechanical dear motors for gates and doors with hinged panels
■ **Power input**	24 V ⎓
■ **Peak absorption**	7 A
■ **Maximum absorption**	2 A
■ **Potenza di picco**	170 W
■ **Maximum power**	50 W
■ **Protection rating**	IP 67
■ **Run**	from 0° to 110° or 360°
■ **Idle speed**	0,8 rpm
■ **Speed at nominal torque**	0,65 rpm
■ **Maximum torque**	400 Nm
■ **Nominal torque**	100 Nm
■ **Functioning temperature**	from -20 °C to +50 °C
■ **Cycles/hour at the nominal torque**	45
■ **Duration**	Estimated between about 100.000 e 250,000 manoeuvre cycles, according to the conditions given in Table 1
■ **Dimensions**	230 mm x 206 mm x h 88 mm
■ **Weight**	15 Kg (gear motor with foundation space)

EN

Product duration

The duration and average economic life of the product. The value of duration is strongly affected by the fatigue index of the manoeuvres performed by the automation: i.e. the sum of all factors that contribute to wear of the product (see Table 1).

To establish the probable duration of your automation, proceed as follows:

01. Calculate the fatigue index by adding the percentage values of the items present in **Table 1**;

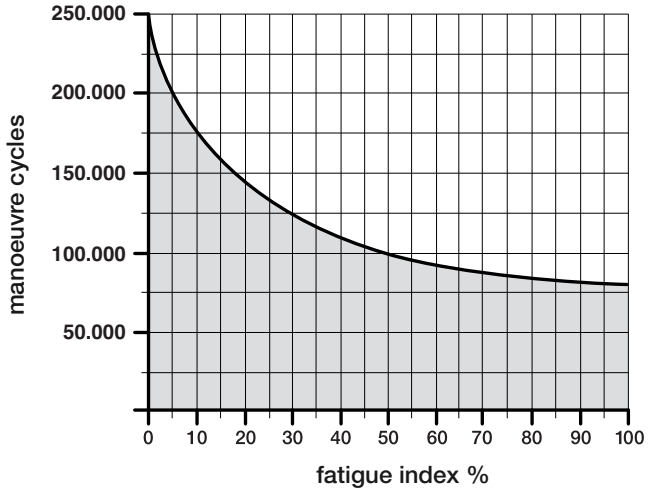
02. In **Graph 2** of the value just found, trace a vertical line that crosses the curve; from this point trace a horizontal line until the "manoeuvre cycles" line is crossed. The value determined is the estimated duration of your product.

The estimation of duration is made on the basis of the design calculations and the test results performed on prototypes. In fact, as it is an estimate, it does not represent any guarantee regarding the effective duration of the product.

TABLE 1

Length of the panel		**≤ 2 m**	**2 - 3 m**	**3 - 4 m**	**4 - 5 m**
Weight of the panel		**Fatigue index**			
	< 150 Kg	0 %	10 %	20 %	30 %
	150 - 350 Kg	10 %	20 %	30 %	40 %
	350 - 550 Kg	20 %	30 %	40 %	50 %
	550 - 750 Kg	30 %	40 %	50 %	-
	750 - 900 Kg	40 %	50 %	-	-
Environmental temperature exceeding 40°C or below 0°C or humidity exceeding 80%					15 %
Blind panel					20 %
Installation in windy area					15 %

GRAPH 2



Example of the duration calculation of an Big Metro gear motor (refer to Table 1 and Graph 2):

- panel length: 3 m and panel weight: 500 Kg = fatigue index: 30%
- Installation in windy areas = fatigue index: 15%
- does not have other elements of fatigue
Total fatigue index = 45%

Estimated duration = 110.000 manoeuvre cycles

CE DECLARATION OF CONFORMITY
and declaration of incorporation of "quasi machinery"

Declaration in accordance with the Directives: 2004/108/EC (EMC); 2006/42/EC (MD) appendix II, part B

Note *- The contents of this declaration correspond to declarations in the official document deposited at the registered offices of Nice S.p.a. and in particular to the last revision available before printing this manual. The text herein has been re-edited for editorial purposes.*
A copy of the original declaration can be requested from Nice S.p.a. (TV) I

Number: 389/BM.. **Revision:** 0 **Language:** EN

Manufacturer's Name: NICE s.p.a.
Adress: Via Pezza Alta 13, Z.I. Rustignè, 31046 Oderzo (TV) Italy
Person authorised to draw up technical documentation: Mr. Oscar Marchetto
Type: "Big Metro" electromechanical gearmotor
Models: BM5024
Accessories:

The undersigned, Luigi Paro, in the role of Managing Director, declares under his sole responsibility, that the product specified above conforms to the provisions of the following directives:

- DIRECTIVE 2004/108/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of 15 December 2004 regarding the approximation of member state legislation related to electromagnetic compatibility, repealing directive 89/336/EEC, according to the following harmonized standards: EN 61000-6-2:2005, EN 61000-6-3:2007

Directive 2006/42/EC THE EUROPEAN PARLIAMENT AND COUNCIL of 17 May 2006 regarding machinery and which amends directive 95/16/EC (recasting)

- It is hereby declared that the pertinent technical documentation has been compiled in compliance with appendix VII B of directive 2006/42/EC and that the following essential requirements have been observed: 1.1- 1.1.2- 1.1.3- 1.2.1-1.2.6- 1.5.1-1.5.2- 1.5.5- 1.5.6- 1.5.7- 1.5.8- 1.5.10- 1.5.11
- The manufacturer undertakes to transmit to the national authorities, in response to a motivated request, all information regarding the "quasi-machine", while maintaining full rights to the related intellectual property.
- Should the "quasi machine" be put into service in a European country with an official language other than that used in this declaration, the importer is obliged to arrange for the relative translation to accompany this declaration.
- The "quasi-machine" must not be used until the final machine in which it is incorporated is in turn declared as compliant, if applicable, with the provisions of directive 2006/42/EC.

The product also complies with the following standards:
EN 60335-1:2002 + A1:2004 + A11:2004 + A12:2006 + A2:2006 + A13:2008, EN 60335-2-103:2003

The product also complies, within the constraints of applicable parts, with the following standards:
EN 13241-1:2003, EN 12445:2002, EN 12453:2002, EN 12978:2003

Oderzo, 1 April 2011

Luigi Paro *(Managing Director)*

Nice SpA
Oderzo TV Italia
info@niceforyou.com

www.niceforyou.com

2009_067_MG_08-04-2011

Mindy

Control unit

A60

Instructions and warnings for the fitter

Istruzioni ed avvertenze per l’installatore

Instructions et recommandations pour l’installateur

Anweisungen und Hinweise für den Installateur

Instrucciones y advertencias para el instalador

Instrukcje i uwagi dla instalatora

Aanwijzingen en aanbevelingen voor de installateur

Nice

Mindy A60

Index: **page**

1) Warnings

GB

This manual contains important information regarding safety. Before starting installation of the components, it is important that you read all the information contained herein. Store this manual safely for future use.
Due to the dangers which may arise during both the installation and use, installation must be carried out in full observance of the laws, provisions and rules currently in force to ensure maximum safety.
This chapter provides details of general warnings. Other more specific warnings are detailed in Chapters “3.1 Preliminary Checks” and “6 Testing and Commissioning”.

⚠According to the most recent European legislation, the automation of doors or gates is governed by the provisions listed in Directive 98/37/CE (Machine Directive) and, more specifically the standards: EN 13241-1 (harmonised standard); EN 12445; EN 12453 and EN 12635, which enables the declaration of machine conformity to the machine directive.

Visit “www.niceforyou.com” for further information and guidelines for risk analysis and how to draw up the Technical Documentation.
This manual has been especially written for use by qualified fitters. Except for the enclosed specification “Instructions and Warnings for Users” to be removed by the installer, none of the information provided in this manual can be considered as being of interest to the end users!

- Any use or operation not explicitly provided for in these instructions is not permitted. Improper use may cause damage and personal injury.
- A risk analysis must be carried out before starting installation, including a the list of essential safety requisites provided for in Enclosure I of the Machine Directive, indicating the relative solutions employed. N.B. Risk analysis is one of the documents included in the “Technical Documentation” for this automation.
- Check whether additional devices are needed to complete the automation based on the specific application requirements and dangers present. The following risks must be considered: impact, crushing, shearing, dragging, etc. as well as other general dangers.
- Do not modify any components unless such action is specified in this manual. Operations of this type are likely to lead to malfunctions. NICE disclaims any liability for damage resulting from modified products.
- During installation and use, ensure that solid objects or liquids do not penetrate the control unit or other open devices. If necessary, contact the NICE customer service department; use in these conditions can be dangerous.
- The automation system must not be used until it has been commissioned as described in chapter 6 “Testing and commissioning”.
- The packaging materials must be disposed of in compliance with local regulations.
- If a fault occurs that cannot be solved using the information provided in this manual, contact the NICE customer service department.
- In the event that any automatic switches are tripped or fuses blown, attempt to identify and eliminate the relative fault.
- Disconnect all the power supply circuits before accessing the terminals inside the cover. If the disconnection device is not identifiable, affix the following sign: “WARNING: MAINTENANCE WORK IN PROGRESS”.

Special warnings concerning the suitable use of this product in relation to the 98/37CE “Machine Directive” (ex 89/392/CEE):

- This product is issued on the market as a “machine component” and is therefore manufactured to be integrated in a machine or assembled with other machines in order to create “a machine”, in accordance with the directive 98/37/EC, exclusively in combination with other components and in the manner described in the present instructions manual. As specified in the directive 98/37CE the use of this product is not admitted until the manufacturer of the machine on which this product is mounted has identified and declared it as conforming to the directive 98/37/CE.

Special warnings concerning suitable use of this product in relation to the 73/23/EEC “Low Voltage” Directive and subsequent amendments 93/68/CEE

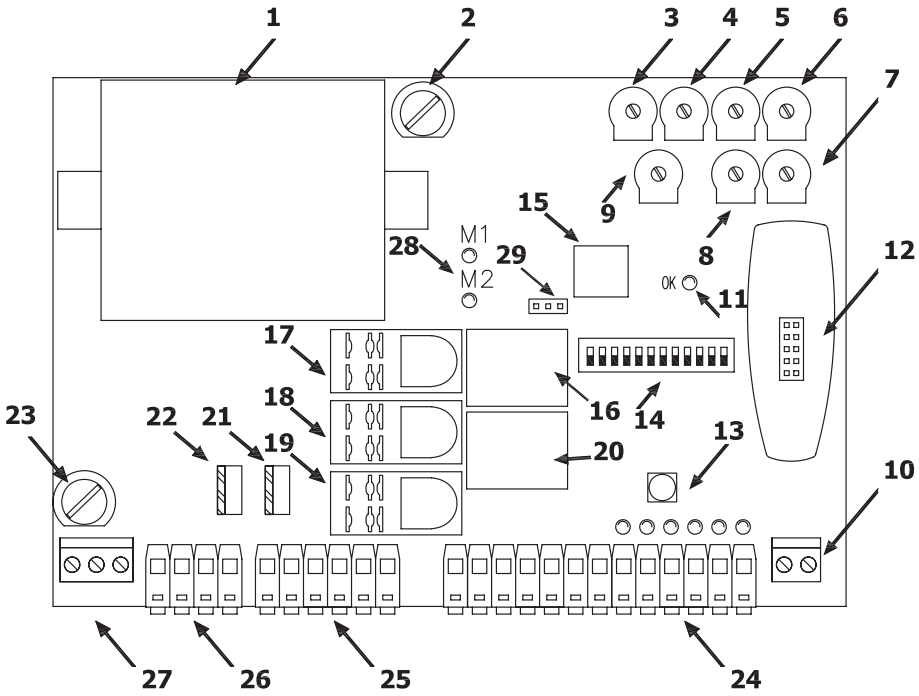
- This product complies with the provisions envisaged by the “Low Voltage” Directive if used in the configurations foreseen in this instruction manual and in combination with the articles present in the Nice S.p.a. product catalogue. If the product is not used in the specified configurations or is used with other products that have not been foreseen, the requirements may not be guaranteed; use of the product is prohibited in these conditions until compliance with the requirements foreseen by the directive has been verified by installers.

Special warnings concerning suitable use of this product in relation to the 89/336/EEC “Electromagnetic Compatibility” Directive and subsequent amendments 92/31/EEC and 93/68/EEC:

- This product has undergone tests regarding electromagnetic compatibility in the most critical of use conditions, in the configurations foreseen in this instruction manual and in combination with articles present in the Nice S.p.A. product catalogue. Electromagnetic compatibility may not be guaranteed if used in configurations or with other products that have not been foreseen; use of the product is prohibited in these conditions until compliance with the requirements foreseen by the directive has been verified by installers.

2) Product description

This control unit for the automation of gates and doors enables control of two gearmotors with single-phase alternating current.
The unit features a series of Dip-switches (mini switches) that enable the selection of the various functions, as well as trimmers used for making adjustments.
The status of the inputs is signalled by LED's located next to the inputs. An additional LED located near the microprocessor indicates whether the internal logic is operating properly.
To facilitate part identification, **Fig.1** below shows the most significant components.



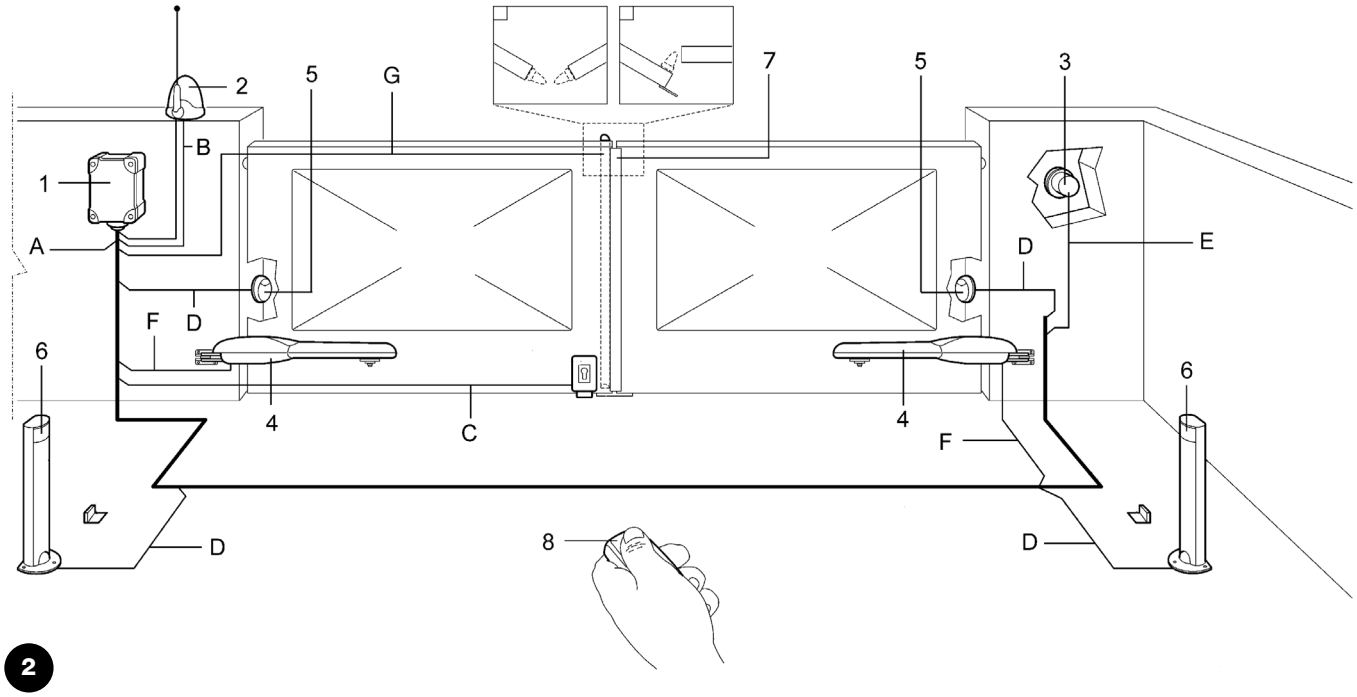
1

1 Transformer
2 Low voltage fuse (500 mA F)
3 Force adjustment trimmer (F)
4 Pause Time adjustment trimmer (TP)
5 Opening Time Delay adjustment trimmer (TRA)
6 Motor 1 Working Time adjustment trimmer (TL1)
7 Motor 2 Working Time adjustment trimmer (TL2)
8 Closing Time Delay adjustment trimmer (TRC)
9 Manoeuvre balance trimmer (BAL)
10 Terminal board for aerial
11 Led OK
12 Radio slot connector
13 Step-by-step button
14 Function selection Dip-Switch
15 Microprocessor
16 Electric lock relay
17 Common motor relay
18 Courtesy light relay
19 Open / Close movement direction relay
20 Phototest relayt
21 Motor 2 Triac
22 Motor 1 Triac
23 Rapid fuse (5A 230Vac) or (6.3A 120Vac) power
24 Input / output control terminal board
25 Motor outputs terminal board
26 Flashing / C.tsy light output terminal board
27 Power supply terminal board
28 Motors ON LED
29 Jumper for selection of deceleration mode (M-RAL)

2.1) Operating limits

Chapter 9 “Technical Characteristics” provides the only data needed to determine whether the products are suitable for the intended application.

2.2) Typical system



2

1. Control Unit A60
2. Flashing light with incorporated aerial
3. Key-operated selector switch
4. Motors
5. Couple of photoelectric cells PHOTO
6. Couple of photoelectric cells PHOTO 1
7. Sensitive edge
8. Radio transmitter

2.3) List of cables

The typical system shown in figure 2 also states the cables required for connection of the various devices, the specifications of which are provided in table 1.

⚠ **The cables used must be suitable for the type of installation; for example, an H03VV-F type cable is recommended for indoor applications, while H07RN-F is suitable for outdoor applications.**

Table 1: List of cables

Connection	Tipo cavo	Maximum admissible length
A: Electrical power line	N°1 cable 3x1,5mm²	30m (note 1)
B: Flashing light with aerial	N°1 cable 2x0,5mm²	20m
	N°1 shielded cable type RG58	20m (less than 5m recommended)
C: Electric lock	N°1 cable 2x1mm²	20m
D: Photocells	N°1 cable 2x0,25mm² (Tx)	30m
	N°1 cable 4x0,25mm² (Rx)	30m
E: Key-operated selector switch	N°1 cable 4x0,25mm²	30m
F: Connection to the motors.	N°1 cable 4x1,5mm²	3m
G: Connection to sensitive edge	N°1 cable 2x0,25mm²	30m

Note 1: power supply cable longer than 30m may be used provided it has a larger gauge, e.g. 3x2,5mm², and that a safety earthing system is provided near the automation unit.

3) Installation

⚠ The installation must be carried out by qualified personnel in compliance with current legislation, standards and regulations, and the directions provided in this manual.

3.1) Preliminary checks

Before proceeding with the installation:

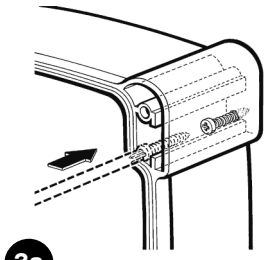
- Check that all the materials are in excellent condition, suitable for use and compliant with current standards.
- Ensure that the structure of the gate is suitable for automation.
- Ensure that the mounting positions of the various devices are protected from impact and that the mounting surfaces are sufficiently sturdy.
- Install cable or pipe leads only at the bottom of the unit; for no reason whatsoever must the side and top walls be perforated. The cables must only enter the unit from the bottom!
- Insert suitable mechanical stops, anchored to the ground, both for opening and closing manoeuvres.
- Components must never be immersed in water or other liquids. Keep away from heat sources and open flames; in acid, saline or potentially explosive atmosphere; this could damage A60 and cause malfunctions or hazardous situations.
- If there is an access door in the leaf, or within the range of movement of the gate, make sure that it does not obstruct normal travel. Mount a suitable interlock system if necessary.
- Only connect the control unit to a power supply line equipped with a safety grounding system.
- The power supply line must be protected by suitable magnetothermal and differential switches.
- A disconnection device must be inserted in the power supply line from the electrical mains (the distance between the contacts must be at least 3.5mm with an overvoltage category of III) or equivalent system, for example an outlet and relative plug. If the disconnection device for the power supply is not mounted near the automation, it must have a locking system to prevent unintentional, unauthorised connection.

3.2) Fixing the control unit

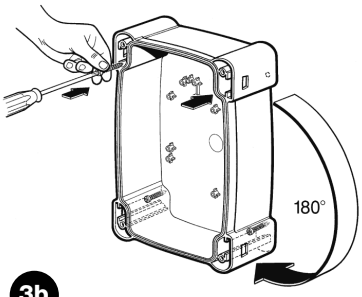
Insert the two screws in the upper holes provided, sliding them on the guide as in fig. 3a and partly screwing them in. Turn the control unit through 180° and perform the same operation with the other 2 screws. Fix the control unit on to the wall.

Fix the cover on the desiderd part (with opening on the right or left), press firmly on the arrows.

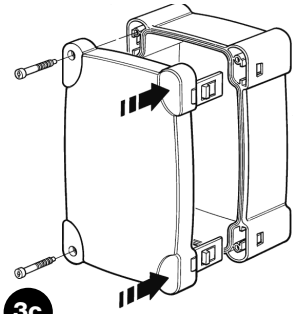
To remove the cover, press with a screwdriver on the join and push upwards at the same time.



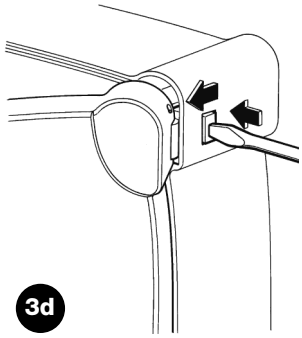
3a



3b



3c



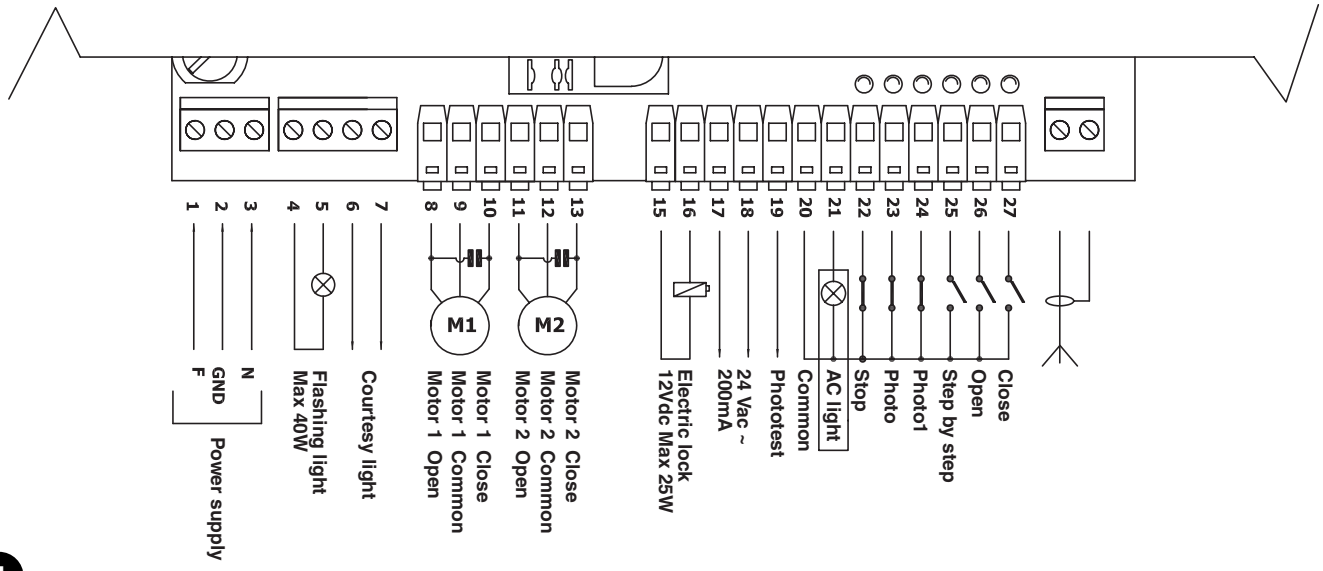
3d

3.3) Electrical connections

⚠ To safeguard the operator and avoid damaging the components, make sure that the control unit is switched off while you are wiring or plugging in the various cards.

- Power the control unit using a 3 x 1.5 mm² cable; should the distance between the unit and the earth connection exceed 30m, install an earth plate near the unit.
- Use wires with a minimum cross-section of 0.25 mm² to connect extra-low voltage safety circuits.
- Use shielded wires if the length exceeds 30m and only connect the earth braid to the control unit side.
- Do not make connections to cables in buried boxes even if they are completely watertight.
- If the inputs of the Normally Closed (NC) contacts are not used, they should be jumped with the “24V common” terminal except for the photocell inputs if the phototest function is enabled. For further information please see the paragraph 3.5 “Notes about connections“ in the part “ Phototest “.
- If there is more than one (NC) contact on the same input, they must be connected in SERIES.
- If the inputs of the Normally Open (NA) contacts are not used they should be left free.
- If there is more than one (NA) contact on the same input, they must be connected in PARALLEL.
- The contacts must be mechanical and potential-free; no stage connections are allowed, such as those defined as "PNP", "NPN", "Open Collector", etc.

Carry out the necessary connections, following the diagram in **Fig. 4** and the following description of the connections.
Remember that there are specific standards that must be complied with both as regards the safety of the electrical systems and as regards automatic gates.



4

3.4) Description of electrical connections

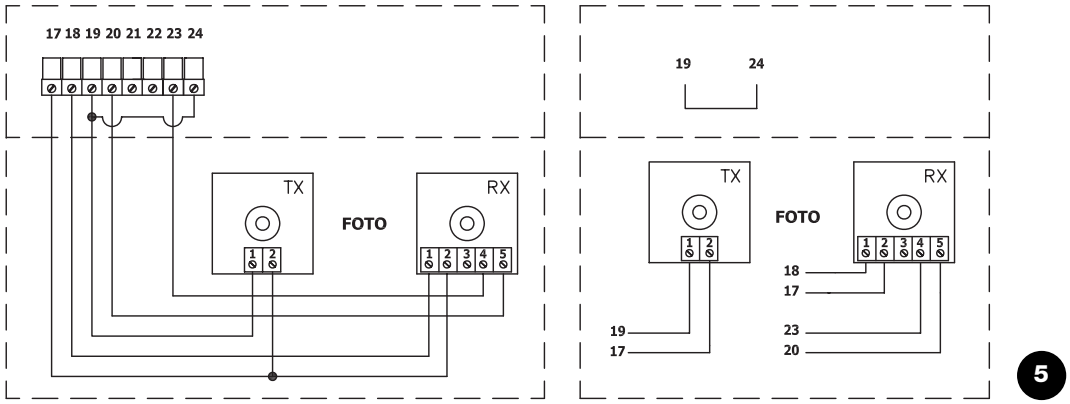
The following table provides a brief description of the possible control unit output connections.

Terminals	Function	Description
1-2-3 :	Power supply =	Mains power line
4-5 :	Flashing light =	Output for connecting flashing light to mains voltage (Max. 40W)
6-7 :	Courtesy light =	Clean contact output for courtesy light connection (Max. 5A)
8-9-10 :	Motor1 =	Motor 1 control output,
11-12-13 :	Motor2 =	Motor 2 control output
15-16 :	Electric lock =	12 Vdc output for electric lock activation, max. power 25W
17-18 :	24 Vac =	Power supply to 24Vac services (Max. 200 mA)
19 :	Phototest =	Phototest output - “TX” power supply to photocells - (Max. 75 mA)
20 :	Common =	Common for all inputs
21 :	AC light =	24 Vac output for open gate indicator light (Max. 2W)
22 :	Stop =	Input with “Stop” function (Stop and short reverse run)
23 :	Photo =	Input for safety devices
24 :	Photo1 =	Input for additional safety device
25 :	Step by step (PP) =	Input for cyclic movement (“Open” – “Stop” – “Close” – “Stop”)
26 :	Open =	Input for opening function
27 :	Close =	Input for closing function
	Aerial =	Input for the radio receiver aerial

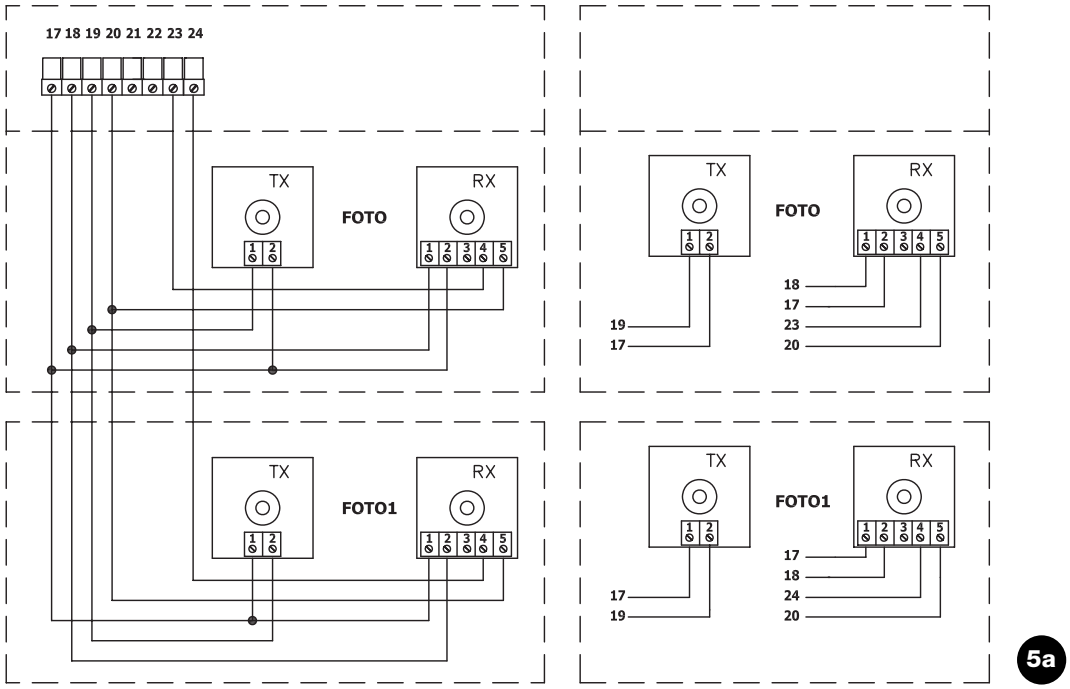
3.5) Notes about connections

For the most part, connections are easy; a lot of them are direct connections to a single user point or contact but some are a little more complex:

All the single-phase asynchronous motors need a capacitor for them to work properly; some gearmotors have this capacitor already connected inside while others have to have the capacitor connected externally. In this case, the capacitor must be connected between the motor's OPEN and CLOSE phases. To be more practical the capacitor should be connected directly inside the unit.



5



5a

The "Phototest" function improves the reliability of the safety devices and puts the control unit and safety photocells in "category 2" according to EN 954-1 standard (ed. 12/1996).

Each time a manoeuvre is begun, the related safety devices are checked and the manoeuvre is started only if everything is in order. Should the test be unsuccessful (the photocell is blinded by the sun, cables have short circuited, etc.) the failure is identified and the manoeuvre is not carried out.

To enable the Phototest function:

- Set Dip Switch 10 to ON
- Connect the safety devices as shown in **fig. 5** (when using the PHOTO output alone), or as shown in **fig. 5a** (when using PHOTO1 as well).
  The photocell transmitters are not powered directly from the service output, but through the dedicated PHOTOTEST output. The maximum current available at the PHOTOTEST output is 75mA (3 pairs of photocells).
- Power the receivers directly from the service output of the control unit (terminals 17-18).

The photocells are tested as follows: when a movement is required, all the receivers involved in the movement are checked to make sure they give their consent, then power to the transmitters is disconnected; next all the receivers are checked to make sure they signal the fact by withholding their consent; the transmitters are then powered and the consent of all the receivers is verified once more. Only if this sequence is successfully carried out will the manoeuvre be performed.

It is always a good idea to activate the synchronisation function by cutting the jumpers on the transmitters. This is the only way to make sure that two pairs of photocells will not interfere with each other. Read the instructions for "SYNCHRONISED" operation in the photocell manual.

If an input subjected to PHOTOTEST is not being used (see PHOTO1) but you still require the phototest function, connect the unused input with the PHOTOTEST output (terminals 19-24) using a jumper; see **fig. 5a**.

If at a later time the Phototest function is no longer required, set Dip-Switch 10 to the OFF position.

3.6) Checking the connections

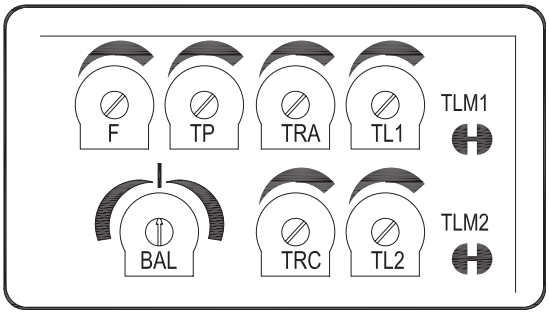
⚠ **The following operations entail working on live circuits; most of these run on extra-low safety voltage so they are not dangerous; however, some are mains voltage circuits, which means they are HIGHLY DANGEROUS! Pay the utmost attention to what you are doing and NEVER WORK ALONE!**

- Power the control unit and check that voltage between terminals 17-18 is approx. 24Vac.
- Check that the "OK" LED flashes rapidly for a few moments and then that it flashes at a regular frequency.
- Now check that the LED's related to the N.C. (Normally Closed) contacts are on (all safety devices active) and that the LED's related to the N.O. (Normally Open) inputs are off (no command); if this is not the case, check the connections and efficiency of the various devices. The STOP input switches off both FCA and FCC.
- Release the leaves, take them to the halfway point and then stop them; this way the leaves will be free to move in either the opening or closing direction.
- Now make sure that movement occurs in the right direction, i.e., see whether the movement set on the unit corresponds to that of the leaves. This check is of paramount importance, if the direction is wrong, in some cases (in the "Semiautomatic" mode, for instance) the "Automatic" system might appear to be working properly; in fact, the OPEN cycle is similar to the CLOSE cycle but with one basic difference: the safety devices are ignored in the closing manoeuvre, which is normally the most dangerous, and they will trigger in the opening manoeuvre, causing the gate to close against an obstacle with disastrous results!
- To see whether the direction of rotation is correct, give a short impulse to the Open input and make sure that the automatic system moves in the opening direction; if this movement is incorrect, proceed as follows:
  – Turn the power off
  – Invert the power conductors of the wrong motor/s. (In the case of M1, invert the connection of terminals 8-10; for M2, invert the connection of terminals 11 – 13).
  – Once this has been done, check whether the direction of rotation is correct by repeating the last operation.

The "OK" LED located in the centre of the board next to the microprocessor has the task of signalling the status of the internal logic: regular flashing at 1 second intervals indicates that the internal microprocessor is active and waiting for commands. When the microprocessor recognises a variation in the status of an input (whether it is a command or a function Dip-Switch input) it generates a rapid double flash even if the variation does not have any immediate effects. Extremely rapid flashing for 3 seconds means that the control unit has just been powered or is carrying out internal testing. Lastly, irregular flashing means that the test has been unsuccessful and that a fault has occurred.

4) Adjustments

Adjustments can be made through trimmers that modify the following parameters:



• WORKING TIME (TL1 TL2):
These adjust the maximum duration of the opening or closing manoeuvre of motor 1 (TL1) and motor 2 (TL2).

The adjustments made to the trimmers (TL1 TL2) take effect the first time a closed gate performs an opening manoeuvre (working time of the 2 leaves finished). Therefore always adjust the trimmers when the gate is closed.
If gearmotors with electric limit switches or limit stops are used, adjust these switches or stops to maximise the opening or closing range of a leaf.
To adjust the working times TL, select the "Semiautomatic" operating mode by setting Dip-Switch 1 to ON, then adjust the TL trimmers to halfway along the travel distance. When these adjustments have been made, execute an opening and closing cycle; if necessary also adjust the TL trimmers so that there is enough time to execute the entire manoeuvre and still leave a margin of 2 or 3 seconds before the electric limit switches (on the motors with limit switches) or the limit stops cut-in.
In order to check when the working time for the two motors terminates, check whether the Motors ON LEDs, located on the control unit, have switched off. (The LEDs will switch off when the Working Time for the respective motor is up).
If the TL trimmers are at maximum and there still is not enough time to perform the entire manoeuvre, cut the TLM1 jumper to increase the working time of motor 1 and cut the TLM2 jumper to increase the working time of motor 2. These jumpers are located alongside the corresponding trimmers.
If you wish to use the DECELERATION function (Dip-Switch 8 On), adjust the working time trimmers so that the motors begin the deceleration stage approximately 50 - 70cm before the opening or closing limit stops are reached.

• OPENING TIME DELAY (TRA) AND CLOSING TIME DELAY (TRC):
If the gate has two leaves that might jam if they start moving simultaneously, or that might overlap when closing, you need to adjust the Opening Time Delay trimmer (TRA) or the Closing Time Delay (TRC) trimmer to overcome these problems.
The TRA trimmer must be adjusted to ensure that the leaf moved by the second motor is out of the range of the leaf moved by the first motor when the latter starts moving.
The TRC trimmer must be adjusted to ensure that, during the closing operation, the leaf moved by the second motor reaches the end of its travel after the first motor has completed its closing manoeuvre.

• PAUSE TIME (TP):
In "Automatic" mode, this adjusts the time span between the end of the opening manoeuvre and the beginning of the closing manoeuvre.

• FORCE (F):
Take great care when adjusting the FORCE (F) trimmer, as this may affect the level of safety of the automatic system. Trial by error is required to adjust this parameter, measuring the force applied to the leaf and comparing it with regulatory values.

• BALANCING manoeuvre times (BAL):
The BALANCE trimmer on this control unit enables a differentiation between the work time between leaf opening and closing manoeuvres.
This is useful when the motor has different speeds in the two directions, such as in the case of hydraulic motors or when the gate leafs are offset in opening and closing, causing different force levels and thus requiring different travel times within the same space.
Therefore if the gate is offset in closing, the opening manoeuvre may terminate before reaching the mechanical stops, in which case rotate the BAL trimmer clockwise (Op) to increase the opening time until the deceleration starts at the set point (50 cm before the mechanical stop) and the manoeuvre lasts for a further 3-5 seconds after the leafs have reached the mechanical stops.
On the other hand, if the gate is offset in opening, balance by rotating the BAL trimmer anti-clockwise (Cl) to extend the closing manoeuvre time.
If the trimmer is positioned exactly at the centre, the opening and closing manoeuvres will have the same work time.

4.1) Operating modes

In the manual operating mode, the OPEN input enables an opening movement, while the CLOSE input enables a closing movement. The STEP-BY-STEP input enables an alternating opening and closing movement. Movement stops as soon as the input command stops. During an opening or closing manoeuvre, movement will stop also when the command input or the signal from the safety devices is disabled. During both opening and closing manoeuvres, the activation of the STOP command will cause the movement to stop immediately. When a movement is stopped, stop the input command before giving a command to start a new movement.
When one of the automatic modes ("Semiautomatic", "Automatic" or "Automatic + Close Always") is operational, a command impulse to the OPEN input causes an opening manoeuvre. A command impulse to the STEP-BY-STEP input begins an alternating closing and opening manoeuvre. A second impulse to the STEP-BY-STEP input or to the same input the started the movement will cause it to stop.

Both in the opening and closing phases, the activation of the STOP command will cause an immediate stopping of movement and a short reverse run. If a continuous signal rather than an impulse is maintained in a command input, a "prevalence" condition will be generated causing the other command inputs to be disabled **(this is useful if you need to connect a clock or a Night/Day selector switch**).

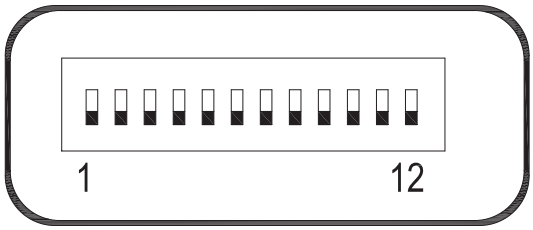
If an automatic operating mode has been chosen, the opening manoeuvre will be followed by a pause and then a closing manoeuvre. If PHOTO triggers during the pause, the timer will be reset with a new pause time; if, on the other hand, STOP is activated during the pause, the closing function will be cancelled and the system will switch to the STOP mode.
PHOTO will have no effect if it is triggered during the opening manoeuvre, however if PHOTO is triggered during the closing manoeuvre, the movement will reverse, pause, and then start to close again.

5) Programming

The unit comprises a set of microswitches used to operate various functions so as to render the system more suitable to user needs and safer in the different ways of usage. All functions are activated by placing the dip-switch in the "ON" position while they will not be activated if the corresponding dip-switches are "OFF"; some functions do not have an immediate effect and only have sense in certain conditions like.

⚠ ATTENTION: some of the programmable functions are linked to safety aspects, very carefully evaluate the effects of a function and see which function gives the greatest possible level of safety.

When servicing a system, before you modify a programmable function, ascertain the reason why, during installation, certain choices were made and then verify if, with the new programming, safety will be impaired.



5.1) Programmable functions

With the FUNCTIONS dip-switch you can select the various functioning modes and add the functions required according to this table:

Switch 1-2	**Off Off**	= "Manual" movement, i.e. hand operated
	On-Off	= "Semiautomatic" movement
	Off-On	= "Automatic" movement, i.e. automatic closing
	On-On	= "Automatic + always close" movement
Switch 3	**On**	= Condominium operation < not available in manual mode >
Switch 4	**On**	= Pre-flashing
Switch 5	**On**	= Close 5" after Photo < in automatic mode > or Close after Photo < in semiautomatic mode >
Switch 6	**On**	= "Photo1" safety also during opening manoeuvres
Switch 7	**On**	= Ramming
Switch 8	**On**	= Deceleration
Switch 9	**On**	= Maintain pressure
Switch 10	**On**	= Phototest
Switch 11	**On**	= Courtesy Light in impulse mode
Switch 12	**On**	= Close becomes Open for Pedestrians

Note 1: Some functions are only available in certain conditions; these are explained by the notes between the characters "<...>".

5.2) Description of functions

Here is a brief description of the functions that can be added by setting the corresponding Dip-Switch to “ON”.

Switch 1-2: Off Off = “Manual” movement (hand operated)
On-Off = “Semiautomatic” movement
Off-On = “Automatic” movement (automatic closing)
On-On = “Automatic + Always Close” movement

In the “Manual” operating mode, the gate will only move as long as the control button is held down.
In “Semiautomatic”mode, a command impulse will perform the whole movement until the Working Time limit expires or the limit stop is reached. In the “Automatic” operating mode, an opening manoeuvre is followed by a pause, after which the gate closes automatically. The “Always Close” function comes into play following a power failure, automatically activating a closing manoeuvre preceded by 5 seconds of pre-flashing.

Switch 3: On = Condominium operation (not available in Manual mode)
In the Condominium operating mode, once an opening manoeuvre has started it cannot be interrupted by other command impulses, such as STEP-BY-STEP or OPEN, until the gate has finished opening. During a closing manoeuvre, a new command impulse will stop the gate and reverse the direction of movement in order to open the gate.

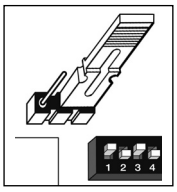
Switch 4: On = Pre-flashing
A command impulse activates the flashing light, followed by movement 5 seconds later (2 seconds later in manual mode).

Switch 5: On = Close 5” after Photo < in automatic mode > or Close after Photo < in semiautomatic mode >
This function, in Automatic mode, allows the gate to be kept open only for the time required for transit; when the PHOTO stage is over, the manoeuvre stops. After 5 seconds a closing manoeuvre will automatically begin. If PHOTO triggers in the “Semiautomatic” mode during a closing manoeuvre, the “Automatic” closing manoeuvre is activated with a set pause time.

Switch 6: On = Safety (Photo1) also during the opening manoeuvre
The “Photo1” safety device is normally active only during the closing manoeuvre; if Dip-Switch 6 is turned "On", the safety device will cause the movement to stop also during the opening manoeuvre.
In the Semiautomatic or Automatic modes, the opening manoeuvre will start again immediately after the photocell has been disengaged.

Switch 7: On = Ramming
When reversible actuators are used, so that the gate does not remain closed thanks to the thrust of the motors alone, it is necessary to install an electric lock (see actuators’ operating instructions). The electric lock may apply a natural thrust to the gate, causing the leaves to open slightly; at times this thrust is so powerful as to cause the locking mechanism to jam.
With the ramming function on, a brief closing cycle is activated before an opening manoeuvre is started. This, however, will not generate any actual movement since the leaves will already be positioned against the closing limit stop.
This way, when the electric lock is activated it will be free from the effects of unwanted forces and will readily click open.

Switch 8: On = Deceleration
Deceleration consists in a 30% reduction of the nominal speed, to reduce the impact force in the gate opening and closing zones.
The deceleration function slows down the automation speed and reduces motor torque by 70%.
In automations requiring a high torque, this torque reduction could cause shutdown of the motors.
For this reason, this function is disabled on heavyweight gates and those subject to high friction.
Once the deceleration function is enabled, the Work Time (WT) trimmer must be adjusted as the deceleration start depends on the set Work Time. Therefore set the Work Time so that deceleration starts at approx. 50 cm before the mechanical stops to ensure that the manoeuvre lasts a further 3-5 seconds after reaching the mechanical stop.
A jumper (M-RAL) is fitted on the control unit to enable selection of the two DECELERATION modes; one with 70% torque reduction and one with 60% torque reduction to use on heavier gates.




70% torque reduction


60% torque reduction

Note that during deceleration, the motor noise levels increase slightly.
Before adjusting deceleration settings, read paragraph “4 Adjustments” with special reference to the operation of the Balance trimmer (BAL).

Switch 9: On = Maintain pressure
With hydraulic actuators, the thrust required to keep the gate closed is generated by a hydraulic circuit which is constantly under pressure.
However, time and wear tend to reduce the seal of the hydraulic circuit. Consequently, after a few hours of operation the internal pressure may drop, causing the leaves to open slightly.
If the “Maintain Pressure” function is enabled, every 4 hours that the gate remains closed a brief closing manoeuvre is activated in order to restore the hydraulic circuit pressure.

Switch 10: On = Phototest
This function checks photocell efficiency at the beginning of each manoeuvre. See the PHOTOTEST chapter.

Switch 11: On = Courtesy light in impulse mode
In this mode, the clean contact of the courtesy light output will remain closed for 1 sec. at the starting of each opening or closing manoeuvre, thus enabling a command impulse to be sent to an external timer.

Switch 12: On = CLOSE becomes OPEN for Pedestrians
In this mode, the CLOSE input loses it basic function and becomes a Pedestrian Step-by-Step input that allows the gate leaf controlled by motor 2 to be opened for pedestrian access.
The Pedestrian opening cycle can only be activated when the gate is closed, while if the gate is moving or open the impulse has no effect on the input.

6) Testing

After the above checks and adjustments have been made, the system can be tested.

⚠ **The automation system must be tested by qualified and experienced personnel who must establish what tests to perform based on the risks involved.**

Testing is the most important part of the whole automation process. Each single component, e.g. motor, emergency stop, photocells, etc., may require a specific test phase; please follow the procedures described in the operating instructions for each component.

To test the control unit, perform the following operations:

1. Function selection:
   - Set Dip Switch 1 to ON (Semi-automatic operation) and the remaining ones to OFF
2. Press the Open button and check that:
   - the flashing light is activated
   - the opening manoeuvre starts
   - the movement stops when the opening limit stop is reached.
3. Press the Close button and check that:
   - the flashing light is activated
   - the closing manoeuvre starts
   - the movement stops when the closing limit stop is reached.
4. Start an opening manoeuvre and make sure that during the manoeuvre the triggering of a device:
   - connected to the “Stop” input causes an immediate stop and a short reverse run
   - connected to the “Photo” input has no effect.
5. Start a closing manoeuvre and make sure that during the manoeuvre the triggering of a device:
   - connected to the “Stop” input causes an immediate stop and a short reverse run
   - connected to the “Photo” input causes the stop and subsequent reversal of the manoeuvre
   - connected to the “Photo1” input causes the stop and subsequent reversal of the manoeuvre.
6. On the connected inputs, make sure that each activation of the input generates a step in the following sequence:
   - Step-by-step input: Sequence = Open – Stop – Close – Stop
   - Open input: Sequence = Open – Stop – Open – Stopp
   - Close input: Sequence = Close – Stop – Close – Stop
7. If the “Phototest” function is used, check the efficiency of the test:
   - Interrupt the “Photo” photocell, then start a manoeuvre and check that it is not performed
   - Interrupt the “Photo1” photocell, then start a manoeuvre and check that it is not performed
   - Short the “Photo” photocell contact, then start a manoeuvre and check that it is not performed
   - Short the “Photo1” photocell contact, then start a manoeuvre and check that it is not performed
8. Perform the tests for measuring the Impact Forces as required by EN 12445.

If after the completion of the testing process additional functions are activated which could affect the safety of the system, specific testing of these functions must be performed.

6.1) Commissioning

Commissioning can take place only after all the testing phases of the control unit and the other devices have been completed successfully. It is not permissible to execute partial commissioning or to enable use of the system in makeshift conditions.

1. Prepare and store for at least 10 years the technical documentation for the automation, which must include at least the following: assembly drawing of the automation, wiring diagram, analysis of hazards and solutions adopted, manufacturer's declaration of conformity of all the devices installed (for A60 use the annexed CE declaration of conformity); copy of the instruction manual and maintenance schedule of the automation.
2. Affix a dataplate on the gate providing at least the following data:type of automation, name and address of manufacturer (person responsible for the “commissioning”), serial number, year of manufacture and “CE” marking.
3. Post a permanent label or sign near the gate detailing the operations for the release and manual manoeuvre.
4. Prepare the declaration of conformity of the automation system and deliver it to the owner.
5. Prepare the “Instructions and warnings for the use of the automation system” and deliver it to the owner.
6. Prepare the maintenance schedule of the automation system and deliver it to the owner (this must provide all directions regarding the maintenance of the single automation devices).
7. Before commissioning the automation system inform the owner in writing regarding residual risks and hazards (e.g. in the “Instructions and warnings for the use of the automation system”).

7) Maintenance and Disposal

⚠ **This charter provides information about how to draw up a maintenance schedule, and the disposal of A60.**

7.1) Maintenance

The automation must undergo maintenance work on a regular basis, in order to guarantee prolonged lifetime.

The maintenance operations must be performed in strict compliance with the safety directions provided in this manual and according to the applicable legislation and standards.

If other devices are present, follow the directions provided in the corresponding maintenance schedule differents from **A60**.

1. Is requires scheduled maintenance work every 6 months or 10.000 manoeuvres (max.) after previous maintenance.
2. Disconnect all power supplies.
3. Check for any deterioration of the components which form the automation, paying particular attention to erosion or oxidation of the structural parts. Replace any parts which are below the required standard.
4. Connect the electric power sources up again, and carry out the testing and checks stated in Paragraph “6 Testing”.

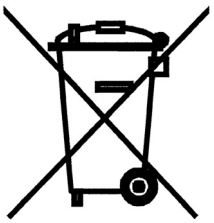
7.2) Disposal

As in the case of installation, at the end of the product lifetime, disposal procedures must be carried out by qualified personnel.

This product comprises various types of materials, some of which can be recycled while others must be disposed of. Check information on the recycling and disposal procedures according to local legislation for this product category.

⚠ **Some parts of the product may contain pollutant or hazardous substances; if disposed of into the environment these may constitute a serious risk of damage to the environment and public health.**

As indicated by the symbol in figure never dispose of this product in domestic waste. Apply “classified waste collection” procedures for disposal in accordance with local regulations or return the product to the retailer when purchasing a new model.



Local regulations may envisage serious fines in the event of illegal disposal of this product.

8) Accessories

RADIO card

The control unit features a connector for plugging in an SM radio card , which activates the inputs and allows the control unit to be remote-controlled through a transmitter.

output 1 STEP-BY-STEP
output 2 Open for pedestrians
output 3 Open
output 4 Close

9) Technical characteristics

With the aim of improving products, Nice S.p.a reserves the right to modify technical characteristics at any time without notice, while maintaining the same functionalities and intended use.

All technical characteristics stated refer to an ambient temperature of 20°C (±5°C).

Model type:	**A60**	**A60/V1**
Power	230 Vac ± 10%, 50 - 60 Hz	120 Vac ± 10%, 50 - 60 Hz
Maximum actuators power	300 W [1,3 A]	300 W [2,5 A]
Maximum flashing light power	100W	
Maximum frequency of operating cycles	unlimited	
Maximum time of continuous operation	unlimited	
Maximun current accessories (24 Vac)	200 mA	
Maximun current phototest output	75 mA	
Gate open indicator max. power SCA (24Vac)	2 W	
Maximun electric lock power 12 Vac	15 VA	
Working time	from 2,5 to 40 sec. (from 40 to 80 sec. with TLM)	
Pause time	from 5 to 80 sec.	
TRA opening delay time	0 or from 2.5 to 12 sec.	
TRC closing delay time	0 or from 2.5 to 12 sec.	
BALANCING manoeuvre times	from 0 to 8 sec.	
Force adjustment	from 0 to 100 %	
Operating temperature	-20 ÷ 50 °C	
Size	280 x 220 x 110 mm	
Weight	1,9 Kg	
Protection level	IP 55 (container undamaged)	

Instructions and Warnings for users of A60 control unit

GB

Congratulations for having chosen a Nice product for your automation system! Nice S.p.A. produces components for the automation of gates, doors, rolling gates, roller shutters and awnings: gearmotors, control units, radio controls, flashing lights, photocells and miscellaneous accessories. Nice uses only the finest materials and first-class workmanship. It focuses on the development of innovative solutions designed to simplify the use of its equipment, dedicating meticulous care to the study of its technical, aesthetic and ergonomic characteristics: From the wide range of Nice products, your installation technician will certainly have selected the one best suited to your specific requirements. However, Nice is not the producer of your automation system, which is rather the result of a combination of operations carried out by your installation technician, namely analysis, evaluation, selection of materials and system implementation. Each automation system is unique. Your installation technician is the only person who possesses the experience and professionalism needed to set up a system capable of satisfying your requirements, a system that is safe, reliable, long lasting and built in accordance with the regulations in force. An automation system is not only very convenient; it also improves the level of security in your home. Moreover, it will last for years with very little maintenance. Even though the automation system you posses meets the safety requirements of the legislation in force, this does not exclude the existence of a “residual risk”, i.e. the possibility that dangers may arise, usually as a result of improper or unreasonable use. We have prepared the following list of do's and don'ts to help you avoid any mishaps:

- **Before using your automation system for the first time**, ask the installer to explain the origin of residual risks; take a few minutes and read the users **instructions manual given you by the installer**. Retain the manual for future use and deliver it to any subsequent owner of the automation system.

- **Your automation system is a machine that will faithfully execute your commands**; unreasonable or improper use may generate dangers: do not operate the system if there are people, animals or objects within its range of operation.

- **Children:** automation systems are designed to guarantee high levels of safety and security. They are equipped with detection devices that prevent movement if people or objects are in the way, guaranteeing safe and reliable activation. However, children should not be allowed to play in the vicinity of automated systems; to prevent any accidental activations, keep all remote controls away from children: **they are not toys!**

- **Photocells do not constitute actual safety devices, but safety aids**. They are designed using highly reliable technology, but in extreme conditions may be subject to malfunctions or potential faults, and in certain cases these faults are not immediately evident.

  For this reason, it is good practice to observe the following:
  - Transit is admitted only if the gate or door is completely open with the leafs stationary
  - Transit while the gate or door is closing is **STRICTLY PROHIBITED**!

  Periodically check correct operation of the photocells and perform the scheduled maintenance at least every six months.

- **Malfunctions:** If you notice that your automation is not functioning properly, disconnect the power supply to the system and operate the manual release device. Do not attempt to make any repairs; call the installation technician and in the meantime, operate the system like a non-automatic door after releasing the gearmotor as described below.

- **Maintenance:** Like any machine, your automation needs regular periodic maintenance to ensure its long life and total safety. Arrange a periodic maintenance schedule with your installation technician. Nice recommends that maintenance checks be carried out every six months for normal domestic use, but this interval may very depending on the intensity of use. Only qualified personnel are authorised to carry out checks, maintenance operations and repairs.

- Do not modify the system or its programming and adjustment parameters in any way, even if you feel capable of doing it: your installation technician is responsible for the system.

- The final test, the periodic maintenance operations and any repairs must be documented by the person who has performed them, these documents must remain under the custody of the owner of the system.

The only recommended maintenance operations that the user can perform periodically concern the cleaning of the photocell glasses and the removal o **leaves and debris that may impede the automation**. To prevent anyone from activating the gate release the automation system. Use a slightly damp cloth to clean.

- **Disposal:** At the end of its useful life, the automation must be dismantled by qualified personnel, and the materials must be recycled or disposed of in compliance with the legislation locally in force.

- **In the event of malfunctions or power failures.** While you are waiting for the technician to come or for the power to be restored if your system is not equipped with buffer batteries, you can operate the system like any non-automatic gate. In order to do this you need to manually release the gearmotor (this operation is the only one that the user of the automation is authorized to perform): This operation has been carefully designed by Nice to make it extremely easy, without any need for tools or physical exertion.

- **Replacing the Remote Control Battery:** if your radio control, after a period of time, seems not to work as well, or not to work at all, it may simply be that the battery is exhausted (depending on the type of use, it may last from several months up to one year and more). In this case you will see that the light confirming the transmission is weak, or does not come on, or comes on only briefly. Before calling the installation technician try exchanging the battery with one from another operating transmitter: if the problem is caused by a low battery, just replace it with another of the same type. The batteries contain polluting substances: do not dispose of them together with other waste but use the methods established by local regulations.

Are you satisfied? If you wish to install another automation system in your home, call your old installation technician and use Nice products. You will get the services of a specialist and the most advanced products available on the market, superior performances and maximum system compatibility. Thank you for reading these instructions. We feel confident that you will be well satisfied with your new system: for any present or future requirements, please contact your reliable installation technician.

Nice

Headquarter

Nice SpA
Oderzo TV Italia
Tel. +39.0422.85.38.38
Fax +39.0422.85.35.85
info@niceforyou.com

Nice in Italy

Nice Padova
Sarmeola di Rubano PD Italia
Tel. +39.049.89.78.93.2
Fax +39.049.89.73.85.2
infopd@niceforyou.com

Nice Roma
Roma Italia
Tel. +39.06.72.67.17.61
Fax +39.06.72.67.55.20
inforoma@niceforyou.com

Nice worldwide

Nice France
Buchelay
Tel. +33.(0)1.30.33.95.95
Fax +33.(0)1.30.33.95.96
info@fr.niceforyou.com

Nice Rhône-Alpes
Decines Charpieu France
Tel. +33.(0)4.78.26.56.53
Fax +33.(0)4.78.26.57.53
infolyon@fr.niceforyou.com

Nice France Sud
Aubagne France
Tel. +33.(0)4.42.62.42.52
Fax +33.(0)4.42.62.42.50
infomarseille@fr.niceforyou.com

Nice Belgium
Leuven (Heverlee)
Tel. +32.(0)16.38.69.00
Fax +32.(0)16.38.69.01
info@be.niceforyou.com

Nice España Madrid
Tel. +34.9.16.16.33.00
Fax +34.9.16.16.30.10
info@es.niceforyou.com

Nice España Barcelona
Tel. +34.9.35.88.34.32
Fax +34.9.35.88.42.49
info@es.niceforyou.com

Nice Polska
Pruszków
Tel. +48.22.728.33.22
Fax +48.22.728.25.10
info@pl.niceforyou.com

Nice UK
Chesterfield
Tel. +44.87.07.55.30.10
Fax +44.87.07.55.30.11
info@uk.niceforyou.com

Nice Turkey
Istanbul
info@tr.niceforyou.com

Nice Romania
Cluj Napoca
Tel/Fax +40.264.45.31.27
info@ro.niceforyou.com

Nice Deutschland
Gelnhausen-Hailer
Tel. +49.60.51.91.52-0
Fax +49.60.51.91.52-119
info@de.niceforyou.com

Nice China
Shanghai
Tel. +86.21.575.701.46
+86.21.575.701.45
Fax +86.21.575.701.44
info@cn.niceforyou.com

Nice USA Inc.
Jacksonville, Fl.
Tel. +001.904.786.7133
Fax +001.904.786.7640
info@us.niceforyou.com

IST125.4858 Rev.02 del 25-07-2007

MOF-MOFO photocells

moon

GB Introduction

The MOON series photocell is a safety device that can be used with automatic gate and door openers to detect the presence of obstacles between the transmitter (TX) and the receiver (RX).
The effective opening angle of the photocell may be reduced to ±5° as required by the IEC 61496-2 standard. This angle is guaranteed for TX-RX distances greater than 1m.

Nice reserves the right to make any modifications to the products as it sees fit.

I Introduzione

La fotocellula della serie MOON, è un dispositivo di sicurezza utilizzabile in impianti di cancelli e porte automatiche per rilevare la presenza di ostacoli sull'asse ottico fra trasmettitore (TX) e ricevitore (RX).
La fotocellula è predisposta per la riduzione a ±5° dell'effettivo angolo di apertura come richiesto dalla norma IEC 61496-2. La riduzione dell'angolo è garantita per distanze TX-RX superiori a 1m.

Nice si riserva di apportare modifiche migliorative ai prodotti.

F Introduction

La photocellule de la série MOON est un dispositif de sécurité utilisable dans des installations avec portes et portails automatisés pour détecter la présence d'obstacles sur l'axe optique entre émetteur (TX) et récepteur (RX).
La photocellule est prévue pour la réduction à ±5° de l'angle d'ouverture effectif conformément à la norme IEC 61496-2. La réduction de l'angle est garantie pour des distances TX-RX supérieures à 1m.

Nice se réserve le droit d'apporter à tout instant les modifications qu'elle judgera utiles.

D Einleitung

Die Photozelle der Serie MOON ist eine Sicherheitsvorrichtung, die in Anlagen mit automatischen Toren und Türen verwendet werden kann, um Hindernisse auf der optischen Achse zwischen Sender (TX) und Empfänger wahrzunehmen (RX).
Wie von der Norm IEC 61496-2 gefordert, ist die Photozelle für die Reduzierung des effektiven Öffnungswinkels auf ±5° vorbereitet. Die Reduzierung des Winkels wird für Abstände zwischen TX und RX gewährleistet, die größer als 1 m sind.

Druckfehler vorbehalten, technische Änderungen der Produkte im Zuge der Weiterentwicklung vorbehalten.

E Introduccion

La fotocélula de la serie MOON es un dispositivo de seguridad que se puede utilizar en instalaciones de cancelas y puertas automáticas, para detectar la presencia de obstáculos en el eje óptico entre el transmisor (TX) y el receptor (RX).
La fotocélula está preajustada para la reducción a ±5° del ángulo efectivo de apertura, según los requisitos de la norma IEC 61496-2. La reducción del ángulo está garantizada para distancias TX-RX por encima de 1m.

Nice se reserva el derecho de realizar en sus productos las modificaciones que considerará oportunas.

PL Przedmowa

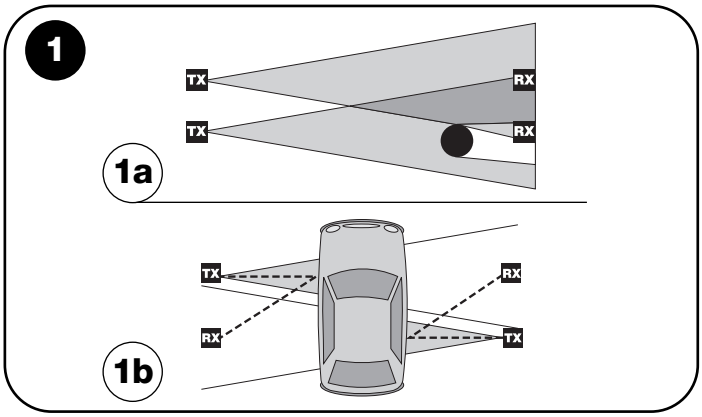
Fotokomórka z serii MOON jest urządzeniem zabezpieczającym do zastosowania w bramach i drzwiach automatycznych w celu odczytania obecność przeszkód w zasięgu promienia optycznego pomiędzy nadajnikiem (TX) i odbiornikiem (RX).
Fotokomórka przystosowana jest do redukcji o +/-5° efektywnego kąta otwarcia, tak jak jest to wymagane w normie IEC 61496-2. Redukcja kąta zagwarantowana jest dla odległości TX-RX powyżej 1m.

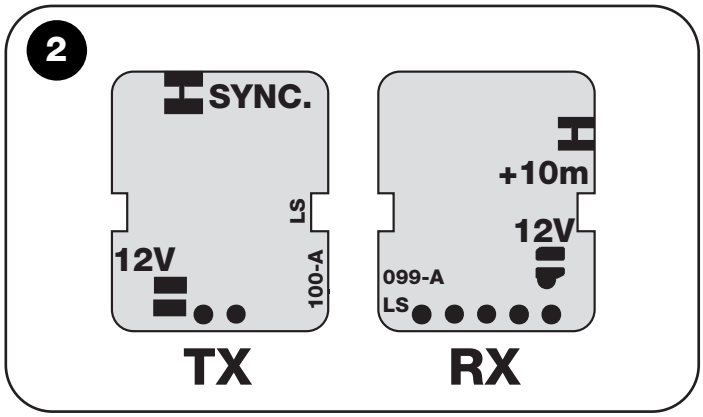
Nice rezerwuje sobie prawo wprowadzenia jakiejkolwick zmiany w produktach, którą uzna za konieczną.

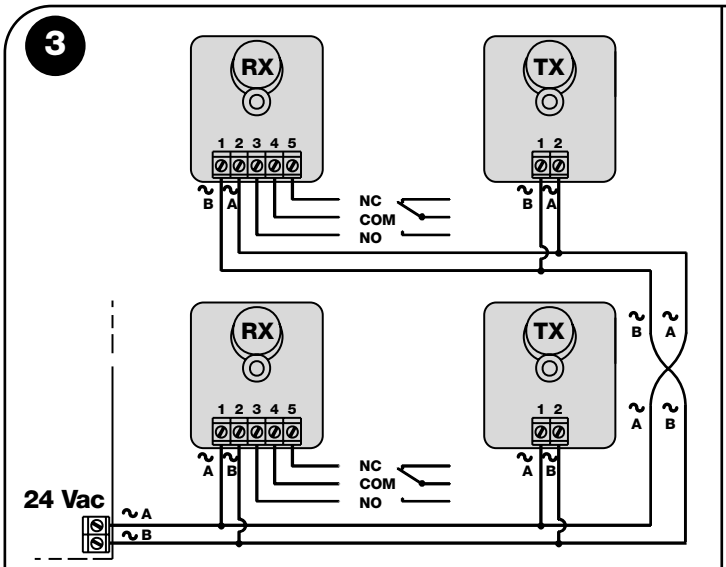
COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV ISO 9001

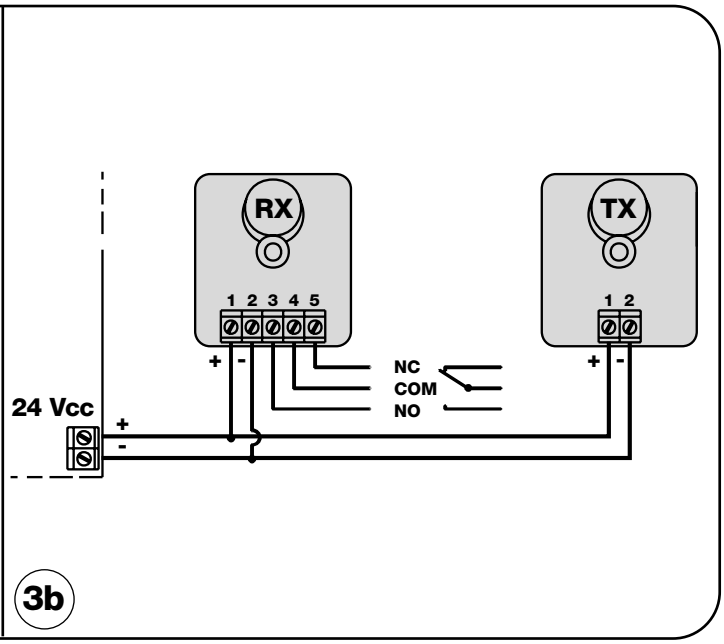
CE

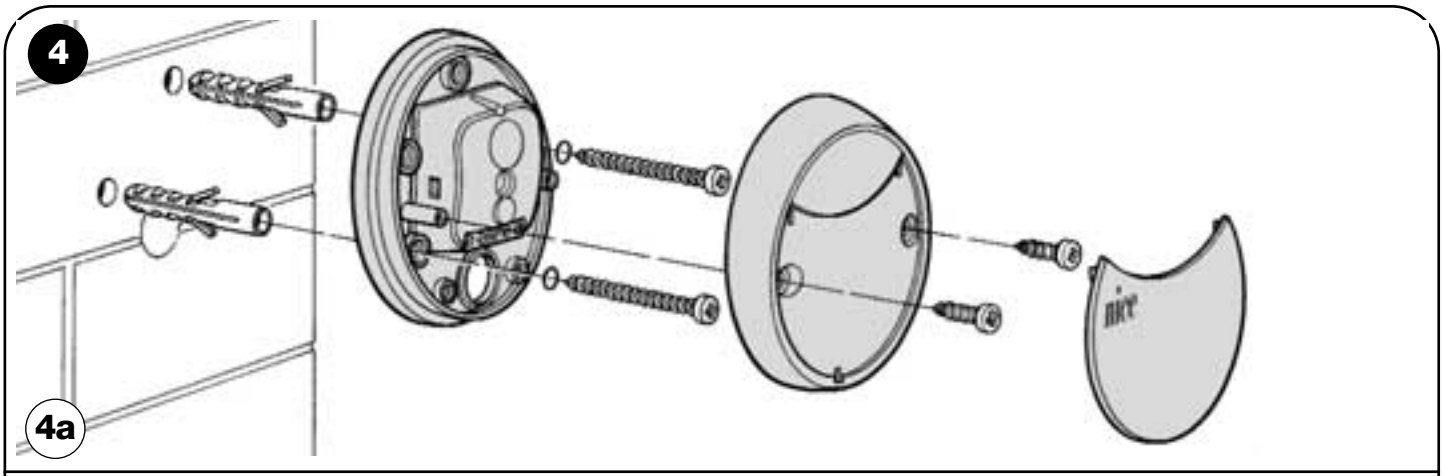
nice

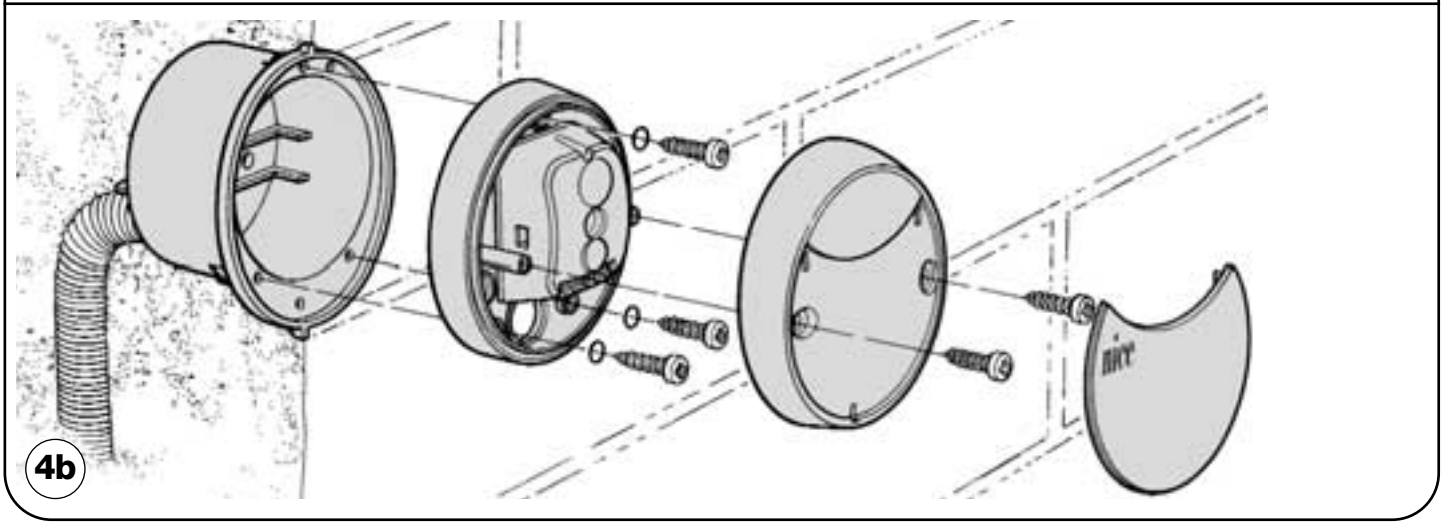

1
TX
RX
TX
RX
1a
TX
RX
RX
TX
1b


2
SYNC.
LS
12V
100-A
TX
+10m
12V
099-A
LS
RX

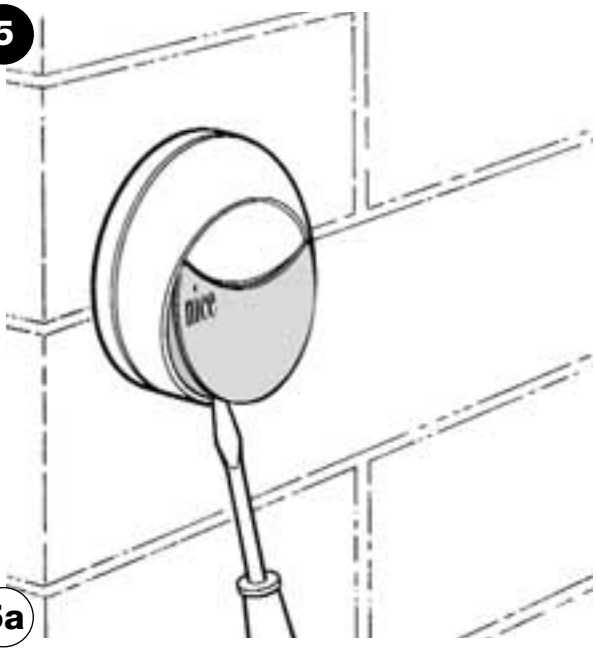

3
RX
TX
1 2 3 4 5
1 2
B
A
NC
COM
NO
24 Vac
3a


RX
TX
1 2 3 4 5
1 2
+
-
NC
COM
NO
24 Vcc
3b

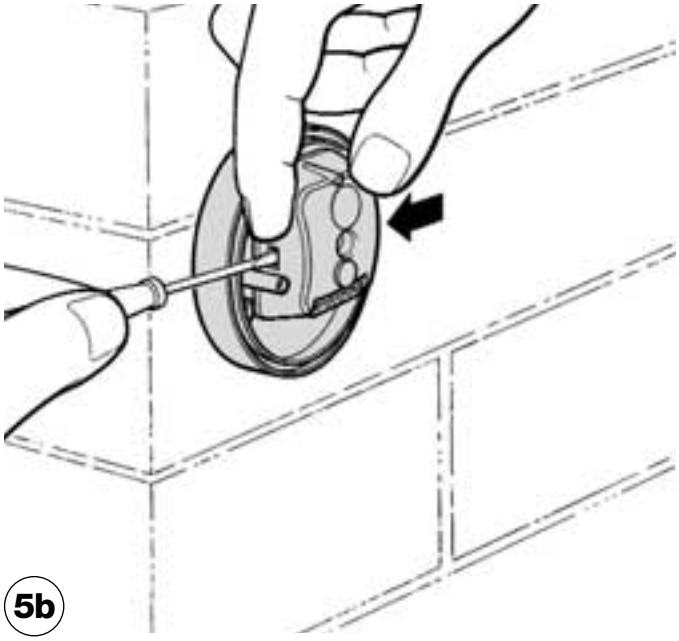

4
4a


4b

5



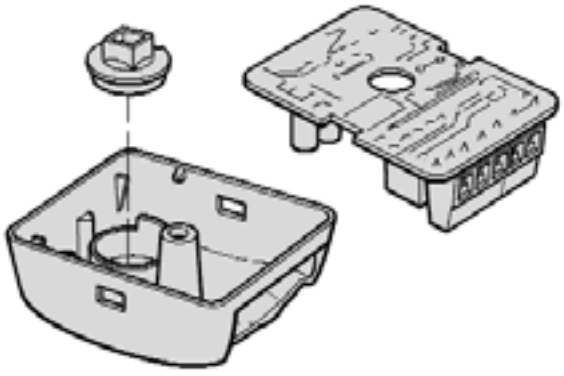
5a



5b

RX

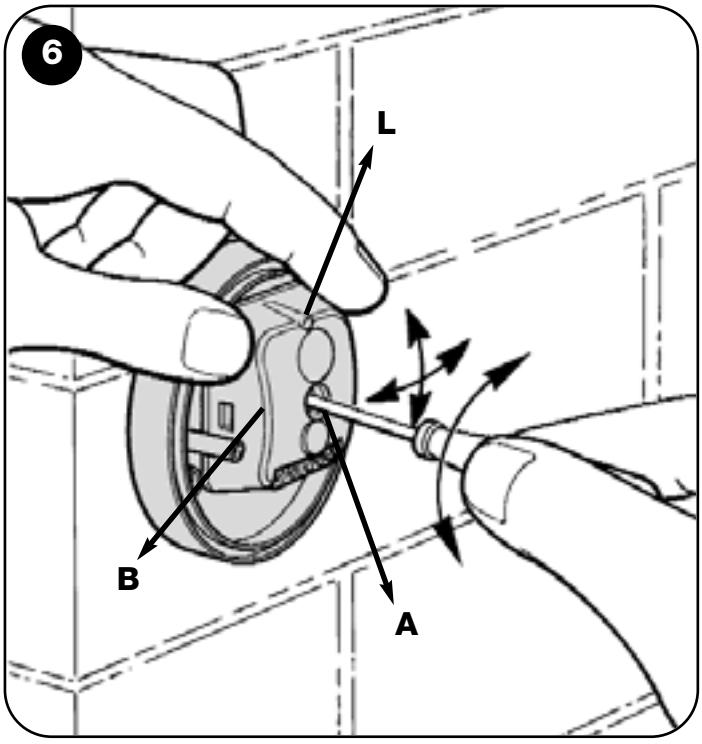
5c



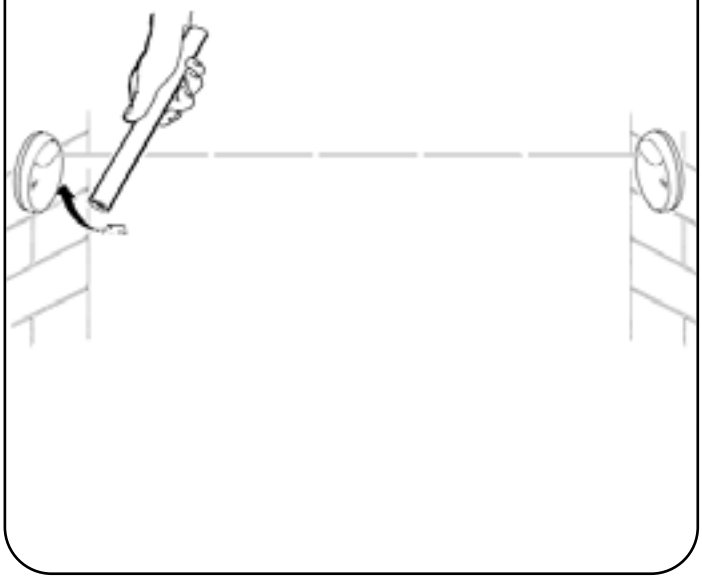
RX

5d

6



7



GB

Warnings Please read the instructions carefully before installing the product, improper use or an error in connection could jeopardise the safety or correct operation of the device.
•This photocell may only be used to detect direct interruptions between TX and RX; it may not be reflected.
•Fix the photocell on a hard, vibration-free surface.
•In order to obtain an "ESPE type 2" safety device, the photocell must be connected to central units fitted with "fototest", or at least 2 devices must be used for the area to protect.
•Use conductors that are large enough to cope with the required current and make sure the overload cut-out located up-line from the safety devices is suitable sized.
•Make sure that the power input corresponds to the values shown in the TECHNICAL FEATURES.

Servicing The photocells do not require any special servicing, but routine maintenance must be carried out at least every six months in order to check the state of the device (presence of humidity, oxidation, etc.), clean the outer casing and the lenses and test as shown in the above paragraph.
These photocells have been designed to work in normal conditions for at least 10 years; from then on, maintenance work should be carried out more frequently.

Disposal This product is made from various kinds of material, some of which can be recycled.
Make sure you recycle or dispose of the product in compliance with current laws and bye-laws.

Technical features

Type
Safety device for automatic doors and gates

Technology used
Direct TX-RX obstruction with an impulse-modulated infrared beam

Max. range
15m (30m with jumper + "10m." with cut jumper)
Range can be reduced by 50% in bad weather conditions: fog, rain, dust, etc.
Range can be reduced by 30% when using the cone for reducing the actual opening angle

Power input
without jumper 24 Vac/Vdc limits 18-35 Vdc, 15-28 Vac
with jumper 12 Vac/Vdc limits 10-18 Vdc , 9-15 Vac

Max. power consumption
25 mA RX, 30mA Tx = 55 mA per pair

Operating temperature
from -20 to +60 °C according to EN 600068-2-1 / EN 600068-2-2 standards

Level of protection
IP55 according to EN 60529 standard

Output relay contact
Max. 500mA and 48V direct or alternating current

Lifetime of contact
> 600,000 AC11 or DC11 operations according to NFP 25-363 standard

Response time
< 30 ms according to IEC 61496-2 and NFP 25-363 standards

RX detection angle
8° ± 25% with reducing cone, according to IEC 61496-2 standard approx. 20° without reducing cone

Angle of TX beam
20° ± 25%

Detection capacity
Opaque objects with a size of ≥ 50 mm and maximum speed of 1.6 m/s.

I

Avvertenze È opportuno leggere attentamente le istruzioni prima di eseguire l'installazione: l'uso improprio o un errore di collegamento potrebbe pregiudicare la sicurezza o il corretto funzionamento del dispositivo.
•La fotocellula deve funzionare esclusivamente per interpolazione diretta TX-RX; è vietato l'uso per riflessione.
•La fotocellula va fissata in modo permanente su una superficie rigida e senza vibrazioni.
•Per ottenere un dispositivo di sicurezza "ESPE tipo 2" la fotocellula deve essere collegata a centrali dotate di fototest, oppure si devono utilizzare almeno 2 dispositivi per zona da proteggere.
•Utilizzare per i collegamenti elettrici conduttori in grado di sopportare le correnti richieste e dimensionare adeguatamente il dispositivo di protezione contro le sovracorrenti posto a monte dei dispositivi di sicurezza.
•Accertarsi che l'alimentazione corrisponda ai valori riportati nella tabella CARATTERISTICHE TECNICHE.

Manutenzione Le fotocellule non necessitano di accorgimenti particolari, ma è necessaria una manutenzione programmata almeno ogni 6 mesi nella quale venga verificato lo stato delle stesse (presenza di umidità, ossidi, ecc.), venga quindi eseguita la pulizia dell'involucro esterno e delle lenti, e rieseguito il collaudo come descritto al paragrafo precedente.
Le fotocellule sono state studiate per funzionare in condizioni normali almeno 10 anni, è quindi opportuno intensificare la frequenza di manutenzione trascorso questo periodo.

Smaltimento Questo prodotto è costituito da varie tipologie di materiali , alcuni possono essere riciclati.
Informatevi sui sistemi di riciclaggio o smaltimento del prodotto attenendosi alle norme di legge vigenti a livello locale.

Caratteristiche tecniche

Tipologia
dispositivo di sicurezza per cancelli e porte automatiche

Tecnologia adottata
Interpolazione diretta TX-RX con raggio infrarosso modulato ad impulsi

Portata massima
15m (30m con ponticello + "10m." tagliato)
La portata si può ridurre del 50% in presenza di fenomeni atmosferici: nebbia, pioggia, polvere ecc.
La portata si può ridurre del 30% quando viene inserito il cono di riduzione dell'angolo di apertura.

Alimentazione
senza ponticello 24 Vac/Vcc limiti 18-35 Vcc,15-28Vac
con ponticello 12 Vac/Vcc limiti 10-18 Vcc , 9-15 Vac

Assorbimento massimo
25 mA RX, 30mA TX = 55 mA per coppia

Temperatura di funzionamento
da –20 a +60 °C secondo norme EN 600068-2-1 EN 600068-2-2

Grado di protezione
IP55 secondo norma EN 60529

Contatto relè di uscita:
Max 500mA e 48V corrente continua o alternata

Durata contatti
> a 600.000 interventi AC11 o DC11 secondo norma NFP 25-363

Tempo di risposta
< a 30ms secondo norme IEC 61496-2 ed NFP 25-363

Angolo di rilevazione RX
8° ± 25% con cono di riduzione, secondo norma IEC 61496-2, 20° circa senza cono di riduzione

Angolo raggio emesso TX
20° ± 25%

Capacità di rilevamento
Oggetti opachi con dimensioni ≥ 50 mm con velocità massima di 1,6 m/s.

F

Recommandations Il est opportun de lire attentivement les instructions avant d'effectuer l'installation, l'utilisation impropre ou une erreur de connexion pourraient compromettre la sécurité ou le fonctionnement correct du dispositif de sécurité.
•La photocellule doit fonctionner exclusivement par interpolation directe TX-RX, son emploi par réflexion est interdit.
•La photocellule doit être fixée de manière permanente sur une surface rigide et exempte de vibrations.
•Pour obtenir un dispositif de sécurité "ESPE type 2" la photocellule doit être connectée à des centrales avec test de la photocellule ou bien, il faut utiliser 2 dispositifs de la zone à protéger.
•Pour les connexions électriques, utiliser des conducteurs en mesure de supporter les courants requis et dimensionner correctement le dispositif de protection contre les surcharges situé en amont des dispositifs de sécurité.
•S'assurer que l'alimentation correspond aux valeurs indiquées dans le tableau CARACTÉRISTIQUES TECHNIQUES.

Maintenance Les photocellules ne nécessitent pas de précautions particulières mais il faut effectuer une maintenance programmée au moins tous les 6 mois au cours de laquelle on doit vérifier leur état (présence d'humidité, oxydes, etc.), effectuer le nettoyage du boîtier et des lentilles et refaire l'essai du dispositif comme le décrit le paragraphe précédent.
Les photocellules ont été étudiées pour fonctionner dans les conditions normales pendant au moins 10 ans, il est donc bon d'intensifier la fréquence de la maintenance une fois cette période écoulée.

Mise au rebut Ce produit est constitué de matériaux divers, certains d'entre eux peuvent être recyclés.
Informez-vous sur les systèmes de recyclage ou de mise au rebut du produit et respectez les normes locales en vigueur.

Caractéristiques techniques

Typologie
dispositif de sécurité pour portes et portails automatisés

Technologie adoptée
Interpolation directe TX-RX avec rayon infrarouge modulé à impulsions

Portée maximum
15 m (30 m avec shunt +"10m." coupé)
La portée peut se réduire de 50% en présence de phénomènes atmosphériques: brouillard, pluie, poussières, etc.
La portée peut se réduire de 30% quand on insère le cône pour la réduction de l'angle d'ouverture.

Alimentation
sans shunt 24 Vac/Vcc limites 18-35 Vcc, 15-28 Vac
avec shunt 12 Vac/Vcc limites 10-18 Vcc, 9-15 Vac

Absorption maximale
25 mA RX, 30 mA TX = 55 mA par paire

Température de fonct.
de –20 à +60 °C selon les normes EN 600068-2-1 / EN 600068-2-2

Indice de protection
IP55 selon la norme EN 60529

Contact relais de sortie
Max. 500 mA et 48V courant continu ou alternatif

Durée contacts
> à 600.000 interventions AC11 ou DC11 selon la norme NFP 25-363

Temps de réponse
< à 30 ms selon les normes IEC 61496-2 et NFP 25-363

Angle de détection RX
8° ± 25% avec cône de réduction, selon la norme IEC 61496-2 20° environ sans cône de réduction

Angle rayon émis TX
20° ± 25%

Capacité de détection
Objets opaques avec dimensions ≥ 50 mm et vitesse maximum de 1,6 m/s.

GB

Installation The TX transmitter of the photocell emits a beam at an angle of about 20°.
If two devices are near to one another, the beam may interfere with the other receiver (figure 1a) and not provide a sufficient level of safety.
In order to solve this problem and if alternating current is available, the synchronisation system that allows the two pairs of photocells to work alternately may be used.
This system requires the synchronism jumper "SINC" to be cut on the two TX's (fig. 2) and the 1st pair of photocells (TX and RX) to be powered with their phases inverted compared with the 2nd pair. (fig. 3).
Before proceeding with installation, check the following points:
-If the photocells are powered with 12V, place a tin jumper between the two "12V" points both on TX and RX (see fig. 2).
-If the distance between TX and RX is greater than 10 metres, cut the jumper between the "+10m" points of RX (see fig. 2).
-If the effective opening angle is required to be reduced to ±5°, fit the reducer cone as shown in fig. 5a, 5b, 5c, 5d.
-Given that the direction of the "MOF" fixed photocell cannot be adjusted, when using this version make sure that the surfaces to which TX and RX are fixed allow them to be perfectly aligned.
Fix the photocells as shown in figure 4a or 4b.
Make the relative electrical connections as shown in the control panel manuals and in fig. 3.

Adjusting direction The direction of the "MOFO" mobile photocell can be adjusted to achieve a perfect alignment even when the fixing position is not perfect. Adjustment must be particularly precise when the cone for reducing the effective opening angle to ±5° is used.
Proceed as shown in figure 6 to adjust the direction. Loosen screw "A", gently move the mobile element B and then tighten screw "A".
If the reducing cone is not used on the transmitter and receiver, adjustment can be made less precisely.
If the reducing cone is used on the receiver, adjustment must be extremely precise, follow the indicator "L": the slower it flashes, the better the alignment is. Alignment is perfect when "L" stays off but is acceptable when "L" flashes slowly; it is incorrect when "L" flashes quickly. Afterwards, check the result using the following table Ⓨ.

Testing The whole installation on which the safety device is installed must be tested by trained and qualified personnel who must carry out the relative tests according to the elements of risk present. The device must be tested using the following procedure:
-Disconnect the photocell from the power supply and check the ALARM state
-Power the receiver and check the ALARM state
-Then power the transmitter as well and check the ALARM state
-Use a 5 cm diameter and 20 cm long cylinder to interrupt the beam, first near the TX's, then near the RX's and lastly in the centre and check that the safety device cuts in and modifies the state of the outputs from ACTIVE to ALARM and vice-versa. (figure 7)

Ⓨ	Indicator L	Meaning	Output status	Action
	Always off	Signal OK No obstacle	Active	All OK
	Slow flashing	Signal weak No obstacle	Active	Improve alignment
	Rapid flashing	Signal incorrect No obstacle	Active	Check alignment cleanliness and environment
	Always on	No signal Obstacle present	Alarm	Remove obstacle

I

Installazione Il trasmettitore TX della fotocellula emette un raggio con un angolo di circa 20°. Nel caso di due dispositivi vicini, il raggio potrebbe interferire sull'altro ricevitore (fig.1a) non garantendo un'adeguata sicurezza.
Per ovviare a questo problema, se disponibile l'alimentazione in corrente alternata, è possibile utilizzare il sistema di sincronismo che permette di far funzionare alternativamente le due copie di fotocellule.
Questo sistema prevede che venga tagliato il ponticello di sincronismo "SINC" sui due TX (vedi figura 2) e che la 1ª coppia di fotocellule (TX e RX) sia alimenta con le fasi invertite rispetto alla 2ª coppia. (vedi fig 3).
Prima di procedere con l'installazione è opportuno verificare i seguenti punti:
-Se si alimentano le fotocellule con una tensione di 12V è necessario effettuare un ponticello di stagno tra i due punti "12V" sia su TX che su RX (vedi fig.2).
-Nel caso la distanza tra TX ed RX sia superiore a 10 metri tagliare il ponticello tra i punti "+10m."del RX (vedi fig.2).
-Se richiesta la riduzione dell'effettivo angolo di apertura a ±5° inserire sul ricevitore il cono di riduzione come in fig. 5a, 5b, 5c, 5d
-Quando si utilizza la fotocellula fissa MOF non essendo disponibile la regolazione dell'orientamento occorre accertarsi che la superfici di fissaggio permettano una corretta centratura TX-RX
Effettuare il fissaggio delle fotocellule come indicato in fig. 4a o 4b.
Eseguire i collegamenti elettrici in base alla funzione richiesta, secondo quanto riportato nei manuali dei quadri di comando e seguendo le indicazioni in fig.3.

Regolazione dell'orientamento
Nella fotocellula orientabile MOFO è disponibile la regolazione dell'orientamento che consente di ottenere un perfetto allineamento anche quando il fissaggio non è ottimale. L'orientamento deve essere particolarmente preciso quando viene inserito il cono per la riduzione dell'effettivo angolo di apertura a ±5°.
Per regolare l'orientamento procedere come indicato in figura 6. Allentare leggermente la vite "A" far oscillare lentamente la parte mobile B, infine richiudere la vite "A".
Nel trasmettitore, e nel ricevitore senza cono di riduzione, la regolazione può essere fatta in modo approssimativo.
Nel ricevitore con cono di riduzione la regolazione deve essere molto precisa, seguire la segnalazione dell'indicatore "L": minore è la velocità del lampeggio e migliore è la centratura. La centratura ottimale si ha quando "L" rimane spento, comunque accettabile quando "L" lampeggia lentamente, a rischio invece quando "L" lampeggia velocemente. Al termine verificare il risultato tramite la seguente tabella Ⓨ

Collaudo Il collaudo dell'intero impianto in cui è inserito il dispositivo di sicurezza dovrà essere eseguito da personale esperto e qualificato che dovrà farsi carico delle prove richieste in funzione del rischio presente.
Il collaudo del singolo dispositivo dovrà essere eseguito con questa semplice procedura:
-Togliere l'alimentazione alle fotocellule e verificare lo stato di ALLARME
-Alimentare il solo ricevitore, verificare lo stato di ALLARME
-Alimentare anche il trasmettitore e verificare lo stato di ATTIVO
- Passare con un cilindro di diametro 5 cm e lunghezza 20 cm sull'asse ottico prima vicino ai TX, poi vicino agli RX e infine al centro del varco e verificare che in tutti i casi il dispositivo intervenga modificando lo stato delle uscite da ATTIVO ad ALLARME e viceversa. (vedi fig.7)

Ⓨ	Indicatore L	Significato	Stato uscita	Azione
	Sempre spento	Segnale OK = Nessun ostacolo	Attivo	Tutto Ok
	Lampeggio lento	Segnale scarso = Nessun ostacolo	Attivo	Migliorare centratura
	Lampeggio veloce	Segnale pessimo = Nessun ostacolo	Attivo	Verificare centratura, stato pulizia e ambiente
	Sempre acceso	Segnale zero = Presente ostacolo	Allarme	Rimuovere ostacolo

F

Installation L'émetteur TX de la photocellule émet un rayon ayant un angle d'environ 20°. Dans le cas de deux dispositifs proches l'un de l'autre, le rayon pourrait interférer sur l'autre récepteur (figure 1a) en compromettant ainsi la sécurité.
Pour remédier à ce problème, si l'alimentation au courant alternatif est disponible, il est possible d'utiliser le système de synchronisme qui permet de faire fonctionner alternativement les deux paires de photocellules.
Ce système prévoit que le shunt de synchronisme "SINC" soit coupé sur les deux TX (voir figure 2) et que la 1re paire de photocellules (TX et RX) soit alimentée avec les phases inversées par rapport à la 2e paire. (fig. 3).
Avant de procéder dans l'installation, il est bon de vérifier les points suivants:
- Si les photocellules sont alimentées à 12V il faut effectuer un shunt à l'étain entre les deux points "12V" aussi bien sur TX que sur RX (fig. 2).
- Si la distance entre TX et RX est supérieure à 10 m, éliminer le shunt entre les points "+10m." du RX (fig. 2).
- S'il faut réduire l'angle d'ouverture effectif à ±5°, insérer le cône de réduction comme sur la fig. 5a, 5b, 5c, 5d.
- Quand on utilise la photocellule MOF, le réglage de l'orientation n'étant pas disponible, il faut contrôler que la surface de fixation permet d'effectuer correctement le centrage TX-RX
Fixer les photocellules comme l'indique la figure 4a -4b.
Effectuer les connexions électriques suivant la fonction désirée, conformément aux indications figurant dans le manuel des coffrets de commande et celles de la fig. 3

Réglage de l'orientation La photocellule MOFO dispose du réglage de l'orientation qui permet d'obtenir un alignement parfait même quand la fixation n'est pas optimale. L'orientation doit être particulièrement précise quand on insère le cône pour la réduction de l'angle d'ouverture effectif à ±5°.
Pour régler l'orientation, procéder comme l'indique la figure 6. Desserrer légèrement la vis "A" faire osciller lentement la partie mobile B, puis serrer la vis "A". Sur l'émetteur et sur le récepteur sans cône de réduction, le réglage peut être effectué de manière approximative. Sur le récepteur avec cône de réduction, le réglage doit être très précis, suivre le signal donné par l'indicateur "L": plus le clignotement est lent et plus le centrage est précis.
Le centrage idéal s'obtient quand "L" reste éteint, il est toutefois acceptable quand "L" clignote lentement; il est par contre à risque quand "L" clignote rapidement. À la fin de l'opération, vérifier le résultat à l'aide du tableau ci-après Ⓨ.

Essai L'essai de l'installation dans laquelle est monté le dispositif de sécurité doit être effectué par du personnel expérimenté et qualifié qui devra se charger des essais requis en fonction du risque présent.
L'essai du dispositif proprement dit devra être effectué à l'aide de la procédure suivante:
- Couper l'alimentation des photocellules et vérifier l'état d'ALARME
- Alimenter seulement le récepteur et vérifier l'état d'ALARME
- Alimenter aussi l'émetteur et vérifier l'état d'ACTIF
- Passer avec un cylindre de 5 cm de diamètre et de 20 cm de longueur sur l'axe optique d'abord près des TX puis près des RX et enfin au centre du passage et vérifier que dans tous les cas, le dispositif intervient en modifiant l'état des sorties d'ACTIF à ALARME et vice versa. (figure 7)

Ⓨ	Indicateur L	Signification	État sortie	Action
	Toujours éteint	Signal OK Aucun obstacle	Actif	OK
	Clignotement lent	Signal insuffisant Aucun obstacle	Actif	Améliorer le centrage
	Clignotement rapide	Mauvais signal Aucun obstacle	Actif	Vérifier le centrage la propreté et l'environnement
	Toujours allumé	Signal zéro Présence d'obstacle	Alarme	Éliminer l'obstacle

Dichiarazione CE di conformità / EC declaration of conformity

(secondo Direttiva 98/37/EC, Allegato II, parte C) (according to 98/37/EC Directive, Enclosure II, part C)

Numero / Number: 113/MOF **Data / Date: 07/2000** **Revisione / Revision: Ø**

Il sottoscritto Lauro Buoro, Amministratore Delegato, dichiara che il prodotto
The undersigned Lauro Buoro, General Manager of the following producer, declares that the product
Nome produttore / Producer name: NICE S.p.A.
Indirizzo / Address: Via Pezza Alta 13, 31046 Z.I. Rustignè – ODERZO - ITALY
Tipo / Type: Fotocellula serie "MOON" / Photocells series "MOON"
Modello / Model: MOF, MOFO
Accessori / Accessories: Nessun accessorio / No accessory
Risulta conforme a quanto previsto dalle seguenti direttive comunitarie / Appears to be in conformity with the following community (EEC) regulations

Riferimento n° Reference n°	**Titolo** Title
98/37/EC (EX 89/392/CEE)	DIRETTIVA MACCHINE / Machinary Directive
89/336/CEE	DIRETTIVA COMPATIBILITA' ELETTROMAGNETICA (EMC) / EMC Electromagnetic Compatibility Directive
73/23/CEE - 93/68/CEE	DIRETTIVA BASSA TENSIONE e successiva modifica / Low Voltage Directive

e che sono state applicate le specifiche tecniche di prodotto sotto-indicate.
and that the product technical specifications referenced overleaf have been applied.
Inoltre dichiara che non è consentita la messa in servizio del prodotto suindicato finché la macchina, in cui il prodotto stesso è incorporato, non sia identificata e dichiarata conforme alla direttiva 89/392/CEE
He declares, moreover, that it is not allowed to use the above mentioned product until the machine, in which this product is incorporated, has been identified and declared in conformity with the regulation 89/392/CEE.
Riferimento relativo alle norme e specifiche tecniche, o parti di esse, utilizzate per la presente dichiarazione di conformità:
Reference about to the regulations of the technical specifications, or parts of them, applied for this declaration of conformity:
Norme armonizzate / Harmonized standards

Riferimento n° Reference n°	**Edizione** Issue	**Titolo** Title	**Livello di valutazione** Estimate level	**Classe** Class
EN61000-4-3	11/1997	SUSCETTIBILITA' RADIATA / Radiated susceptibility	10V/m	A
ENV50204		SUSC. RADIATA MODULAZIONI A IMPULSI	10V/m	A
EN61000-4-6	11/1997	SUSCETTIBILITA' CONDOTTA / Radiated and Conducted Susceptibility	10V	A
EN61000-4-4	09/1996	IMMUNITA' AI BURST / Fast Transient	2000V	B
EN61000-4-2	09/1996	IMM. ALLE SCARICHE ELETTR. (EDS) / Electrostatic Discharge	6KV, 8KV	B
EN61000-4-11	09/1996	IMM. AI BUCHI DI TENSIONE / Power Fail		B - C
EN61000-4-8	06/1997	IMMUNITA' AL CAMPO MAGNETICO A FREQUENZA DI RETE Power – frequency Magnetic fields		B
EN61000-4-5	06/1997	IMMUNITA' AI SURGE / Surge Immunity	2 KV	B
EN61496-1	10/1998	SICUREZZA DEL MACCHINARIO-APPARECCHI ELETTROSENSIBILI DI PROTEZIONE – PARTE 1: PRESCRIZIONI GENERALI E PROVE Safety of machinary - Electro-sensitive protective equipment - Part 1: General requirementes and tests		
IEC61496-2	11-1997	SAFETY OF MACHINARY - ELECTRO-SENSITIVE EQUIPMENT - PART 2: PARTICOLAR REQUIREMENTS FOR EQUIPMENT USING ACTIVE OPTO - ELECTRONIC PROTECTIVE DEVICES (AOPDs)		

Altre norme e/o specifiche tecniche di prodotto / Other standards and/or product technical specifications

Riferimento n° Reference n°	**Edizione** Issue	**Titolo** Title	**Livello di valutazione** Estimate level
UNI 8612	06/1989	CANCELLI E PORTONI AUTOMATICI. CRITERI COSTRUTTIVI E DISPOSITIVI DI PROTEZIONE Motorized gates and main doors - Protection devices against accidents	
EN 954-1	12/1998	PARTI DEI SISTEMI DI COMANDO LEGATE ALLA SICUREZZA Safety - related parts of control systems	1
NFP25-363	08/1994	PORTES ET PORTAILS COMPLETS COMPOSANTS DE SECURITE' - METHODES D'ESSAIS Shutters for open bays and gates - Outfitted doors and gates - Safety components - Test methods	
prEN12978	10/1998	DISPOSITIVI DI SICUREZZA REQUISITI E METODI DI PROVA Safety devices - Requirement and test methods	

P.S.: **Il prodotto montato con le nostre centrali dotate della funzione "fototest", permette di ottenere un livello di sicurezza di categoria 2**.
The product allows to have an safety level 2, if is installed to control unit with fototest
Il prodotto suindicato si intende parte integrante di una delle configurazioni di installazione tipiche, come riportato nei nostri cataloghi generali
The above mentioned product is meant integral part of one of the installation configuration as shown on our general catalogues

Oderzo, lì 17 Luglio 2000

(Amministratore Delegato / General Manager)
Lauro Buoro

CE

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV ISO 9001

Nice SpA, Oderzo TV Italia
Via Pezza Alta, 13 Z. I. Rustignè
Tel. +39.0422.85.38.38
Fax +39.0422.85.35.85

E-mail info@niceforyou.com
Web site http://www.niceforyou.com

Nice France, Buchelay
Tel. +33.(0)1.30.33.95.95
Fax +33 (0)1.30.33.95.96

Nice Polska, Pruszków
Tel. +48.22.728.33.22
Fax +48.22.728.25.10

nice

REV. 01
ISTFM 4854

ENGLISH

PRODUCT DESCRIPTION AND INTENDED USE

This transmitter belongs to the "**NiceOne**" range of products manufactured by Nice. The transmitters in this range are designed for the control of automatic door openers, gate openers and similar devices: **any other use is improper and prohibited!**
Models with 1, 2, 4 and 9 keys are available (**fig. A**), as well as the following optional accessories: keyring cord (**fig. D)**; pocket clasp (**fig. E**); wall-mounting support (**fig. F**).

The "NiceOpera" system

The **NiceOne** range of transmitters belongs to the "**NiceOpera**" system. This system has been designed by Nice for the purpose of optimizing and facilitating the programming, operation and maintenance of the devices normally utilized in automation systems. The system comprises several devices capable of exchanging data and information via radio, using a new coding system called "**O-Code**", or through physical connection.
The main devices featured in the NiceOpera system are:
– **NiceOne transmitters**;
– **NiceOne receivers**;
– **O-Box programming units**;
– **O-View portable programmer**;
– **gearmotors with "Bus T4"**.

IMPORTANT – ***in order to go into all the functions of the NiceOpera system and the operating interdependence which links all the devices of the system, look up the general manual "NiceOpera System Book", available also in the internet site www.niceforyou.com***

THE PRODUCT'S FUNCTIONS

• The transmitter adopts a transmission technology called "**O-Code**", featuring a variable code *(rolling-code)* which significantly improves the commands' transmission speed.
• The transmitter incorporates a "Memory", a "Proximity Receiver" and an "Enable Code" which, together, allow you to carry out, by radio control, operations and programming typical of the NiceOpera system.

TESTING THE TRANSMITTER

Before memorizing the transmitter in the automation system's Receiver, check its proper operation by pressing any key and observing whether the Led lights up (**fig. A)**. If it does not, refer to the section entitled "Replacing the Battery" in this manual.

MEMORIZING THE TRANSMITTER

In order to use all the new functions of the transmitter, it must be associated with the Receivers with the "**O-Code**" coding system (to identify these models, refer to the Nice products catalogue).
Note** – the transmitter is also compatible with all the Receivers that use the "**FloR**" coding system (to identify these models, refer to the Nice products catalogue);* ***in this case, however, the typical functions of the NiceOpera System cannot be used.
To memorize the transmitter in a NiceOne Receiver, you can choose one of the following operating procedures:

a – Memorization in **"Mode I"**
b – Memorization in **"Mode II"**
c – Memorization in **"Extended Mode II"**
d – Memorization through the **"Certificate Number"**
e – Memorization through the **"Enable Code" received from a previously memorized transmitter.**

The operating procedures for these memorization methods are provided in the instruction manual of the Receiver or Control Unit with which the transmitter is to be used.
These manuals are also available on the internet site: ***www.niceforyou.com****.In these manuals, the transmitter keys are identified by numbers. To match these* ***numbers*** *with the correct NiceOne transmitter* ***keys****, see* ***fig. A****.*

a – Memorization "Mode I"

This procedure allows you to memorize *all the transmitter keys,* at once*,* in the receiver. The keys are automatically associated to each control managed by the Control Unit according to a factory-set sequence.

For the model "ON9" - "ON9FM" transmitter only
If the memorization of this transmitter is performed according to the "Mode I" operating procedure, during the operation the transmitter keypad should be regarded as separated into three independent sections (**s1**, **s2**, **s3** in **fig. A**), each section having its own identity code. Therefore, each section will require a distinct memorization procedure (as if there were three separate transmitters).

b – Memorization "Mode II"

This procedure enables the memorization of *a single transmitter key* in the receiver. In this case, the user will select from among the commands managed by the Control Unit (4 max) the one he wishes to associate to the key that is being memorized. ***Note*** *– the procedure must be repeated for each single key that must be memorized*.

c – "Extended Mode II" memorization

This procedure is designed specifically for the devices belonging to the NiceOpera system, with "**O-Code**" coding system. It is identical to the "**Mode II**" procedure above, except that it also offers the possibility of selecting the desired command (to be associated to the key that is being memorized) from a wide range of commands (up to 15 different commands) managed by the Control Unit.
Therefore, the feasibility of this procedure depends on the capacity of the Control Unit to manage the 15 commands, such as the Control Units that are compatible with the NiceOpera system.

d – Memorization using the "CERTIFICATE number"
[with O-Box programming unit]

This procedure is designed specifically for the devices belonging to the NiceOpera system, with "**O-Code**" coding system. Each Receiver in this system is associated to a designated number, called "**CERTIFICATE**", that identifies and certifies it. The use of this "certificate" has the advantage of simplifying the transmitter memorization procedure in the Receiver, since the installer is no longer obliged to operate within the reception range of the Receiver. Indeed, the procedure allows you, with the help of the "O-Box" programming unit, to program the transmitter for memorization even from a remote location, away from the installation site (at the installer's own premises, for instance – **fig. H**).

e – Memorization using the "ENABLE Code" [between two transmitters]

This procedure is designed specifically for the devices belonging to the NiceOpera system, with "**O-Code**" coding system. The NiceOne transmitters have a secret code called "**ENABLE CODE**". This "Enable", once it has been transferred from an old transmitter (previously memorized) to a new NiceOne transmitter (**fig. G**) enables the latter to be recognized and automatically memorized by a Receiver.
The procedure used to transfer the "Enable Code" of an OLD transmitter to a NEW transmitter is as follows:

01. Hold two transmitters together so they are touching, a "**NEW**" one to be memorized and an "**OLD**", previously memorized, one.
02. Press any*(note 1)* key on the **NEW** transmitter and hold it down until the Led of the **OLD** transmitter lights up. Then release the key *(the Led of the **OLD** transmitter will start blinking).*
03. Next, press any*(note 1)* key on the **OLD** transmitter and hold it down until the Led of the **NEW** transmitter lights up. Then release the key *(the Led will go off, indicating the end of the procedure and the successful transfer of the "Enable Code" in the NEW transmitter).*

note 1 *– If model "ON9" - "ON9FM" is used, consider the keyboard divided into 3 sections (i.e. 3 transmitters -* ***fig. A****). Then press any key in the sector to be memorised.*

The first 20 times that the transmitter is used, it will transmit this *"Enable Code"* to the Receiver along with the command. Once it has recognized the "Enable" signal, the Receiver will automatically memorize the *identity code* of the transmitter that has transmitted it.

ERROR SIGNALS VIA LEDS

4 flashes = transfer of "Enable code" disabled.
6 flashes = transfer of "Enable code" disabled between different transmitters.
10 flashes = communication error between devices.
15 flashes = memorisation failed due to time limit exceeded.

REPLACING THE BATTERY

When the battery runs down the range of the transmitter is significantly reduced. When pressing any key you will find that the Led takes a while to light up (= *battery almost exhausted*) and that the brightness of the Led is dimmed (= *battery completely exhausted*).
In these cases, in order to restore the normal operation of the transmitter, you need to replace the exhausted battery with a new one of the same type, observing the polarity shown in **fig. C**.

Battery disposal

Warning! – Exhausted batteries contain polluting substances; therefore they may not be disposed of together with unsorted household waste. They must be disposed of separately according to the regulations locally in force.

PRODUCT DISPOSAL

This product constitutes an integral part of the automation system it controls, therefore it must be disposed of along with it.
As for the installation, the disposal operations at the end of the product's effective life must be performed by qualified personnel. This product is made up of different types of material, some of which can be recycled while others must be scrapped. Seek information on the recycling and disposal methods envisaged by the local regulations in your area for this product category.
Warning! – Some parts of the product may contain polluting or hazardous substances that, if incorrectly disposed of, could have a damaging effect on the environment or on the health of individuals. As the symbol on the left indicates, this product may not be disposed of with the usual household waste.
It must be disposed of separately in compliance with the regulations locally in force, or returned to the seller when purchasing a new, equivalent product. **Warning!** – Heavy fines may be imposed by local laws for the illegal disposal of this product.

TECHNICAL CHARACTERISTICS OF THE PRODUCT

■ **Power supply**: 3Vdc, CR2032 type lithium battery ■ **Estimated battery life**: 2 years, with 10 transmissions a day ■ **Frequency**: 433.92 MHz (± 100 kHz) / 868.46 MHz (± 35 kHz) ■ **Estimated radiated power**: approx. 1 mW E.R.P. ■ **Radio coding**: rolling code, 72 bit, O-Code (Flo-R compatible) ■ **Operating temperature**: - 20°C; + 55°C ■ **Estimated range**: 200 m (outside); 35 m (inside buildings) (*) ■ **Protection class**: IP 40 (for household use or in protected environments) ■ **Dimensions**: L. 44 x D. 55 x H. 10 mm ■ **Weight**: 11g

*Notes: • **The frequencies 433.92 MHz and 868.46 MHz are not compatible** • (*) The range of the transmitters and the reception capacity of the Receivers are greatly affected by the presence of other devices (such as alarms, radio headsets, etc..) operating in your area at the same frequency. In these cases, Nice cannot offer any warranty regarding the actual range of its devices. • All the technical characteristics specified above refer to an ambient temperature of 20°C (± 5°C). • Nice S.p.a. reserves the right to make modifications to the product at any time without prior notice, while maintaining the same functionality and intended use.*

CE DECLARATION OF CONFORMITY

***Note** –This Declaration of Conformity contains the individual declarations of conformity for the specified products; it was updated on the issue date of this manual and the text herein has been drawn up for editorial purposes. A copy of the original declaration for each product can be requested from Nice S.p.a. (TV) I.*

Nice S.p.a. - via Pezza Alta, 13, Z.I. Rustignè, 31046 Oderzo (TV) Italy, declares that all the products in the **Nice One** range (ON1; ON1FM; ON2; ON2FM; ON4; ON4FM; ON9; ON9FM) meet the essential requirements of the R&TTE Directive 1999/5/EC, for the intended use of the devices. The products are in Class 1.

Lauro Buoro
(Managing Director)

FRANÇAIS

DESCRIPTION DU PRODUIT ET APPLICATION

Cet émetteur fait partie de la série « **NiceOne** » de Nice. Les émetteurs de cette série sont destinés à la commande d'automatismes pour l'ouverture de portes, portails et autres dispositifs du même type : **toute autre utilisation est impropre et donc interdite !**
La gamme comprend des modèles à 1, 2, 4 et 9 touches (**fig. A**) ainsi que les accessoires suivants en option : cordon pour porte-clés (**fig. D**) ; clip d'accrochage (**fig. E**) ; support pour fixation au mur (**fig. F**).

Le système « NiceOpera »

Les émetteurs de la série **NiceOne** font partie du système « **NiceOpera** ». Ce système a été conçu par Nice afin d'optimiser et de faciliter les phases de programmation, d'utilisation et de maintenance des dispositifs généralement utilisés sur les installations d'automatisation. Le système est constitué de différents dispositifs capables d'échanger des données et des informations par radio en utilisant un nouveau système de codage appelé « **O-Code** » ou à travers la connexion physique.
Les principaux dispositifs qui composent le système NiceOpera sont les suivants :
– émetteurs NiceOne ;
– récepteurs NiceOne ;
– unité de programmation O-Box ;
– programmateur portable O-View ;
– opérateurs avec « Bus T4 ».

IMPORTANT – ***Afin d'approfondir en détail tous les fonctions du système NiceOpera et l'interdépendance opérative qui lie des différents dispositifs du système, veuillez consulter les instructions générales « NiceOpera System Book », disponibles aussi dans le site Internet www.niceforyou.com***

LES FONCTIONS DU PRODUIT

• L'émetteur utilise une technologie de transmission appelée « **O-Code** », à code variable (rolling code), qui améliore sensiblement la vitesse de transmission de la commande.
• L'émetteur contient une « mémoire », un « récepteur de proximité » et un « code d'activation » qui, ensemble, permettent d'effectuer par radio les opérations et les programmations typiques du système NiceOpera.

VÉRIFICATION DE L'ÉMETTEUR

Avant de mémoriser l'émetteur dans le récepteur de l'automatisme, vérifier qu'il fonctionne correctement en pressant l'une des touches et en observant si la LED s'allume au même moment (**fig. A**). Si elle ne s'allume pas, lire le paragraphe « Remplacement de la pile » dans ce guide.

MÉMORISATION DE L'ÉMETTEUR

Pour pouvoir se servir de toutes les fonctions de l'émetteur, il faut l'associer aux récepteurs avec codage « **O-Code** » (pour identifier ces modèles, consulter le catalogue des produits de Nice).
Note** – L'émetteur est également compatible avec tous les récepteurs qui utilisent le codage « **FloR** » (pour identifier ces modèles, consulter le catalogue des produits de Nice) ;* ***toutefois, dans ce cas, il ne sera pas possible d'utiliser les fonctions typiques du système NiceOpera*.*
Pour mémoriser l'émetteur dans un récepteur NiceOne, il est possible de choisir parmi les procédures opérationnelles suivantes :

a – Mémorisation en **« Mode I »**
b – Mémorisation en **« Modo II »**
c – Mémorisation en **« Modo II étendu »**
d – Mémorisation au moyen du **« Numéro de certificat »**
e – Mémorisation au moyen d'une **« Code d'activation »** reçu d'un émetteur déjà mémorisé

Les procédures opérationnelles de ces modalités de mémorisation sont fournies dans le guide d'utilisation du récepteur ou de la logique de commande avec lequel on veut faire fonctionner l'émetteur.
Les guides mentionnés sont également disponibles sur le site Internet : ***www.niceforyou.com.*** *Dans ces guides, les touches des émetteurs sont identifiées par des chiffres. Pour connaître la correspondance entre ces chiffres et les touches des émetteurs NiceOne, se reporter à la* ***fig. A****.*

a – Mémorisation en « Mode I »

Cette procédure permet de mémoriser dans le récepteur, en une seule fois, *toutes les touches de l'émetteur*. Les touches sont automatiquement associées à chaque commande gérée par la logique de commande, selon un ordre préétabli en usine.

Uniquement pour l'émetteur mod. « ON9 » - « ON9FM »
Si la mémorisation de cet émetteur est effectuée avec la procédure opérationnelle « Mode I », il faut considérer que le clavier de l'émetteur, durant l'exécution de la procédure, est divisé en 3 secteurs autonomes (**s1**, **s2**, **s3** sur la **fig. A**), chacun avec un code d'identification qui lui est propre. Chaque secteur nécessitera donc une procédure de mémorisation spécifique (comme s'il s'agissait de 3 émetteurs distincts).

b – Mémorisation en « Modo II »

Cette procédure permet de mémoriser dans le récepteur *une seule touche de l'émetteur*. Dans ce cas, c'est l'utilisateur qui choisit parmi les commandes gérées par la logique de commande (4 au maximum), quelle commande il souhaite associer à la touche qu'il est en train de mémoriser. ***Note –*** *La procédure doit être répétée pour chacune des touches que l'on veut mémoriser.*

c – Mémorisation en « Modo II étendu »

Cette procédure est spécifique aux dispositifs qui font partie du système NiceOpera à codage « **O-Code** ». Elle est identique à la procédure précédent « **Mode II** » mais offre en plus la possibilité de choisir la commande voulue (à associer à la touche que l'on est en train de mémoriser) dans une liste plus longue de commandes – jusqu'à 15 commandes différentes – gérées par la logique de commande. La faisabilité de la procédure dépend donc de la capacité de la logique de commande à gérer les 15 commandes, comme les logiques de commande compatibles avec NiceOpera.

d – Mémorisation au moyen du « Numéro de CERTIFICAT »
[avec l'unité de programmation O-Box]

Cette procédure est spécifique aux dispositifs qui font partie du système NiceOpera à codage « **O-Code** ». Dans ce système, chaque récepteur possède un numéro particulier, qui l'identifie et le certifie, appelé « **CERTIFICAT** ». L'utilisation de ce « certificat » présente l'avantage de simplifier la procédure de mémorisation de l'émetteur dans le récepteur car elle ne contraint plus l'installateur à travailler dans le rayon de réception du récepteur. Il est en effet possible, grâce à l'unité de programmation « O-Box », de préparer l'émetteur à la mémorisation même loin du lieu de l'installation (par exemple, dans le bureau de l'installateur **- fig. H**).

e – Mémorisation au moyen du « code d'ACTIVATION » [entre deux émetteurs]

Cette procédure est spécifique aux dispositifs qui font partie du système NiceOpera à codage « **O-Code** ». Les émetteurs NiceOne possèdent un code secret dans leur mémoire, appelé « **CODE D'ACTIVATION** ». Cette « activation », une fois qu'elle a été correctement transférée d'un ancien émetteur (déjà mémorisé) vers un nouvel émetteur NiceOne (**fig. G**), permet à ce dernier d'être reconnu et donc automatiquement mémorisé par un récepteur.
La procédure de transfert du « code d'activation » d'un ANCIEN émetteur dans un NOUVEL émetteur est la suivante :

01. Tenir près l'un de l'autre (joints) deux émetteurs, un « **NOUVEAU** » (à mémoriser) et un « **ANCIEN** » (déjà mémorisé).
02. Sur le **NOUVEL** émetteur, presser n'importe*(note 1)* quelle touches touches jusqu'à ce que la LED de l'**ANCIEN** émetteur s'allume. Ensuite, relâcher la touche (*la LED de l'**ANCIEN** émetteur commence à clignoter*).
03. Sur l'**ANCIEN** émetteur, presser n'importe*(note 1)* quelle touches jusqu'à ce que la LED du **NOUVEL** émetteur s'allume. Relâcher alors la touche (*la LED s'éteint, ce qui indique que la procédure est terminée et que le « code d'activation » est transféré dans le NOUVEL émetteur*).

note 1 *– Si l'on utilise le modèle « ON9 » - « ON9FM », considérer que le clavier est divisé en trois secteurs (c'est-à-dire 3 émetteurs -* ***fig. A****). Presser ensuite l'une des touches dans le secteur à mémoriser.*

Les 20 premières fois où le NOUVEL émetteur sera utilisé, il transmettra au récepteur ce « code d'activation » en même temps que la commande. Le récepteur, après avoir reconnu l'« activation », mémorisera automatiquement le code d'identification de l'émetteur qui l'a transmise.

SIGNALISATION DES ERREURS AU MOYEN DES LED

4 clignotements = transfert du « code d'activation » désactivé.
6 clignotements = transfert du « code d'activation » désactivé entre des émetteurs différents.
10 clignotements = erreur de communication entre les dispositifs.
15 clignotements = la mémorisation n'a pas abouti car le temps limite a été dépassé

REMPLACEMENT DE LA PILE

Quand la pile est usagée, la portée de l'émetteur diminue sensiblement. Quand on presse une touche, on note en particulier que la LED s'allume en retard (= *pile presque déchargée*) ou que l'intensité de l'ampoule de la LED faiblit (= *pile totalement déchargée*).
Dans ce cas, pour rétablir le fonctionnement normal de l'émetteur, changer la pile usagée en utilisant une pile du même type et en respectant la polarité indiquée sur la **fig. C**.

Mise au rebut de la pile

Attention ! – La pile usagée contient des substances polluantes et ne doit donc pas être jetée avec les ordures ménagères. Il faut la mettre au rebut en adoptant les méthodes de collecte sélective prévues par les normes en vigueur dans le pays d'utilisation.

MISE AU REBUT DU PRODUIT

Ce produit fait partie intégrante de l'automatisme qu'il commande et doit donc être mis au rebut avec cette dernière.
Comme pour les opérations d'installation, à la fin de la durée de vie de ce produit, les opérations de démantèlement doivent être effectuées par du personnel qualifié. Ce produit est constitué de différents types de matériaux dont certains peuvent être recyclés et d'autres devront être mis au rebut. Informez-vous sur les systèmes de recyclage ou de mise au rebut prévus par les règlements, en vigueur dans votre pays, pour cette catégorie de produit.
Attention ! – certains composants du produit peuvent contenir des substances polluantes ou dangereuses qui pourraient avoir des effets nuisibles sur l'environnement et sur la santé des personnes s'ils étaient jetés dans la nature.
Comme l'indique le symbole ci-contre, il est interdit de jeter ce produit avec les ordures ménagères. Par conséquent, utiliser la méthode de la « collecte sélective » pour la mise au rebut des composants conformément aux prescriptions des normes en vigueur dans le pays d'utilisation ou restituer le produit au vendeur lors de l'achat d'un nouveau produit équivalent.
Attention ! – les règlements locaux en vigueur peuvent appliquer de lourdes sanctions en cas d'élimination illicite de ce produit.

CARACTÉRISTIQUES TECHNIQUES DU PRODUIT

■ **Alimentation** : pile au lithium de 3 Vcc type CR2032 ■ **Durée de la pile** : 2 ans environ, avec 10 transmissions par jour ■ **Fréquence** : 433.92 MHz (± 100 kHz) / 868.46 MHz (± 35 kHz). ■ **Puissance rayonnée** : environ 1 mW P.A.R. ■ **Codage radio** : code variable, 72 bits, O-Code (compatible avec Flo-R) ■ **Température de fonctionnement** : - 20 °C ; + 55 °C ■ **Portée** : 200 m environ ; 35 m (à l'intérieur) (*) ■ **Indice de protection** : IP 40 (utilisation à l'intérieur ou dans des milieux protégés) ■ **Dimensions** : L 44 x P 55 x H 10 mm ■ **Poids** : 11 g.

Notes : • Les fréquences 433.92 MHz et 868.46 MHz ne sont pas compatibles entre elles. *• (*) La portée des émetteurs et la capacité de réception des récepteurs est fortement influencée par d'autres dispositifs (par exemple : alarmes, radio à écouteurs, etc.) qui fonctionnent dans votre zone à la même fréquence. Dans ces cas, Nice ne peut offrir aucune garantie quant à la portée réelle de ses dispositifs. • Toutes les caractéristiques techniques indiquées se réfèrent à une température ambiante de 20 °C (± 5 °C). • Nice S.p.A. se réserve le droit d'apporter des modifications au produit chaque fois qu'elle le jugera nécessaire à condition toutefois de garantir les mêmes fonctions et la même application.*

DÉCLARATION CE DE CONFORMITÉ

***Note** – La présente Déclaration de conformité réunit le contenu des diverses déclarations de conformité de chaque produit cité ; elle est mise à jour à la date d'édition du présent manuel et a été réélaborée pour des raisons d'édition. Une copie de la déclaration originale pour chaque produit peut être demandée à Nice S.p.a. (TV) I.*

Nice S.p.A. - via Pezza Alta, 13, Z.I. Rustignè, 31046 Oderzo (TV), Italie, déclare que tous les produits de la ligne **Nice One** (ON1; ON1FM; ON2; ON2FM; ON4; ON4FM; ON9; ON9FM) sont conformes aux exigences essentielles requises par la directive R&TTE 1999/5/CE pour l'usage auquel les appareils sont destinés. Les produits sont en classe 1.

Lauro Buoro
(administrateur délégué)

ESPAÑOL

DESCRIPCIÓN DEL PRODUCTO Y USO PREVISTO

El presente transmisor forma parte de la serie "**NiceOne**" de Nice. Los transmisores de esta serie están destinados para accionar automatizaciones para abrir y cerrar puertas, cancelas y similares: **¡cualquier otro uso es considerado inadecuado y está prohibido!**
Hay disponibles modelos con 1, 2, 4 y 9 botones (**fig. A**), más los siguientes accesorios opcionales: cordón para llavero (**fig. D**); clip para bolsillo (**fig. E**); soporte para fijación a la pared (**fig. F**).

El sistema "NiceOpera"

Los transmisores de la serie **NiceOne** forman parte del sistema "**NiceOpera**". Este sistema ha sido diseñado por Nice para optimizar y facilitar la programación, el uso y el mantenimiento de los dispositivos utilizados normalmente en las instalaciones de automatización. El sistema está formado de varios dispositivos que intercambian entre sí los datos y las informaciones vía radio, utilizando un nuevo sistema de codificación llamado "**O-Code**", o por medio de la conexión física.
Los dispositivos principales que forman el sistema NiceOpera son:
– transmisores NiceOne;
– receptores NiceOne;
– unidad de programación O-Box;
– programador portátil O-View;
– motorreductores con "Bus T4".

IMPORTANTE – ***para profundizar todas las funciones del sistema NiceOpera y la interdependencia operativa que conecta los diferentes dispositivos del sistema, consulte el manual general "NiceOpera System Book", disponible también en la página web www.niceforyou.com***

LAS FUNCIONALIDADES DEL PRODUCTO

• El transmisor adopta una tecnología de transmisión denominada "**O-Code**" con código variable *(rolling-code)*, que mejora aún más la velocidad de transmisión del mando.
• El transmisor contiene en su interior una "Memoria", un "Receptor de proximidad" y un "Código de habilitación" que, en su conjunto, permiten efectuar, por radio, operaciones y programaciones típicas del sistema NiceOpera.

CONTROL DEL TRANSMISOR

Antes de memorizar el transmisor en el Receptor de la automatización, controle que éste funcione correctamente pulsando cualquier botón y observando, simultáneamente, el encendido del Led (**fig. A**). Si éste no se enciende, lea el párrafo "Sustitución de la batería" en este manual.

MEMORIZACIÓN DEL TRANSMISOR

Para aprovechar todas las funciones del transmisor hay que combinarlo con los Receptores con codificación "**O-Code**" (para identificar estos modelos, consulte el catálogo de productos de Nice spa).
Nota** – el transmisor es compatible con todos los Receptores que adoptan la codificación "**FloR**" (para identificar estos modelos, consulte el catálogo de productos de Nice);* ***en este caso no se podrán utilizar las funcionalidades típicas del Sistema NiceOpera.
Para memorizar el transmisor en un Receptor NiceOne es posible elegir entre los siguientes procedimientos operativos:

a – Memorización en **"Modo I"**
b – Memorización en **"Modo II"**
c – Memorización en **"Modo II amplio"**
d – Memorización mediante el **"Número de Certificado"**
e – Memorización mediante el **"Código de Habilitación" recibida por un transmisor ya memorizado**

Los procedimientos operativos de estas modalidades de memorización están indicados en el manual de instrucciones del Receptor o de la Central con los que se desea hacer funcionar el transmisor.
Dichos manuales también se pueden descargar desde la página web: ***www.niceforyou.com****. En estos manuales los botones de los transmisores están identificados con números. Por consiguiente, para saber la correspondencia entre estos* ***números*** *y los* ***botones*** *de los transmisores NiceOne, vea la* ***fig. A.***

a – Memorización en "Modo I"

Este procedimiento permite memorizar en el receptor, en una sola operación, *todos los botones del transmisor*. Los botones se combinan automáticamente a cada mando controlado desde la Central, según un orden predeterminado en fábrica.

Sólo para el transmisor mod. "ON9" - "ON9FM"
Si este transmisor se memoriza con el procedimiento operativo "Modo I", durante su ejecución habrá que considerar la botonera del transmisor como subdividida en 3 sectores autónomos (**s1**, **s2**, **s3** en la **fig. A),** cada uno con un código de identidad propio. Por consiguiente, para cada sector habrá que efectuar un procedimiento de memorización (como si fueran 3 transmisores separados).

b – Memorización en "Modo II"

Este procedimiento permite memorizar en el receptor *un solo botón del transmisor*. En este caso, el usuario deberá elegir, entre los mandos controlados desde la Central (máximo 4), cuál de estos desea combinar al botón que está memorizando. ***Nota*** *– el procedimiento debe repetirse en cada botón que se desea memorizar.*

c – Memorización en "Modo II amplio"

Este procedimiento es específico para los dispositivos que forman parte del sistema NiceOpera, con codificación "**O-Code**". Es igual al "**Modo II**", pero ofrece la posibilidad de elegir el mando deseado (a combinar al botón que se está memorizando) en una lista amplia de mandos – hasta 15 mandos diferentes, – controlados desde la Central.
El procedimiento es factible si la Central tiene la capacidad suficiente para controlar los 15 mandos, tales como las Centrales compatibles con NiceOpera.

d – Memorización mediante el "Número de CERTIFICADO"
[con la unidad de programación O-Box]

Este procedimiento es específico para los dispositivos que forman parte del sistema NiceOpera con codificación "**O-Code**". En este sistema cada Receptor tiene un número específico, llamado "**CERTIFICADO**", que lo identifica y lo certifica. Este "certificado" tiene la ventaja de simplificar el procedimiento de memorización del transmisor en el Receptor, porque no es obligatorio que el instalador trabaje dentro del radio de recepción del Receptor. En efecto, el procedimiento permite, con la ayuda de la unidad de programación "O-Box", preparar el transmisor para la memorización, incluso lejos del sitio de instalación (por ejemplo, en la oficina del instalador – **fig. H**).

e – Memorización mediante el "Código de HABILITACIÓN"
[entre dos transmisores]

Este procedimiento es específico para los dispositivos que forman parte del sistema NiceOpera con codificación "**O-Code**". Los transmisores NiceOne tienen un código secreto, llamado "**CÓDIGO DE HABILITACIÓN**". Dicha "habilitación", transferida desde un transmisor viejo (ya memorizado) en un nuevo transmisor NiceOne (**fig. G**), permite que este último sea reconocido y, posteriormente, memorizado automáticamente por un Receptor.
El procedimiento para transferir el "código de habilitación" de un transmisor VIEJO a uno NUEVO es el siguiente:

01. Mantenga dos transmisores cercanos entre sí (¡pegados!), uno "**NUEVO**" (a memorizar) y uno "**VIEJO**" (ya memorizado).
02. Mantenga pulsado cualquier*(nota 1)* botón del **NUEVO** transmisor hasta que se encienda el Led del **VIEJO** transmisor. Posteriormente, suelte el botón *(el Led del **VIEJO** transmisor comenzará a destellar).*
03. Mantenga pulsado cualquier*(nota 1)* botón del **VIEJO** transmisor hasta que se encienda el Led del **NUEVO** transmisor. Posteriormente, suelte el botón *(el Led se apagará indicando que el procedimiento se ha concluido y que el "código de habilitación" se ha transferido al NUEVO transmisor).*

nota 1 *– Si se utiliza el modelo "ON9" - "ON9 FM, habrá que considerar la botonera subdividida en 3 sectores (es decir 3 transmisores -* ***fig. A****). Posteriormente, pulse cualquier botón dentro del sector que se debe memorizar.*

Cuando utilice 20 veces por primera vez el NUEVO transmisor, éste transmitirá al Receptor dicho "*código de habilitación"* junto con el mando. Después de haber reconocido la "habilitación", el Receptor memorizará automáticamente el *código de identidad* del transmisor que la ha transmitido.

SEÑALIZACIÓN DE ERRORES MEDIANTE EL LED

4 destellos = transmisión del "Código de habilitación" deshabilitada.
6 destellos = transmisión del "Código de habilitación" deshabilitada entre transmisores diferentes.
10 destellos = error de comunicación entre los dispositivos.
15 destellos = no memorizado por haberse superado el tiempo límite.

SUSTITUCIÓN DE LA BATERÍA

Cuando la batería esté agotada el alcance del transmisor será mucho más corto. En particular, pulsando un botón se notará que el Led se enciende con retardo (= *batería casi agotada*), o que la intensidad de la luz del Led es débil (= *batería completamente agotada*).
En dichos casos, para restablecer el funcionamiento normal del transmisor, sustituya la batería agotada con una del mismo tipo, respetando la polaridad indicada en la **fig. C.**

Eliminación de la batería

¡Atención!– La batería agotada contiene sustancias contaminantes y, por dicho motivo, no debe arrojarse en los residuos normales. Hay que eliminarla utilizando los métodos de recogida selectiva previstos por las normativas vigentes locales.

ELIMINACIÓN DEL PRODUCTO

Este producto forma parte integrante de la automatización que acciona y, por consiguiente, debe eliminarse junto con ésta.
Al igual que para las operaciones de instalación, también al final de la vida útil de este producto las operaciones de desguace deben ser efectuadas por personal experto. Este producto está formado de varios tipos de materiales: algunos pueden reciclarse y otros deben eliminarse. Infórmese sobre los sistemas de reciclaje o de eliminación previstos por las normativas vigentes locales para esta categoría de producto.
¡Atención!– algunas piezas del producto pueden contener sustancias contaminantes o peligrosas que, si se las abandona en el medio ambiente, podrían provocar efectos perjudiciales para el mismo medio ambiente y para la salud humana.
Tal como indicado por el símbolo de aquí al lado, está prohibido arrojar este producto a los residuos urbanos. Realice la "recogida selectiva" para la eliminación, según los métodos previstos por las normativas vigentes locales, o bien entregue el producto al vendedor cuando compre un nuevo producto equivalente.
¡Atención!– las normas locales pueden prever sanciones importantes en el caso de eliminación abusiva de este producto.

CARACTERÍSTICAS TÉCNICAS DEL PRODUCTO

■ **Alimentación**: batería de litio de 3 Vdc tipo CR2032 ■ **Duración de la batería**: estimada en 2 años con 10 transmisiones por día ■ **Frecuencia**: 433.92 MHz (± 100 kHz) / 868.46 MHz (± 35 kHz) ■ **Potencia radiada**: estimada en alrededor de 1 mW E.R.P. ■ **Codificación radio**: rolling code, 72 bit, O-Code (compatible Flo-R) ■ **Temperatura de funcionamiento**: - 20°C; + 55°C ■ **Alcance**: estimada en 200 m (al aire libre); 35 m (en el interior de edificios) (*) ■ **Grado de protección**: IP 40 (uso en interiores o en ambientes protegidos) ■ **Dimensiones**: L 44 x P 55 x H 10 mm ■ **Peso**: 11 g

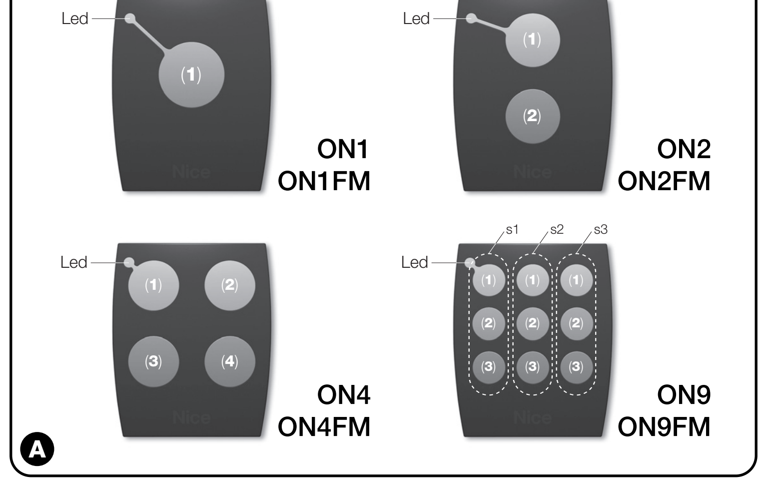
***Notas**: • **Las frecuencias 433.92 MHz y 868.46 MHz no son compatibles entre sí** • (*) El alcance de los transmisores y la capacidad de recepción de los Receptores dependen de otros dispositivos (por ejemplo: alarmas, radioauriculares, etc..) que funcionen en la zona con la misma frecuencia. En estos casos, Nice no puede ofrecer ninguna garantía sobre el alcance efectivo de sus dispositivos. • Todas las características técnicas indicadas se refieren a una temperatura de 20°C (± 5°C). • Nice S.p.a se reserva el derecho de modificar los productos en cualquier momento en que lo considere necesario, manteniendo las mismas funcionalidades y el mismo uso previsto.*

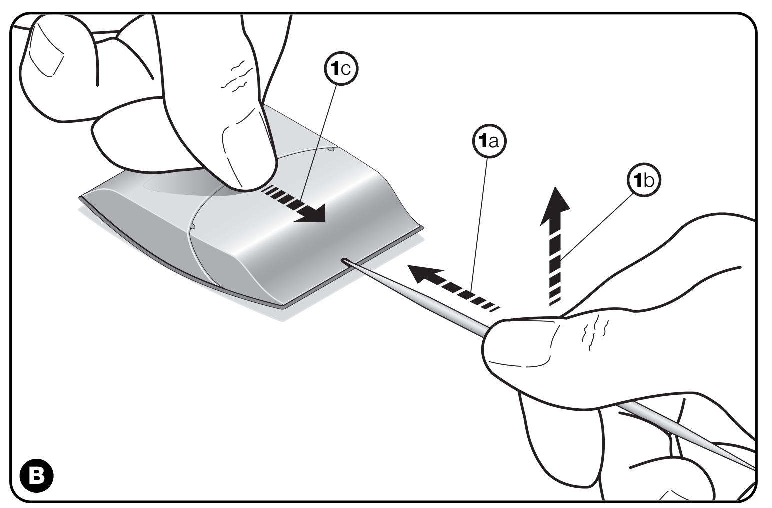
DECLARACIÓN DE CONFORMIDAD CE

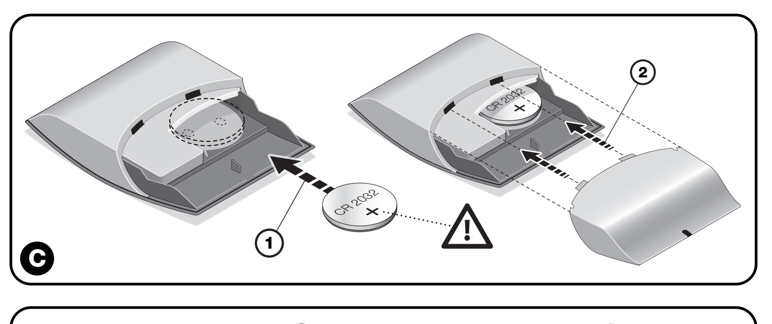
***Nota** – La presente Declaración de Conformidad agrupa el contenido de cada declaración de conformidad de cada uno de los productos citados; está actualizada a la fecha de edición de este manual y ha sido readaptada por motivos de impresión. Una copia de la declaración original de cada producto puede ser solicitada a Nice S.p.a. (TV) I.*

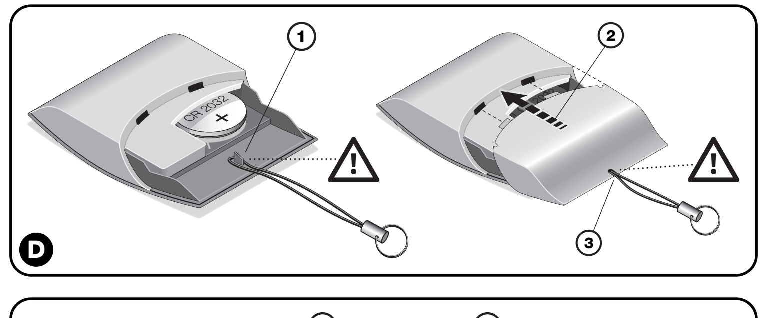
Nice S.p.a. - Via Pezza Alta 13, Z.I. Rustignè, 31046 Oderzo (TV) Italia, declara que todos los productos de la línea **Nice One** (ON1; ON1FM; ON2; ON2FM; ON4; ON4FM; ON9; ON9FM) respetan los requisitos esenciales de la Directiva 1999/5/CE "Equipos Radioeléctricos y Equipos Terminales de Telecomunicación" para el uso al que están destinados los equipos. Los productos son fabricados en Clase 1.

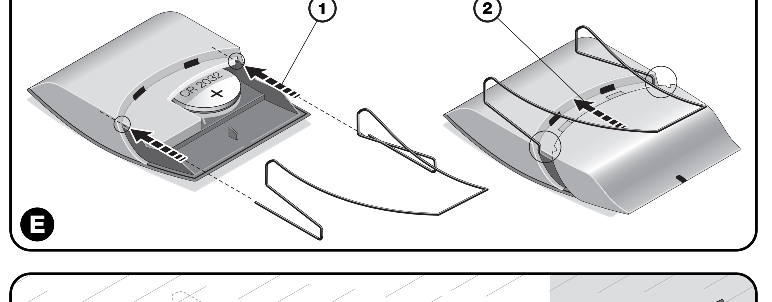
Lauro Buoro
(Administrador delegado)

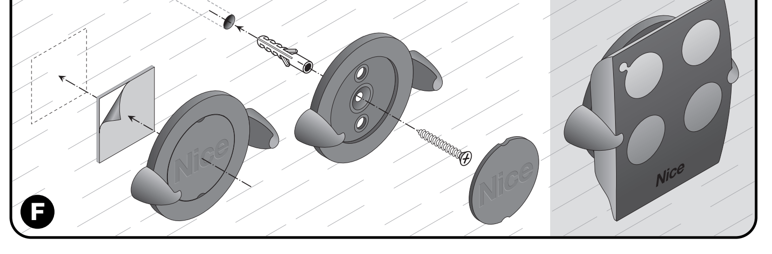












NiceOne

Transmitter

Europe: CE 0682

Instructions for the fitter
Istruzioni per l'installatore
Instructions pour l'installateur
Instrucciones para el instalador
Anweisungen für den installateur
Instrukcje dla instalatora
Aanwijzingen bestemd voor de installateur

Headquarters

Nice SpA
Oderzo TV Italia
Ph. +39.0422.85.38.38
Fax +39.0422.85.35.85
info@niceforyou.com

Nice in Italy

Nice Padova
Sarmeola di Rubano PD Italia
Ph. +39.049.89.78.93.2
Fax +39.049.89.73.85.2
infopd@niceforyou.com

Nice Roma
Roma RM Italia
Ph. +39.06.72.67.17.61
Fax +39.06.72.67.55.20
inforoma@niceforyou.com

Nice Worldwide

Nice France
Buchelay France
Ph. +33.(0)1.30.33.95.95
Fax +33.(0)1.30.33.95.96
info@fr.niceforyou.com

Nice France Sud
Aubagne France
Ph. +33.(0)4.42.62.42.52
Fax. +33.(0)4.42.62.42.50
infomarseille@fr.niceforyou.com

Nice France Rhône Alpes
Decines Charpieu France
Ph. +33.(0)4.78.26.56.53
Fax +33.(0)4.78.26.57.53
infolyon@fr.niceforyou.com

Nice Belgium
Leuven (Heverlee) Belgium
Ph. +32.(0)16.38.69.00
Fax +32.(0)16.38.69.01
info@be.niceforyou.com

Nice Deutschland
Gelnhausen Deutschland
Ph. +49.(0)6051.91.520
Fax +49.(0)6051.91.52.119
info@de.niceforyou.com

Nice España Madrid
Mostoles Madrid España
Ph. +34.(0)9.16.16.33.00
Fax +34.(0)9.16.16.30.10
info@es.niceforyou.com

Nice España Barcelona
Sant Quirze del Valles
Barcelona España
Ph. +34.(0)9.37.84.77.75
Fax +34.(0)9.37.84.77.72
info@es.niceforyou.com

Nice Polska
Pruszków Polska
Ph. +48.(022).759.40.00
Fax +48.(022).759.40.22
info@pl.niceforyou.com

Nice Portugal
Mem Martins Portugal
Ph. +351.21.922.82.10
Fax +351.21.922.82.19
info@pt.niceforyou.com

Nice Romania
Cluj Napoca Romania
Ph./Fax +40.(0)264.453.127
info@ro.niceforyou.com

Nice Turkey
Kadikoy Istanbul Turkey
Ph. +90.216.456.34.97
Fax +90.216.455.78.29
info@tr.niceforyou.com

Nice UK
Sutton in Ashfield
United Kingdom
Ph. +44.16.23.55.00.86
Fax +44.16.23.55.05.49
info@uk.niceforyou.com

Nice Australia
Wetherill Park Australia
Ph. +61.(0)2.96.04.25.70
Fax +61.(0)2.96.04.25.73
info@au.niceforyou.com

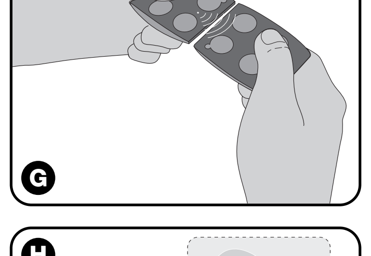
Nice China
Shanghai P. R. China
Ph. +86.21.575.701.46/45
Fax +86.21.575.701.44
info@cn.niceforyou.com

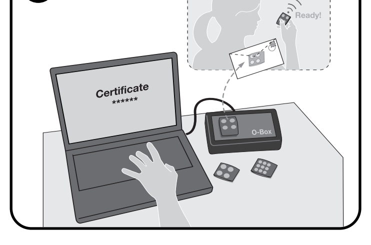
Nice USA
Jacksonville Florida USA
Ph. +1.904.786.7133
Fax +1.904.786.7640
info@us.niceforyou.com

Nice

www.niceforyou.com

Codice: IST227R01.4851 - Rev. 00 del 18-04-2008





Installation and use instructions and warnings

Istruzioni ed avvertenze per l'installazione e l'uso

Instructions et avertissements pour l'installation et l'utilisation

Anweisungen und Hinweise für die Installation und die Bedienung

Instrucciones y advertencias para la instalación y el uso

Instrukcje i ostrzeżenia związane z instalowaniem i użytkowaniem

Aanwijzingen en aanbevelingen voor installering en gebruik

Nice

NiceOne

Receiver

OXI family
OX2 family

Europe: CE 0682

EN – Models with “SM” type connection
IT – Modelli con connessione a innesto “SM”
FR – Modèles avec connecteur embrochable «SM»
ES – Modelos con conexión con conector “SM”
DE – Modelle mit Steckverbindung “SM”
PL – Modele z połączeniem za pomocą złącza typu “SM”
NL – Modellen met steekconnector “SM”

EN – Models with universal type connection
IT – Modelli con connessione universale
FR – Modèles avec connecteur universel
ES – Modelos con conexión universal
DE – Modelle mit Universalverbindung
PL – Modele z połączeniem uniwersalnym
NL – Modellen met universele aansluiting

ENGLISH

1 – PRODUCT DESCRIPTION AND INTENDED USE

This receiver is part of the series "**NiceOne**" produced by Nice spa. The receivers in this series are destined for use on the control units fitted on systems for the automation of gates, garage doors and road barriers. **Any use other than as specified herein is to be considered improper and is strictly prohibited! The manufacturer denies all liability for damage deriving from improper use of the product and use other than as specified in this manual.**
Various models are available, with the specifications as stated in the table below.

1.1 – The "NiceOpera" system

The receivers in the series **NiceOne** are part of the "**NiceOpera**" system. This system has been designed to simplify the programming phases, use and maintenance of the devices normally used in automation systems. The system comprises various software and hardware devices capable of intercommunicating via radio, by means of the "**O-Code**" encoding system or a "physical" connection via cable.
The main devices that make up the NiceOpera system are:

– NiceOne transmitters;
– NiceOne receivers;
– O-box programming unit;
– Control units and gearmotors with "T4 Bus";
– O-View programmer for devices with "T4 Bus".

IMPORTANT – ***For further details on all functions of the NiceOpera system and interdependency of the various devices in the system, refer to the general manual "NiceOpera System Book", also available on the Internet site www.niceforyou.com.***

Mod.	Frequency	Function	Connection
OXI	433.92 MHz	Receiver	Connector type
OXIFM	868.46 MHz	Receiver	Connector type
OXIT	433.92 MHz	Receiver-transmitter	Connector type
OXITFM	868.46 MHz	Receiver-transmitter	Connector type
OX2	433.92 MHz	Receiver	with 6-core cable
OX2FM	868.46 MHz	Receiver	with 6-core cable
OX2T	433.92 MHz	Receiver-transmitter	with 6-core cable
OX2TFM	868.46 MHz	Receiver-transmitter	with 6-core cable

Notes to table:
– The frequencies 433.92 MHz and 868.46 MHz are not compatible.
*– The letter "**T**" in the model name indicates a receiver with built-in transmitter.*

EN

2 – FUNCTIONAL PRODUCT SPECIFICATIONS

• *For all models*

– The receiver manages "**O-Code**" radio encoding with variable code *(rolling-code)*, which enables use of all the new functions in the NiceOpera system.
The receiver is compatible also with "**FloR**", "**TTS**", "**Smilo**" and "**Flo**" encoding systems. However, in this case **some of the exclusive NiceOpera system functions described in this manual cannot be used.**

– The receiver has a capacity of 1024 spaces in which to memorise transmitters. If the transmitter is memorised in "**Mode I**", all the relative keys will occupy 1 memory allocation; otherwise if memorised in "**Mode II**", each memorised key will occupy 1 memory allocation *(for memorisation procedures, see below in this manual)*.

– Each receiver has its own identification number called a "**Certificate**".
This number enables access to a series of operations, such as: Memorisation of new transmitters without the need for direct intervention on the receiver and use of the O-View unit, by means of the "T4 Bus" connection.
The sealed coupon in the product pack contains the sheet with the certificate number of this receiver. **Caution!** – *this coupon must be kept in a safe place as it enables access to data stored in the receiver, unless further protection measures are adopted, such as the use of a security password.*

• *For models with "SM" type connection*

– These models can be used exclusively with the control units fitted with an "SM" type connection (**fig. 1**). ***Note*** *– to identify compatible control units, refer to the Nice product catalogue.*

– These models automatically recognise the characteristics of the control unit to which they are connected and the receiver self-installs as follows.
• **If the control unit manages the "T4 Bus"**, the receiver provides up to 15 different commands.
• **If the control unit does not manage the "T4 Bus"**, the receiver provides up to 4 different command channels.
Caution! – *In both cases the number and variety of the commands available depend on the type and model of control unit used. The "Table of commands" of each control unit is provided in the instruction manual of the relative control unit.*

• *For models with universal type connection*

– These models operate with 2 voltage-free contact relays and therefore can be used with any type of control unit.

• *For models with "T" in the model name*

– These models are equipped with a *"Repeater"* function *(see below in this manual)* which enables an increase in the transmission range of the transmitters. They also enable "wireless" communication with the O-Box programming unit.

3 – PRODUCT INSTALLATION

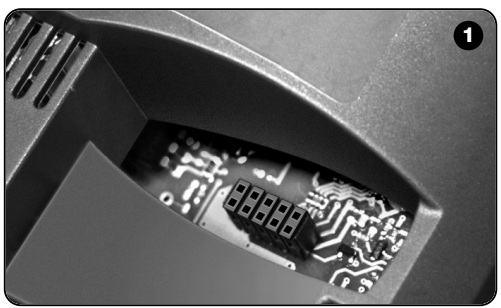
• *For models with "SM" type connection*

These models are connected to the control unit by inserting the connector in the relative control unit connector (**fig. 1**).
Caution! – Before connecting or removing the receiver, disconnect the control unit from the power supply.
The aerial supplied must also be installed, connecting it to the specific terminals on the control unit.

• *For models with universal type connection*

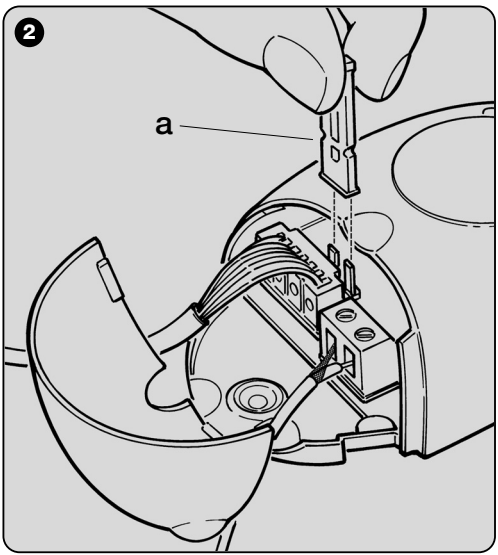
—— Power supply selection ——

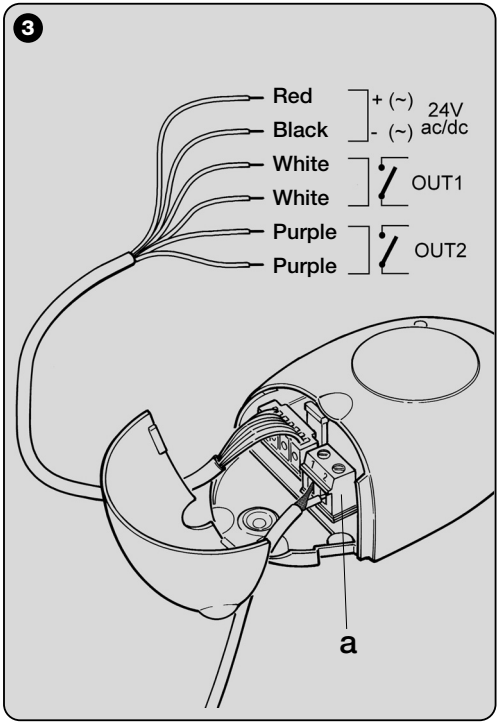
These models are connected to the control unit by means of a 6-core cable. Before connecting the cable, select the type of power supply required, leaving or removing the electric jumper as necessary (**fig. 2**-**a**) as follows:



– Jumper NOT inserted = **24** V ac/dc
(voltage limits: 18 ÷ 28 V)

– Jumper INSERTED = **12** V ac/dc
(voltage limits: 10 ÷ 18 V)





—— Electrical connections ——

Connect the 6 wires of the receiver cable to the relative terminals of the control unit as follows (**fig. 3**):

- **Red** and **Black =** POWER SUPPLY
  (red = *Positive*, black = *Negative*. In AC this is not important).
- **White** and **White =** RELAY 1 OUTPUT
  (voltage-free contact of a normally open relay).
- **Purple** and **Purple =** RELAY 2 OUTPUT
  (voltage-free contact of a normally open relay).

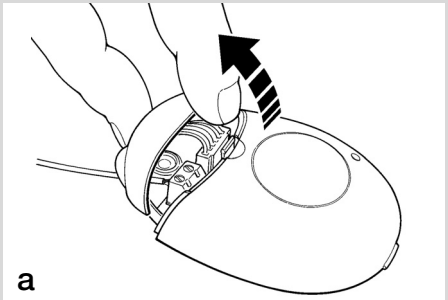
— How to obtain "NC" type contacts —

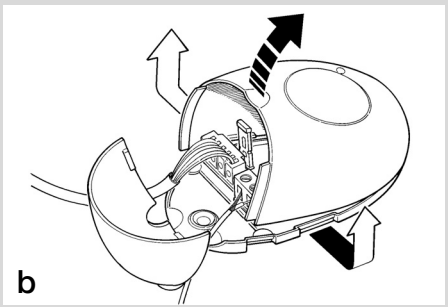
The outputs are controlled by 2 relays with NO (normally open) type contact. To change to NC (normally closed) type contact, proceed as follows:

01. Disconnect the receiver from the power supply.
02. Open the box of the receiver by first raising the smaller section of the cover (**fig. 4**-**a**) and then the larger section with the key (**fig. 4**-**b**).
03. Carefully remove the board and turn it over: *the side with the soldered elements must be facing the user.*
04. On the side with the soldered elements, proceed as follows (**fig**. **5**):
– Cut the traced section at point "**X**"
– Join the contacts with a drop of tin at points "**Y**".

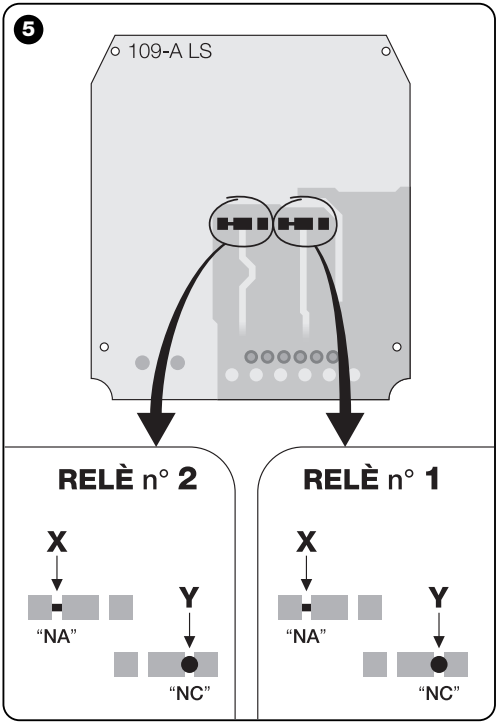
***Note** – these modifications may be applied to one or both relays as required.*

4





5



- ***For all models:***
  Installation of an external aerial

If the aerial supplied is in an unfavourable position and the radio signal is weak, an external aerial may be installed to improve reception (mod. ABF or ABFKIT). The new aerial must be positioned as high as possible and above any metal or reinforced concrete structures present in the area.

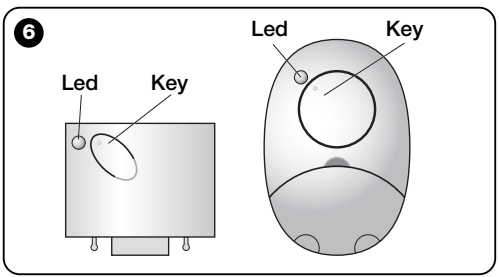
– ***Connection to the Control Unit***: Use a coaxial cable with an impedance of 50 ohm (for example, a RG58 cable with low loss). **Caution!** – *To reduce signal dispersion use a cable that is as short as possible (not exceeding 10 m).*

– ***Connection to the receiver (only for models with universal type connection):*** Open the receiver by first raising the smaller section of the cover (**fig. 4-a**) and disconnect the aerial supplied; then connect the cable of the new aerial to terminal **1** and **2** as follows (**fig. 3**-**a**): **Terminal 1** = *sheath*; **Terminal 2** = *core.*

PROGRAMMING THE MAIN FUNCTIONS

Programming warnings

The settings described in this chapter (except for procedure 6) require use of the key and led on the receiver (fig. 6). To indicate the state of activity in progress, the led emits a set number of flashes with a specific duration and colour (green, red or orange). For the meaning of these signals, refer to Table A at the end of the manual.



4 – CAUTION! – READ THIS SECTION BEFORE MEMORISING THE TRANSMITTER

The receiver can only memorise transmitters belonging to one of the following 3 encoding families:

– family with "**O-Code**", "**FloR**" and "**TTS**" encoding;
– family with "**Flo**" encoding;
– family with "**Smilo**" encoding.

***Note** – Each code enables use exclusively of the standard associated functions on the receiver.*

Caution! – ***The encoding family of the first transmitter memorised on the receiver also defines the relative encoding family for the subsequent transmitters to be memorised.***
To change the encoding family set on the receiver, perform procedure 10 – Total receiver memory deletion.

To check on the receiver whether transmitters and the associated encoding family are already memorised, proceed as follows:

01. Disconnect the receiver from the power supply.
02. Re-connect the power to the receiver and count the number of **green** flashes emitted by the receiver led.
03. Check the number of flashes emitted with the data in the table below:

– **1** flash = ***Flo** encoding*
– **2** flashes = ***O-Code** / **FloR** / **TTS** encoding*
– **3** flashes = ***Smilo** encoding*
– **5** flashes = *no transmitter entered*

Caution! – ***Before memorising a transmitter, carefully read all memorisation procedures described below to select the one most suited to your specific application.***

5 – TRANSMITTER MEMORISATION PROCEDURE: "Mode I" AND "Mode II"

Each control unit has a set number of commands that can be activated according to the type of receiver: The models with **"SM" connector** provide 4 or 15 commands while models with the **universal connection** provide 2 outputs.
In general the commands can be associated with the transmitter keys in two ways:

• **"Mode I"**. This mode enables memorisation on the receiver of *all transmitter keys* or *a group of the latter* at once (on transmitters with more than one identity code such as model ON9). The keys are automatically associated with the pre-set commands of the control unit or the receiver outputs, on models with universal connectotion.

• **"Mode II"**. This mode enables memorisation on the receiver of *a single transmitter key*. The user has a free choice of which command, among those available on the control unit (maximum 4) or which output of the receiver to be associated with the selected key.

– "Extended Mode II" (only for models with "SM" connector). This mode can only be used with control units using the connection system "T4 Bus". The "Extended Mode II" is the same as "**Mode II**" with the additional option to choose the required command from those available in the *"Table of commands"* (maximum 15), as provided in the manual of the control unit connected to the receiver.

5.1 – *Memorisation in "MODE I"*

Warning – *This procedure simultaneously memorises all keys of the transmitter or a group of the latter (on transmitters with more than one identity code).*

01. Press and hold the key on the receiver until the **green** led on the receiver illuminates. Then release the key.

02. (within 10 seconds) On the transmitter to be memorised, press and hold any key until the led on the receiver emits the first of 3 **green** flashes to confirm memorisation.

Note – *After the three flashes, a 10-second interval is available to memorise another transmitter as required.*

5.2 – *Memorisation in "MODE II" (valid also for "Extended Mode II")*

WARNINGS:

– ***The "Extended Mode II" procedure can only be used with receivers with "SM" type connectors.***

– ***This procedure enables memorisation of a single transmitter key.***

01. In the control unit manual, look up the "*Table of commands*", select the command to assign to the transmitter key and note the **number** corresponding to the command.

02. (on the receiver) Press the key the same number of times as the previously noted **number** – *the Led on the receiver emits the same number of flashes repeated at regular intervals*.

03. (on the transmitter within 10 seconds) Press and hold the selected key for memorisation until the led on the receiver emits the first of 3 flashes (= *memorisation confirmed*).

Note – *After the three flashes, a 10-second interval is available to memorise the same command on other keys on the same transmitter or a new transmitter as required.*

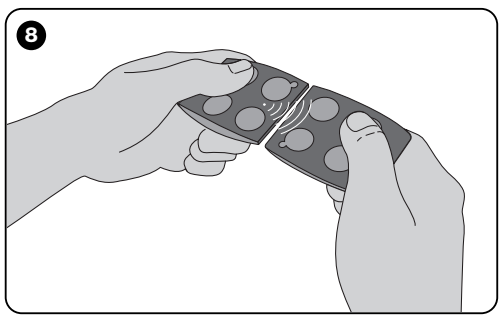
6 – MEMORISING A TRANSMITTER USING THE "ENABLE CODE" OF ANOTHER TRANSMITTER [already memorised]

This procedure can only be used if two transmitters with "**O-Code**" encoding are used.

The NiceOne transmitters have a secret code stored in the memory, known as the "**ENABLE CODE**". Thanks to this code, operation of NEW transmitter can be enabled by simply transferring the "enable code" of an OLD transmitter (previously memorised on the receiver) onto its memory (**fig. 8**).

Note – *For this procedure, refer to the transmitter manual.*

Subsequently, when the NEW transmitter is used, it will transmit its own identity code to the receiver as well as the relative "enable code" (*the first twenty times only*). The receiver, after recognising the "enable code" of an OLD transmitter (previously memorised on the receiver) automatically memorises the identity code of the NEW transmitter sent to it.



• *Preventing accidental use of this memorisation procedure*

To prevent memorisation on the receiver of other transmitters not compatible with the system but with the "enable code" of a transmitter already memorised on the receiver, this procedure can be "locked" (or unlocked) by programming the function in **paragraph 10**.
As an alternative to locking memorisation of the entire receiver, transfer of the "enable code" can be disabled exclusively for some or all OLD transmitters already memorised. This operation can be performed using the O-Box programming unit.

7 – MEMORISATION OF A TRANSMITTER USING THE PROCEDURE IN THE VICINITY OF THE RECEIVER

[with a transmitter already memorised]

A NEW transmitter can be memorised in the receiver memory without acting directly on the key of the receiver, but by simply working within its reception range. To use this procedure, an OLD transmitter, previously memorised (in "Mode I" or in "Mode II") and operative, is required. The procedure enables the NEW transmitter to receive the settings of the OLD version.

WARNINGS:

- ***Use only one of the two procedures described below, according to requirements.***
- ***The procedure must be performed within the reception range of the receiver (maximum 10-20 m from receiver).***
- ***Repeat the same procedure for each transmitter to be memorised.***

Standard Procedure *(valid for all Nice receivers)*

01. On the NEW transmitter, press and hold the key**....** for at least 5 seconds *(see **note 1**)* and then release.
02. On the OLD transmitter, press key**....** three times *(see note 1)* and then release.
03. On the NEW transmitter, press the same key pressed in point 01 once and then release.

Alternative Procedure *(valid for this receiver only)*

01. On the NEW transmitter, press and hold the key**....** for at least 3 seconds *(see **note 1**) and then release.*
02. On the OLD transmitter, press and hold the key**....** for at least 3 seconds *see **note 1**) and then release.*

03. On the NEW transmitter, press the same key pressed in point 01 for at least 3 seconds and then release.
04. On the OLD transmitter, press the same key pressed in point 02 for at least 3 seconds and then release.

Note 1:
*If the OLD transmitter is memorised in "**Mode I**" the NEW transmitter will also be memorised in "Mode I". In this case, during the procedure press any key on either the OLD or NEW transmitter.*
*If the OLD transmitter is memorised in "**Mode II**" the NEW transmitter will also be memorised in "Mode II". In this case, during the procedure press the required command key on the OLD transmitter and the associated key to be memorised for this command on the NEW transmitter. This procedure must also be repeated for each key of the NEW transmitter to be memorised.*

• Preventing accidental use of this memorisation procedure

To prevent the continuous reception of a signal transmitted at random by a transmitter not part of the system from accidentally activating the memorisation procedure, this procedure can be "locked" (or unlocked) by programming the function in **paragraph 10**.

8 – TOTAL RECEIVER MEMORY DELETION

All transmitters memorised can be deleted from the receiver memory, or all data present in the latter can be deleted as follows:

01. Press and hold the receiver key and check the following changes in Led status:
– (after approx. 4 seconds) the **green** led illuminates;
– (after approx. 4 seconds) the **green** led turns off;
– (after approx. 4 seconds) the **green** led starts flashing.

02. At this point release the key **exactly**.....
• **on the 3rd flash**, to delete all transmitters, or,
• **on the 5th flash**, to delete the entire memory of the receiver, including configurations and encoding families of the transmitters.

Alternatively this function can be performed using the O-Box or O-View programming unit.

9 – DELETING A SINGLE TRANSMITTER FROM THE RECEIVER MEMORY

A single transmitter (in your possession) memorised can be deleted from the receiver memory as follows:

01. Press and hold the receiver key.
02. After approx. 4 seconds the **green** led illuminates (*keep the key pressed*).
03. On the transmitter to be deleted from the memory, press and hold any key (see ***note 1***) until the led on the receiver emits 5 **green** flashes (= *deletion confirmed*).

Note 1:
*If the transmitter is memorised in "**Mode I**" any key can be pressed.*
*If the transmitter is memorised in "**Mode II**" the entire procedure must be repeated for each memorised key to be deleted.*

Alternatively this function can be performed using the O-Box or O-View programming unit.

10 – ENABLING (or disabling) THE RECEIVER FOR TRANSMITTER MEMORISATION

This function enables the user to prevent memorisation of new transmitters when the procedures "**in the vicinity**" (*factory setting is **ON***) or with "**enable code**" (*factory setting is **ON)** are used as described in this manual.* To enable or disable this function, proceed as follows:

01. Disconnect the receiver from the power supply and wait 5 seconds.
02. Reconnect the power and switch on by pressing the receiver key until the relative led has completed the signals indicating the type of code stored in the memory (see paragraph **5**) and the procedure is activated, indicated by 2 short **orange** flashes. Then release the key.
03. (within 5 seconds) Press the receiver key repeatedly to select one of the following functions (**Warning**! – *on each press of the key the Led changes colour to indicate the currently selected function*):
- Led **OFF** = *No lock enabled*
- Led **RED =** *Memorisation "in the vicinity" locked*
- Led **GREEN** = *Memorisation with "enable code" locked*
- Led **ORANGE =** *Both memorisation modes locked ("in the vicinity" and with "enable code").*

04. (within 5 seconds) Press any key of a transmitter already memorised on the receiver to save the selected function.

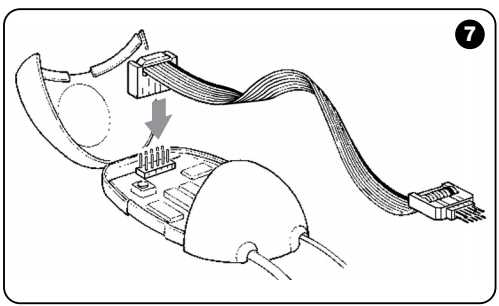
Alternatively the lock (or unlock) function can be applied using the O-Box or O-View programming unit.

OTHER FUNCTIONS

WARNING – *The settings described in this chapter require use of the O-Box or O-View programming unit. For operation of these devices, refer to the relative instruction manuals, also available on the internet site: www.niceforyou.com.*

• The models with "SM" connector are connected to the O-Box unit by inserting the receiver in the relative connector.

*• The models with universal connector are connected to the O-Box unit by means of a special cable (**fig. 7-a**) which must be connected to the connector on the receiver (see **fig. 7-b**).*

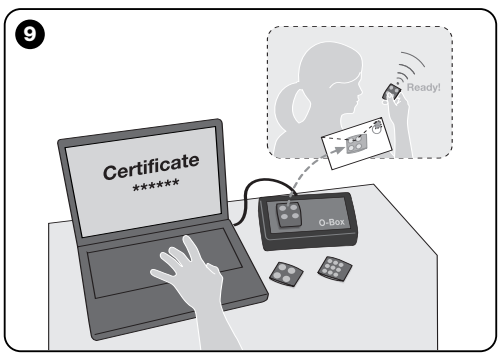


11 – MEMORISATION OF A TRANSMITTER USING THE RECEIVER "CERTIFICATE NUMBER"

[with O-Box] – This procedure can only be used if a transmitter is used with "**O-Code**" encoding and when in possession of the receiver "Certificate Number".

The "**CERTIFICATE**" is a personal number (factory set) identifying the single receiver to distinguish it from all others.

Use of this "certificate" simplifies the procedure required to memorise the transmitter in the receiver, as it no longer obliges the installer to work within the receiver operating range. In fact the new procedure enables transmitter memorisation from any distance, even far from the installation site (for example from the installer's office – **fig. 9**).



Initially, the procedure consists in the installer entering, with the aid of the programming unit "O-Box", the required functions and the relative receiver "certificate" in the memory of the transmitter. The transmitter, ready to use, is then sent to the client.
Subsequently, when the transmitter is used, it will transmit the command along with the "certificate" to the receiver (*the first twenty times only*). The receiver, after recognising the "certificate" as its own, automatically memorises the identity code of the transmitter that sent the certificate.

12 – REMOTE REPLACEMENT OF A TRANSMITTER USING "PRIORITY" MODE

[with O-Box] – The identity code of a transmitter in the NiceOne series is accompanied by a **number** (from **0** to **3**), which enables the user to specify the transmitter's **priority level** on a receiver with respect to any other transmitters with the same code.
This "**priority**" serves to replace, and thus disable, use of a transmitter that has been lost or stolen, without the need to return to the client's system.
Use of priority mode requires knowledge of the code of the lost transmitter and enables maintenance of the same code and functions of the previous transmitter.
Therefore the lost transmitter can be disabled by simply **updating the priority level** of the new transmitter with the next highest value.
On first use of the transmitter, the receiver memorises the **new priority level** received and ignores any command sent by the lost or stolen transmitter if subsequently used.

This function can be enabled (or disabled) on the receiver *(factory setting **ON**)* and, when active, the receiver does not update the priority level sent by the transmitter.

13 – ENABLING (or disabling) RECEPTION OF NON-ORIGINAL "IDENTITY CODES"

[with O-Box / O-View] – The identity codes of transmitters with "**FloR**" and "**O-Code**" encoding can be modified as required, using the "O-Box" or "O-View" programming unit. The receiver can normally recognise whether a code is original (factory set) or modified.
When this function is enabled or disabled *(factory setting **ON**)* the receiver has the option to accept (or not) the command of a transmitter with a modified *identity code*.

14 – LOCKING (or unlocking) THE MOBILE SECTION *(Rolling code)* OF THE IDENTITY CODE

[with O-Box / O-View] – This function enables the user to lock (or unlock) management on the receiver of the variable section *(rolling code)* of an identity code sent by a transmitter. When the lock function is active *(factory setting **OFF**)*, the receiver treats a "rolling code" as if it were a "fixed" code, ignoring the variable section.

15 – ENABLING (or disabling) THE “REPEATER” FUNCTION

(Function available only on models OXIT, OXITFM, OX2T, OX2TFM, in combination with transmitters using O-Code encoding).

[with O-Box] – If an automation is to be controlled at a distance greater than that normally covered by the transmitter and receiver, a second receiver may be used (up to a maximum of five) serving to re-transmit, via radio, the command to the final receiver (in which the sending transmitter identity code is memorised), so that this can execute the command.
To enable or disable this function *(factory setting **OFF**)* programming must be performed both on the additional receivers and transmitters.

16 – MANAGING RELEASE OF THE TRANSMITTER KEYS

(Function available only on transmitters using O-Code encoding)

[with O-Box / O-View] – Normally, after sending a command, on release of the key the manoeuvre is not stopped immediately but proceeds for a very short pre-set interval.
If necessary, the manoeuvre can be interrupted at the exact time of key release (required for example during minimal adjustments) by enabling this function *(factory setting **OFF**).*

17 – ENABLING (or disabling) COMMAND DELIVERY ON THE “T4 BUS” NETWORK

[with O- View] – On systems in which connection is via the “T4 Bus”, if more than one receiver is installed, and there is the need for control at a distance greater than that normally covered by the transmitter and receiver, this function can be enabled (on at least 2 receivers) to increase the receiver reception range.
This enables the receiver that receives a command “via radio” to re-transmit the command via the Bus cable to the final receiver (in which the sending transmitter identity code is memorised), so that this can execute the command.
To enable or disable the option to receiver and/or send radio codes on the “T4 Bus” in a receiver *(factory setting **OFF**)*, the receivers concerned must be duly programmed, using the O-View programming unit.

18 – CREATING THE “FAMILY GROUPS” OF TRANSMITTERS

[with O-Box] – Each code memorised on the receiver can be associated with one or more “family groups”, from the 4 available.
The formation of groups and their activation or deactivation *(factory setting **OFF**)* is managed by means of the O-Box programming unit while use of the groups, for example in a set timeband, is managed by means of the O-View programming unit.

19 – PROTECTION OF PROGRAMMED FUNCTION SETTINGS

[with O-Box / O-View] – This function enables the user to protect all programmed functions on the receiver, also disabling functionality of the key and relative led. The function is enabled by entering a ***password*** on the receiver, i.e. a maximum of 10 digits, as set by the installer.
When the function is enabled, before programming and maintenance of the receiver, the special *password* must be entered on the programming unit to unlock the receiver.

DISPOSAL OF THE PRODUCT

This product constitutes an integral part of the automation system, therefore it must be disposed of along with it.
As in installation, also at the end of product lifetime, the disassembly and scrapping operations must be performed by qualified personnel.
This product is made up of different types of material, some of which can be recycled while others must be disposed of. Seek information on the recycling and disposal systems envisaged by the local regulations in your area for this product category.

Caution! – some parts of the product may contain pollutant or hazardous substances which, if disposed of into the environment, may cause serious damage to the environment or physical health.

As indicated by the symbol on the left, disposal of this product in domestic waste is strictly prohibited. Separate the waste into categories for disposal, according to the methods envisaged by current legislation in your area, or return the product to the retailer when purchasing a new version.

Caution! – Local legislation may envisage serious fines in the event of abusive disposal of this product.

EN

PRODUCT TECHNICAL SPECIFICATIONS

	OXI	OXIT	OXIFM	OXITFM
• Decoding	“O-Code” / “FloR” / “TTS”; or “Flo”; or “Smilo”			
• Maximum absorption	30 mA			
• Reception frequency	433.92 MHz		868.46 MHz	
• Transmission frequency	—	433.92 MHz	—	868.46 MHz
• Sensitivity	Above 0.5 µV		Above 0.8 µV	
• Operating temperature	–20° C ÷ +55° C			
• Outputs	4 (on “SM” connector)			
• Dimensions and weight	L. 50; H. 45; P. 19 mm; weight 20			
• Radiated power	—	approx. 1 mW E.R.P.	—	approx. 1 mW E.R.P.
• Input impedance	52 ohm			

	OX2	OX2T	OX2FM	OX2TFM
• Decoding	“O-Code” / “FloR” / “TTS”; or “Flo”; or “Smilo”			
• Power supply	Without electric jumper = 24 V standard. **Limits from 18 to 28 V direct or alternating** With electric jumper = 12 V standard. **Limits from 10 to 18 V direct or alternating**			
• Absorption on standby	10 mA at 24 Vac			
• Absorption with 2 relays activ	80 mA at 24 Vac.			
• Reception frequency	433.92 MHz		868.46 MHz	
• Transmission frequency	—	433.92 MHz	—	868.46 MHz
• Sensitivity	Above 0.5 µV		Above 0.8 µV	
• N° relays	2			
• Relay contact	Normally open max 0,5 A and 50 V			
• Operating temperature	–20° C ÷ +55° C			
• Protection rating	IP 30			
• Dimensions and weight	58 x 86; H. 22 mm; weight 55 g			
• Radiated power	—	approx. 1 mW E.R.P.	—	approx. 1 mW E.R.P.

GENERAL NOTES

As well as the functions and settings described in this manual, the receiver offers many other features to enhance performance, safety and ease of use.
All these settings require use of the O-Box (or in some cases O-View) programming unit.
For further information on the settings available, refer to the general system manual "NiceOpera System Book", or the O-Box/ O-View programming unit manual.

• *Notes on Product Technical specifications*

– *The range of the transmitters and reception capacity of the receivers is strongly influenced by other devices (for example: alarms, radio headphones etc.) operating in the zone at the same frequency. In these cases, Nice cannot guarantee the effective capacity of its devices.*

– *All technical specifications stated in this section refer to an ambient temperature of 20°C (± 5°C).*

– *Nice reserves the right to apply modifications to the product at any time when deemed necessary, while maintaining the same functionalities and intended use.*

Table A

SIGNALS EMITTED BY THE RECEIVER LED

— **Long** flashes / GREEN —

On start-up:

1 ✷ = Code in use: “Flo”
2 ✷ = Code in use: “O-Code”/“FloR”
3 ✷ = Code in use: “Smilo”
5 ✷ = No remote control memorised

During operation:

1 ✷ = Indicates that the code received is not stored in the memory
1 ✷ = During programming, indicates that the code is already stored in the memory
3 ✷ = Saving code in memory
5 ✷ = Memory deleted
6 ✷ = During programming, indicates that the code is not authorised for memorisation
8 ✷ = Memory full

— **Short** flashes / GREEN —

1 ✷ = “Certificate” not valid for memorisation
2 ✷ = Code cannot be memorised as is transmitting “certificate”
3 ✷ = During programming, indicates that the code has been re-synchronised
4 ✷ = Output in “Mode II” not managed on control unit
5 ✷ = During deletion procedure, indicates that the code has been deleted
5 ✷ = “Certificate” with higher priority that the admissible value
6 ✷ = Code synchronisation failure
6 ✷ = Code cannot be memorised due to “incorrect key”

— **Long** flashes / RED —

1 ✷ = Non-original code block
2 ✷ = Code with lower priority than the authorised value

— **Short** flashes / RED —

1 ✷ = “In vicinity” programming mode block
1 ✷ = Memorisation by means of “certificate” block
2 ✷ = Memory block (PIN entry)

— **Long** flashes / ORANGE —

1 ✷ = Indicates that the code is in the memory but outside the group currently enabled

---

— **Short** flashes / ORANGE —

2 ✷ = Indicates activation of block programming (on start-up)

EC DECLARATION OF CONFORMITY

Note *–This Declaration of Conformity contains the individual declarations of conformity for the specified products; it was updated on the issue date of this manual and the text herein has been drawn up for editorial purposes. A copy of the original declaration for each product can be requested from Nice S.p.a. (TV) I.*

The undersigned, Lauro Buoro, in the role of Managing Director, declares under his sole responsibility, that the product:

Manufacturer's name : Nice S.p.a.

Address: Via Pezza Alta 13, Z.I. Rustignè, 31046 Oderzo (TV) Italy

Type: Receiver and receiver-transmitter for remote control of automations for doors, gates, shutters, awnings, rolling shutters and similar applications.

Models: OXI, OXIT, OXIFM, OXITFM

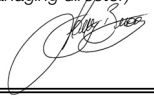
Accessories:

conform with the requirements of the EC directive:

• 1999/5/EC; DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of 9 March 1999 regarding radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity

According to the following harmonised standards
Health protection: EN 50371:2002;
Electrical safety: EN 60950-1:2006;
Electromagnetic compatibility : EN 301 489-1V1.6.1:2006; EN 301 489-3V1.4.1:2002
Radio range: EN 300220-2V2.1.2:2007

Lauro Buoro
(Managing director)



EC DECLARATION OF CONFORMITY

Note *–This Declaration of Conformity contains the individual declarations of conformity for the specified products; it was updated on the issue date of this manual and the text herein has been drawn up for editorial purposes. A copy of the original declaration for each product can be requested from Nice S.p.a. (TV) I.*

The undersigned, Lauro Buoro, in the role of Managing Director, declares under his sole responsibility, that the product:

Manufacturer's name : Nice S.p.a.

Address: Via Pezza Alta 13, Z.I. Rustignè, 31046 Oderzo (TV) Italy

Type: Receiver and receiver-transmitter for remote control of automations for doors, gates, shutters, awnings, rolling shutters and similar applications.

Models: OX2, OX2T, OX2FM, OX2TFM

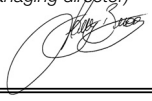
Accessories:

conform with the requirements of the EC directive:

• 1999/5/EC; DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of 9 March 1999 regarding radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity

According to the following harmonised standards
Health protection: EN 50371:2002;
Electrical safety: EN 60950-1:2006;
Electromagnetic compatibility : EN 301 489-1V1.6.1:2006; EN 301 489-3V1.4.1:2002
Radio range: EN 300220-2V2.1.2:2007

Lauro Buoro
(Managing director)



Nice

Headquarters

Nice SpA
Oderzo TV Italia
Ph. +39.0422.85.38.38
Fax +39.0422.85.35.85
info@niceforyou.com

Nice in Italy

Nice Padova
Sarmeola di Rubano PD Italia
Ph. +39.049.89.78.93.2
Fax +39.049.89.73.85.2
infopd@niceforyou.com

Nice Roma
Roma RM Italia
Ph. +39.06.72.67.17.61
Fax +39.06.72.67.55.20
inforoma@niceforyou.com

Nice Worldwide

Nice France
Buchelay France
Ph. +33.(0)1.30.33.95.95
Fax +33.(0)1.30.33.95.96
info@fr.niceforyou.com

Nice France Sud
Aubagne France
Ph. +33.(0)4.42.62.42.52
Fax. +33.(0)4.42.62.42.50
infomarseille@fr.niceforyou.com

Nice France Rhône Alpes
Decines Charpieu France
Ph. +33.(0)4.78.26.56.53
Fax +33.(0)4.78.26.57.53
infolyon@fr.niceforyou.com

Nice Belgium
Leuven (Heverlee) Belgium
Ph. +32.(0)16.38.69.00
Fax +32.(0)16.38.69.01
info@be.niceforyou.com

Nice Deutschland
Gelnhausen Deutschland
Ph. +49.(0)6051.91.520
Fax +49.(0)6051.91.52.119
info@de.niceforyou.com

Nice España Madrid
Mostoles Madrid España
Ph. +34.(0)9.16.16.33.00
Fax +34.(0)9.16.16.30.10
info@es.niceforyou.com

Nice España Barcelona
Sant Quirze del Valles
Barcelona España
Ph. +34.(0)9.37.84.77.75
Fax +34.(0)9.37.84.77.72
info@es.niceforyou.com

Nice Polska
Pruszków Polska
Ph. +48.(022).759.40.00
Fax +48.(022).759.40.22
info@pl.niceforyou.com

Nice Portugal
Mem Martins Portugal
Ph. +351.21.922.82.10
Fax +351.21.922.82.19
info@pt.niceforyou.com

Nice Romania
Cluj Napoca Romania
Ph./Fax +40.(0)264.453.127
info@ro.niceforyou.com

Nice Turkey
Kadikoy Istanbul Turkey
Ph. +90.216.456.34.97
Fax +90.216.455.78.29
info@tr.niceforyou.com

Nice UK
Sutton in Ashfield
United Kingdom
Ph. +44.16.23.55.80.86
Fax +44.16.23.55.05.49
info@uk.niceforyou.com

Nice Australia
Wetherill Park Australia
Ph. +61.(0)2.96.04.25.70
Fax +61.(0)2.96.04.25.73
info@au.niceforyou.com

Nice China
Shanghai P. R. China
Ph. +86.21.575.701.46/45
Fax +86.21.575.701.44
info@cn.niceforyou.com

Nice USA
Jacksonville Florida USA
Ph. +1.904.786.7133
Fax +1.904.786.7640
info@us.niceforyou.com

Codice: IST1228R01 4851 - Rev. 00 del 18 - 04 - 2008

www.niceforyou.com