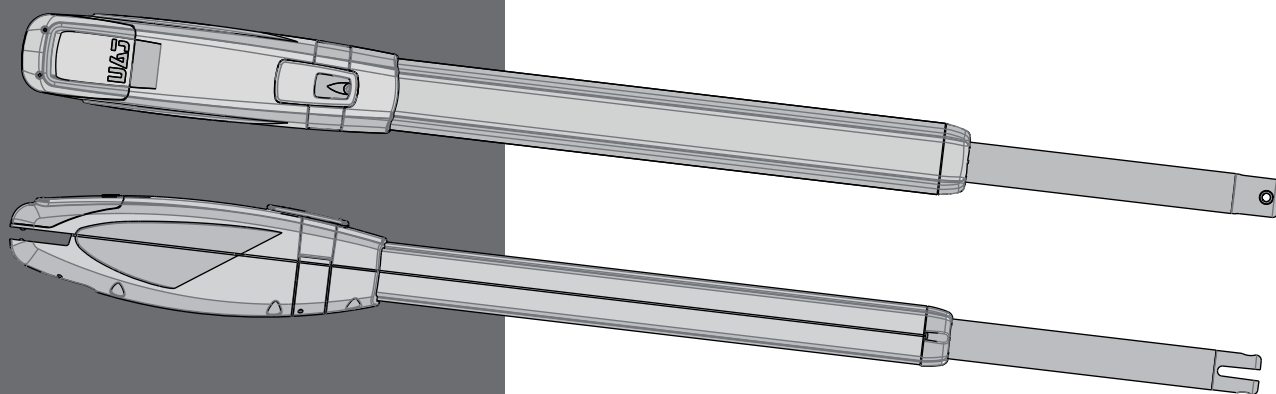


ARM200 Series



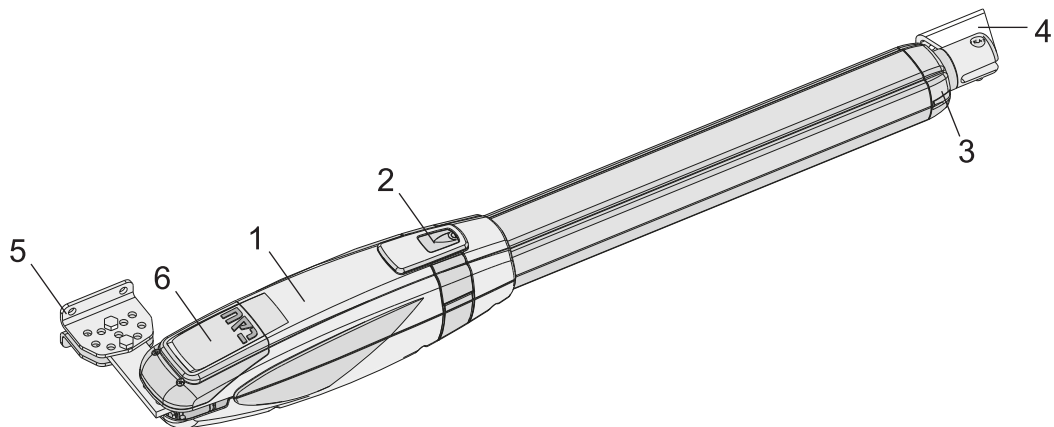


fig. 1

ARM	A	B max	C max
225I - 225BI	290 mm	1070 mm	1098 mm
250I - 250BI 250BR	425 mm	1350 mm	1378 mm
270I - 270BI	530 mm	1560 mm	1588 mm
290BI	853 mm	2266 mm	2294 mm

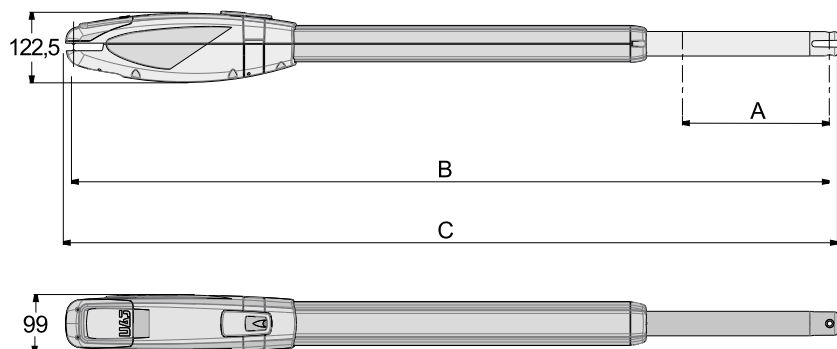
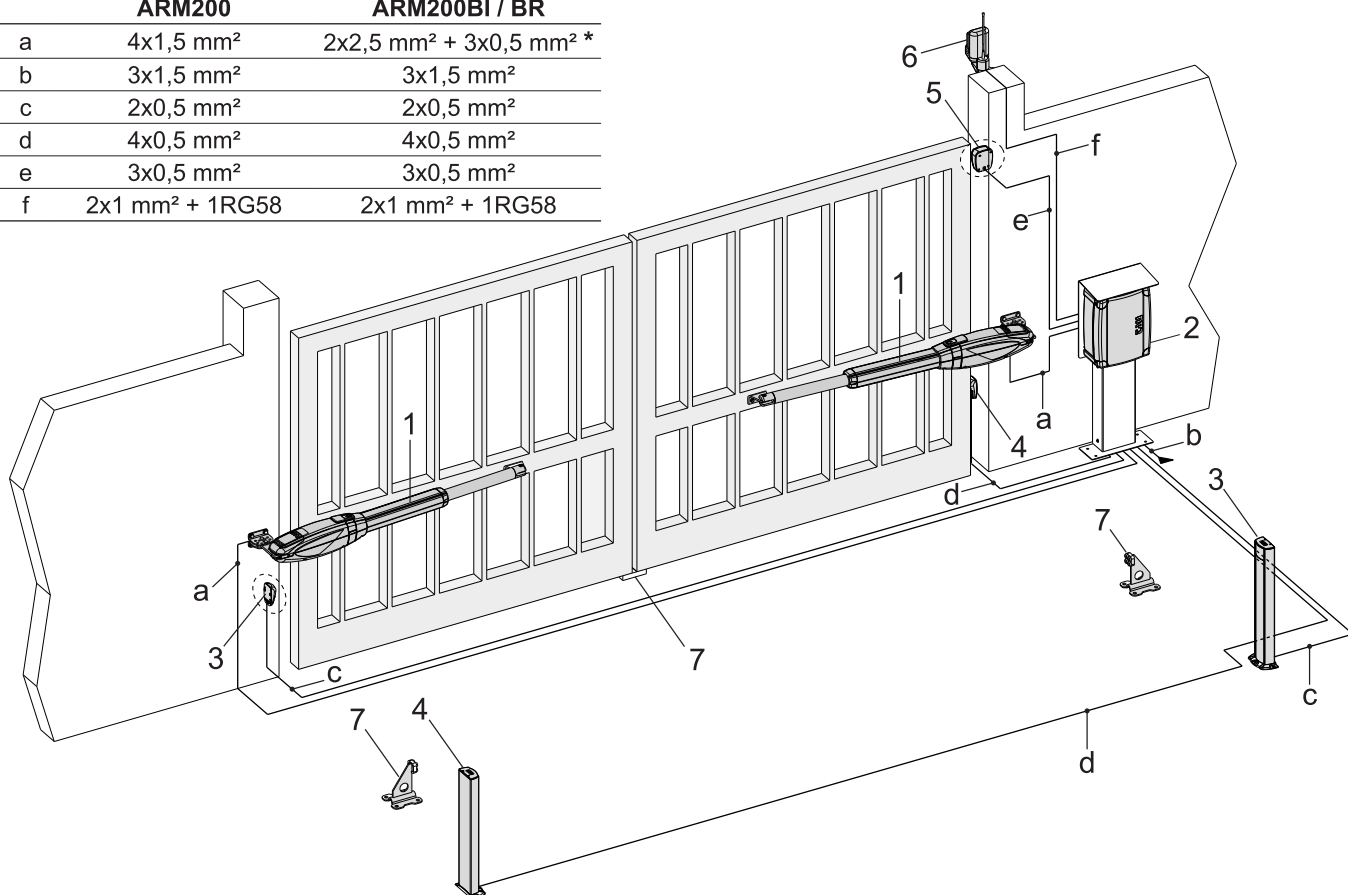


fig. 2

	ARM200	ARM200BI / BR
a	4x1,5 mm ²	2x2,5 mm ² + 3x0,5 mm ² *
b	3x1,5 mm ²	3x1,5 mm ²
c	2x0,5 mm ²	2x0,5 mm ²
d	4x0,5 mm ²	4x0,5 mm ²
e	3x0,5 mm ²	3x0,5 mm ²
f	2x1 mm ² + 1RG58	2x1 mm ² + 1RG58



* sezione di 2,5 mm² obbligatoria per i motori in c.c.

* 2.5 mm² section mandatory for DC motors

* 2,5 mm² Querschnitt für Gleichstrommotoren obligatorisch

* Section 2,5 mm² obligatoire pour les moteurs DC

* Sección de 2.5 mm² obligatoria para motores DC

* Seção de 2,5 mm² obrigatória para motores de corrente contínua

fig. 3

- 1) Attuatore
- 2) Centralina
- 3) Selettore a chiave
- 4) Antenna e lampeggiante

- 5) Fotocellule a parete
- 6) Battenti
- 7) Fotocellule a colonnina
- 8) Elettroserratura

- 1) Actuator
- 2) Control unit
- 3) Key switch
- 4) Aerial and flashing light

- 5) Wall-mounted photocells
- 6) Gate stops
- 7) Photocells on post
- 8) Electric lock

- 1) Antrieb
- 2) Steuerzentrale
- 3) Schlüsselschalter
- 4) Antenne und Blinkleuchte

- 5) Photozellen an Mauer
- 6) Anschläge
- 7) Photozellen auf Ständer
- 8) Elektroschloss

- 1) Opérateur
- 2) Logique de commande
- 3) Sélecteur a clé
- 4) Antenne et clignotant

- 5) Photocellules murales
- 6) Battants
- 7) Photocellules sur colonne
- 8) Serrure électrique

- 1) Operador
- 2) Centralita
- 3) Selector de llave
- 4) Antena y luz intermitente

- 5) Fotocélulas de pared
- 6) Topes
- 7) Fotocélulas en columnas
- 8) Electrocerradura

- 1) Motoredutor
- 2) Unidade de controle
- Seletor de teclas
- 4) Antena e piscando

- 5) Fotocélulas na parede
- 6) folhas
- 7) Fotocélula de coluna
- 8) Fechadura elétrica



QUOTE DI
INSTALLAZIONE
(FIG.4)

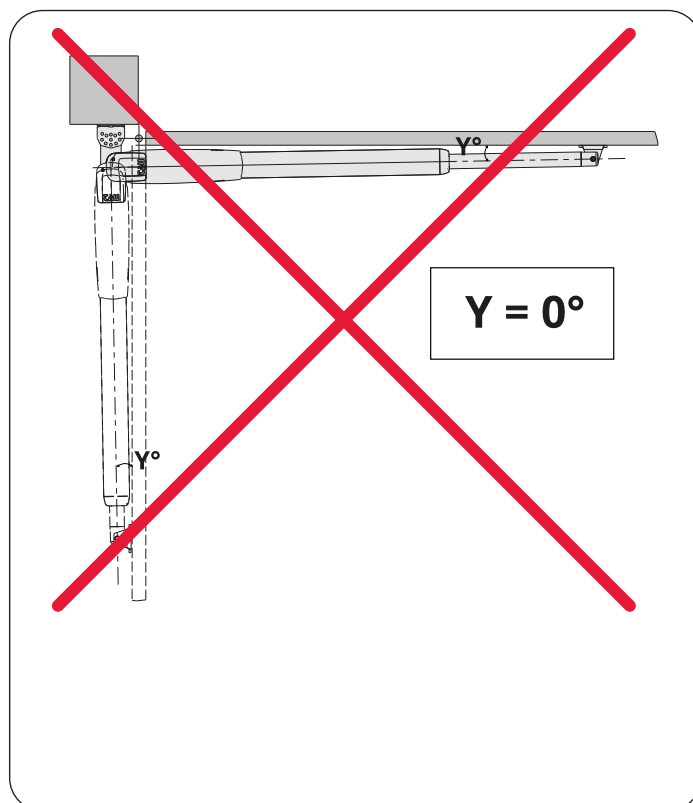
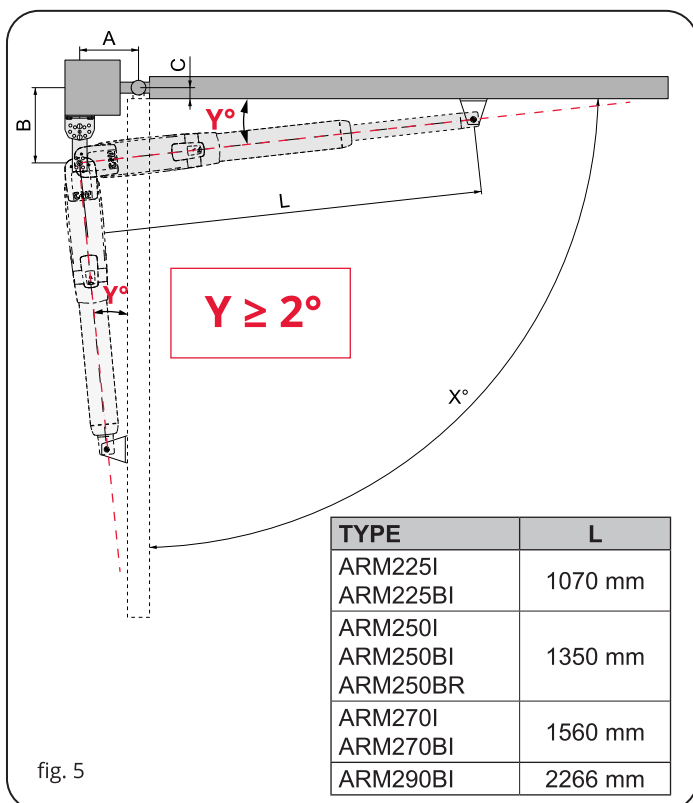
INSTALLATION
DIMENSIONS
(FIG.4)

ANBAUMASSE
(ABB.4)

COTES
D'INSTALLATION
(FIG.4)

COTAS DE
INSTALACIÓN
(FIG.4)

COTAS PARA
INSTALAÇÃO
(FIG.4)



ARM225

X°	A (mm)	B (mm)	C (mm)
90	110	120 ÷ 165	20 mm
90	115	120 ÷ 160	20 mm
90	120 ÷ 125	120 ÷ 155	20 mm
90	130	120 ÷ 150	20 mm
90	135	120 ÷ 145	20 mm
Misura ideale / Ideal size:			
90	140	140	20 mm
90	140	120 ÷ 140	20 mm
90	145	120 ÷ 135	20 mm
90	150 ÷ 155	120 ÷ 130	20 mm
90	160	120 ÷ 125	20 mm
90	165	120 ÷ 120	20 mm
100	130	120 ÷ 130	20 mm
100	135	120 ÷ 120	20 mm

ARM250

X°	A (mm)	B (mm)	C (mm)
90	120 ÷ 125	135 ÷ 275	20 mm
90	130	135 ÷ 270	20 mm
90	135	135 ÷ 265	20 mm
90	140	135 ÷ 260	20 mm
90	145 ÷ 150	135 ÷ 255	20 mm
90	155	135 ÷ 250	20 mm
90	160	135 ÷ 245	20 mm
90	165	135 ÷ 240	20 mm
90	170 ÷ 175	135 ÷ 235	20 mm
90	180	135 ÷ 230	20 mm
90	185	135 ÷ 225	20 mm
Misura ideale / Ideal size:			
90	190	190	20 mm
90	190 ÷ 195	135 ÷ 220	20 mm
90	200	135 ÷ 215	20 mm
100	145	135 ÷ 160	20 mm
100	150	135 ÷ 210	20 mm
100	155	135 ÷ 225	20 mm
100	160	135 ÷ 220	20 mm
100	165	135 ÷ 215	20 mm
100	170	135 ÷ 210	20 mm
100	170	135 ÷ 205	20 mm
100	180	135 ÷ 200	20 mm
100	185	135 ÷ 195	20 mm
110°	170	135 ÷ 140	20 mm
110°	200	135 ÷ 155	20 mm

ARM270

X°	A (mm)	B (mm)	C (mm)
90	150	170 ÷ 345	20 mm
90	155	170 ÷ 340	20 mm
90	160 ÷ 165	170 ÷ 335	20 mm
90	170	170 ÷ 330	20 mm
90	175 ÷ 180	170 ÷ 325	20 mm
90	185	170 ÷ 320	20 mm
90	190	170 ÷ 315	20 mm
90	195	170 ÷ 310	20 mm
90	200 ÷ 205	170 ÷ 305	20 mm
90	210	170 ÷ 300	20 mm
90	215	170 ÷ 295	20 mm
Misura ideale / Ideal size:			
90	225	225	20 mm
90	220 ÷ 225	170 ÷ 290	20 mm
100	175	170 ÷ 170	20 mm
100	180	170 ÷ 220	20 mm
100	185	170 ÷ 280	20 mm
100	190	170 ÷ 285	20 mm
100	195	170 ÷ 280	20 mm
100	200	170 ÷ 275	20 mm
100	205	170 ÷ 270	20 mm
100	210	170 ÷ 265	20 mm
100	215	170 ÷ 260	20 mm
100	220	170 ÷ 255	20 mm
100	225	170 ÷ 250	20 mm
110	210	170 ÷ 175	20 mm
110	215	170 ÷ 190	20 mm
110	220	170 ÷ 210	20 mm
110	225	170 ÷ 225	20 mm
120°	225	170 ÷ 225	20 mm
120°	230	170 ÷ 175	20 mm

ARM290

X°	A (mm)	B (mm)	C (mm)
90°	200	225 – 595	20
90°	210	225 – 585	20
90°	220	225 – 580	20
90°	230	225 – 570	20
90°	240	225 – 565	20
90°	250	225 – 555	20
90°	260	225 – 550	20
90°	270	225 – 545	20
90°	280	225 – 535	20
90°	290	225 – 530	20
90°	300	225 – 520	20
90°	310	225 – 515	20
90°	320	225 – 505	20
90°	330	225 – 500	20
90°	340	225 – 495	20
90°	350	225 – 490	20
90°	360	225 – 485	20
90°	370	225 – 475	20
90°	380	225 – 470	20
90°	390	225 – 460	20
90°	400	225 – 455	20
90°	410	225 – 450	20
90°	420	225 – 445	20
90°	430	225 – 435	20
90°	440	225 – 430	20
90°	450	225 – 420	20
100°	230	225 – 245	20
100°	250	225 – 480	20
100°	300	225 – 470	20
100°	350	225 – 430	20
100°	400	225 – 385	20
100°	450	225 – 345	20
125°	370	225 – 240	20
125°	400	225 – 265	20
125°	420	225 – 235	20



Nota: perchè funzioni l'angolo formato dall'attuatore e l'anta (Y° fig. 5) deve essere > di 2° sia ad anta completamente chiusa che ad anta completamente aperta.

Note: for it to work, the angle formed by the actuator and the gate (Y°, pic. 5) must be ≥ 2° both with the gate completely closed and completely open.

HINWEIS: Damit es funktioniert, muss der Winkel zwischen dem Antrieb und dem Torflügel (Y° Fig. 5) ≥ 2 betragen, sowohl bei vollständig geschlossenem, als auch bei vollständig offenem Torflügel.

Remarque : pour que cela fonctionne l'angle formé par l'actionneur et le vantail (Y ° fig. 5) doit être ≥ à 2° que le vantail soit complètement fermé ou complètement ouvert.

Nota: para que funcione, el ángulo formado entre el accionador y la puerta (Y° fig. 5) debe ser ≥ 2° con la puerta completamente cerrada y con la puerta completamente abierta.

Nota: para que funcione, o ângulo formado entre motorreductor e a folha do portão (Y ° fig. 5) deve ser >2°, seja com a folha totalmente fechada ou totalmente aberta.

÷ = INTERVALLO TRA IL VALORE MINIMO E IL VALORE MASSIMO CONSENTITI

Quando la quota "C" risulta essere superiore/inferiore a 20 mm, aumentare/diminuire la quota "B" della differenza (es: se C= 25mm, aumentare "B" di 5mm), verificando che sia entro i limiti riportati in tabella.



Nota: per una veloce apertura del cancello e per una ottimale tenuta in posizione di chiusura (cancelli provvisti di elettroseratura), si consiglia di utilizzare la massima dimensione "B" riportata nelle tabelle.

÷ = RANGE BETWEEN PERMITTED MINIMUM AND MAXIMUM VALUES

When distance "C" is greater/smaller than 20 mm, increase/decrease distance "B" by the difference (e.g.: if C = 25mm, increase "B" by 5mm), making sure that it does not exceed the limits shown in the chart.



Note: for a quick opening and optimum closed-holding position (gates with an electrical lock), use the maximum distance "B" shown in the chart.

÷ = INTERVALL ZWISCHEN ZULÄSSIGEM MINDEST- UND HÖCHSTWERT

Wenn das Maß "C" größer oder kleiner als 20 mm ist, muss zum Maß "B" die Differenz addiert bzw. von diesem abgezogen werden (Beispiel: wenn C= 25mm ist, müssen zu "B" 5mm addiert werden), prüfen, dass sich das Maß innerhalb der Grenzwerte in der Tabelle befindet.



HINWEIS: Für eine schnelle Öffnung des Tores sowie für ein optimales Halten in der geschlossenen Position (Tore mit Elektroschloss) empfehlen wir die Verwendung der größten in der Tabelle angegebenen Größe "B".

÷ = INTERVALLE ENTRE LA VALEUR MINIMUM ET LA VALEUR MAXIMUM ADMISES.

Quand la mesure « C » résulte être supérieure/inférieure à 20 mm, augmenter/diminuer la mesure « B » de la différence (ex. : si C= 25 mm, augmenter « B » de 5 mm), en vérifiant qu'elle rentre dans les limites indiquées dans le tableau.



Remarque: Pour une ouverture rapide du portail et pour une tenue optimale en position fermée (portails équipés avec serrure électrique), il est recommandé d'utiliser la taille « B » maximale indiquée dans les tableaux.

÷ = INTERVALLO ENTRE EL VALOR MÍNIMO Y EL VALOR MÁXIMO CONSENTIDOS

Cuando la cota "C" es superior/inferior a 20 mm, aumente/disminuya la cota "B" con el valor de la diferencia (ej: si C= 25mm, aumente "B" 5 mm), comprobando que se sitúe dentro de los límites que aparecen en la tabla.



Para una rápida apertura de la puerta y para un cierre más firme (puertas equipadas con electro-cerradura), se aconseja utilizar la máxima dimensión "B" que se muestra en las tablas.

÷ = Intervallo entre o valor mínimo e o valor máximo consentido

Quando a cota "C" é maior/menor que 20 mm, aumentar/diminuir a cota "B" pela sua diferença (por exemplo, se C = 25mm, aumente "B" em 5mm), verificando se esta se encontra dentro dos limites indicados na tabela.



Nota: para uma abertura rápida do portão e para uma ideal permanência na posição de fecho (portões equipados com fechadura eléctrica), é aconselhável usar o valor máximo admissível da cota "B" de acordo com as tabelas.

QUOTE DI
INSTALLAZIONE
PER MONTAGGIO
SU ANTE CON
APERTURA VERSO
L'ESTERNO

SIZES TO
INSTALL THE
OPERATOR
ON OUTDOOR
OPENING
LEAVES

EMPLACEMENT
POUR L'INSTALLA-
TION DU MOTEUR
SUR VANTAUX
OUVRANT VERS
L'EXTÉRIEUR

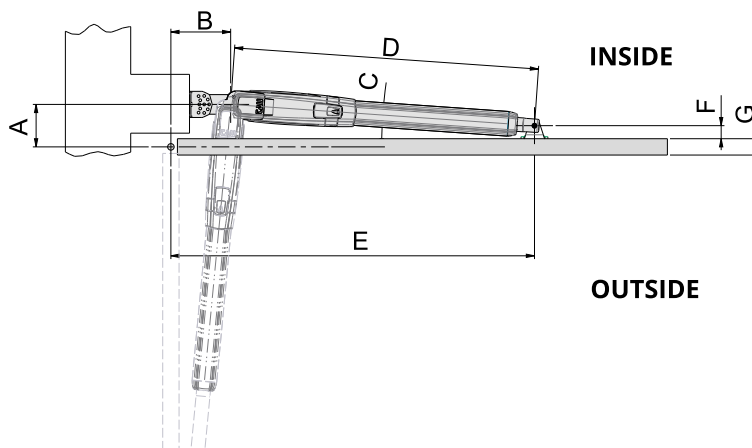
INSTALLA-
TIONSMASSE
FÜR DIE MONTA-
GE AUF FLÜGEL
MIT ÖFFNUNG
NACH AUßEN

MEDIDAS DE
INSTALACIÓN
PARA MONTAJE
EN HOJAS CON
APERTURA HA-
CIA EL EXTERIOR

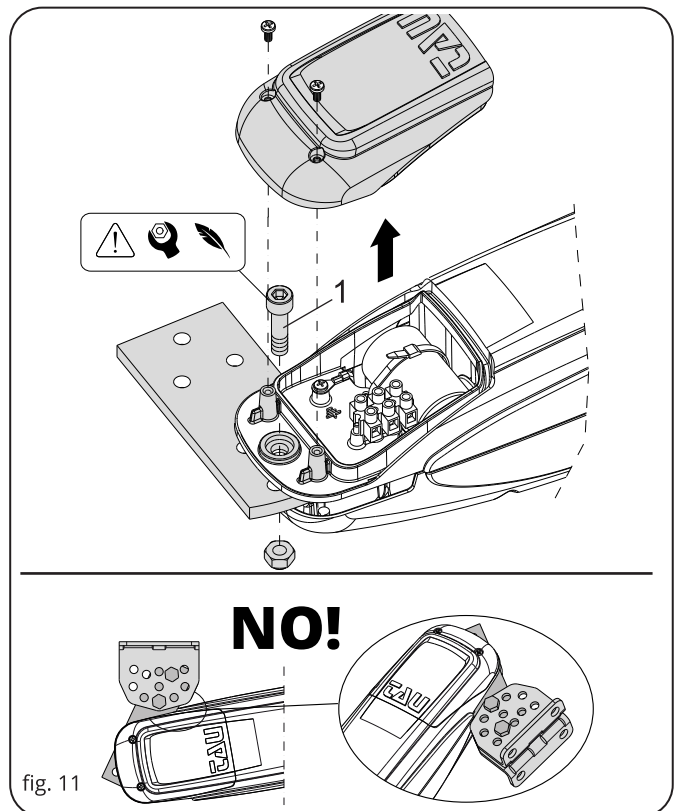
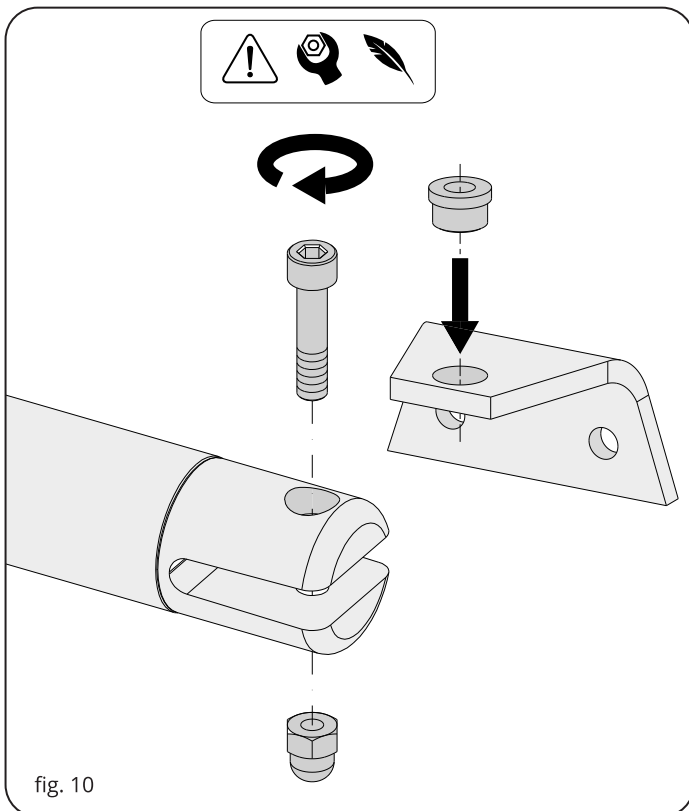
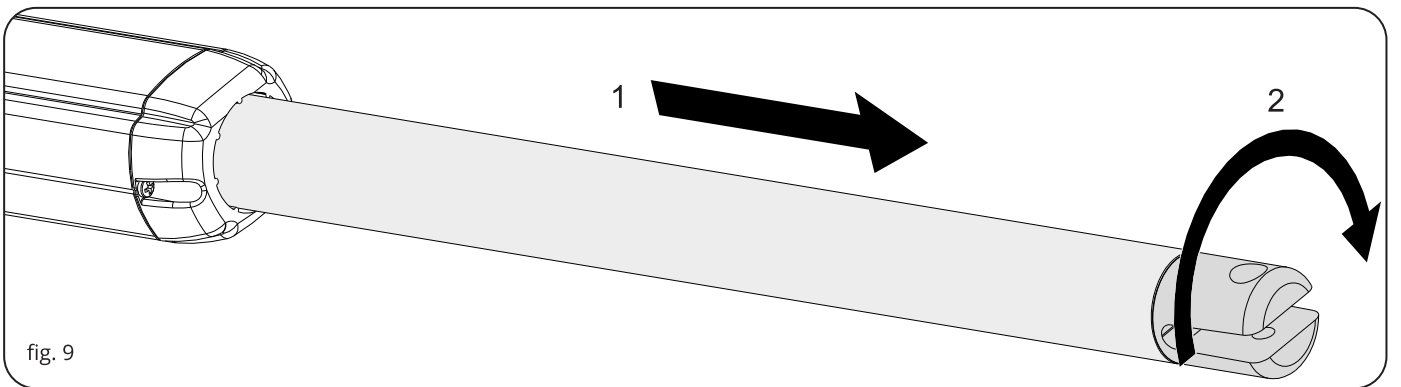
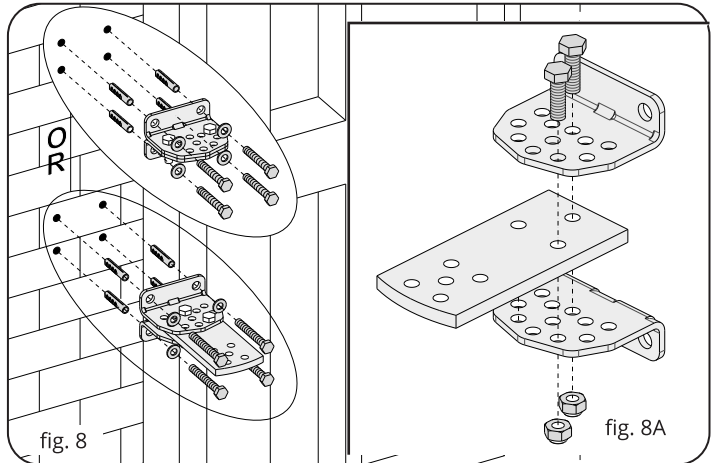
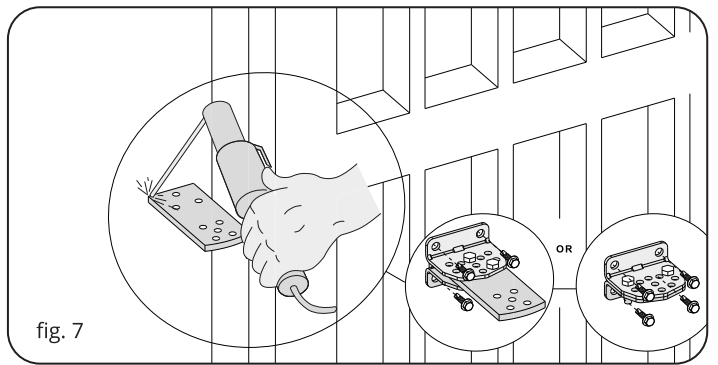
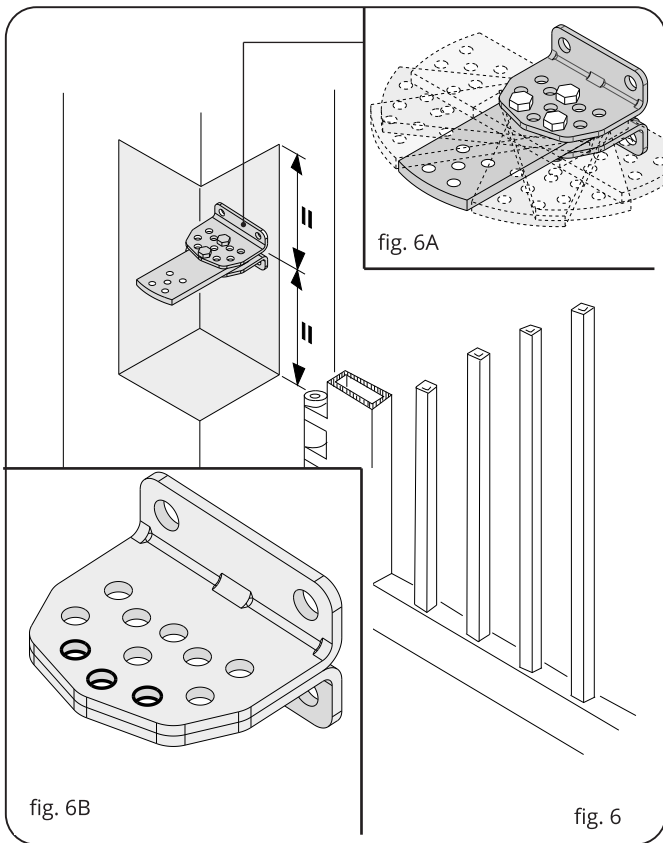
MEDIDAS DE
INSTALAÇÃO
PARA MONTA-
GEM DE PORTAS
COM ABERTURA
PARA FORA

fig. 5B

Example mounting: Opening
outwards
Esempio di montaggio per
apertura anta verso l'esterno.



TYPE	A	B	C	D	E	F	G
ARM225I - ARM225BI	125 mm	145 mm	3,3°	781 mm	925 mm	40 mm	40 mm
ARM250I - ARM250BI - ARM250BR	130 mm	145 mm	3,1°	931 mm	1075 mm	40 mm	40 mm
ARM270I - ARM270BI	155 mm	180 mm	4,2°	1032 mm	1210 mm	40 mm	40 mm



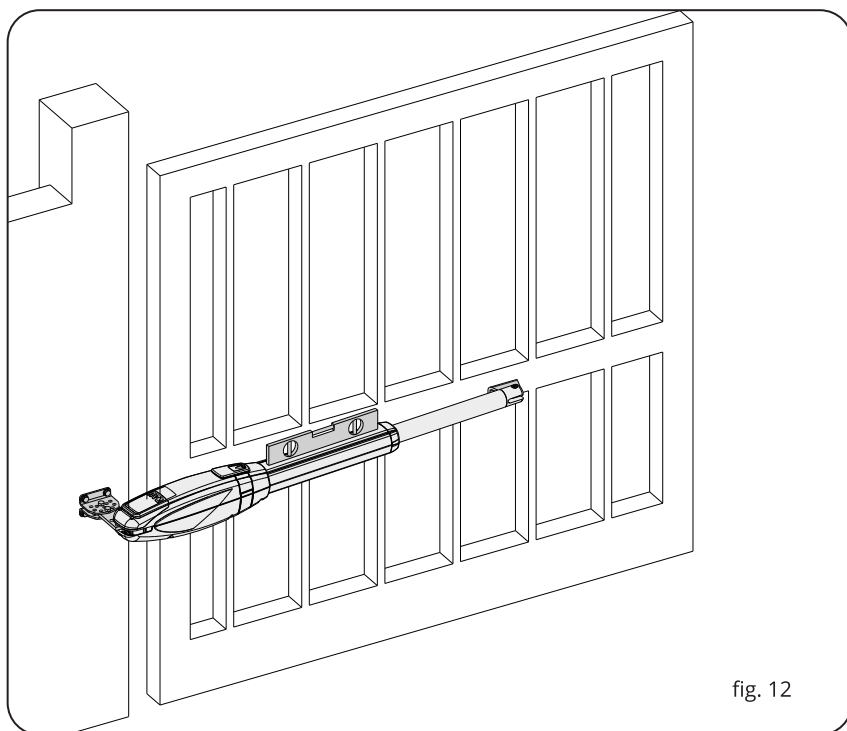


fig. 12

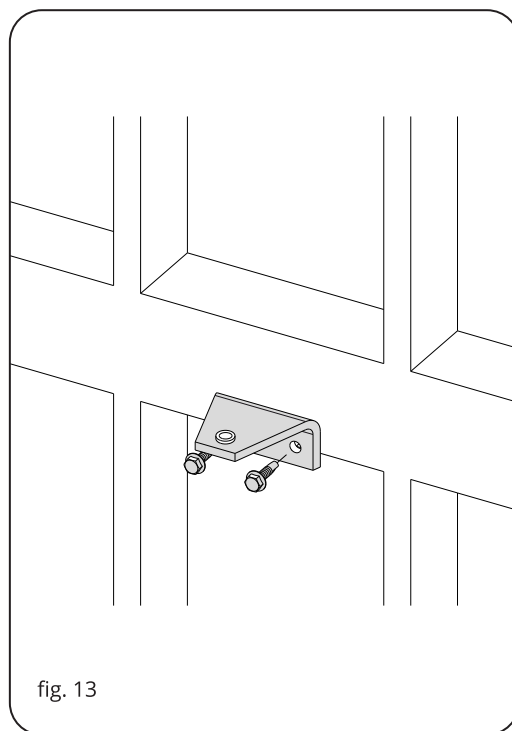


fig. 13

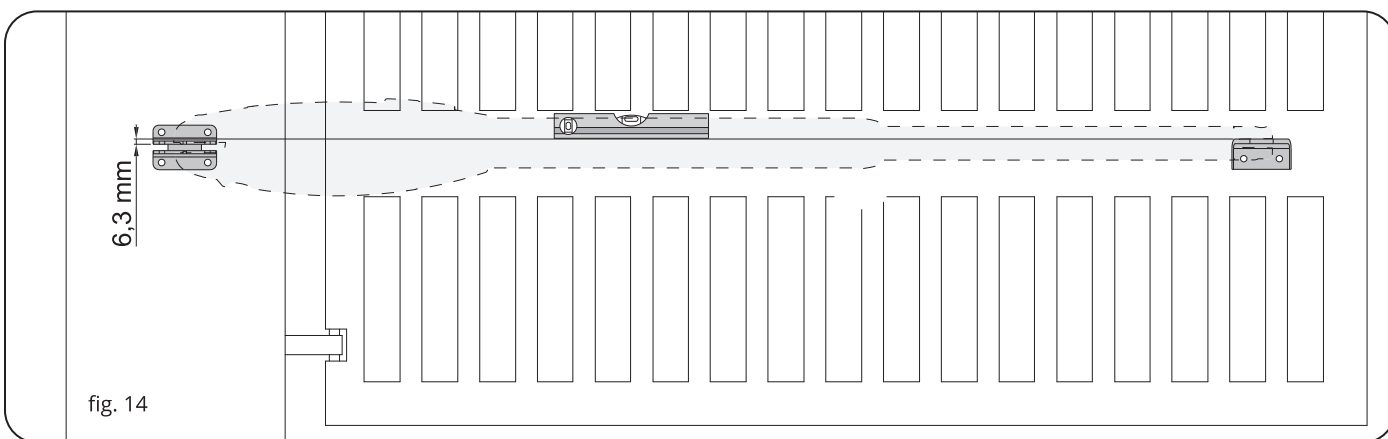


fig. 14

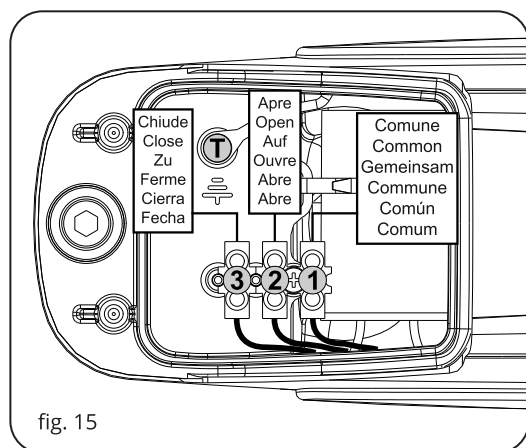


fig. 15

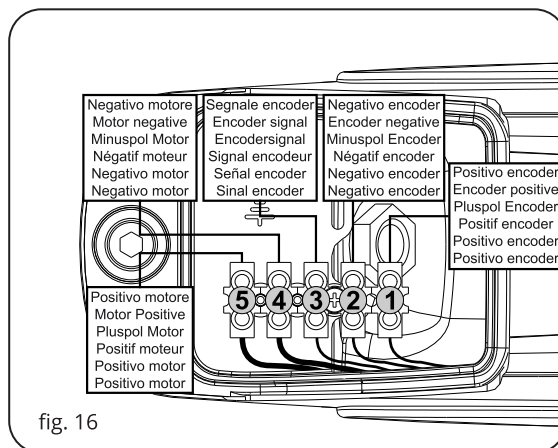


fig. 16

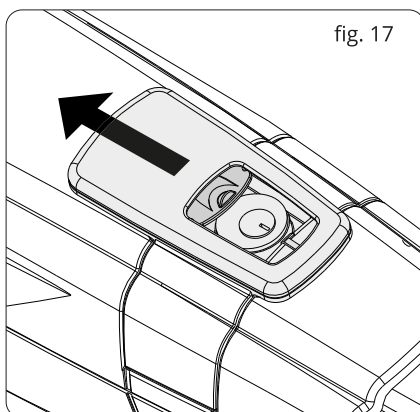


fig. 17

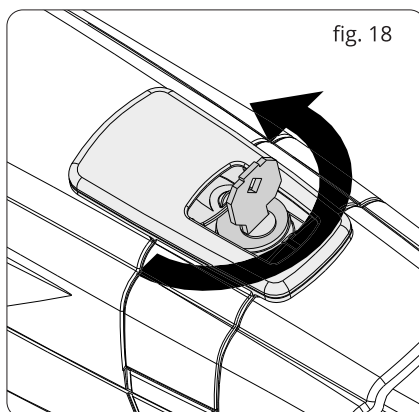


fig. 18

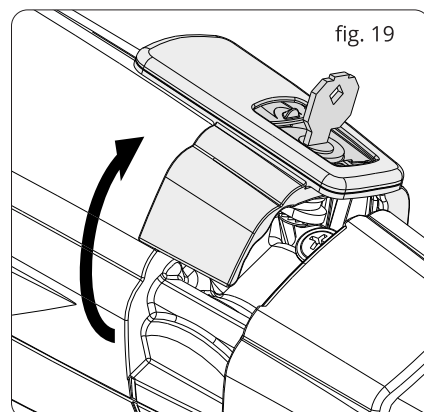


fig. 19

I dati riportati nel presente manuale sono puramente indicativi. La TAU si riserva il diritto di modificarli in qualsiasi momento. La Casa costruttrice si riserva il diritto di apportare modifiche o miglioramenti al prodotto senza alcun preavviso. Eventuali imprecisioni o errori riscontrabili nel presente fascicolo, saranno corretti nella prossima edizione.

All'apertura dell'imballo verificare che il prodotto sia integro. Riciclare i materiali secondo la normativa vigente.

L'installazione del prodotto dovrà essere effettuata da personale qualificato. La Ditta costruttrice Tau declina ogni responsabilità per danni derivanti a cose e/o persone dovuti ad un'eventuale errata installazione dell'impianto o la non messa a Norma dello stesso secondo le vigenti Leggi (vedi Direttiva Macchine).

The data described in this handbook are purely a guide. TAU reserves the right to change them in any moment.

The manufacturer reserves the right to modify or improve products without prior notice. Any inaccuracies or errors found in this handbook will be corrected in the next edition.

When opening the packing please check that the product is intact. Please recycle materials in compliance with current regulations.

This product may only be installed by a qualified fitter. The manufacturer declines all liability for damage to property and/or personal injury deriving from the incorrect installation of the system or its non-compliance with current law (see Machinery Directive).

Die beschriebenen Daten in der vorliegenden Betriebsanleitung sind rein indikativ. TAU behält sich vor, diese in jedem Moment zu modifizieren.

Der Hersteller behält sich das Recht vor, ohne vorherige Benachrichtigung Änderungen oder Verbesserungen am Produkt anzubringen. Ungenauigkeiten oder Fehler, die in der vorliegenden Ausgabe festgestellt werden, werden in der nächsten Ausgabe berichtigt.

Beim Öffnen der Verpackung prüfen, dass das Produkt keine Schäden aufweist. Die Materialien nach den gültigen Vorschriften recyceln.

Die Installation des Produktes muss von Fachpersonal ausgeführt werden. Die Herstellerfirma TAU übernimmt keinerlei Haftung für Personen- und/oder Sachschäden aufgrund einer falschen Installation der Anlage oder der Nichtkonformität derselben mit den gültigen Gesetzen (siehe Maschinenrichtlinie).

Les données décrites dans ce manuel sont purement indicatives. La TAU se réserve le droit de les modifier à n'importe quel moment.

Le Constructeur se réserve le droit d'apporter des modifications ou des améliorations au produit sans aucun préavis. Les éventuelles imprécisions ou erreurs présentes dans ce fascicule seront corrigées dans la prochaine édition.

À l'ouverture de l'emballage, vérifier que le produit est intact. Recycler les matériaux suivant les normes en vigueur.

L'installation du produit devra être effectuée par du personnel qualifié. Tau décline toute responsabilité pour les dommages aux choses et/ou personnes dus à une éventuelle installation erronée de l'automatisme ou à la non-mise aux normes suivant les lois en vigueur (voir Directive Machines).

Los datos descritos en este manual son puramente indicativos. La TAU se reserva el derecho de modificarlos en cualquier momento.

El Fabricante se reserva el derecho de modificar o actualizar el producto sin aviso previo. Posibles imprecisiones o errores en este manual serán corregidos en la próxima edición.

Cuando abra el embalaje, controle que el producto esté íntegro. Recicle los materiales según la normativa vigente.

La instalación del producto tiene que ser efectuada por personal cualificado. El Fabricante Tau no se asume ninguna responsabilidad por lesiones a personas o averías a cosas causadas por una instalación incorrecta del equipo o la por la inobservancia de la normativa vigente (véase Directiva de Máquinas).

Os dados descritos neste manual são puramente indicativos. A TAU reserva-se no direito de o modificar a qualquer momento. O fabricante reserva-se no direito de modificar ou atualizar o produto sem aviso prévio. Possíveis imprecisões ou erros neste manual serão corrigidos na próxima edição / revisão.

Ao abrir a embalagem certifique-se que o produto está intacto. Recicle os materiais segundo as normas em vigor.

Este produto só pode ser instalado por um técnico qualificado. O fabricante TAU declina qualquer responsabilidade por danos pessoais ou materiais resultantes de uma instalação incorrecta do equipamento ou a sua não conformidade com a norma vigente (Ver Directiva de Máquinas).

AVVERTENZE PER L'INSTALLATORE - OBBLIGHI GENERALI PER LA SICUREZZA**Italiano**

- A) Leggere attentamente le istruzioni prima di procedere all'installazione, in quanto forniscono importanti indicazioni concernenti la sicurezza, l'installazione, l'uso e la manutenzione. Una errata installazione o un errato uso del prodotto può portare a gravi danni alle persone.**
- B) I materiali dell'imballaggio (plastica, polistirolo, ecc.) non devono essere lasciati alla portata dei bambini in quanto potenziali fonti di pericolo.
- C) Conservare le istruzioni per riferimenti futuri.
- D) Questo prodotto è stato progettato e costruito esclusivamente per l'utilizzo indicato in questa documentazione. Qualsiasi altro utilizzo non espressamente indicato potrebbe pregiudicare l'integrità del prodotto e/o rappresentare fonte di pericolo.
- E) TAU declina qualsiasi responsabilità derivata dall'uso improprio o diverso da quello per cui l'automatismo è destinato.
- F) Non installare il prodotto in ambiente e atmosfera esplosivi.
- G) Gli elementi costruttivi meccanici devono essere in accordo con quanto stabilito dalle Norme EN 12604 e EN 12605. Per i Paesi extra-CEE, oltre ai riferimenti normativi nazionali, per ottenere un livello di sicurezza adeguato, devono essere seguite le Norme sopra riportate.
- H) TAU non è responsabile dell'inosservanza della Buona Tecnica nella costruzione delle chiusure da motorizzare, nonché delle deformazioni che dovessero intervenire nell'utilizzo.
- I) L'installazione deve essere effettuata nell'osservanza delle Norme EN 12453 e EN 12445. Il livello di sicurezza dell'automazione deve essere C+D.
- J) Prima di effettuare qualsiasi intervento sull'impianto, togliere l'alimentazione elettrica e scollegare le batterie.
- K) Prevedere sulla rete di alimentazione dell'automazione un interruttore onnipolare con distanza d'apertura dei contatti uguale o superiore a 3 mm. È consigliabile l'uso di un magnetotermico da 6A con interruzione onnipolare.
- L) Verificare che a monte dell'impianto vi sia un interruttore differenziale con soglia da 0,03 A.
- M) Verificare che l'impianto di terra sia realizzato a regola d'arte e collegarvi le parti metalliche della chiusura.
- N) L'automazione dispone di una sicurezza intrinseca antischiacciamento costituita da un controllo di coppia. E' comunque necessario verificarne la soglia di intervento secondo quanto previsto dalle Norme indicate al punto I.
- O) I dispositivi di sicurezza (norma EN 12978) permettono di proteggere eventuali aree di pericolo da Rischi meccanici di movimento, come ad Es. schiacciamento, convogliamento, cesoiamento.
- P) Per ogni impianto è consigliato l'utilizzo di almeno una segnalazione luminosa nonché di un cartello di segnalazione fissato adeguatamente sulla struttura dell'infisso, oltre ai dispositivi citati al punto O.
- Q) Il costruttore dell'automazione declina ogni responsabilità qualora vengano installati componenti incompatibili ai fini della sicurezza e del buon funzionamento. Per l'eventuale riparazione o sostituzione dei prodotti dovranno essere utilizzati esclusivamente ricambi originali.
- R) Per la manutenzione utilizzare esclusivamente parti originali TAU.
- S) Non eseguire alcuna modifica sui componenti facenti parte del sistema d'automazione.
- T) L'installatore deve fornire tutte le informazioni relative al funzionamento manuale del sistema in caso di emergenza e consegnare all'Utente utilizzatore dell'impianto la "Guida Utente" allegata al prodotto.
- U) Non permettere ai bambini o persone di sostare nelle vicinanze del prodotto durante il funzionamento.
- W) Tenere fuori dalla portata dei bambini radiocomandi o qualsiasi altro datore di impulso, per evitare che l'automazione possa essere azionata involontariamente.
- X) Il transito tra le ante deve avvenire solo a cancello completamente aperto.
- Y) L'Utente utilizzatore deve astenersi da qualsiasi tentativo di riparazione o d'intervento diretto e rivolgersi solo a personale qualificato.
- Z) Tutto quello che non è previsto espressamente in queste istruzioni non è permesso.

Consigliamo di riporre tutta la documentazione relativa all'impianto all'interno o nelle immediate vicinanze della centralina.

IMPORTANT NOTICE FOR THE INSTALLER - GENERAL SAFETY REGULATIONS**English**

- A) Please read these instructions carefully before installing the product as they contain important information concerning safety, installation, use and maintenance. Incorrect installation or incorrect use of the product could cause serious harm to people.**
- B) Do not leave packing materials (plastic, polystyrene, etc.) within reach of children as such materials are potential sources of danger.
- C) Store these instructions for future reference.
- D) This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the good condition/operation of the product and/or be a source of danger.
- E) TAU declines all liability caused by improper use or use other than that for which the automated system was intended.
- F) Do not install the product in explosive environments.
- G) The mechanical parts must conform to the provisions of Standards EN 12604 and EN 12605. For non-EU countries, to obtain an adequate level of safety, the Standards mentioned above must be observed, in addition to national legal regulations.
- H) TAU is not responsible for failure to observe Good Technique in the construction of the closing elements to be motorised, or for any deformation that may occur during use.
- I) The installation must conform to Standards EN 12453 and EN 12445. The safety level of the automated system must be C+D.
- J) Before attempting any job on the system, cut out electrical power and disconnect the batteries.
- K) The mains power supply of the automated system must be fitted with an all-pole switch with contact opening distance of 3mm or greater. Use of a 6A thermal breaker with all-pole circuit break is recommended.
- L) Make sure that a differential switch with threshold of 0.03 A is fitted upstream of the system.
- M) Make sure that the earthing system is perfectly constructed, and connect metal parts of the means of the closure to it.
- N) The automated system is supplied with an intrinsic anti-crushing safety device consisting of a torque control. Nevertheless, its tripping threshold must be checked as specified in the Standards indicated at point "I".
- O) The safety devices (EN 12978 standard) protect any danger areas against mechanical movement Risks, such as crushing, dragging, and shearing.
- P) Use of at least one indicator-light is recommended for every system, as well as a warning sign adequately secured to the frame structure, in addition to the devices mentioned at point "O".
- Q) The manufacturer declines all liability if incompatible safety and components are installed. Only use original spare parts to repair or replace the product.
- R) For maintenance, strictly use original parts by TAU.
- S) Do not in any way modify the components of the automated system.
- T) The installer shall supply all information concerning manual operation of the system in case of an emergency, and shall hand over to the user the "User Guide" supplied with the product.
- U) Do not allow children or adults to stay near the product while it is operating.
- W) Keep remote controls or other pulse generators away from children, to prevent the automated system from being activated involuntarily.
- X) Transit through the leaves is allowed only when the gate is fully open.
- Y) The user must not attempt any kind of repair or direct action whatever and contact qualified personnel only.
- Z) Anything not expressly specified in these instructions is not permitted.

Keep all the documents concerning the system inside or near the central control unit.

- A) Die Anweisungen vor der Installation genau lesen, da sie wichtige Hinweise mit Bezug auf Sicherheit, Installation, Bedienung und Wartung liefern. Eine falsche Installation oder ein fehlerhafter Betrieb des Produktes können zu schwerwiegenden Personenschäden führen.**
- B) Das Verpackungsmaterial (Kunststoff, Styropor, usw.) sollte nicht in Reichweite von Kindern aufbewahrt werden, da es eine potentielle Gefahrenquelle darstellt.
- C) Die Anleitung sollte aufbewahrt werden, um auch in Zukunft Bezug auf sie nehmen zu können.
- D) Dieses Produkt wurde ausschließlich für den in diesen Unterlagen angegebenen Gebrauch entwickelt und hergestellt. Jeder andere Gebrauch, der nicht ausdrücklich angegeben ist, könnte die Unversehrtheit des Produktes beeinträchtigen und/oder eine Gefahrenquelle darstellen.
- E) Die Firma TAU lehnt jede Haftung für Schäden, die durch unsachgemäßen oder nicht bestimmungsgemäßen Gebrauch der Automatik verursacht werden, ab.
- F) Das Produkt nicht in EX-Umgebung bzw. EX-Atmosphäre installieren.
- G) Die mechanischen Bauelemente müssen den Anforderungen der Normen EN 12604 und EN 12605 entsprechen. Für Länder, die nicht der Europäischen Union angehören, sind für die Gewährleistung eines entsprechenden Sicherheitsniveaus neben den nationalen gesetzlichen Bezugsvorschriften die oben aufgeführten Normen zu beachten.
- H) Die Firma TAU übernimmt keine Haftung im Falle von nicht fachgerechten Ausführungen bei der Herstellung der anzutreibenden Schließvorrichtungen sowie bei Deformationen, die eventuell beim Betrieb entstehen.
- I) Die Installation muß unter Beachtung der Normen EN 12453 und EN 12445 erfolgen. Die Sicherheitsstufe der Automatik sollte C+D sein.
- J) Vor der Ausführung jeglicher Eingriffe auf der Anlage sind die elektrische Versorgung und die Batterie abzunehmen.
- K) Auf dem Versorgungsnetz der Automatik ist ein omnipolarer Schalter mit Öffnungsabstand der Kontakte von über oder gleich 3 mm einzubauen. Darüber hinaus wird der Einsatz eines Magnetschutzschalters mit 6A mit omnipolarer Abschaltung empfohlen.
- L) Es sollte überprüft werden, ob vor der Anlage ein Differentialschalter mit einer Auslöseschwelle von 0,03 A zwischengeschaltet ist.
- M) Es sollte überprüft werden, ob die Erdungsanlage fachgerecht ausgeführt wurde. Die Metallteile der Schließung sollten an diese Anlage angeschlossen werden.
- N) Die Automation verfügt über eine eingebaute Sicherheitsvorrichtung für den Quetschschutz, die aus einer Drehmomentkontrolle besteht. Es ist in jedem Falle erforderlich, deren Eingriffsschwelle gemäß der Vorgaben der unter Punkt "I" angegebenen Vorschriften zu überprüfen.
- O) Die Sicherheitsvorrichtungen (Norm EN 12978) ermöglichen den Schutz eventueller Gefahrenbereiche vor mechanischen Bewegungsrisiken, wie zum Beispiel Quetschungen, Mitschleifen oder Schnittverletzungen.
- P) Für jede Anlage wird der Einsatz von mindestens einem Leuchtsignal empfohlen sowie eines Hinweisschildes, das über eine entsprechende Befestigung mit dem Aufbau des Tors verbunden wird. Darüber hinaus sind die unter Punkt "O" erwähnten Vorrichtungen einzusetzen.
- Q) Der Hersteller der Automatisierung übernimmt keinerlei Haftung, falls Bestandteile installiert werden, die – was Sicherheit und korrekten Betrieb betrifft – nicht kompatibel sind. Zur Reparatur oder zum Ersatz der Produkte dürfen ausschließlich Originalersatzteile verwendet werden.
- R) Bei der Instandhaltung sollten ausschließlich Originalteile der Firma TAU verwendet werden.
- S) Auf den Komponenten, die Teil des Automationssystems sind, sollten keine Veränderungen vorgenommen werden.
- T) Der Installateur sollte alle Informationen hinsichtlich des manuellen Betriebs des Systems in Notfällen liefern und dem Betreiber der Anlage das "Führer Benutzer", das dem Produkt beigelegt ist, übergeben.
- U) Weder Kinder noch Erwachsene sollten sich während des Betriebs in der unmittelbaren Nähe der Automation aufhalten.
- W) Die Funksteuerungen und alle anderen Impulsgeber sollten außerhalb der Reichweite von Kindern aufbewahrt werden, um ein versehentliches Aktivieren der Automation zu vermeiden.
- X) Der Durchgang oder die Durchfahrt zwischen den Flügeln darf lediglich bei vollständig geöffnetem Tor erfolgen.
- Y) Der Betreiber sollte keinerlei Reparaturen oder direkte Eingriffe auf der Automation ausführen, sondern sich hierfür ausschließlich an qualifiziertes Fachpersonal wenden.
- Z) Alle Vorgehensweisen, die nicht ausdrücklich in der vorliegenden Anleitung vorgesehen sind, sind nicht zulässig.

Wir empfehlen, alle Unterlagen der Anlage in der Steuerzentrale oder in ihrer unmittelbaren Nähe aufzubewahren.

CONSIGNES POUR L'INSTALLATEUR - RÈGLES DE SÉCURITÉ

Français

- A) Lire attentivement les instructions avant de procéder à l'installation, dans la mesure où elles fournissent des indications importantes concernant la sécurité, l'installation, l'emploi et la maintenance. Une installation erronée ou un usage erroné du produit peut entraîner de graves conséquences pour les personnes.**
- B) Les matériaux d'emballage (matière plastique, polystyrène, etc.) ne doivent pas être laissés à la portée des enfants car ils constituent des sources potentielles de danger.
- C) Conserver les instructions pour les références futures.
- D) Ce produit a été conçu et construit exclusivement pour l'usage indiqué dans cette documentation. Toute autre utilisation non expressément indiquée pourrait compromettre l'intégrité du produit et/ou représenter une source de danger.
- E) TAU décline toute responsabilité qui dériverait d'usage impropre ou différent de celui auquel l'automatisme est destiné.
- F) Ne pas installer le produit dans un environnement et une atmosphère explosifs.
- G) Les composants mécaniques doivent répondre aux prescriptions des Normes EN 12604 et EN 12605. Pour les Pays extra-CEE, l'obtention d'un niveau de sécurité approprié exige non seulement le respect des normes nationales, mais également le respect des Normes susmentionnées.
- H) TAU n'est pas responsable du non-respect de la Bonne Technique dans la construction des fermetures à motoriser, ni des déformations qui pourraient intervenir lors de l'utilisation.
- I) L'installation doit être effectuée conformément aux Normes EN 12453 et EN 12445. Le niveau de sécurité de l'automatisme doit être C+D.
- J) Couper l'alimentation électrique et déconnecter la batterie avant toute intervention sur l'installation.
- K) Prévoir, sur le secteur d'alimentation de l'automatisme, un interrupteur omnipolaire avec une distance d'ouverture des contacts égale ou supérieure à 3 mm. On recommande d'utiliser un magnétothermique de 6A avec interruption omnipolaire.
- L) Vérifier qu'il y ait, en amont de l'installation, un interrupteur différentiel avec un seuil de 0,03 A.
- M) Vérifier que la mise à terre est réalisée selon les règles de l'art et y connecter les pièces métalliques de la fermeture.
- N) L'automatisme dispose d'une sécurité intrinsèque anti-écrasement, formée d'un contrôle du couple. Il est toutefois nécessaire d'en vérifier le seuil d'intervention suivant les prescriptions des Normes indiquées au point "I".
- O) Les dispositifs de sécurité (norme EN 12978) permettent de protéger des zones éventuellement dangereuses contre les Risques mécaniques du mouvement, comme l'écrasement, l'acheminement, le cisaillement.
- P) On recommande que toute installation soit dotée au moins d'une signalisation lumineuse, d'un panneau de signalisation fixé, de manière appropriée, sur la structure de la fermeture, ainsi que des dispositifs cités au point "O".
- Q) Le constructeur de l'automatisme décline toute responsabilité en cas d'installation de composants incompatibles en matière de sécurité et de bon fonctionnement. Pour toute réparation ou pour tout remplacement des produits, il faudra utiliser exclusivement des pièces de rechange originales.
- R) Utiliser exclusivement, pour l'entretien, des pièces TAU originales.
- S) Ne jamais modifier les composants faisant partie du système d'automatisme.
- T) L'installateur doit fournir toutes les informations relatives au fonctionnement manuel du système en cas d'urgence et remettre à l'Usager qui utilise l'installation le "Guide Usager" fournie avec le produit.
- U) Interdire aux enfants ou aux tiers de stationner près du produit durant le fonctionnement.
- W) Eloigner de la portée des enfants les radiocommandes ou tout autre générateur d'impulsions, pour éviter tout actionnement involontaire de l'automatisme.
- X) Le transit entre les vantaux ne doit avoir lieu que lorsque le portail est complètement ouvert.
- Y) L'Usager qui utilise l'installation doit éviter toute tentative de réparation ou d'intervention directe et s'adresser uniquement à un personnel qualifié.
- Z) Tout ce qui n'est pas prévu expressément dans ces instructions est interdit.

Nous conseillons de conserver toute la documentation relative à l'installation à l'intérieur de l'armoire de commande ou à proximité immédiate.

- A) Lea con atención las instrucciones antes de proceder con la instalación, puesto que suministran importantes indicaciones sobre la seguridad, instalación, uso y mantenimiento. Una instalación incorrecta o un uso impropio del producto puede causar graves daños a las personas.**
- B) Los materiales del embalaje (plástico, poliestireno, etc.) no deben dejarse al alcance de los niños, ya que constituyen fuentes potenciales de peligro.
- C) Guarden las instrucciones para futuras consultas.
- D) Este producto ha sido proyectado y fabricado exclusivamente para la utilización indicada en el presente manual. Cualquier uso diverso del previsto podría perjudicar el funcionamiento del producto y/o representar fuente de peligro.
- E) TAU declina cualquier responsabilidad derivada de un uso impropio o diverso del previsto.
- F) No instale el producto en locales con atmósfera explosiva.
- G) Los elementos constructivos mecánicos deben estar de acuerdo con lo establecido en las Normas EN 12604 y EN 12605. Para los países no pertenecientes a la CEE, además de las referencias normativas nacionales, para obtener un nivel de seguridad adecuado, deben seguirse las Normas arriba indicadas.
- H) TAU no es responsable del incumplimiento de las buenas técnicas de fabricación de los cierres que se han de motorizar, así como de las deformaciones que pudieran intervenir en la utilización.
- I) La instalación debe ser realizada de conformidad con las Normas EN 12453 y EN 12445. El nivel de seguridad de la automatización debe ser C+D.
- J) Quiten la alimentación eléctrica y desconecten las baterías antes de efectuar cualquier intervención en la instalación.
- K) Coloquen en la red de alimentación de la automatización un interruptor omnipolar con distancia de apertura de los contactos igual o superior a 3 mm. Se aconseja usar un magnetotérmico de 6A con interrupción omnipolar.
- L) Comprueben que la instalación disponga línea arriba de un interruptor diferencial con umbral de 0,03 A.
- M) Verifiquen que la instalación de tierra esté correctamente realizada y conecten las partes metálicas del cierre.
- N) La automatización dispone de un dispositivo de seguridad antiaplastamiento constituido por un control de par. No obstante, es necesario comprobar el umbral de intervención según lo previsto en las Normas indicadas en el punto "I".
- O) Los dispositivos de seguridad (norma EN 12978) permiten proteger posibles áreas de peligro de Riesgos mecánicos de movimiento, como por ej. aplastamiento, arrastre, corte.
- P) Para cada equipo se aconseja usar por lo menos una señalización luminosa así como un cartel de señalización adecuadamente fijado a la estructura del bastidor, además de los dispositivos indicados en el "O".
- Q) El fabricante de la automatización no se asume ninguna responsabilidad si se instalan componentes incompatibles para la seguridad y el funcionamiento correcto. Para una posible reparación o sustitución de los productos, use sólo recambios originales.
- R) Para el mantenimiento utilicen exclusivamente piezas originales TAU.
- S) No efectúen ninguna modificación en los componentes que forman parte del sistema de automatización.
- T) El instalador debe proporcionar todas las informaciones relativas al funcionamiento del sistema en caso de emergencia y entregar al usuario del equipo la "Guía Usuario" que se adjunta al producto.
- U) No permitan que niños o personas se detengan en proximidad del producto durante su funcionamiento.
- W) Mantengan lejos del alcance los niños los telemandos o cualquier otro emisor de impulso, para evitar que la automatización pueda ser accionada involuntariamente.
- X) Sólo puede transitarse entre las hojas si la cancela está completamente abierta.
- Y) El usuario no debe por ningún motivo intentar reparar o modificar el producto, debe siempre dirigirse a personal cualificado.
- Z) Todo lo que no esté previsto expresamente en las presentes instrucciones debe entenderse como no permitido.

Se aconseja guardar toda la documentación de la instalación en el interior o cerca de la central.

AVISO AO INSTALADOR - NORMAS GERAIS OBRIGATÓRIAS DE SEGURANÇA

Português

- A) Leia atentamente as instruções antes de efectuar a instalação, na medida em que fornecem indicações importantes relativas à segurança, à instalação, à utilização e à manutenção. Uma instalação ou utilização incorrectas podem traduzir-se em sérios riscos pessoais.**
- B) Os materiais de embalagem (plástico, poliestireno expandido, etc.) não devem ser deixados ao alcance das crianças na medida em que constituem uma fonte de potencial perigo.
- C) Guardar o manual de utilizador para qualquer consulta futura.
- D) Este produto foi concebido e construído exclusivamente para o fim indicado nesta documentação. Qualquer outra utilização que não a expressamente indicada pode comprometer a integridade e o desempenho do produto e / ou representar uma fonte de potencial perigo.
- E) TAU declina toda e qualquer responsabilidade derivante de utilização imprópria ou diferente daquela a que o automatismo se destina.
- F) Não instalar o produto numa atmosfera ou ambiente explosivo.
- G) Os elementos mecânicos terão de estar em conformidade com as normas EN 12604 e EN 12605. Para os países não membros da CEE, em complemento às normas nacionais, as normas acima mencionadas terão de se cumprir de modo a garantir um adequado nível de segurança.
- H) A TAU não é responsável por falhas detectadas no fabrico de portas / portões a automatizar, assim como deformações que se possam verificar aquando da sua utilização.
- I) A instalação deve ser realizada em conformidade com as normas EN 12453 e 12445. O nível de segurança da automatização deve ser C + D.
- J) Antes de iniciar qualquer tipo de intervenção na instalação, desligar a alimentação eléctrica bem como a bateria.
- K) É necessário prever na rede de alimentação da automatização um interruptor omnipolar, com uma abertura entre contactos, igual ou superior a 3mm. Recomenda-se o uso de um interruptor magnetotérmico de 6A com interrupção omnipolar.
- L) Verificar que a montante da instalação existe um interruptor diferencial com uma sensibilidade de 0,03A.
- M) Assegurar que o sistema de ligação 'terra' está conforme a boa prática profissional e ligados à secção metálica do portão.
- N) A automatização é fornecida com um dispositivo de segurança intrínseco anti-esmagamento através de controlo de torque. Não obstante, é necessário comprovar o limite de actuação segundo o previsto nas normas indicadas no ponto I.
- O) Os elementos de segurança (standard EN 12978) capazes de proteger áreas de risco associadas a movimentos mecânicos tais como esmagamento, arrastamento e cisalhamento.
- P) O uso de pelo menos um indicador luminoso por cada sistema, assim como um aviso fixo à estrutura, como complemento aos elementos especificados no ponto O.
- Q) O fabricante da automatização declina qualquer responsabilidade no caso de instalação de componentes incompatíveis nos campos da segurança e bom funcionamento. Para qualquer reparação ou substituição de produto, é imperativo utilizar unicamente peças de substituição originais.
- R) Para a manutenção utilize exclusivamente peças originais TAU.
- S) Não efectuar nenhuma modificação sobre os elementos que façam parte do sistema de automatização.
- T) O instalador deve fornecer informação como operar manualmente o sistema numa emergência ou falha de corrente e remeter o utilizador final para o 'Manual do Utilizador' que acompanha o produto.
- U) Nunca permitir que pessoas ou crianças permaneçam na vizinhança do produto durante o modo operativo.
- W) Mantenha todos os radiocomandos ou emissores de outros fabricantes fora do alcance das crianças de modo a impedir activação do automatismo involuntariamente.
- X) Só se pode transitar entre as folhas do portão se este estiver competamente aberto.
- Y) O utilizador final não deve por nenhuma razão tentar reparar ou alterar o produto, deve sempre entrar em contacto com um técnico especializado.
- Z) Tudo o que não estiver expressamente previsto nestas instruções deve entender-se como não permitido.

Aconselha-se que a documentação relacionada com o sistema deve estar guardada no interior ou na proximidade da unidade de controlo.

CARATTERISTICHE TECNICHE DELLA SERIE ARM200 / TECHNICAL CHARACTERISTICS OF THE ARM200 SERIES / TECHNISCHE EIGENSCHAFTEN DER SERIE ARM200 / CARACTÉRISTIQUES TECHNIQUES DE LA SÉRIE ARM200 / CARACTERÍSTICAS TÉCNICAS DE LA SERIE ARM200 / CARACTERÍSTICAS TÉCNICAS DA SÉRIE ARM200

	ARM225I	ARM250I	ARM270I
Alimentazione / Power input / Versorgung / Alimentation / Alimentación / Alimentação	230V AC ±10% (50/60 Hz)		
Alimentazione Motore / Motor power input / Motorversorgung / Alimentation Moteur / Alimentación motor / Alimentação motor	230V AC ±10%		
Condensatore / Capacitor / Kondensator Condensateur / Condensador / Condensador	10 µf		
Corrente assorbita a vuoto / Absorbed current (no load) / Stromaufnahme (ohne Last) / Courant absorbé (à vide) / Corriente absorbida (en vacío) / Corrente absorvida (em vazio)	1 A ± 10%		
Potenza assorbita a vuoto / Absorbed power (no load) / Leistungsaufnahme (ohne Last) / Puissance absorbée (à vide) / Potencia absorbida (en vacío) / Potência absorvida (em vazio)	120 W		
Velocità motore (a vuoto) / Motordrehzahl (leer) / Motor speed (no load) / Vitesse moteur (à vide) / Velocidad motor (en vacío) / Velocidade do motor (em vazio)	950 rpm		
Corsa utile / Useful travel / Arbeitshub / Course utile / Carretra útil / Curso útil	290 mm	425 mm	530 mm
Intervento di termoprotezione / Thermal protection trips at / Auslösung des Wärmeschutzes / Intervention protection thermique / Intervención de termoprotección / Protecção térmica do motor	160 °C (autoreset)		
Lunghezza max anta / Max length of leaf / Max. Flügelänge / Longueur max. battant / Longitud máx. hoja / Largura máxima da folha	3000 mm	4000 mm	5000 mm
Rapporto di riduzione / Reduction ratio / Untersetzungsverhältnis / Rapport de réduction Relación de reducción / Rácio de redução	1/24		
Temperatura di esercizio / Operating temperature / Betriebstemperatur / Température de fonctionnement / Temperatura de ejercicio / Temperatura de trabalho	-20 °C ÷ +55 °C		
Peso / Weight / Gewicht / Poids / Peso / Peso	7,8 Kg	8,1 Kg	10,4 Kg
IP Motore / Motor IP / Schutzart des Motors (IP) / IP Moteur / IP Motor / Grau de protecção (IP)	IP 44		
Spinta max. / Max. thrust / Max. Schub / Poussée max. / Empuje máx. / Impulso máximo	2300 N		
Ciclo di lavoro / Work cycle / Arbeitszyklus / Cycle de travail / Ciclo de trabajo / Factor de serviço	36 %		
Tempo corsa 90° / 90° travel time / Laufzeit, 90° / Temps de course 90° / Tiempo recorrido 90° / Tempo de curso para 90°	20 sec.	25 sec.	34 sec.

Nota: quando il sistema in 12V DC è alimentato unicamente dalla batteria (in caso di black-out oppure in abbinamento con pannello fotovoltaico), le prestazioni espresse dal motoriduttore (forza e velocità) si riducono del 30% ca.

Note: when the system is in the 12V DC mode and is powered by the battery only (in the event of a power failure or when used in conjunction with a photovoltaic panel), the gear motor's output (power and speed) is reduced by approximately 30% .

Anmerkung: wenn das 12V DC System nur über Batterie gespeist ist (bei Stromausfall oder in Kombination mit einem Photovoltaicpanel), verringern sich die Leistungen des Getriebemotors (Kraft und Geschwindigkeit) um ca. 30%.

Attention : quand le système à 12 vcc est alimenté uniquement par la batterie (en cas de coupure de courant ou bien en association avec un panneau photovoltaïque), les performances du motoréducteur (force et vitesse) diminuent d'environ 30% .

Nota: cuando el sistema de 12 vdc es alimentado únicamente por la batería (en caso de corte de corriente, o bien combinado con panel fotovoltaico), las prestaciones del motorreductor (fuerza y velocidad) se reducen en un 30%.

Nota : Quando o sistema de 12VDC é alimentado unicamente pela bateria (em caso de falha de corrente ou quando usado em combinação com painel fotovoltaico) as prestações do motor (velocidade e força) reduzem-se aproximadamente em 30%.

	ARM225BI	ARM250BI	ARM270BI	ARM290BI	ARM250BR
Alimentazione / Power input / Versorgung / Alimentation / Alimentación / Alimentação	230V AC ±10% (50/60 Hz)				
Alimentazione Motore / Motor power input / Motorversorgung / Alimentation Moteur / Alimentación motor / Alimentação motor	18V DC ±10%			24 V DC ±10%	
Condensatore / Capacitor / Kondensator Condensateur / Condensador / Condensador	-				
Corrente assorbita a vuoto / Absorbed current (no load) / Stromaufnahme (ohne Last) / Courant absorbé (à vide) / Corriente absorbida (en vacío) / Corrente absorvida (em vazio)	1,1 A ± 10%			1 A ± 10%	
Potenza assorbita a vuoto / Absorbed power (no load) / Leistungsaufnahme (ohne Last) / Puissance absorbée (à vide) / Potencia absorbida (en vacío) / Potência absorvida (em vazio)	120 W				
Velocità motore (a vuoto) / Motordrehzahl (leer) /Motor speed (no load) / Vitesse moteur (à vide) / Velocidad motor (en vacío) / Velocidade do motor (em vazio)	1850 rpm				
Corsa utile / Useful travel / Arbeitshub /Course utile / Carretra útil / Curso útil	290 mm	425 mm	530 mm	853 mm	425 mm
Intervento di termoprotezione / Thermal protection trips at / Auslösung des Wärmeschutzes / Intervention protection thermique / Intervención de termoprotección / Protecção térmica do motor	-				
Lunghezza max anta / Max length of leaf / Max. Flügelänge / Longueur max. battant / Longitud máx. hoja / Largura máxima da folha	3000 mm	4000 mm	5000 mm	6000 mm	3000 mm
Rapporto di riduzione / Reduction ratio / Untersetzungsverhältnis / Rapport de réduction Relación de reducción / Rácio de redução	1/24				
Temperatura di esercizio / Operating temperature / Betriebstemperatur / Température de fonctionnement / Temperatura de ejercicio / Temperatura de trabalho	-20 °C ÷ +55 °C				
Peso / Weight / Gewicht / Poids / Peso / Peso	7,8 Kg	8,1 Kg	10,4 Kg	12.3 Kg	7,8 Kg
IP Motore / Motor IP / Schutzart des Motors (IP) / IP Moteur / IP Motor / Grau de protecção (IP)	IP 44				
Spinta max. / Max. thrust / Max. Schub /Poussée max. / Empuje máx. / Impulso máximo	2400 N			2650 N	
Ciclo di lavoro / Work cycle / Arbeitzyklus / Cycle de travail / Ciclo de trabajo / Factor de serviço	100 %				
Tempo corsa 90° / 90° travel time / Laufzeit, 90° / Temps de course 90° / Tiempo recorrido 90° / Tempo de curso para 90°	12 sec.	12,5 sec.	13 sec.	21 sec. *	9 sec.

- * regolabile tramite Tauprog
- * adjustable through Tauprog
- * einstellbar durch Tauprog
- * réglable par le biais du Tauprog
- * ajustable a través de Tauprog
- * ajustável através de Tauprog

Nota: in presenza di cancelli ad ante battenti cieche, prevedere l'installazione di un'elettroserratura sia per la tenuta in chiusura che per la salvaguardia del prodotto.

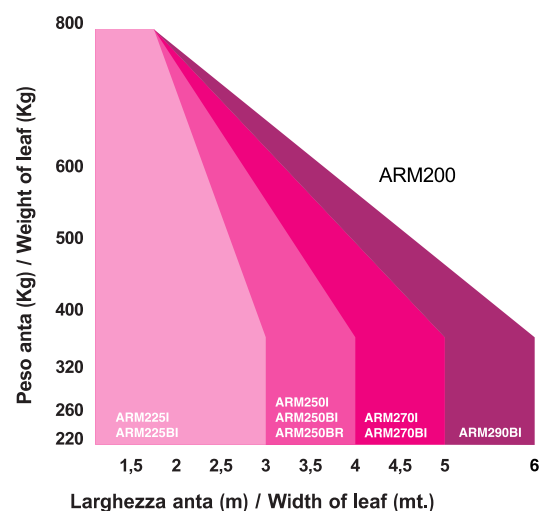
Note: in case of closed design gate leaves an electro lock must be installed to avoid major damages.

Anmerkung: Bei Toren mit kompletter- bzw. teilflächiger Füllung ist ein Elektroschloss erforderlich.

Note: en présence de portails à vantaux pleins, nous recommandons de prévoir l'installation d'une serrure électrique, soit pour garder la fermeture bien serrée soit pour la protection du produit.

Nota: con hojas totalmente ciegas instalar un electro-cierre para evitar daños al accionador.

Nota: Na presença de portões completamente chapeados instalar uma fechadura eléctrica para evitar danos ao actuador.



1. DESCRIPTION

The **ARM200** automated system for swing gates is an electro-mechanical non-reversing actuator that transmits motion to the leaf via a worm screw system.

The actuator is available in more versions in 18V DC and 230V AC.

The non-reversing system ensures the leaf is mechanically locked when the motor is not operating, but it is not intended as a high degree security deterrent against intrusion attempts and/or tampering. A convenient and safe release system with customised key makes it possible to manually move the leaf in the event of a malfunction or of a power failure.

ATTENTION:



In the absence of a mechanical clutch, the use of a control unit with an adjustable electronic clutch, or the installation of a sensitive edge, is required in order to ensure crush-proof safety.



The ARM200 automated system was designed and built for controlling vehicle access. It is not intended as a high degree security deterrent against intrusion attempts and/or tampering. Avoid any other use whatever.

2. ACTUATOR PARTS (fig.1)

Pos.	Description	Pos.	Description
1	Actuator	4	Wing connection bracket
2	Release device	5	Rear bracket
3	Rod	6	Terminal board cover

3. DIMENSIONS (fig.2)

4. INSTALLATION (fig.3)

Electrical set-up (standard system - ARM200)

Pos.	Description	Cables
1	Attuatore	4x1,5 mm ²
2	Control unit	3x1,5 mm ² (power supply)
3	TX photocells	4x0,5 mm ²
4	RX photocells	2x0,5 mm ²
5	Key-operated selector switch	3x0,5 mm ²
6	Flashing light and aerial	2x1 mm ² + 1RG58
7	Mechanical stops	-

Electrical set-up (standard system - ARM200BI/BR)

Pos.	Description	Cables
1	Attuatore	2x2,5 mm ² + 3x0,5 mm ²
2	Control unit	3x1,5 mm ² (power supply)
3	TX photocells	4x0,5 mm ²
4	RX photocells	2x0,5 mm ²
5	Key-operated selector switch	3x0,5 mm ²
6	Flashing light and aerial	2x1 mm ² + 1RG58
7	Mechanical stops	-

Notes:

- Use suitable tubes and/or hoses to lay electric cables
- Choose short routes for cables and keep power cables separate from control cables.

Preliminary checks

Prior to installing the automation, make all structural modifications in order to ensure safety distances and protect and segregate areas in which people may be exposed to the risk of crushing, shearing, dragging or similar dangers.

- Make sure the existing structure is sufficiently sturdy and stable;
- the mechanical parts must conform to the provisions of Standards EN 12604 and EN 12605;
- leaf length in compliance with the actuator specifications;
- regular and uniform movement of the leaves, without any friction and dragging during their entire travel;
- stiff hinges in good conditions;
- presence of both opening and closing mechanical limit stops;
- presence of an efficient earthing for electrical connection of the actuator.

Perform any necessary metalwork job before installing the automated system.

The condition of the gate structure directly affects the reliability and safety of the automated system.

ARRANGEMENT OF WALL INTERVENTIONS (fig.4)

INSTALLATION DIMENSIONS (FIG.5)

When measurement "C" is greater/smaller than 20 mm, increase/diminish measurement "B" by the difference (e.g.: if C = 25mm, increase "B" by 5mm), making sure that it does not exceed the limits shown in the table.



Note: to work correctly, the angle formed by the actuator and the gate (Y° fig. 5) must be > 3° (ARM225 - ARM250) and > 4° (ARM270 - ARM290BI) both with the gate completely closed and completely open.



Note: for a quick opening and optimum closed-holding position (gates with an electrical lock), use the maximum dimension "B" shown in the tables.

If the pillar dimensions or the hinge position do not allow the installation of the actuator, a niche on the pillar, as shown in **Fig. 6**, should be created in order to maintain the A dimension as determined. The niche should be dimensioned in such a way to enable easy installation, actuator rotation and operation of the release device. The mounting brackets are designed to enable small adjustments in both directions (**fig. 6A**), it is possible to use the two multipoint brackets overlapped (**pict. 6B**: in this case the only holes to be used are the 3 highlighted, according to the direction of the leaf movement). In any case, always refer to the measurements shown in the table. Please keep to the values given in the table and oil the gate's hinges.

- 1_ Fix the rear bracket in the position determined before. In the event of iron pillar carefully weld directly the bracket or use n°4 suitable screws (**fig. 7**). In the event of brick pillar (**fig. 8**), use n°4 suitable bolts (after you have assembled it, **fig. 8A**).

During the fastening operations, check if the bracket is perfectly horizontal by means of a level.



WARNING - In case of large gate leaves and /or closed design leaves other than the installation of an electro lock it is suggested to strengthen the fastening of the back bracket (weld the steel parts instead of using screws to assemble the bracket, use steel anchors instead of the dowels, weld the bracket onto the pillar, etc.).

- 2_ Set the operator for manual operation (see paragraph **MANUAL RELEASE**).
- 3_ Completely extend the rod till it reaches the limit stop (1 **fig. 9**).
- 4_ Lock the operator again (see paragraph **RESTORING NORMAL OPERATION**).
- 5_ Rotate the stem clockwise 2 turns to ensure that it retracts and prevents it from working in mechanical stop. (2 **fig. 9**).
- 6_ Assemble the front bracket as shown in **fig. 10**. Fasten the screw using the special nut and insert the self-lubricating bushing into the bracket as shown on **Fig. 10**.
- 7_ After removing the terminal board cover, anchor the actuator to the rear bracket using the screw and nut supplied (see 1 **fig. 11**);

ATTENTION: The actuator can be moved by hand only if it is installed on the gate and in released position (see paragraph **MANUAL RELEASE).**



ATTENTION: carefully verify that, when gate is closed, the actuator's rear do not touch the bracket (see **fig. 11). If so adjust the setting accordingly.**

IMPORTANT: In the event of anomalous vibrations during operation, make sure the screw no. 1 in **fig. 11 is not too tight.**

- 8_ Check measurement "L" according to the table (**fig. 5**).
- 9_ rest the bracket that has just been fixed, onto the wing of the completely closed gate and mark the fixing points (make sure it is level, see **fig. 12**).

Before going on to the next phase please carry out the following test:

- 10_ Release the actuator (see paragraph **MANUAL RELEASE**) and manually check if the gate can completely open without hindrances and stop at the mechanical travel stoppers (floor-mounted mechanical stoppers) as well as if the leaf moves regularly without any friction.
- 11_ Carry out the necessary corrective measures and repeat from point 10. Manually open the gate to the maximum required angle;
- 12_ Tighten the arm until the front bracket finds itself over the position just marked on the gate.

If the small bracket does cover the position marked it means installation has been done correctly.

This method can be used to establish where the small bracket will have to be welded for each opening angle (X°) required provided it is possible (parameters A and B and the actuator's useful travel permitting).

- 13_ fasten the gate mounting bracket in the position indicated (**fig. 13**), referring to the dimensions shown in **fig. 14** and ensuring the planarity of the assembly.



Note: if the gate structure does not allow a fix bracket fastening it is necessary to create a sturdy supporting base in the gate structure.



Note: for complete safety, the mechanical stops with rubber cap (floor stops) must be fitted in opening and closing of the gate (7 **fig. 3), in order that they intervene just before the mechanical piston stops.**

5. WIRING THE ACTUATOR

A terminal board is fitted in the lower part of the actuator for the connection of the motor, of any limit switch and for the earthing of the actuator. (**fig. 15-16**).

Connect the motor and the earthing with reference to **fig. 15-16** and to the table.

ARM200 - 230V AC		
POS.	COLOR	DESCRIPTION
1	Blue	Common cable
2	Brown	Phase 1
3	Black	Phase 2
T	Yellow / Green	Earthing

Connect up the condenser in parallel to the 2 phases of the motor (terminals 2 and 3). Warning! Do not short-circuit the two wires as this may cause discharges because of the current remaining in the wires. Use control units with torque limiting device only.

ARM200BI - ARM200BR - 18/24V DC		
POS.	COLOR	DESCRIPTION
1	Brown	Encoder positive
2	Blue	Encoder negative
3	White	Encoder signal
4	Black	Motor negative
5	Red	Motor positive

Only use control units fitted with an electric clutch.

The distance between the control unit and the motor must not exceed 10 – 12 m.

TAU srl recommends its composite cable, Code **M-03000CC101**;



Place the control unit (external versions) in the immediate vicinity of the motors.



Be careful not to run cables for auxiliary devices inside raceways housing other cables supplying power to large loads or lights with electronic starters.



In the event control pushbuttons or indicator lights are installed inside homes or offices several metres from the actual control unit, it is advisable to decouple the signal by means of a relay in order to avoid induced interference.

6. START-UP

Carefully observe points 10, 11, 12, 13 and 14 of the SAFETY GENERAL RULES.

With reference to the indications in fig.3 and in the table (see paragraph **INSTALLATION**), set the ducts and carry out the electrical connections of the control board and of the chosen accessories.

Choose short routes for cables and keep power cables separate from control cables.

- 1) Power the system and check the status of the LED's according to the control unit instructions.
- 2) Program the control board according to the needs by following the given instructions.

7. TESTING THE AUTOMATED SYSTEM

- Carefully check operating efficiency of the automated system and of all accessories connected to it, paying special attention to the safety devices.
- Hand the "User Guide" to the final user together with the Maintenance register.
- Explain correct operation and use of the automated system to the user.
- Indicate the potentially dangerous areas of the automated system to the user.

8. MANUAL RELEASE

If the automated system needs to be moved manually due to a power lack or to an actuator malfunction, proceed as follows:

- 1_ Cut power by means of the safety circuit breaker (even in the event of a power lack).
- 2_ Slide the protective cap, *fig.17*;
- 3_ Insert the key and turn it 90°, *fig.18*.
- 4_ As shown in *fig.19*, rotate the release lever upward in order to release the actuator.
- 5_ Open or close the leaf manually.



Note: To hold the actuator in manual operation the release device should be left in its current positions and the system should be without power.

9. RESTORING NORMAL OPERATION

To restore normal operating conditions, proceed as follows:

- 1_ Lock the release lever by rotating it downward.
- 2_ Turn 90° the release key and remove it.
- 3_ Close the protection cover.
- 4_ Power up the system and perform some movements in order to check the correct restoring of every function of the automated system.

10. USE

Actuators ARM225I - ARM225BI, ARM250I - ARM250BI - ARM250BR and ARM270I - ARM270BI - ARM290BI are designed to move gates with a maximum length of, respectively, 3.0, 4.0, 5.0 and 6.0 metres.

It is expressly **forbidden to use the device for any other purposes or under any other circumstances other than those mentioned**. The electronic control unit (**which must be fitted with an electric clutch**) allows the following functions to be selected:

automatic : a command impulse opens and shuts the gate

semiautomatic : a command impulse opens or shuts the gate.

In the event of a power failure, the gate may be moved manually by activating the "**manual release**" device. Mod. ARM200BENC can be powered by a buffer battery and is able to perform at least 15 complete cycles (open and close) on its own.

This is an electrically powered automatic device and should therefore be used with care. In particular:

- do not touch with wet hands and/or wet or bare feet;
- disconnect the power supply before opening the control box and/or the actuator;
- do not pull the plug out by its cable;
- do not touch the motor unless you are certain it is cool;
- only operate the gate when it is completely visible;
- carry out routine maintenance;

11. MAINTENANCE

To ensure trouble-free operation and a constant safety level, an overall check of the system should be carried out every 6 months.

A form for recording operations has been included in the "User Guide" booklet.

Switch off the mains power supply to eliminate the risk of electrocution. If the power supply must be left on for certain operations, each control device should be checked or disabled (remote controls, push button strips, etc.) except for the one used by the maintenance man.

The ARM200 / ARM200BENC actuators need very little maintenance. However, as the gate must be in good working order for them to work properly, the operations required to keep it in perfect condition are described below.

Routine maintenance

Each of the following operations must be carried out every 6 months for domestic use (approx. 3000 work cycles) and every 2 months for intensive use such as blocks of flats (always 3000 work cycles).



WARNING: In the event installation is to take place in areas exposed to a great deal of sea spray and/or sand (maritime regions, desert zones, etc.), maintenance will need to be performed at shorter intervals, every 2/3 months.

Gate:

- lubricate and grease the hinges of the gate.

Automation system:

- check the safety devices (photocells, pneumatic edge, etc.) work according to the manufacturer's instructions;
- grease (with a greaser) the worm screw from underneath the actuator (see fig.12); TAU srl recommends using the complex lithium soap grease, Code **M-OILG0NY640M**.
- use a tester for lead-acid batteries to check whether the battery is charged; if it needs replacing use an original battery and recycle the flat one in compliance with current legislation (alternatively, TAU srl recommends using FIAMM batteries).



Note: with use, a thin line of oxide may form on the actuator stem. This is due to the materials addition when welding the tube/stem. However, in NO WAY does this affect the quality or normal operation of the gearmotor. We recommend the stem be cleaned regularly using special products for stainless steel.

Extraordinary maintenance or breakage

If major work on electromechanical parts must be carried out, the faulty component should be removed and repaired in the workshop by the maker's or other authorised technicians.

Keep all the documents concerning the system inside or near the control unit.

12. SPECIAL APPLICATIONS

There is no special application other than the described use.

13. NOISE LEVELS

Airborne noise generated by the gearmotor in normal operating conditions is constant and does not exceed 70 dB.

14. SCRAPPING

All materials must be disposed of in observance of current standards.

If the automation is to be scrapped there are no particular dangers or risks associated with the automation itself.

In the case of material recovery, separate components according to the waste category (electrical parts - copper - aluminium - plastic, etc.).

15. GUARANTEE: GENERAL CONDITIONS

TAU guarantees this product for a period of 24 months from the date of purchase (as proved by the sales document, receipt or invoice).

This guarantee covers the repair or replacement at TAU's expense (ex-works TAU: packing and transport at the customer's expense) of parts that TAU recognises as being faulty as regards workmanship or materials.

For visits to the customer's facilities, also during the guarantee period, a "Call-out fee" will be charged for travelling expenses and labour costs.

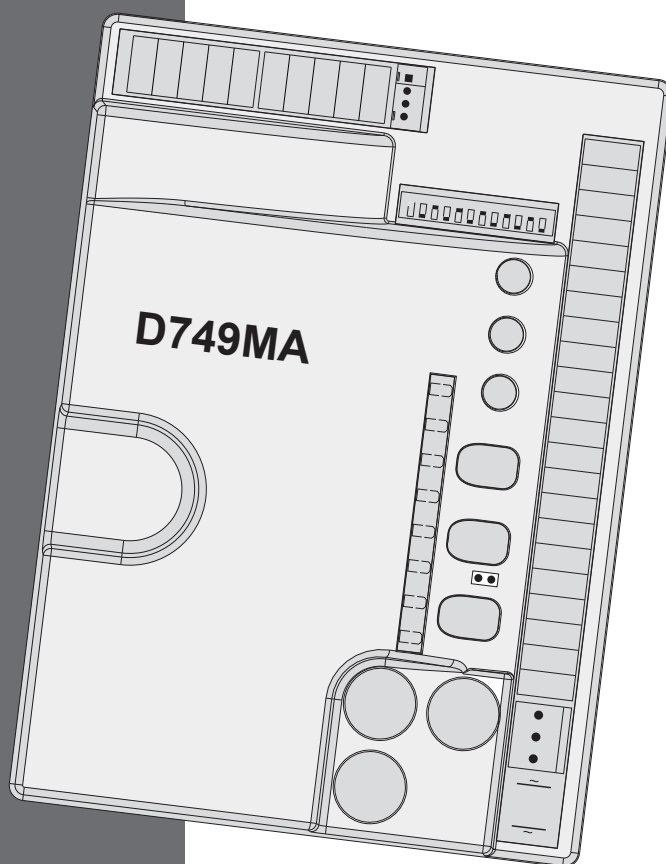
The guarantee does not cover the following cases:

- If the fault was caused by an installation that was not performed according to the instructions provided by the company inside the product pack.
- If original TAU spare parts were not used to install the product.
- If the damage was caused by an Act of God, tampering, overvoltage, incorrect power supply, improper repairs, incorrect installation, or other reasons that do not depend on TAU.
- If a specialised maintenance man does not carry out routine maintenance operations according to the instructions provided by the company inside the product pack.
- Wear of components.

The repair or replacement of pieces under guarantee does not extend the guarantee period.

In case of industrial, professional or similar use, this warranty is valid for 12 months.

D749MA



Ver. Firmware 8.xx

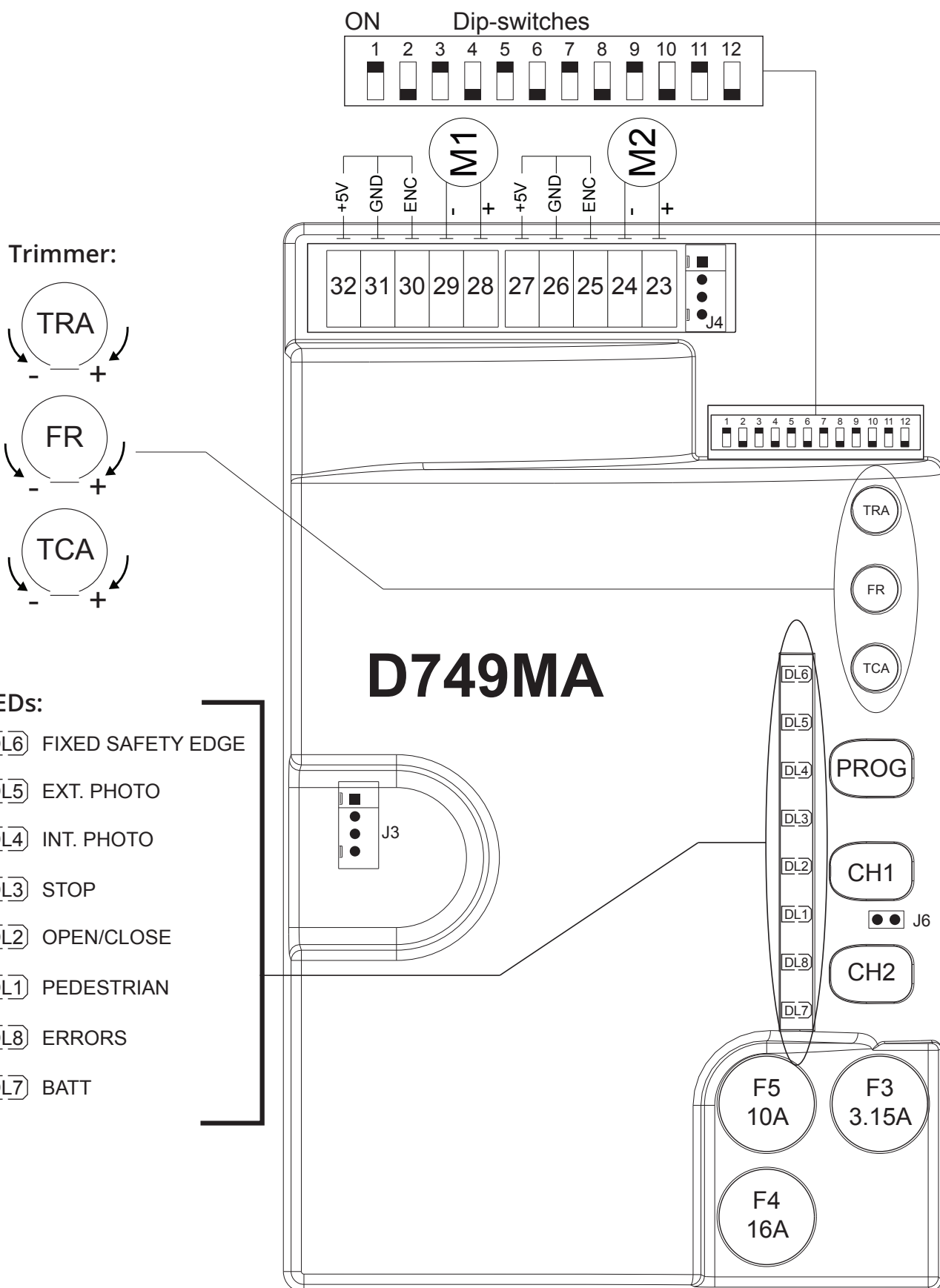
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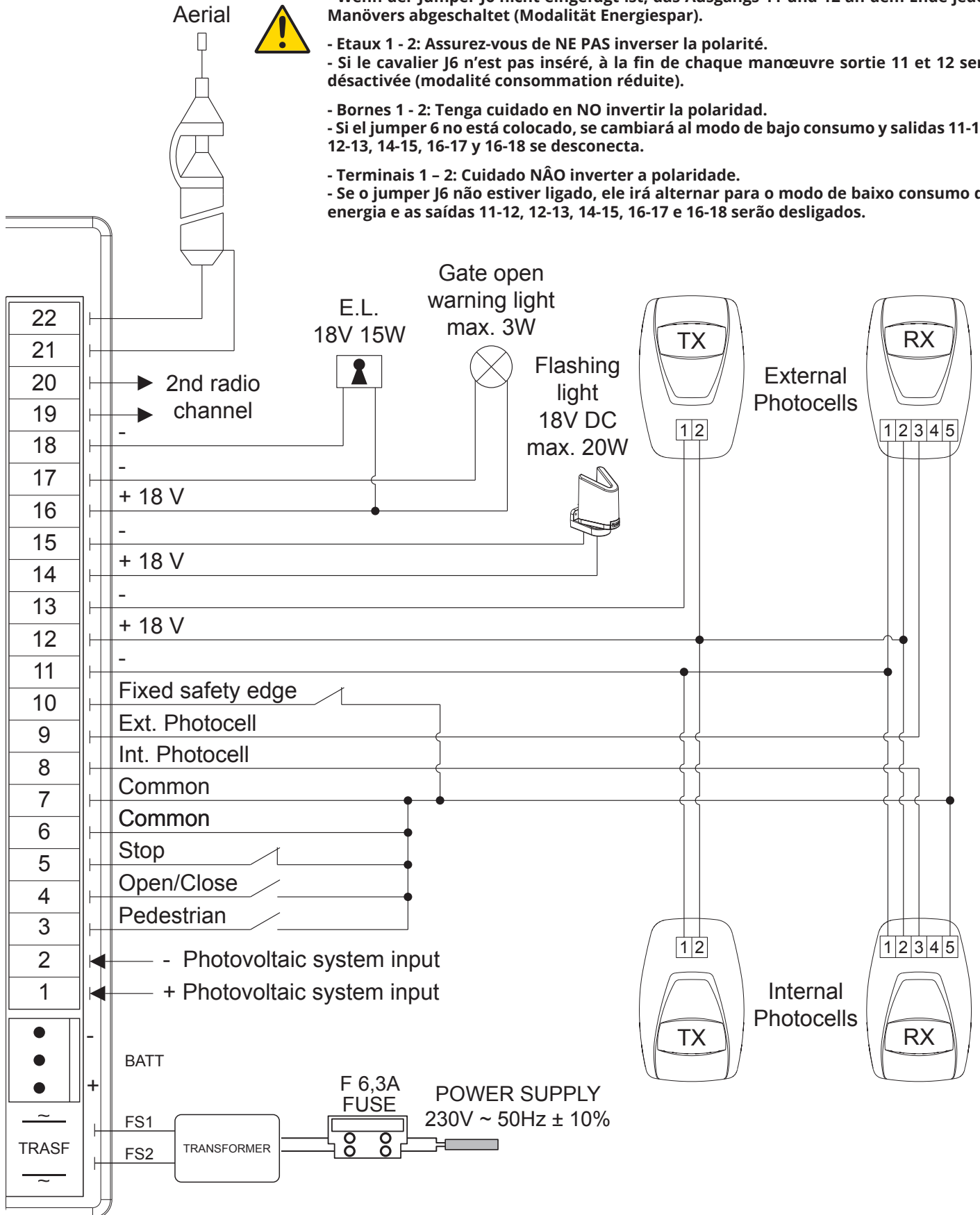


**MADE IN
ITALY**





- Morsetti 1 - 2: Attenzione a NON invertire la polarità.
- Se il jumper 6 non è inserito, verrà attivata la modalità basso consumo e le uscite 11-12, 12-13, 14-15, 16-17 e 16-18 verranno spente.
- Terminals 1 - 2: Careful NOT to invert polarity.
- If the jumper J6 is not plugged in, at the end of each maneuver output 11 and 12 will be switched off (energy saving mode).
- Klemmen 1 - 2: Achtung: Nicht verpolen.
- Wenn der Jumper J6 nicht eingefügt ist, das Ausgangs 11 und 12 an dem Ende jedes Manövers abgeschaltet (Modalität Energiespar).
- Eaux 1 - 2: Assurez-vous de NE PAS inverser la polarité.
- Si le cavalier J6 n'est pas inséré, à la fin de chaque manœuvre sortie 11 et 12 sera désactivée (modalité consommation réduite).
- Bornes 1 - 2: Tenga cuidado en NO invertir la polaridad.
- Si el jumper J6 no está colocado, se cambiará al modo de bajo consumo y salidas 11-12, 12-13, 14-15, 16-17 y 16-18 se desconecta.
- Terminais 1 - 2: Cuidado NÃO inverter a polaridade.
- Se o jumper J6 não estiver ligado, ele irá alternar para o modo de baixo consumo de energia e as saídas 11-12, 12-13, 14-15, 16-17 e 16-18 serão desligados.

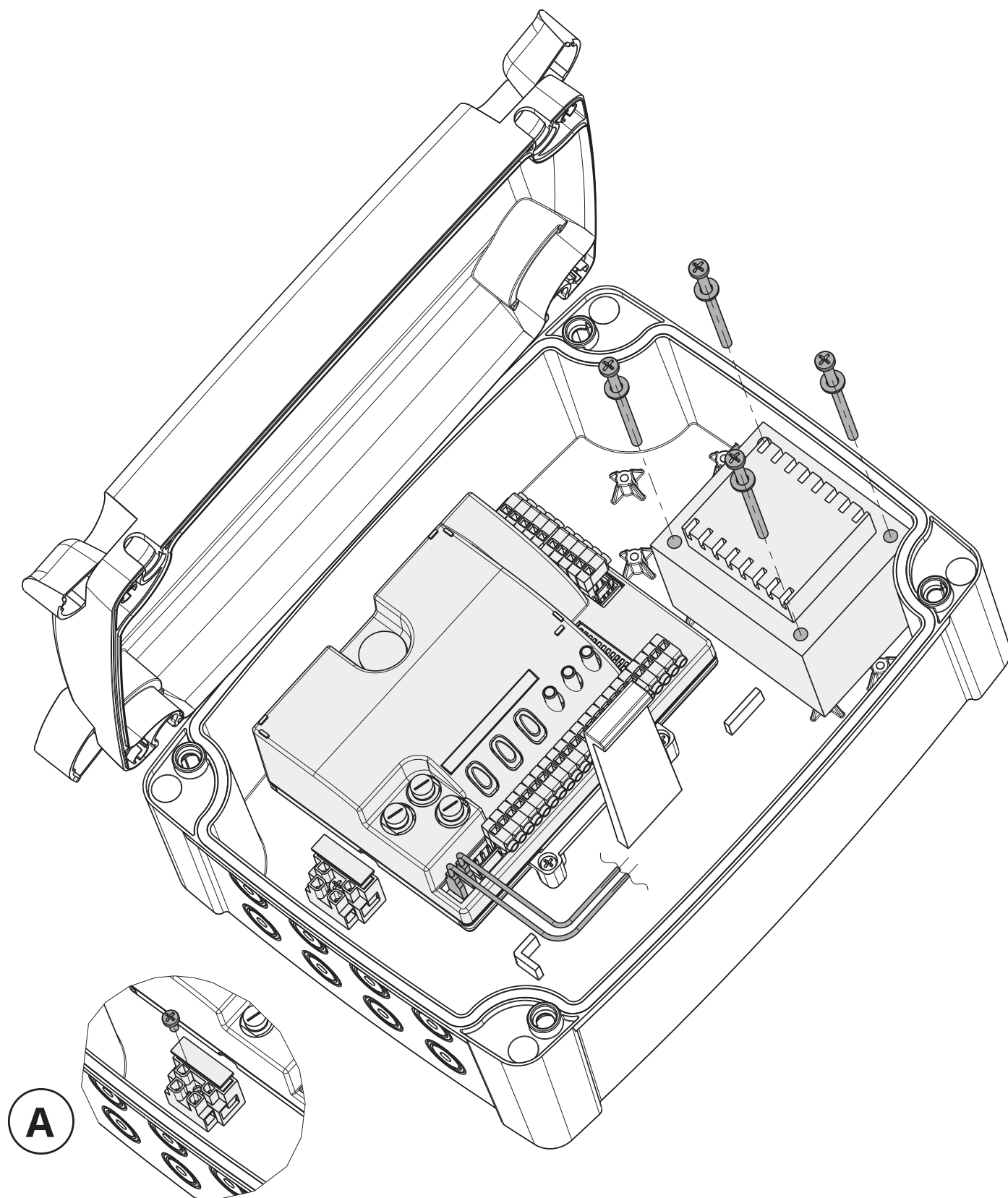


D749MA

COME FISSARE LA
CENTRALE D749MA
SULLA SCATOLA

HOW TO FIX THE
D749MA CONTROL
UNIT ON THE BOX

WIE MAN DAS D749MA
STEUERGERÄT AN DER
BOX BEFESTIGT

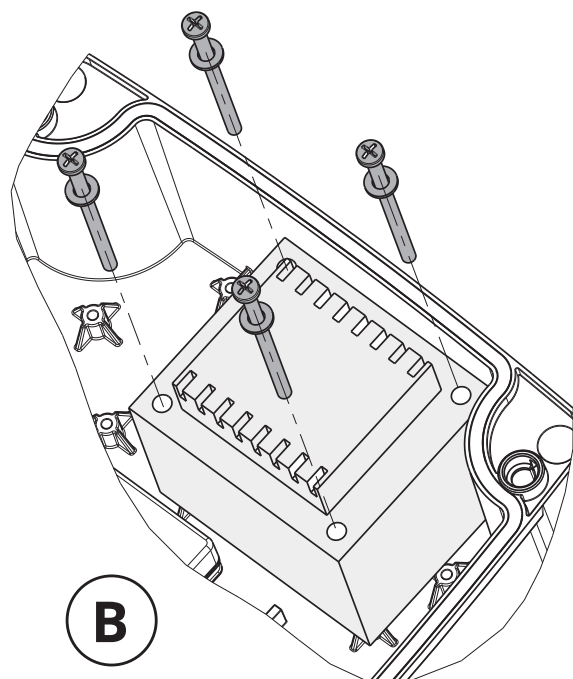


PORTAFUSIBILI

COMMENT FIXER
L'UNITÉ DE CONTRÔLE
D749MA À LA BOÎTE

CÓMO FIJAR LA UNIDAD
DE CONTROL D749MA A
LA CAJA

COMO FIXAR A UNIDADE
DE CONTROLE D749MA
NA CAIXA



TRASFORMATORE

A

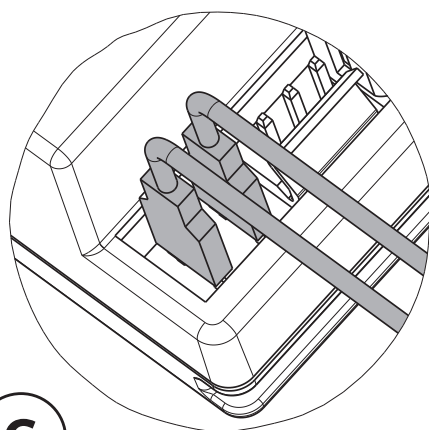
Portafusibili
Fuse holder
Sicherungshalter
Porte-fusible
Portafusibles
Fusível

B

Trasformatore
Transformer
Transformator
Transformateur
Transformador
Transformador

C

Collegamento faston a centrale
Faston connection to control
unit
Faston-Verbindung zum Steu-
ergerät
Connexion Faston au panneau
de commande
Conexión Faston al panel de
control
Conexão Faston ao painel de
controle



C

COLLEGAMENTO FASTON
A CENTRALE

- BATTERY CHARGER BOARD (INTEGRATED)
- BATTERY CONNECTOR
- DIAGNOSTICS OF MALFUNCTIONS SIGNALLED BY LED
- POSSIBILITY OF ENERGY SAVING OPERATION
- COMPATIBILITY WITH OUR APPS: TAUOPEN AND TAUAPP

2. INTRODUCTION

The D749MA board has two working modes, selectable through the J6 jumper (see wiring diagram).

- J6 Jumped: standard mode, i.e. the control unit is powered all the time;
 J6 Not jumped: low-energy mode, i.e. the control unit is switched off after each operation and on after each command (mode where power is supplied by other energy sources, ex. batteries charged by a photovoltaic panel).

Once the connection is achieved, in low-energy mode, press the PROG button briefly:

- All the green LEDs must be on (each of them corresponds to a Normally Closed input). The go off only when the controls to which they are associated are operated.
- All the red LEDs must be off (each of them corresponds to a Normally Open input). The light up only when the controls to which they are associated are operated.

3. TECHNICAL CHARACTERISTICS

Board power supply	230 V AC - 50 Hz
Max. absorption DC motor	7 A - 18V DC
Fast acting fuse for protection of input power supply 13,5 V AC (F4 - 5x20)	F 16A
Fast acting fuse for battery charger protection (F5 - 5x20)	F 10A
Fast acting fuse for protection of auxiliary circuits 18 V DC (F3 - 5x20)	3,15A
Motor power supply circuits voltage	18V DC
Auxiliary device circuits supply voltage	18V DC
Logic circuits supply voltages	5V DC
Operating temperature	-20 °C ÷ +55 °C

4. CONNECTIONS TO TERMINAL BOARD

Terminals	Function	Description
FS1 - FS2	POWER SUPPLY	13,5 V control unit power supply input – Fed by the transformer and protected by the fuses on the 6,3 A - 230V AC power supply.
1 - 2	PHOTOVOLTAIC SYSTEM INPUT	external power input (ex. Photovoltaic system 12V DC). NB: In the latest versions of the control boards, the voltage change through jumper J7 is no longer necessary (make sure whether it is present on the control board or not). ATTENTION: POWERING THE CONTROL UNIT WITH AN EXTERNAL SOURCE, ALL THE OTHER 18V DC OUTPUTS BECOME THE SAME AS THE OUTSIDE VOLTAGE.
3 - 6	PEDESTRIAN	N.O. PEDESTRIAN button contact input – commands total opening and closing of motor 1 – governed by dip-switches 2 and 3. (3= PED - 6= COM)
4 - 6	OPEN/CLOSE	OPEN/CLOSE button N.O. input – Controls the opening and closing of the automation and is regulated based on the function of dip-switches 2 and 4. (4= O/C - 6= COM)
5 - 6	STOP	STOP button N.C. input – Stops the automation in any position, temporarily preventing the automatic closure, if programmed. (5= STOP - 6= COM)

7 - 8	INTERNAL PHOTOCELLS	PHOTOCELL OR SAFETY DEVICE input INSIDE the automation (Normally Closed contact). When these devices trigger during the opening phase, they temporarily stop the automation until the obstacle has been removed; during the closing phase they stop the automation and then totally open it again. (7= COM - 8= CLOSE)
7 - 9	EXTERNAL PHOTOCELLS	PHOTOCELL OR SAFETY DEVICE input OUTSIDE the automation (Normally Closed contact). Then these devices trigger during the closing phase, they stop the automation and then totally open it again. (7= COM - 9= FOT) Note: the photocell transmitter must always be supplied by terminals no. 12 and no. 13, since the safety system test (phototest) is carried out on it. Without this connection, the control unit does not work. To override the testing of the safety system, or when the photocells are not used, set dip-switch no. 6 to OFF.
7 - 10	SENSITIVE EDGE	SAFETY EDGE input (Resistive sensitive edge or with n.c. contact - see DIP SWITCH 12). During the opening phase, it temporarily stops the gate and makes it close again for about 20 cm, thus allowing to free the potential obstacle. During the closing phase, it stops the gate and makes it totally reopen at a limited speed. In this case, if programmed, the automatic closing will be inhibited. Jumper terminals if not used. (7 = COMMON - 10 = SENSITIVE EDGE) NOTE: if a resistive sensitive edge is connected, set dip-switch no. 12 to ON; If a fixed safety edge with NC contact is connected, set dip-switch no. 12 to OFF;
11 - 12 **	AUX	auxiliary circuits output 18V DC max. 15 W for photocells, receivers, etc... (11= NEGATIVE - 12= POSITIVE) If the jumper J6 is not plugged in, at the end of each maneuver this output (11 and 12) will be switched off (energy saving mode).
12 - 13 **	TX PHOTOCELLS	18V DC output for transmitter photocell - phototest - max. no. 1 photocell transmitters. (12= POSITIVE - 13= NEGATIVE)
14 - 15 **	FLASHING LIGHT (LED CABINET)	18V DC max. 20W output for flashing light supply, flashing signal supplied by the control unit, rapid for closing, slow for opening. (14= POSITIVE - 15= NEGATIVE)
16 - 17* **	GATE OPEN LIGHT	Output for OPEN GATE LIGHT 18V DC, 3 w max; while the automation opens the light flashes slowly, when the automation is open it stays on and while closing it flashes at twice the speed. (16= POSITIVE - 17= NEGATIVE)
16 - 18* **	ELECTRIC LOCK	18V DC, 15 W output for electric lock. (16=POSITIVE - 18= NEGATIVE) For the connection of the device it is recommended to use cables with a cross section of 1.5 mm². We recommend the use of a relay to control the electric lock
19 - 20*	2 nd CH RADIO	2 nd radio channel output - for control of an additional automation or for switching on lights, etc... (N.O. clean contact) Warning: to connect other devices to the 2nd Radio Channel (area lighting, pumps, etc.), use an additional auxiliary relay (see note at end of paragraph). WARNING: the default outlet is active monostable 2 sec. To switch it to active bistable or to modify the activation time it is necessary to use the TAUPROG hand-held programmer (see relative instructions).
21 - 22	AERIAL	plug-in radio-receiver aerial input , for 433.92 MHz receivers only. (21= GROUND - 22= SIGNAL)
23 - 24	MOTOR (M2)	motor (M2) supply output 18V DC. (23= POSITIVE - 24= NEGATIVE) use 2.5 mm ² cables
25 - 26 - 27	ENCODER (M2)	encoder supply and input (25= WHITE signal - 26= BLUE negative - 27= BROWN positive)
28 - 29	MOTOR (M1)	motor (M1) supply output 18V DC. (28= POSITIVE - 29= NEGATIVE) use 2.5 mm ² cables

30 - 31 - 32	ENCODER (M1)	encoder supply and input (30= WHITE signal - 31= BLUE negative - 32= BROWN positive)
J3	MEMORY CARD	Quick plug-in for MEMORY CARD connection for transmitters codes.
J4	AUX	Quick coupling for the connection of the T-WIFI and T-CONNECT devices

* The outlets can be configured using the TAUPROG or TAUAPP (T-WIFI) (see relative instructions). The standard configuration is shown in the table.

** If Jumper J6 is not plugged in, energy saving mode will be activated and, at the end of each manoeuvre, outputs 11-12, 12-13, 14-15, 16-17 and 16-18 will be switched off.

IMPORTANT:

- **Do not connect auxiliary relays or other devices to the 18 V DC output (terminals 11 – 12) to avoid malfunctions of the control unit. Use separated power supply / transformers instead;**
- **do not connect switching feeders or similar apparatus close to the automation that may be a source of disturbance.**

5. LOGIC ADJUSTMENTS

Make the logic adjustments.

Note: when any adjusting devices (trimmers or dip-switches) on the control panel are operated, a complete manoeuvre must be carried out in order for the new settings to take effect.

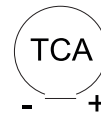
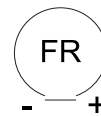
TRIMMER

T.R.A. This trimmer may give some extra seconds – other than the ones already set in learning mode – to the second gate leaf closing delay. Unless necessary, leave it to the minimum value. By turning the trimmer clockwise will increase the extra the second gate leaf closing delay;

FR. obstacle detection sensitivity adjustment.



Note: by rotating the TRIMMER FR. clockwise the sensitivity of the gearmotor to obstacles diminishes and therefore the thrust force increases; **vice-versa, by rotating it counter-clockwise, the sensitivity of the gearmotor to obstacles increases** and therefore the thrust force diminishes.



T.C.A. Automatic Closing Time adjustment: from about 1 to 120 seconds (see dip-switch no. 1);

Dip switch

1	AUTOMATIC CLOSING	On	when completely open, closure is automatic after the set time on the T.C.A. trimmer has past.
		Off	the closing manoeuvre requires a manual command.
2	2 / 4 STROKE	On	when the automation is operating, a sequence of opening/closing commands causes the automation to OPEN-CLOSE-OPEN-CLOSE, etc.
		Off	in the same conditions, the same sequence of commands causes the automation to OPEN-STOP-CLOSE-STOP-OPEN-STOP, etc. (step-by step function) (see also dip switch 4).
3	CLOSES AFTER THE PHOTOCCELL	On	after the photocell is activated (input 7 - 9), the automation closes automatically after 5 seconds.
		Off	function off.
4	NO REVERSE	On	the automation ignores the closure command during opening and auto-close time.
		Off	the automation responds as established by dip switch No. 2.
5	PRE-FLASHING	On	the pre-flashing function is enabled.
		Off	the pre-flashing function is disabled.
6	FOTOTEST	On	the "photocell test" function is enabled.
		Off	the "photocell test" function is disabled. Note: leave OFF when photocells are not used.

7	OPENING RAM BLOW	On	the "opening ram blow" function is on. This permits the release of the electric lock (to be used only in the presence of an electric lock);
		Off	the "opening ram blow" function is off;
8	MOTORS SELECTION	On	enables just one motor (M1).
		Off	enables 2 motors.

9-10-11 Automation type selection

Dip 9	Dip 10	Dip 11	Automation
Off	Off	Off	ARM, ZIP12 up to 200 Kg or leaf less than 3 m.;
On	Off	Off	ARM, ZIP12 over 200 kg and leaf less than 3 m
Off	On	Off	R18BENC
On	On	Off	R40
Off	Off	On	BIUNO-BT
On	Off	On	ARM, ZIP12 with leaf above 3 m and 400 Kg max
Off	On	On	EASY12QR;
On	On	On	not used



IMPORTANT: In case the automation type change, a new setting of the dips # 9, 10 and 11 will be required. Before the new setup, however, it is necessary to proceed to a **HARD RESET** (see page 26) of the controller.

12	SENSITIVE EDGE	On	RESISTIVE SENSITIVE EDGE (terminal No. 10).
		Off	NC CONTACT SENSITIVE EDGE (terminal No. 10). Note: if not used, keep the DIP in the OFF position.

6. MEMORIZATION PROCEDURE

WARNING: After powering the control panel, wait 2 seconds before you start performing the adjustment operations.

Note: the mechanical stops of the automation must be regulated both in opening and in closing [see motor instructions].

When you have completed the installation procedures:



Check the position of dip-switches 9, 10 and 11. Dip-switches must be set according to the automation model (see table of dip-switches 9-10-11, "Logic adjustments" section).

It is recommended to start the learning process with the gate at 0,5 m from closing mechanical stop. Press without releasing the PROG button till the DL8 LED starts flashing (yellow):

- the automation starts to open slowly looking for the opening limit gate stop;



If the automation closes instead of opening, stop the run of the gate (by cutting the photocells or closing the STOP contact), invert the polarity of the motor that closes, take the gate in the closed position (on the mechanical stop) and restart the procedure from the beginning.

Note: if the automation does not work, check the input connections. The DL6, DL5, DL4 and DL3 green LEDs must be on.

- once the limit gate stop is reached, the automation starts closing looking for the closing limit gate stop (in this phase the control unit gathers all the parameters regarding the run);
- the automation carries out one complete opening to optimize the opening power;
- after a short pause, the automation carries out one complete closure to optimize the closing power.

WARNING:

- The procedure can be stopped by pressing the STOP button.
- During the various stages of the operation, if the sensor is activated saving is stopped. To restart the procedure from the beginning (with the DL8 yellow LED flashing), use the AP/CH control, the remote control (if programmed) or press the PROG button briefly.



Please remember that an obstacle during saving is interpreted as a mechanical limit stop (the system does not start any safety operation, it just stops the motors). Make sure you don't stand near the automation during saving.

7. D749MA CHARACTERISTICS

TIMER-OPERATED OPENING AND CLOSING CYCLES

The opening/closing of the automation can be controlled by means of a timer that has a free N.O. output contact (relay). The timer must be connected to terminals 4 - 6 (OPEN/CLOSE button) and can be programmed so that, at the desired opening time, the relay contact closes until the desired closing time (when the timer's relay contact opens, enabling the automatic closing of the gate).

Note: the automatic closing function must be enabled by setting Dip-switch no. 1 to ON).

BATTERY CHARGER BOARD (INTEGRATED)

If the battery is connected the automation will operate in any case if there is no mains power supply. If the voltage drops below 11.3 Vdc, the automation ceases to operate (the control unit remains fed); whereas, when the voltage drops below 10.2 Vdc, the card completely disconnects the battery (the control panel is no longer fed).

OBSTACLE DETECTION

If the obstacle detection function (which can be set through trimmer FR) is activated during an opening manoeuvre, the automation closes approx. 20 cm., if it is activated during a closing manoeuvre, the automation opens all the way .



WARNING: the control panel logics may interpret mechanical friction as an obstacle.

8. DIAGNOSTICS LED

DL1 - Red	PEDESTRIAN button LED signal
DL2 - Red	OPEN/CLOSE button LED signal
DL3 - Green	STOP button LED signal
DL4 - Green	INTERNAL PHOTOCELLS LED signal
DL5 - Green	EXTERNAL PHOTOCELLS LED signal
DL6 - Green	SENSITIVE EDGE LED signal

LED - DL7

Apart from highlighting the presence of the battery, LED DL7 displays any mistakes with a series of pre-set flashes in various colours:

Key:	● led always on;	◉ led flashing;
● always on (green):	fully-charged battery, main voltage present;	
● always on (yellow):	battery charging;	
◉ 1 flash every 4 seconds (green):	fully-charged battery, no main voltage; <i>Check the main voltage;</i>	
◉ 1 flash every 4 seconds (yellow):	power supply through photovoltaic panel (terminals 1-2), battery charger disabled	
◉ 1 flash every 2 seconds (red):	low battery; <i>Charge the battery, replace the battery;</i>	
◉ fast flashing (red):	faulty battery; <i>Replace the battery;</i>	

LED - DL8

The DL8 LED indicates mistakes in the board logic with a series of pre-set flashes in different colours:

Key:	● led always on;	◉ led flashing;
◉ 1 flash every 4 seconds (green):	normal operation;	
◉ / ◉ alternate flashing (red/green):	saving to be performed;	

● fast flashing (yellow):	saving in progress;
● 1 flash (red):	phototest error <i>Disable phototest (dip-switch 6 OFF), check the operation of the photocells and their connection;</i>
● 1 flash (yellow):	unknown status, next operation REALIGNMENT;
● 2 flashes (red):	obstacle for motor 1; <i>Make sure there are no obstacles across the path of the automation and that it slides smoothly;</i> <i>With an active automatic closing feature, after the intervention meant to detect the obstacle, the automatic closing is deactivated. A command pulse is required to carry out the closing;</i>
● 2 flashes (yellow):	obstacle for motor 2 <i>Make sure there are no obstacles across the path of the automation and that it slides smoothly;</i> <i>With an active automatic closing feature, after the intervention meant to detect the obstacle, the automatic closing is deactivated. A command pulse is required to carry out the closing;</i>
● 3 flashes (red):	no motor 1 encoder signal; <i>Check wiring, check encoder by TEST-ENCODER (optional);</i>
● 3 flashes (yellow):	no motor 2 encoder signal; <i>Check wiring, check encoder by TEST-ENCODER (optional);</i>
● 4 flashes (red):	no motor 1 signal; <i>Check wiring, check the motor rotates freely and is powered directly by the battery, check fuse F5;</i>
● 4 flashes (yellow):	no motor 2 signal; <i>Check wiring, check the motor rotates freely and is powered directly by the battery, check fuse F5;</i>
● 5 flashes (red):	max current limit for motor 1 exceeded; <i>Excessive absorption peaks of the gearmotor, check there are no obstacles on the automation path, check the current absorption of the motor when in a no-load condition and when applied to the gate,</i>
● 5 flashes (yellow):	max current limit for motor 2 exceeded; <i>Excessive absorption peaks of the gearmotor, check there are no obstacles on the automation path, check the current absorption of the motor when in a no-load condition and when applied to the gate,</i>
● 7 flashes (red):	Sensitive edge safety intervention <i>A command pulse is required to carry out the closure;</i>
● 8 flashes (red):	Eeprom external memory fault; <i>Replace the external memory module;</i>
● 8 flashes (yellow):	Eeprom data error (internal/external); <i>Perform procedure RADIO MEMORY RESET;</i>

Apart from the logic mistakes, the DL8 LED indicates also the status of the control unit during the saving of the radio controls.

● always on (green):	channel CH1 waiting to be saved;
● fast flashing (green):	CH1 channel memory full;
● always on (yellow):	channel CH2 waiting to be saved;
● fast flashing (yellow):	CH2 channel memory full;

● always on (red):	channel CH3 waiting to be saved;
● fast flashing (red):	CH3 channel memory full;
● flashing (green):	CH1 channel waiting to be cancelled;
● always on (green):	cancelling of channel CH1 in progress;
● flashing (yellow):	CH2 channel waiting to be cancelled;
● always on (yellow):	cancelling of channel CH2 in progress;
● flashing (red):	CH3 channel waiting to be cancelled;
● always on (red):	cancelling of channel CH3 in progress;

When LEDs DL7 and DL8 flash at the same time they indicate:

flashing ● + ● (red + red):	factory reset procedure waiting for confirmation;
flashing ● + ● (yellow + yellow):	waiting for total cancellation of the radio channels;

Multiple errors are signalled by a 2-second pause between signals.

Should the encoder (obstacle detection) activates while closing, the controller will reverse the direction and slowly open until the laef reaches its fully opened position. Auto Close function will be deactivated until a further command pulse is given. In case of 5 consecutive safety interventions the controller will progressively increase the Auto Close delay. Once the closing has been successfully achieved, the Auto Close delay will go back to standard setting.

9. RESTORING AUTOMATIC OPERATION

Should the automation need to be operated manually, use the release system. After the manual operation:

- after a Mains Power Failure, such as a black-out (controller remains disconnected for a certain time), the automation will be moving slowly to allow the Controller to establish its Limits (REALIGNMENT procedure);
- after a Manual Operation without Mains Power Failure (controller remains connected) it will take 4 to 5 complete cycles to complete the realignment procedure. During these cycles, Limits and Soft-Stops will not be working.

10. 433.92 MHz BUILT-IN RADIO RECEIVER

The radio receiver can learn up to a maximum of 30 codes of rolling code (S2RP, S4RP, K-SLIM-RP, T-4RP) to be set freely on 3 channels.

The first channel directly commands the control board for opening the automatic device; the second channel commands a relay for a N.O. no-voltage output contact (terminals 19 - 20, max. 24V AC, 1 A) and the third channel controls directly the pedestrian opening from the controller.

LEARNING SYSTEM FOR RADIO CONTROL DEVICES

CH1 = 1st channel (OPEN/CLOSE) CH2 = 2nd channel CH1+ CH2= 3rd channel CH3 (PEDESTRIAN)

- 1_ Press button CH1 briefly to associate a radio control device with the OPEN/CLOSE function;
- 2_ the (green) DL8 LED is ON to indicate the code learning mode has been activated (if no code is entered within 10 seconds the board exits the programming function);
- 3_ press the button of the relative radio control device;
- 4_ the (green) DL8 LED turns off to indicate saving is complete and then on again immediately waiting for other radio control devices (if this is not the case, try to re-transmit or wait 10 seconds and restart from point 1);
- 5_ to memorise codes to other radio control devices, press the key to be stored on other devices within 2-3 sec. After this time (DL8 LED turns off) must repeat the procedure from point 1 (up to a maximum of 30 transmitters);
- 6_ if you wish to save on the 2nd channel, repeat the procedure from point 1 using the CH2 key instead of CH1 (in this case the DL8 LED is yellow);
- 7_ to program transmitters into the third channel, repeat procedure from point 1 using CH1 and CH2

buttons at the same time (DL8 will turn on red);

- 8_ to exit the learning mode without memorising a code, press button CH1 or CH2 briefly.



If the maximum number of radio controls is reached (30), the LED DL8 will begin to flash rapidly for about 3 seconds but without performing memorisation.

REMOTE PROGRAMMING BY MEANS OF T-4RP / K-SLIM-RP / S-2RP / S-4RP (V 4.X)

With the new version of software V 4.X it is possible to carry out the remote self-learning of the new version of transmitters T-4RP / K-SLIM-RP / S-2RP / S-4RP (V 4.X), that is without pressing the receiver's programming buttons.

It will be sufficient to have an already programmed transmitter in the receiver in order to start the procedure of remote programming of the new transmitters. Follow the procedure written on the instructions of the transmitter T-4RP / K-SLIM-RP / S-2RP / S-4RP (V 4.X).

CANCELLING CODES FROM RADIO CONTROL DEVICES

- 1_ Keep button CH1 pressed for 3 seconds in order to cancel all the associated radio control devices;
- 2_ LED DL8 flashes slowly to indicate that the cancellation mode has been activated;
- 3_ press button CH1 again for 3 seconds;
- 4_ LED DL8 turns off for approx. 3 seconds and then remains steady to indicate that the code has been cancelled;
- 5_ repeat the procedure from point 1 using button CH2 to cancel all the associated radio control devices;
- 6_ repeat procedure from point 1 using CH1 and CH2 buttons at the same time to erase all transmitters programmed into the third channel;
- 7_ to exit the learning mode without memorising a code, press button CH1 or CH2 briefly.

MEMORY CAPACITY

The code memory capacity* can be expanded from 30 to 126, 254 or 1022 codes (transmitters) by replacing the memory cards as follows (plug them onto J3 connector, see wiring diagram):

126	codes	Art.	250SM126
254	codes	Art.	250SM254
1022	codes	Art.	250SM1022

* Control units are supplied with a standard built-in 30-code memory. The memory card for enhancing the code memory capacity must be ordered separately.

To allow the previously stored codes (max. 30) to be moved to the control unit, it is required to install a memory card, making sure that the control unit is at that time off and that the memory card is brand new and therefore completely empty.

When the control unit is restarted, the codes will automatically move to the memory card.

Moving the codes from the control unit to the memory card does not work if on the memory card used, radio control codes have already been stored and the memory card has been subsequently erased.

To insert new radio controls, the operation described above shall be repeated.



WARNING: Control unit must be turned OFF to insert / remove a memory card.

RADIO MEMORY RESET:

- press without releasing keys CH1 and PROG till LEDs DL7 and DL8 start flashing quickly with a yellow light. At this point release the keys and press them again till the LEDs go off confirming the operation is complete (if they are not pressed the board reverts to normal operation after about 12 seconds).

HARD RESET (factory setting):

- press without releasing keys CH2 and PROG till LEDs DL7 and DL8 start flashing quickly with a red light. At this point release the keys and press them again till the LEDs go off (reset in progress), confirming the operation is complete (if they are not pressed the board reverts to normal operation after about 12 seconds); When the unit starts again saving will be required.



In case of Hard Reset the memory of the radio receiver will not be erased: all existing transmitters remain programmed.

11. SET-UP FOR OPERATION WITH TAU APPS

In order to use the TauApp and TauOpen apps, it will be necessary to connect to input J4 of the D749MA

control unit using the supplied cable, the respective T-WIFI and T-CONNECT devices. To activate the operation of the apps see the respective instructions.

12. MALFUNCTIONS: POSSIBLE CAUSES AND SOLUTION

The automation does not start

- a- Check there is 230V AC power supply with the multimeter.
- b- Check, in the standard mode, that the NC contacts on the board are really normally closed (4 green LEDs on).
- c- Set dip-switch 6 (phototest) OFF.
- d- Increase the FR trimmer to the limit.
- e- Check that the fuses are intact with the multimeter.

The radio control has very little range

- a- Check that the ground and the aerial signal connections have not been inverted.
- b- Do not make joints to increase the length of the aerial wire.
- c- Do not install the aerial in a low position or behind walls or pillars.
- d- Check the state of the radio control batteries.

The automation opens the wrong way

Invert the motor connections on the terminal block (terminals 28 and 29 for M1; terminals 23 and 24 for M2).

12. GUARANTEE: GENERAL CONDITIONS

TAU guarantees this product for a period of 24 months from the date of purchase (as proved by the sales document, receipt or invoice).

This guarantee covers the repair or replacement at TAU's expense (ex-works TAU: packing and transport at the customer's expense) of parts that TAU recognises as being faulty as regards workmanship or materials.

For visits to the customer's facilities, also during the guarantee period, a "Call-out fee" will be charged for travelling expenses and labour costs.

The guarantee does not cover the following cases:

- If the fault was caused by an installation that was not performed according to the instructions provided by the company inside the product pack.
- If original TAU spare parts were not used to install the product.
- If the damage was caused by an Act of God, tampering, overvoltage, incorrect power supply, improper repairs, incorrect installation, or other reasons that do not depend on TAU.
- If a specialised maintenance man does not carry out routine maintenance operations according to the instructions provided by the company inside the product pack.
- Wear of components.

The repair or replacement of pieces under guarantee does not extend the guarantee period. In case of industrial, professional or similar use, this warranty is valid for 12 months.

ENGLISH

TAU S.r.l.
Via E. Fermi, 43 - 36066 Sandrigo (Vi) ITALY

Electronic control unit
Swing Gates
Residential / Communities
Radioreceiver and battery charger board

Type: *D749MA*

Commercial name: *Control panel for one-two 12V motors with encoder*