

# IND4000V

OPERATORE IRREVERSIBILE PER CANCELLI SCORREVOLI  
IRREVERSIBLE OPERATOR FOR SLIDING GATES  
OPÉRATEUR IRREVERSIBLE POUR PORTAILS COUILLANTES  
OPERADOR IRREVERSIBLE PARA VERJAS CORREDERAS



Operatore Operateur Operator Operador	Alimentazione Power Supply Alimentation Alimentación	Centralina Control unit Centrale de commande Centralita	Peso max cancello Max gate weight Poids maxi portail Peso máx verja	Spinta max Max Thrust Poussée maxi Max Empuje	Codice Code Code Codigo
IND4000V/I	230V 50/60Hz	CT INVERTER	4000 kg / 8810 lbs	3700 N	12007103
IND4000V/T	400V 50/60Hz	CT3IND	4000 kg / 8810 lbs	3700 N	12007104

 ALLMATIC®

MADE IN ITALY



**- ATTENZIONE -**

**PER LA SICUREZZA DELLE PERSONE È IMPORTANTE CHE  
VENGANO SEGUITE TUTTE LE ISTRUZIONI**

**SEGUIRE TUTTE LE ISTRUZIONI DI INSTALLAZIONE**

- 1° - Questo libretto d'istruzioni è rivolto esclusivamente a del personale specializzato che sia a conoscenza dei criteri costruttivi e dei dispositivi di protezione contro gli infortuni per i cancelli, le porte e i portoni motorizzati (attenersi alle norme e alle leggi vigenti).
- 2° - L'installatore dovrà rilasciare all'utente finale un libretto di istruzioni in accordo alla EN 12635.
- 3° - L'installatore prima di procedere con l'installazione deve prevedere l'analisi dei rischi della chiusura automatizzata finale e la messa in sicurezza dei punti pericolosi identificati (seguendo le norme EN 12453/EN 12445).
- 4° - Il cablaggio dei vari componenti elettrici esterni all'operatore (ad esempio fotocellule, lampeggianti, ecc.) deve essere effettuato secondo la EN 60204-1 e le modifiche a questa apportate dal punto 5.2.2 della EN 12453.
- 5° - L'eventuale montaggio di una pulsantiera per il comando manuale del movimento deve essere fatto posizionando la pulsantiera in modo che chi la aziona non si trovi in posizione pericolosa; inoltre si dovrà fare in modo che sia ridotto il rischio di azionamento accidentale dei pulsanti.
- 6° - Tenete i comandi dell'automaticismo (pulsantiera, telecomando etc.) fuori dalla portata dei bambini. I comandi devono essere posti ad un'altezza minima di 1,5mt dal suolo e fuori dal raggio d'azione delle parti mobili.
- 7° - Prima di eseguire qualsiasi operazione di installazione, regolazione, manutenzione dell'impianto, togliere la tensione agendo sull'apposito interruttore magnetotermico collegato a monte dello stesso.

LA DITTA ALLMATIC NON ACCETTA NESSUNA RESPONSABILITÀ per eventuali danni provocati dalla mancata osservanza nell'installazione delle norme di sicurezza e delle leggi attualmente in vigore.

**CONSERVARE CON CURA QUESTE ISTRUZIONI**

- 1° - Se non è previsto nella centralina elettrica, installare a monte della medesima un'interruttore di tipo magnetotermico (onnipolare con apertura minima dei contatti pari a 3mm) che riporti un marchio di conformità alle normative internazionali. Tale dispositivo deve essere protetto contro la richiusura accidentale (ad esempio installandolo dentro quadro chiuso a chiave).
- 2° - Per la sezione ed il tipo dei cavi ALLMATIC consiglia di utilizzare un cavo di tipo H05RN-F con sezione minima di 1,5mm<sup>2</sup> e comunque di attenersi alla norma IEC 364 e alle norme di installazione vigenti nel proprio Paese.
- 3° - Posizionamento di un'eventuale coppia di fotocellule: Il raggio delle fotocellule deve essere ad un'altezza non superiore a 70 cm dal suolo e ad una distanza dal piano di movimento dell'anta non superiore a 20 cm. Il loro corretto funzionamento deve essere verificato a fine installazione in accordo al punto 7.2.1 della EN 12445.
- 4° - Per il soddisfacimento dei limiti imposti dalla EN 12453, se la forza di picco supera il limite normativo di 400 N è necessario ricorrere alla rilevazione di presenza attiva sull'intera altezza del cancello (fino a 2,5m max) - Le fotocellule in questo caso sono da applicare all'esterno tra le colonne ed all'interno per tutta la corsa della parte mobile ogni 60-70cm per tutta l'altezza delle colonne del cancello fino ad un massimo di 2,5m (EN 12445 punto 7.3.2.1) - es. colonne alte 2,2mt => 6 copie di fotocellule - 3 interne e 3 esterne (meglio se dotate di sincronismo).

**N.B.: È obbligatoria la messa a terra dell'impianto**

I dati descritti nel presente manuale sono puramente indicativi.

ALLMATIC si riserva di modificarli in qualsiasi momento.

Realizzare l'impianto in ottemperanza alle norme ed alle leggi vigenti.

**- ATTENTION -**

**FOR THE SAFETY OF THE PEOPLE IT IS IMPORTANT TO FOLLOW ALL THE INSTRUCTIONS.**

**FOLLOW ALL INSTALLATION INSTRUCTIONS**

- 1° - This handbook is exclusively addressed to the specialized personnel who knows the constructive criteria and the protection devices against the accidents for motorized gates, doors and main doors (follow the standards and the laws in force).
- 2° - The installer will have to issue to the final user a handbook in accordance with the EN 12635.
- 3° - Before proceeding with the installation, the installer must forecast the risks analysis of the final automatized closing and the safety of the identified dangerous points (following the standards EN 12453/EN 12445).
- 4° - The wiring harness of the different electric components external to the operator (for example photoelectric cells, flashlights etc.) must be carried out according to the EN 60204-1 and the modifications to it done in the point 5.2.2 of the EN 12453.
- 5° - The possible assembly of a keyboard for the manual control of the movement must be done by positioning the keyboard so that the person operating it does not find himself in a dangerous position; moreover, the risk of accidental activation of the buttons must be reduced.
- 6° - Keep the automation controls (push-button panel, remote control etc.) out of the children way. The controls must be placed at a minimum height of 1,5mt from the ground and outside the range of the mobile parts.
- 7° - Before carrying out any installation, regulation or maintenance operation of the system, take off the voltage by operating on the special magnetothermic switch connected upstream it.

THE ALLMATIC COMPANY DOES NOT ACCEPT ANY RESPONSIBILITY for possible damages caused by the non observance during the installation of the safety standards and of the laws at present.

**KEEP THESE INSTRUCTIONS WITH CARE**

- 1° - Install a thermal magnetic switch (omnipolar, with a minimum contact opening of 3 mm) before the control board, in case this is not provided with it. The switch shall be guaranteed by a mark of compliance with international standards. Such a device must be protected against accidental closing (e.g. Installing it inside the control panel key locked container).
- 2° - As far as the cable section and the cable kind are concerned, ALLMATIC suggests to use an H05RN-F cable, with a minimum section of 1,5mm<sup>2</sup>, and to follow, In any case, the IEC 364 standard and Installation regulations In force In your Country.
- 3° - Positioning of an eventual pair of photocells: The beam of the photocells must be at an height not above the 70 cm from the ground, and, should not be more than 20 cm away from the axis of operation of the gate (Sliding track for sliding gate or door, and the hinges for the swing gate). In accordance with the point 7.2.1 of EN 12445 their correct functioning must be checked once the whole installation has been completed.
- 4° - In order to comply with the limits defined by the EN 12453 norm, if the peak force is higher than the limit of 400N set by the norm, it is necessary to use an active obstacle detection system on the whole height of the gate (up to a maximum of 2,5m) - The photocells in this case must be apply externally between the columns and internally for all the race of the mobil part every 60-70cm for all the height of the column of the gate up to a maximum of 2,5m (EN 12445 point 7.3.2.1). example: column height 2,2m => 6 copies of photocells - 3 internal and 3 external (better if complete of syncronism feature).

**N.B.: The system must be grounded**

Data described by this manual are only Indicative and ALLMATIC reserves to modify them at any time. Install the system complying with current standards and regulations.

**- ATTENTION -**

**POUR LA SECURITE DES PERSONNES IL EST IMPORTANT QUE  
TOUTES LES INSTRUCTIONS SOIENT SUIVIES**

**SUIVRE TOUTES LES INSTRUCTIONS D'INSTALLATION**

- 1° - Ce livret d'instructions est adressé exclusivement à un personnel spécialisé qui connaît les critères de construction et les dispositifs de protection contre les accidents concernant les portails, les portes et les grandes portes motorisés (s'en tenir aux normes et aux lois en vigueur).
- 2° - L'installateur devra délivrer à l'utilisateur final un livret d'instruction en accord à la EN 12635.
- 3° - L'installateur avant de procéder à l'installation, doit prévoir l'analyse des risques de la fermeture automatisée finale et la mise en sécurité des points identifiés dangereux (en suivant les normes EN 12453/EN 12445).
- 4° - Le câblage des divers composants électriques externes à l'opérateur (par exemple photocellules, clignotants, etc) doit être effectué selon la EN 60204-1 et les modifications apportées à celle-ci dans le point 5.2.2 de la EN 12453.
- 5° - Le montage éventuel d'un tableau pour la commande manuelle du mouvement doit être fait en positionnant le tableau de façon à ce que la personne qui l'actionne ne se trouve pas en position de danger; de plus, il faudra faire en sorte que le risque d'actionnement accidentel des boutons soit réduit.
- 6° - Tenir les commandes de l'automatisme (tableau, télécommande, etc) hors de portée des enfants. Les commandes doivent être placées à une hauteur minimum de 1,5 m du sol et hors du rayon d'action des parties mobiles.
- 7° - Avant l'exécution de toute opération d'installation, de réglage, d'entretien de l'installation, couper le courant en agissant sur l'interrupteur magnétothermique à cet effet, branché en amont de l'installation.

LA SOCIETE ALLMATIC N'ACCEPTE AUCUNE RESPONSABILITE pour d'éventuels dommages provoqués par la non-observation dans l'installation, des normes de sécurité et des lois actuellement en vigueur.

**CONSERVER SOIGNEUSEMENT CES INSTRUCTIONS**

- 1° - Si la centrale électrique ne dispose d'aucun interrupteur, il faut en installer un de type magnétothermique en amont de cette dernière (omnipolaire avec ouverture minimale des contacts correspondant à 3mm); la marque de cet interrupteur devra être en conformité avec les normes internationales. Ce dispositif doit être protégé contre toute remise en fonction accidentelle (ex. en l'installant dans un coffre fermant à clé).
- 2° - En ce qui concerne la section et le type des câbles, le conseil de ALLMATIC est celui d'utiliser un câble de type H05RN-F présentant une section minimale de 1,5mm<sup>2</sup> et, quoi qu'il en soit, de se conformer à la norme IEC 364, ainsi qu'aux normes d'installation en vigueur dans le pays de destination.
- 3° - Positionnement d'un éventuel jeu de photocellules : le faisceau des photocellules ne doit pas être à une hauteur supérieure à 70 cm du sol et 20 cm du bord du vantail. Leur correct effectivité fonctionnement doit être vérifié terminant l'installation, selon le point de la 7.2.1 de la EN 12445.
- 4° - Afin de satisfaire aux limites imposées par la norme EN 12453, si la force d'impact dépasse la limite de 400N, il sera nécessaire de détecter une présence sur la hauteur totale du portail (jusqu'à un maximum de 2,5m)
  - Les cellules photo-électriques dans ce cas-ci doivent être s'appliquent extérieurement entre les colonnes et intérieurement pour toute la course de la pièce de mobil chaque 60-70cm pour toute la taille de la colonne de la porte jusqu'à un maximum de 2,5m (EN 12445 point 7.3.2.1) - exemple: taille 2,2m de colonne => 6 copies des cellules photo-électriques - 3 internes et 3 externes (meilleur si complet du dispositif de synchronisme).

**N.B.: La mise à terre de l'installation est obligatoire.**

Les données figurant dans le présent manuel sont fournies à titre purement indicatif. ALLMATIC se réserve le droit de les modifier à tout moment, sans aucun préavis. Effectuer l'installation en conformité avec les normes et les lois en vigueur.

**- CUIDADO -**

**UNA INCORRECTA INSTALACIÓN PUEDE CAUSAR GRAVES DAÑOS**

**SEGUIR TODAS LAS INSTRUCCIONES DE INSTALACIÓN**

- 1° - Este manual de instrucciones está exclusivamente dirigido a personal especializado que conozca los criterios de construcción y de los dispositivos de protección contra accidentes con cancelas, puertas y portales motorizados (atenerse a las normas y a las leyes vigentes).
- 2° - El instalador tendrá que dar al usuario final un manual de instrucciones de acuerdo con la EN 12635.
- 3° - El instalador antes de proceder con la instalación tiene que hacer una análisis de los riesgos del cierre automatizado final y la puesta en seguridad de los puntos identificados como peligrosos (siguiendo las normas EN 12453 / EN 12445).
- 4° - El cableado de los varios componentes eléctricos externos al operador (por ejemplo fotocélulas, los intermitentes, etc) tiene que ser efectuado según la EN 60204-1 y a las modificaciones sucesivas aportadas por el punto 5.2.2 de la EN 12453.
- 5° - El eventual montaje de un panel de mandos para la gestión del movimiento manual tiene que ser efectuado posicionando el panel en modo que quien lo accione no se encuentre en una posición peligrosa; además se tiene que hacer en modo que el riesgo de accionamiento accidental de los pulsadores sea mínimo.
- 6° - Tener los mandos del automatismo (panel de mandos, mando a distancia, etc.) lejos del alcance de los niños. Los mandos tienen que ser puestos a una altura mínima de 1,5mt del suelo y fuera del radio de acción de las partes móviles.
- 7° - Antes de ejecutar cualquier operación de instalación, ajuste o mantenimiento del sistema, quitar la corriente accionando el respectivo interruptor magnetotérmico conectado antes del mismo.

LA EMPRESA ALLMATIC NO ES RESPONSABLE por eventuales daños provocados por la falta de respeto de las normas de seguridad, durante la instalación y de las leyes actualmente vigentes.

**CONSERVAR CUIDADOSAMENTE ESTAS INSTRUCCIONES**

- 1° - En el caso de que no sea previsto en la central eléctrica, instalar antes de la misma, un interruptor de tipo magnetotérmico (omnipolar con una abertura mínima de los contactos de 3mm) que dé un sello de conformidad con las normas internacionales. Este dispositivo tiene que estar protegido contra cierres accidentales (por ejemplo instalándolo dentro de un panel cerrado a llave).
- 2° - Para la sección y el tipo de los cables, ALLMATIC aconseja utilizar cables de tipo H05RN-F con sección mínima de 1,5mm<sup>2</sup> e igualmente atenerse a la norma IEC 364 y a las normas de instalación del propio País.
- 3° - Posicionamiento eventual de un par de fotocélulas. El rayo de las fotocélulas no debe estar a más de 70 cm de altura desde el suelo y a una distancia de la superficie de movimiento de la puerta, no superior a 20 cm. El correcto funcionamiento tiene que ser controlado al final de la instalación de acuerdo con el punto 7.2.1 de la EN 12445.
- 4° - Para satisfacer los límites impuestos por la EN 12453, si la fuerza de punta supera el límite normativo de 400 N, es necesario recurrir al control de presencia activa en toda la altura de la puerta (hasta a 2,5m max). Las fotocélulas en este caso se tienen que colocar en el exterior entre las columnas y en el interior por todo el recorrido de la parte móvil cada 60-70cm en toda la altura de las columnas de la cancela hasta un máximo de 2,5m (EN 12445 punto 7.3.2.1) - es. columnas altas de 2,2mt => 6 par de fotocélulas - 3 internas y 3 externas (mejor si están provistas de sincronismo).

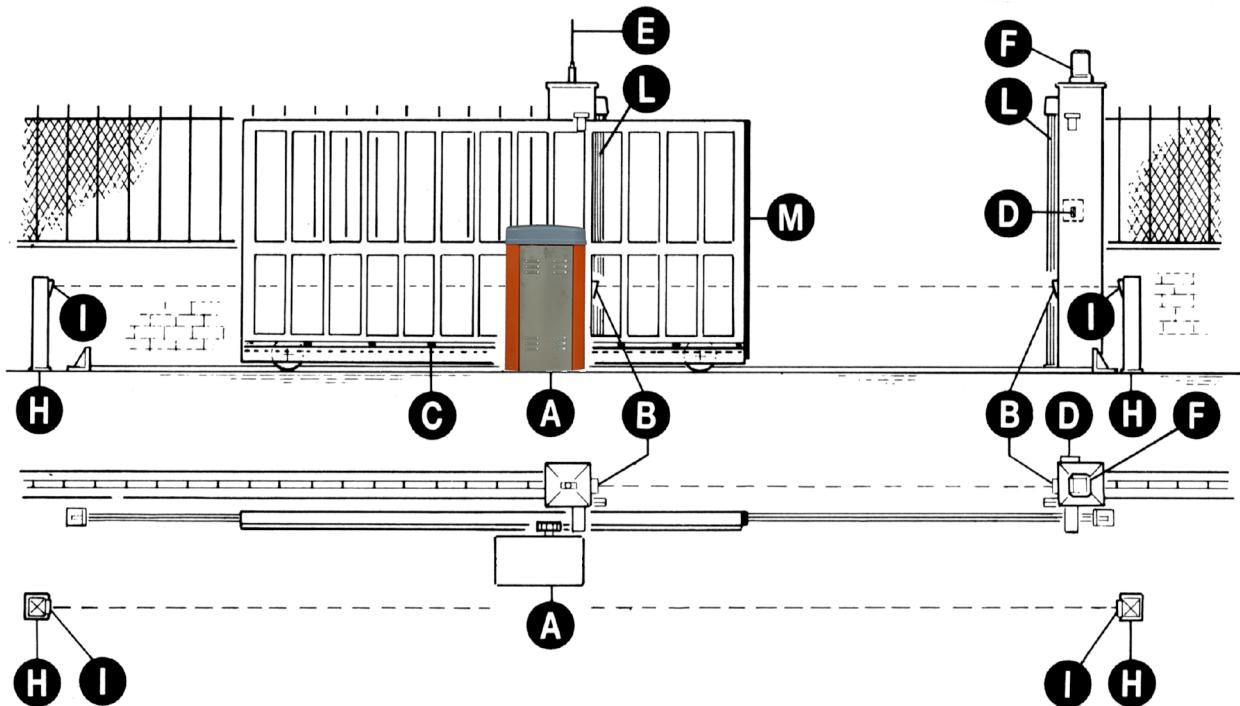
**PS.: Es obligatorio la puesta a tierra del sistema.**

Los datos descritos en el presente manual son sólamente indicativos.

ALLMATIC se reserva de modificarlos en cualquier momento.

Realizar el sistema respetando las normas y las leyes vigentes.

## SYSTEM LAYOUT



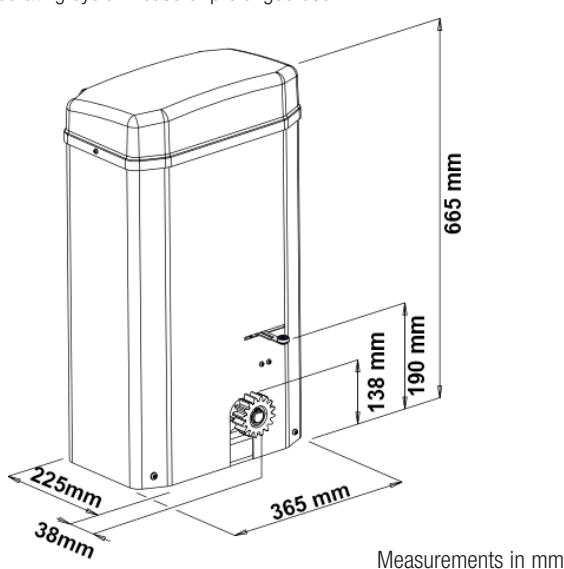
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- A - IND4000V operator
- B - Photocells (external)
- C - Rack M4
- D - Key selector
- E - Tuned antenna
- F - Flashing lamp
- H - Galvanized column for photocells
- I - Photocells (internal)
- L - Safety edge fixed to column
- M - Safety edge with wireless system

## TECHNICAL FEATURES

### Irreversible operating devices for sliding gates with a maximum weight of 4000 kg.

The irreversibility of this operating device allows you to avoid using any electric lock for an effective closing of the gate. The motor is protected by an heat probe, that temporary interrupts the operating cycle in case of prolonged use.



TECHNICAL DATA		IND4000V
Max. leaf weight	kg	4000
Thrust force to constant turns	N	3700
Rack		M4
Power supply		230V 3~ 50/60Hz delta connection (CT INVERTER) 380V 3~ 50/60Hz (CT3IND)
Power	W	750
Current absorbed	A	2,5
Capacitor	µF	-
Daily operations suggested	n°	200
Service	%	80
Unlocking device for emergency manoeuvre		With key
Working temperature	°C	-25 ÷ +70
Protection	IP	54
Limit switch		Electromechanical

# INSTALLATION IND4000V

## CHECKING BEFORE THE INSTALLATION

### !! THE GATE SHALL MOVE FRICTIONLESS !!

**Note:** Gate features must be uniformed with the standards and laws in force. The door/gate can be automated only if it is in a good condition and its conditions comply with the EN 12604 norm.

- The door/gate leaf does not have to have a pedestrian opening. In the opposite case it is necessary to take the appropriate steps, in accordance with EN 12453 norm (for instance; by preventing the operation of the motor when the pedestrian opening is opened, by installing a safety microswitch connected with the control panel).

- Besides the electrical or mechanical limit switches available on the operators, there must be, on both ends of the installation, a fixed mechanical stopper which stop the gate in the unlikely event of ill functioning of limit switches on the operators. For this reason the fixed mechanical stopper must be of an adequate size to withstand the static and kinetic forces generated by the gate (N) (Fig.2).

The guide must be provided with two mechanical stops at its ends (N) (Fig. 2). Gate columns shall have anti-derailment guides on their top (Fig. 3), to avoid the unintentional gate release.

**Note:** Eliminate those mechanical stops of the kind described by figure 3.

No mechanical stop shall be on top of the gate, since mechanical stops are not safe enough.

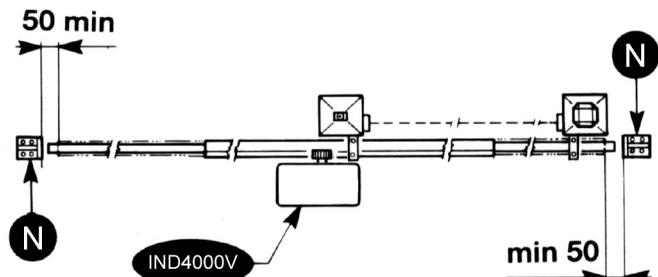


FIG. 2

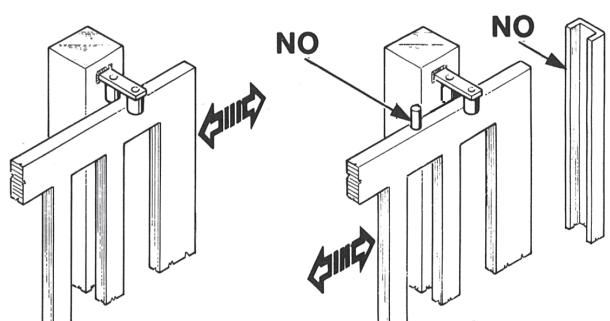


FIG. 3

COMMAND TYPE	USE OF THE SHUTTER		
	Skilled persons (out of public area*)	Skilled persons (public area)	Unrestricted use
with manned operation	A	B	non possible
with visible impulses (e.g. sensor)	C or E	C or E	C and D, or E
with not visible impulses (e.g. remote control device)	C or E	C and D, or E	C and D, or E
automatic	C and D, or E	C and D, or E	C and D, or E

\* a typical example are those shutters which do not have access to any public way  
A: Command button with manned operation (that is, operating as long as activated).  
B: Key selector with manned operation.  
C: Adjustable power of the motor.  
D: Safety strips and/or other safety devices to keep thrust force within the limits of EN12453 regulation - Appendix A.  
E: Photocells.

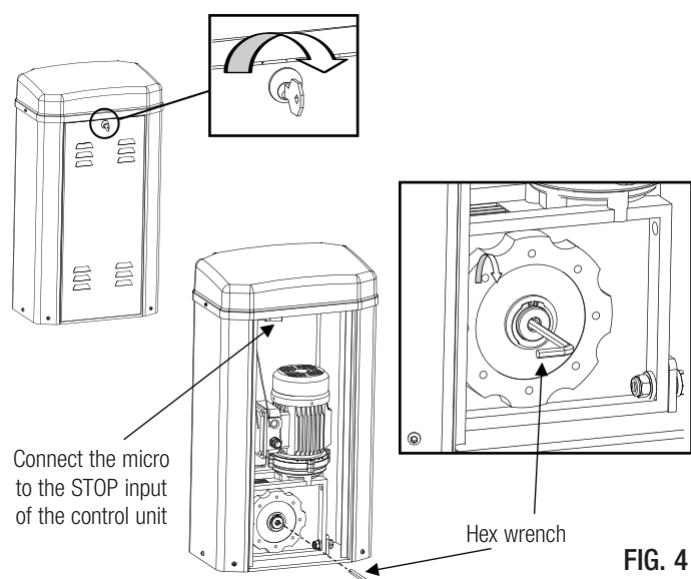


FIG. 4

## RELEASE

To operate after the power supply to the motor has been interrupted.

In order to work manually on the gate:

- open the front cover;
  - insert the hex wrench and rotate it 3 times counterclockwise (Fig. 4).
- In order to carry out the manual operation of the gate leaf the following must be checked:
- That the gate is endowed with appropriate handles;
  - That these appropriate handles are placed so to avoid safety risks for the operator;
  - That the physical effort necessary to move the gate leaf should not be higher than 225 N, for doors/gates for private dwellings, and, 390N for doors/gates for commercial and industrial sites (values indicated in 5.3.5 of the EN 12453 norm).

## MOTOR AND RACK FITTING

Predispose a cable trunking in the holes.

Follow this procedure for the installation of the backing plate:

- Bend the brackets (Fig. 5).
- Make an excavation.
- Insert the cable trunking.
- Level and cement the fixing plate.

When the backing plate is fixed, open the front cover, remove the casing from the motor by unscrewing the screws present in the lower part of the casing.

Place the motor on the fixing plate and screw with the M12 nuts supplied (Fig.5).

The rack shall be fitted over the motor support, at a certain distance from it.

Its height can be adjusted thanks to the holes in the rack.

The height adjusting is necessary to prevent the gate leaning on the driving gear (Fig. 6).

To fix the rack on the gate, drill some Ø 5 mm holes and thread them using an M6 screw tap.

The driving gear needs 2 or 3 mm clearance from the rack.

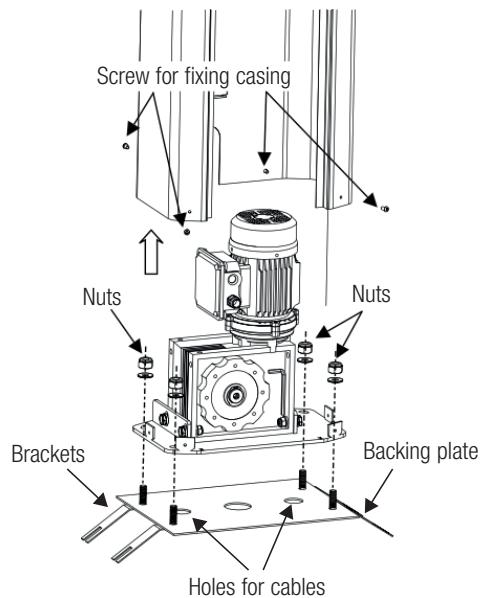


FIG. 5

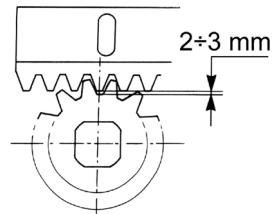


FIG. 6

## LIMIT SWITCH FITTING

In order to determine the gate travel length, place two cams at the ends of the rack (Fig. 7).

Move the cams on the rack teeth to adjust their opening and closing travel.

To fix the cams to the rack, tighten the screws issued.



FIG. 7

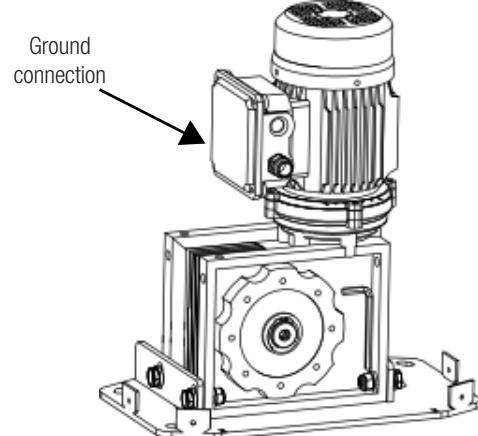


FIG. 8

## MAINTENANCE

To be carried out exclusively by skilled persons after the power supply to the motor has been interrupted.

Periodically, when the gate is standstill, clean and keep the guide free from stones and dirt.

## TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTION
By giving a command with the remote control or with the key selector, the gate doesn't open or the motor doesn't start.	230 volt mains voltage absent.	Check the main switch.
	Emergency STOP present.	Check for any STOP selectors or commands. If not used, check the jumper on the STOP input of the control unit.
	Fuse blown.	Replace with one of same value.
	Power cable of motor not connected or faulty.	Connect the cable to the appropriate terminal board or replace it.
	The photocell is not functioning or the beam is interrupted.	Check the connection, remove any obstacle across the beam.
By giving a command with the remote control, the gate does not open, but it works with the key selector.	The remote control has not been memorized or the battery is flat.	Carry out the remote control learning procedure on the control unit or replace the battery with a new one.
The gate starts, but stops immediately	The torque of the motor is insufficient.	Modify the value of the torque in the control unit, if possible.
	The value of the obstacle sensitivity (if present) it is not suitable for the installation.	Modify the value of the sensitivity in the control unit, if possible.

## GUARANTEE

In compliance with legislation, the manufacturer's guarantee is valid from the date stamped on the product and is restricted to the repair or free replacement of the parts accepted by the manufacturer as being defective due to poor quality materials or manufacturing defects. The guarantee does not cover damage or defects caused by external agents, faulty maintenance, overloading, natural wear and tear, choice of incorrect product, assembly errors, or any other cause not imputable to the manufacturer. Products that have been misused will not be guaranteed or repaired. Printed specifications are only indicative. The manufacturer does not accept any responsibility for range reductions or malfunctions caused by environmental interference. The manufacturer's responsibility for damage caused to persons resulting from accidents of any nature caused by our defective products, are only those responsibilities that come under Italian law.

## PRODUCT DISPOSAL

This product is an integral part of automation, and therefore must be disposed of together with it. As with installation operations, even at the end of the life of this product, dismantling operations must be carried out by qualified personnel. This product consists of various types of materials: some can be recycled, others must be disposed of. Find out about the recycling or disposal systems required by the regulations in force in your territory for this category of product.

**WARNING!** - certain parts of the product may contain pollutants or dangerous substances which, if dispersed in the environment, could have harmful effects on the environment and human health.

As indicated by the symbol on the side, it is forbidden to throw this product into household waste. Then perform the "separate collection" for disposal, according to the methods provided by the regulations in force in your territory, or return the product to the seller when buying a new equivalent product.

**WARNING!** - the regulations in force at local level may provide for heavy penalties in case of improper disposal of this product.



MADE IN ITALY

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