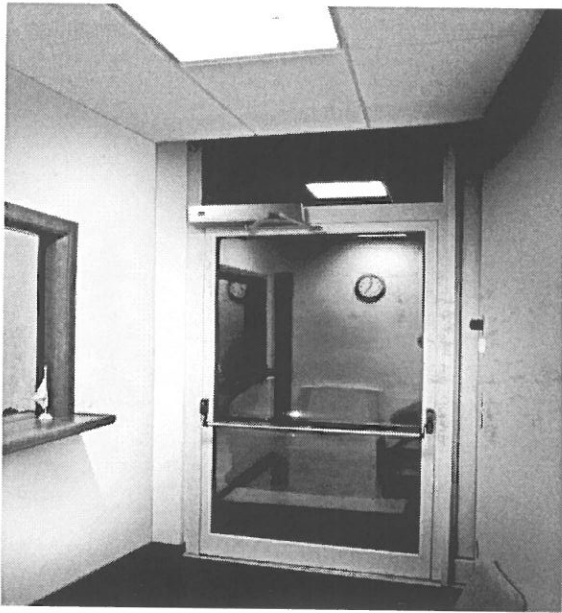


CE

WEL

IP1891 - rev. 2008-12-16



- (I) Manuale di installazione e manutenzione per automazioni per porte battenti.
- (GB) Installation and maintenance manual for automations for swing doors.
- (F) Manuel d'installation et d'entretien pour portes battantes.
- (D) Montage und Wartungshandbuch für Drehtürenantrieb.
- (E) Manual de instalación y manutención para puertas de vaivén.
- (P) Manual de instalação e manutenção para portas de balanço.

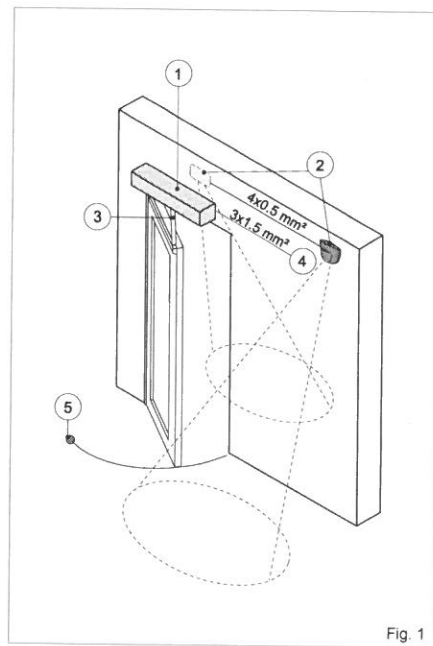


Fig. 1

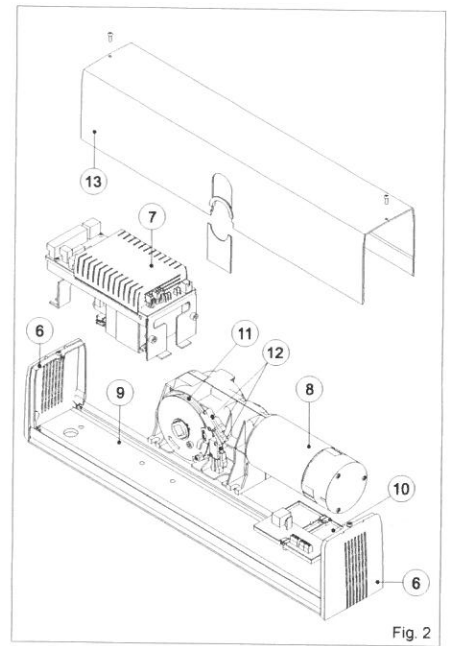


Fig. 2

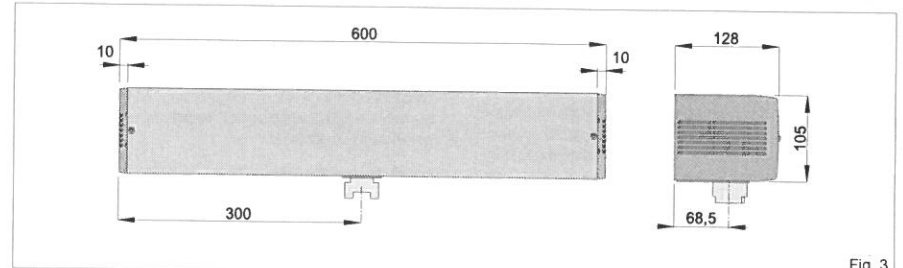


Fig. 3

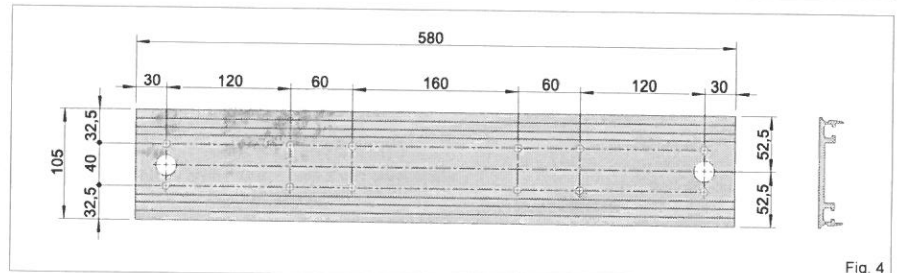


Fig. 4



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 www.ditec.it - ditec@ditecva.com

ISO 9001
 Cert. n° 0957

AVVERTENZE GENERALI PER LA SICUREZZA

Il presente manuale di installazione è rivolto esclusivamente a personale professionalmente competente. L'installazione, i collegamenti elettrici e le regolazioni devono essere effettuati nell'osservanza della Buona Tecnica e in ottemperanza alle norme vigenti.

Leggere attentamente le istruzioni prima di iniziare l'installazione del prodotto.

Una errata installazione può essere fonte di pericolo. I materiali dell'imballaggio (plastica, polistirolo, ecc.) non vanno dispersi nell'ambiente e non devono essere lasciati alla portata dei bambini in quanto potenziali fonti di pericolo.

Prima di iniziare l'installazione verificare l'integrità del prodotto. Non installare il prodotto in ambiente e atmosfera esplosivi: presenza di gas o fumi infiammabili costituiscono un grave pericolo per la sicurezza.

Prima di installare la motorizzazione, apportare tutte le modifiche strutturali relative alla realizzazione dei franchi di sicurezza ed alla protezione o segregazione di tutte le zone di schiacciamento, cesoiamento, convogliamento e di pericolo in genere.

Verificare che la struttura esistente abbia i necessari requisiti di robustezza e stabilità. Il costruttore della motorizzazione non è responsabile dell'inosservanza della Buona Tecnica nella costruzione degli infissi da motorizzare, nonché delle deformazioni che dovessero intervenire nell'utilizzo. I dispositivi di sicurezza (fotocellule, coste sensibili, stop di emergenza, ecc.) devono essere installati tenendo in considerazione: le normative e le direttive in vigore, i criteri della Buona Tecnica, l'ambiente di installazione, la logica di funzionamento del sistema e le forze sviluppate dalla porta o cancello motorizzati.

I dispositivi di sicurezza devono proteggere eventuali zone di schiacciamento, cesoiamento, convogliamento e di pericolo in genere, della porta o cancello motorizzati.

Applicare le segnalazioni previste dalle norme vigenti per individuare le zone pericolose.

Ogni installazione deve avere visibile l'indicazione dei dati identificativi della porta o cancello motorizzati.

Prima di collegare l'alimentazione elettrica accertarsi che i dati di targa siano rispondenti a quelli della rete di distribuzione elettrica. Prevedere sulla rete di alimentazione un interruttore/sezionatore onnipolare con distanza d'apertura dei contatti uguale o superiore a 3 mm.

Verificare che a monte dell'impianto elettrico vi sia un interruttore differenziale e una protezione di sovracorrente adeguati.

Quando richiesto, collegare la porta o cancello motorizzati ad un efficace impianto di messa a terra eseguito come indicato dalle vigenti norme di sicurezza.

Durante gli interventi di installazione, manutenzione e riparazione, togliere l'alimentazione prima di aprire il coperchio per accedere alle parti elettriche.

La manipolazione delle parti elettroniche deve essere effettuata munendosi di bracciali conduttivi antistatici collegati a terra. Il costruttore della motorizzazione 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.

L'installatore deve fornire tutte le informazioni relative al funzionamento automatico, manuale e di emergenza della porta o cancello motorizzati, e consegnare all'utilizzatore dell'impianto le istruzioni d'uso.

DIRETTIVA MACCHINE

Ai sensi della Direttiva Macchine (98/37/CE) l'installatore che motorizza una porta o un cancello ha gli stessi obblighi del costruttore di una macchina e come tale deve:

- predisporre il fascicolo tecnico che dovrà contenere i documenti indicati nell'Allegato V della Direttiva Macchine; (Il fascicolo tecnico deve essere conservato e tenuto a disposizione delle autorità nazionali competenti per almeno dieci anni a decorrere dalla data di costruzione della porta motorizzata);
- redigere la dichiarazione CE di conformità secondo l'Allegato II-A della Direttiva Macchine e consegnarla al cliente;
- apporre la marcatura CE sulla porta motorizzata ai sensi del punto 1.7.3 dell'Allegato I della Direttiva Macchine.

Per maggiori informazioni consultare le "Linee guida per la realizzazione del fascicolo tecnico" disponibile su internet al seguente indirizzo: www.ditec.it

INDICAZIONI DI UTILIZZO

Classe di servizio: 5 (minimo 5 anni di utilizzo con 600 cicli al giorno)

Utilizzo: MOLTO INTENSO (per ingressi di tipo collettivo con uso carroia o pedonale molto intenso)

- Le prestazioni di utilizzo si riferiscono al peso raccomandato (circa 2/3 del peso massimo consentito). L'utilizzo con il peso massimo consentito potrebbe ridurre le prestazioni sopra indicate.
- La classe di servizio, i tempi di utilizzo e il numero di cicli consecutivi hanno valore indicativo. Sono rilevati statisticamente in condizioni medie di utilizzo e non possono essere certi per ogni singolo caso. Si riferiscono al periodo nel quale il prodotto funziona senza necessità di manutenzione straordinaria.
- Ogni ingresso automatico presenta elementi variabili quali: attriti, bilanciature e condizioni ambientali che possono modificare in maniera sostanziale sia la durata che la qualità di funzionamento dell'ingresso automatico o di parte dei suoi componenti (fra i quali gli automatismi). E' compito dell'installatore adottare coefficienti di sicurezza adeguati ad ogni particolare installazione.

DICHIARAZIONE DEL FABBRICANTE

(Direttiva 98/37/CE, Allegato II, parte B)

Fabbricante: DITEC S.p.A.

Indirizzo: via Mons. Banfi, 3
21042 Caronno P.I. (VA) - ITALY

Dichiara che l'automazione per porte battenti serie WEL

- è costruito per essere incorporato in una macchina o per essere assemblato con altri macchinari per costituire una macchina considerata dalla Direttiva 98/37/CE;

- è conforme alle condizioni delle seguenti altre direttive CE: Direttiva compatibilità elettromagnetica 2004/108/CE; Direttiva bassa tensione 2006/95/CE;

e inoltre dichiara che non è consentito mettere in servizio il macchinario fino a che la macchina in cui sarà incorporata o di cui diverrà componente sia stata identificata e ne sia stata dichiarata la conformità alle condizioni della Direttiva 98/37/CE e alla legislazione nazionale che la trasponesse.

Caronno Pertusella,
18-06-2004

Fermo Bressanini
Presidente

1. DATI TECNICI

	WELM	WELS	WELE
Alimentazione	230 V~ / 50-60 Hz	230 V~ / 50-60 Hz	230 V~ / 50-60 Hz
Assorbimento	1A	1A	1A
Coppia max	50 Nm	30 Nm (apertura) 20 Nm (chiusura)	30 Nm (apertura) 20 Nm (chiusura)
Intermittenza	S2 = 30 min, S3 = 80 %	S2 = 30 min, S3 = 80 %	S2 = 30 min, S3 = 80 %
Tempo di apertura	1,5+5 s / 90°	1,5+5 s / 90°	2+10 s / 90°
Tempo di chiusura	1,5+5 s / 90°	1,5+5 s / 90°	3-8 s / 90°
Tipo di funzionamento	Apertura a motore Chiusura a motore	Apertura a motore Chiusura a molla	Apertura a motore Chiusura a molla
Alimentazione accessori	24 V= / 0,5 A	24 V= / 0,5 A	24 V= / 0,5 A
Temperatura	-20°C / +55°C [Batterie -10°C / +50°C]	-20°C / +55°C [Batterie -10°C / +50°C]	-20°C / +55°C [Batterie -10°C / +50°C]
Grado di protezione	IP31	IP31	IP31
Quadro elettronico	99	99+BRAKE	EL12E
Indicazioni di utilizzo: mm = lunghezza anta kg = peso anta	 *Attenzione: in porte a due ante senza sormonto, il peso di ciascuna anta non deve superare i 150 kg		

2. RIFERIMENTI ILLUSTRAZIONI

La garanzia di funzionamento e le prestazioni dichiarate si ottengono solo con accessori e dispositivi di sicurezza DITEC.

2.1 Riferimenti installazione tipo (fig. 1)

- [1] Automazione WEL
- [2] Radar
- [3] Braccio scorrevole
- [4] Collegare l'alimentazione ad un interruttore onnipolare con distanza di apertura dei contatti di almeno 3 mm (non forniti) protetto contro l'attivazione involontaria e non autorizzata. Il collegamento alla rete deve avvenire su canale indipendente e separata dai collegamenti ai dispositivi di comando e sicurezza.
- [5] Fermo battuta

2.2 Riferimenti automazione (fig. 2)

- [6] Testate
- [7] Quadro elettronico
- [8] Motoriduttore
- [9] Piastra di base
- [10] Scheda BRAKE (solo WELS)
- [11] Molla (solo WELS e WELE)
- [12] Finecorsa
- [13] Carter

3. INSTALLAZIONE

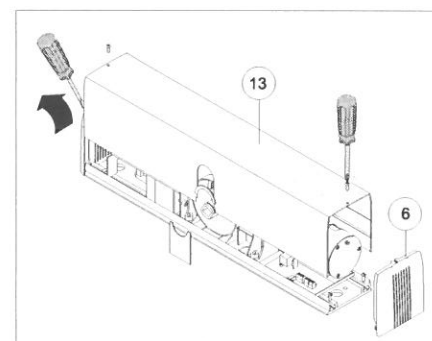
Tutte le misure riportate sono espresse in millimetri (mm), salvo diversa indicazione.

3.1 Controlli preliminari

Controllare la stabilità, il peso dell'anta e che il movimento sia regolare e senza attriti (se necessario rinforzare il telaio). Eventuali chiudi porta devono essere tolti o completamente annullati.

3.2 Smontaggio automazione

Aprire il carter [13] agendo con un cacciavite sull'apposita fentioia presente sulle testate. Togliere le testate [6], staccare i connettori dei collegamenti elettrici, le viti di bloccaggio e sfilare il quadro elettronico [7], il motoriduttore [8] e la scheda BRAKE [10] se presente. *Attenzione: non togliere né spostare le staffe inserite nelle guide della piastra di base.*



ISTRUZIONI D'USO AUTOMAZIONE PER PORTE BATTENTI WEL

OPERAZIONE DI SBLOCCO

In caso di malfunzionamento dell'automazione o dei dispositivi di apertura o sicurezza, scollegare l'alimentazione di rete e contattare solo personale professionalmente competente. La porta può essere movimentata manualmente e, se provvista di elettroerratura, usare l'apposita chiave per sbloccarla.

AVVERTENZE GENERALI PER LA SICUREZZA

Le presenti avvertenze sono parte integrante ed essenziale del prodotto e devono essere consegnate all'utilizzatore. Leggerle attentamente in quanto forniscono importanti indicazioni riguardanti la sicurezza di installazione, uso e manutenzione. È necessario conservare queste istruzioni e trasmetterle ad eventuali subentranti nell'uso dell'impianto.

Questo prodotto dovrà essere destinato solo all'uso per il quale è stato espressamente concepito. Ogni altro uso è da considerarsi improprio e quindi pericoloso. Il costruttore non può essere considerato responsabile per eventuali danni causati da usi impropri, erronei ed irragionevoli. Evitare di operare in prossimità delle cerniere o organi meccanici in movimento. Non entrare nel raggio di azione della porta o cancello motorizzati mentre è in movimento.

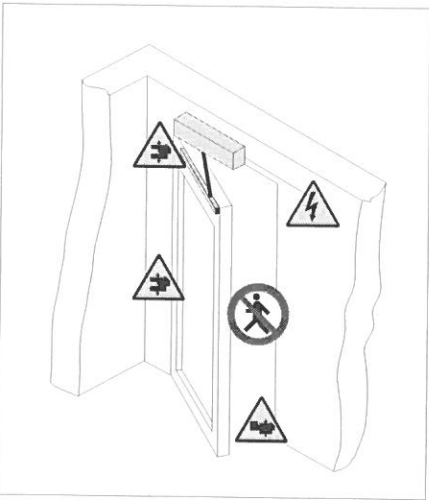
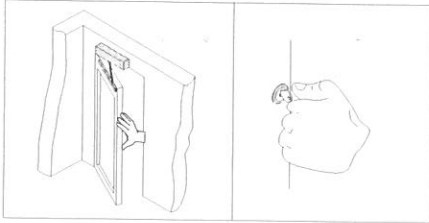
Non opporsi al moto della porta o cancello motorizzati poiché può causare situazioni di pericolo. Non permettere ai bambini di giocare o sostare nel raggio di azione della porta o cancello motorizzati. Tenere fuori dalla portata dei bambini i radiocomandi e/o qualsiasi altro dispositivo di comando, per evitare che la porta o cancello motorizzati possa essere azionata involontariamente. In caso di guasto o di cattivo funzionamento del prodotto, disinserire l'interruttore di alimentazione, astenendosi da qualsiasi tentativo di riparazione o di intervento diretto e rivolgersi solo a personale professionalmente competente.

Il mancato rispetto di quanto sopra può creare situazioni di pericolo.

Qualsiasi intervento di pulizia, manutenzione o riparazione, deve essere effettuato da personale professionalmente competente.

Per garantire l'efficienza dell'impianto ed il suo corretto funzionamento è indispensabile attenersi alle indicazioni del costruttore facendo effettuare da personale professionalmente competente la manutenzione periodica della porta o cancello motorizzati.

In particolare si raccomanda la verifica periodica del corretto funzionamento di tutti i dispositivi di sicurezza. Gli interventi di installazione, manutenzione e riparazione devono essere documentati e tenuti a disposizione dell'utilizzatore.



Installatore:

DA STACCARE E CONSEGNARE ALL'UTILIZZATORE

DITEC AUTOMATIC ENTRANCE SPECIALISTS
 DITEC S.p.A.
 Via Mons. Banfi, 3
 21042 Caronno Pertusella (VA) - ITALY
 Tel. +39 02 963911 - Fax +39 02 9650314
 www.ditec.it - ditec@ditecva.com

GB GENERAL SAFETY PRECAUTIONS

This installation manual is intended for professionally competent personnel only.

Installation, electrical connections and adjustments must be performed in accordance with Good Working Methods and in compliance with applicable regulations.

Before installing the product, carefully read the instructions. Bad installation could be hazardous. The packaging materials (plastic, polystyrene, etc.) should not be discarded in the environment or left within reach of children, as these are a potential source of hazard.

Before installing the product, make sure it is in perfect condition. Do not install the product in an explosive environment and atmosphere: gas or inflammable fumes are a serious hazard risk. Before installing the motors, make all structural changes relating to safety clearances and protection or segregation of all areas where there is risk of being crushed, cut conveyed, and danger areas in general.

Make sure the existing structure is up to standard in terms of strength and stability. The motor manufacturer is not responsible for failure to use Good Working Methods in building the frames to be motorised or for any deformation occurring during use. The safety devices (photocells, safety edges, emergency stops, etc.) must be installed taking into account applicable laws and directives, Good Working Methods, installation premises, system operating logic and the forces developed by the motorised door or gate.

The safety devices must protect any areas where the risk exists of being crushed, cut conveyed, or where there are any other risks generated by the motorised door or gate.

Apply hazard area notices required by applicable regulations. Each installation must clearly show the identification details of the motorised door or gate.

Before making power connections, make sure the plate details correspond to those of the power mains. Fit on the electrical system an omnipolar disconnection switch with a contact opening gap of at least 3 mm.

Check there is a differential switch and adequate overcurrent protection upline from the electrical system.

When necessary, connect the motorised door or gate to a reliable earth system made in accordance with applicable safety regulations.

During installation, maintenance and repair, interrupt the power supply before opening the lid to access the electrical parts.

To handle electronic parts, wear earthed antistatic conductive bracelets. The motor manufacturer declines all responsibility in the event of component parts being fitted that are not compatible with the safe a correct operation.

For repairs or replacements of products only original spare parts must be used.

The installer shall provide all information relating to automatic, manual and emergency operation of the motorised door or gate, and provide the user with operating instructions.

MACHINERY DIRECTIVE

Pursuant to Machinery Directive (98/37/EC) the installer who motorises a door or gate has the same obligations as the manufacturer of machinery and as such must:

- prepare the technical file which must contain the documents indicated in Annex V of the Machinery Directive;
- (The technical file must be kept and placed at the disposal of competent national authorities for at least ten years from

- the date of manufacture of the motorised door);
 - draft the EC declaration of conformity in accordance with Annex II-A of the Machinery Directive and deliver it to the customer;
 - affix the CE marking on the power operated door in accordance with point 1.7.3 of Annex I of the Machinery Directive.
- For more information consult the "Technical Manual Guidelines" available on Internet at the following address: www.ditec.it

APPLICATIONS

Service class: 5 (minimum 5 years of working life with 600 cycles a day)

Applications: HEAVY DUTY (For vehicle or pedestrian access to institutional complexes with very intense use).

- Performance characteristics are to be understood as referring to the recommended weight (approx. 2/3 of maximum permissible weight). A reduction in performance is to be expected when the access is made to operate at the maximum permissible weight.
- Service class, running times, and the number of consecutive cycles are to be taken as merely indicative having been statistically determined under average operating conditions, and are therefore not necessarily applicable to specific conditions of use. During given time spans product performance characteristics will be such as not to require any special maintenance.
- The actual performance characteristics of each automatic access may be affected by independent variables such as friction, balancing and environmental factors, all of which may substantially alter the performance characteristics of the automatic access or curtail its working life or parts thereof (including the automatic devices themselves). When setting up, specific local conditions must be duly borne in mind and the installation adapted accordingly for ensuring maximum durability and trouble-free operation.

DECLARATION BY THE MANUFACTURER

Directive 98/37/EC, Annex II, sub B)

Manufacturer: DITEC S.p.A.

Address: via Mons. Banfi, 3

21042 Caronno P.Ia (VA) - ITALY

Herewith declares that the electromechanical automatic system for swing doors series WEL

- is intended to be incorporated into machinery or to be assembled with other machinery to constitute machinery covered by Directive 98/37/EC;
- is in conformity with the provisions of the following other EC directives: Electromagnetic Compatibility Directive 2004/108/EC; Low Voltage Directive 2006/95/EC;

and furthermore declares that it is not allowed to put the machinery into service until the machinery into which it is to be incorporated or of which it is to be a component has been found and declared to be in conformity with the provisions of Directive 98/37/EC and with national implementing legislation.

Caronno Pertusella,
18-06-2004

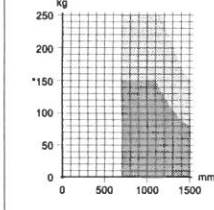
Fermo Bressanini
B. Bressanini

1. TECHNICAL DETAILS

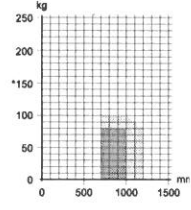
	WELM	WELS	WELE
Power supply	230 V~ / 50-60 Hz	230 V~ / 50-60 Hz	230 V~ / 50-60 Hz
Absorption	1A	1A	1A
Maximum torque	50 Nm	30 Nm (opening) 20 Nm (closing)	30 Nm (opening) 20 Nm (closing)
Intermittence	S2 = 30 min, S3 = 80 %	S2 = 30 min, S3 = 80 %	S2 = 30 min, S3 = 80 %
Opening time	1,5+5 s / 90°	1,5+5 s / 90°	2+10 s / 90°
Closing time	1,5+5 s / 90°	1,5+5 s / 90°	3-8 s / 90°
Operation type	Motor opening Motor closing	Motor opening Spring closing	Motor opening Spring closing
Accessories power supply	24 V= / 0,5 A	24 V= / 0,5 A	24 V= / 0,5 A
Temperature	-20°C / +55°C [Batteries -10°C / +50°C]	-20°C / +55°C [Batteries -10°C / +50°C]	-20°C / +55°C [Batteries -10°C / +50°C]
Degree of protection	IP31	IP31	IP31
Control panel	99	99+BRAKE	EL12E

Applications:

- mm = door wing width
kg = door wing weight
- Recommended dimensions for heavy duty use (600 cycles/day)
 - Limit dimensions for intensive use (100+200 cycles/day)
 - Unauthorised usage



**Warning: in case of doors with two doors without overlap, the weight of each door should not exceed 150 kg.*



2. REFERENCE TO ILLUSTRATION

The given operating and performance features can only be guaranteed with the use of DITEC accessories and safety devices.

2.1 Standard installation references (fig. 1)

- [1] Automation WEL
- [2] Radar
- [3] Sliding arm
- [4] Connect power supply to a type-approved omnipolar switch with a contact opening gap of no less than 3 mm (not supplied) protected against accidental and unauthorized activation. Connection to supply mains must be carried out in an independent raceway separate from control connections and safety device connections.
- [5] Stop

2.2 Automation references (fig. 2)

- [6] Heads
- [7] Control panel
- [8] Gearmotor
- [9] Base plate
- [10] Brake card (WELS only)
- [11] Spring (WELS and WELE only)
- [12] Limit switch
- [13] Casing

3. INSTALLATION

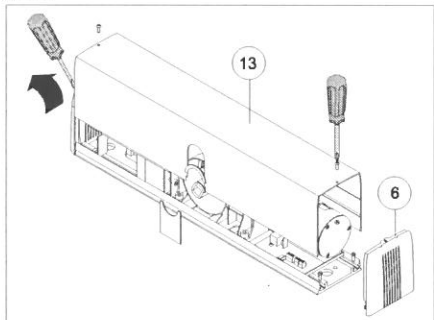
Unless otherwise specified, all measurements are expressed in millimetres (mm).

3.1 Preliminary checks

Check stability, the weight of the door and that movement is smooth and free of friction (if necessary strengthen the frame). Any door closers must be removed or completely cancelled.

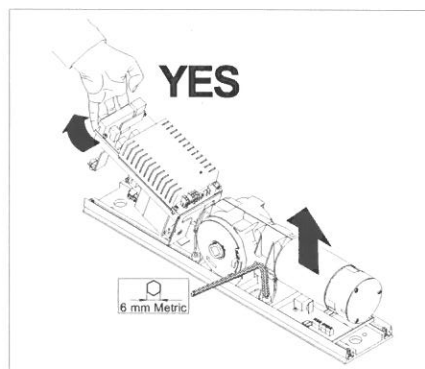
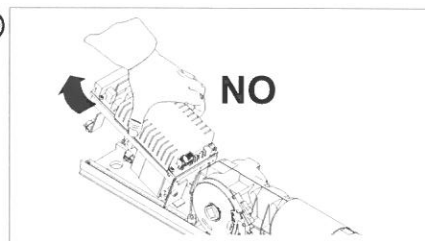
3.2 Automation dismantling

Open the casing [13] by placing a screwdriver in the appropriate slot on the heads. Remove the heads [6], detach the connectors of the power connections and the fixing brackets and take out the control panel [7], the gearmotor [8] and the BRAKE card [10] (if fitted). *Attention: do not remove or move the brackets in the base plate guides.*



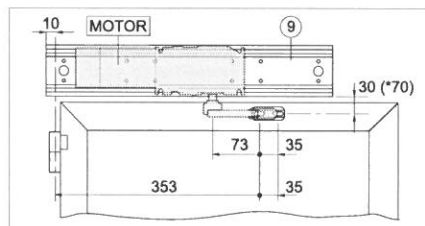
Attention: carefully handle the control panel, as indicated in figure. At the end of the automation dismantling phase proceed with the installation phases indicated in chapters 4, 5 or 6, depending on the type of arm used.

GB



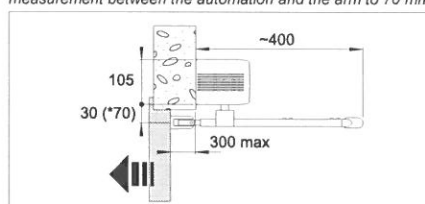
4. OUTSWING DOOR ARM INSTALLATION

Use the WELBA outswing door arm for doors that open outwards as seen from the geared motor side.



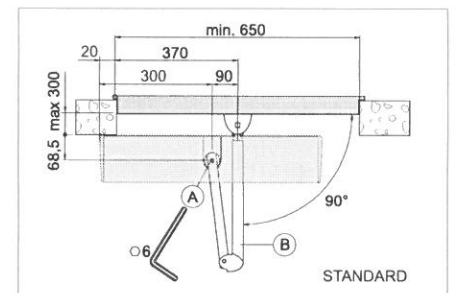
Fasten the base plate [9] to the wall so it is stable and level using the measurements indicated in the figure. Also drill a hole in the door wing where the articulated arm is to fix.

(* If necessary use the WELD40 extension to lengthen the measurement between the automation and the arm to 70 mm.

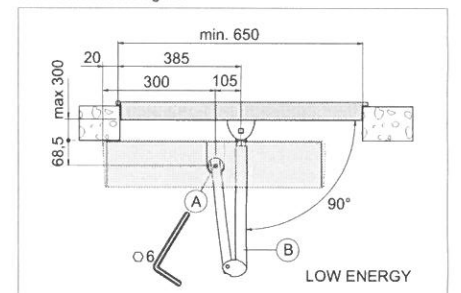


Reposition the components on the base plate. *Note: in the version with the WELBA jointed arm, the motor must again be positioned on the hinge side. Check that the jointed arm is properly assembled (see preparation in chapter 4.1).*

Fix the arm to the automation at point [A]. Also fix the top end of the arm to the door wing, in such a way as to create an angle of 90° as shown in the figure.



The manual opening force can be reduced for the LOWENERGY applications by reducing angle α and following the measurements indicated in the figure.



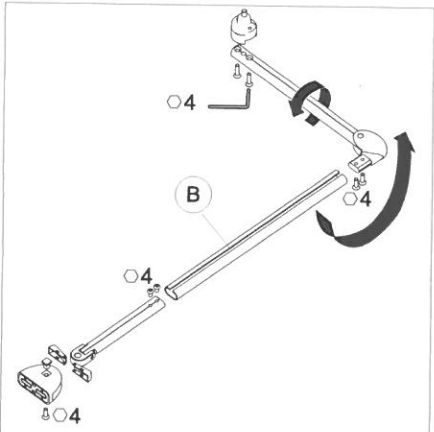
Note: for distances between the automation and the door wing lower than 115 mm it is necessary to shorten the non-drilled side of the arm [B].

Important: fixing the arm to the door wing for automation with a WELS and WELE closure spring, is difficult because of the thrust of the spring. Move the door manually and check that it opens and closes properly without friction.

Install the open door stop. Note: the floor stops must be fastened in a visible position so there is no risk of people tripping over them.

4.1 Preparation of the jointed arm

If necessary reverse the jointed arm assembly as indicated in the figure if the direction the door opens requires it.



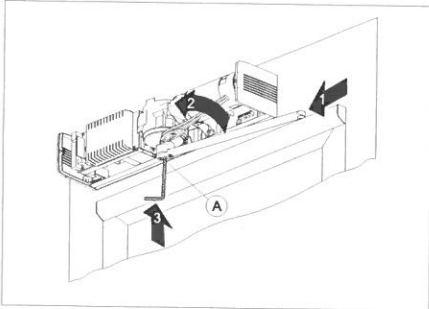
Reposition the components on the base plate.

Note: in the version with the WELBS jointed arm, the motor must always be positioned on the opposite side the hinge.

Place the sliding arm into the guide.

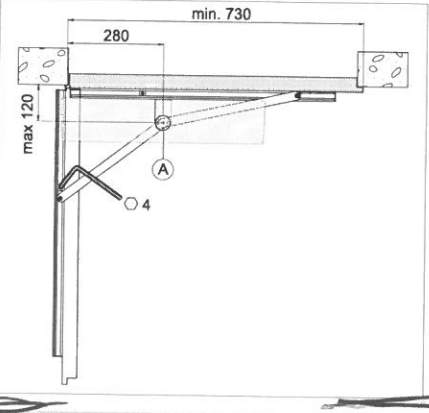
Fix the arm to the automation at point [A].

Important: fixing the arm to the door wing for automation with a WELS and WELE closure spring is difficult because of the thrust of the spring. By using a 24 mm long spanner as indicated in the figure, make the movement necessary to insert the arm into the motor.



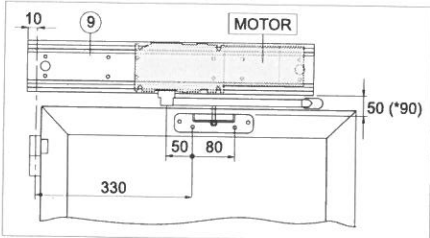
Move the door manually and check that it opens and closes properly without friction.

Regulate the door open stop in the guide as shown in figure.



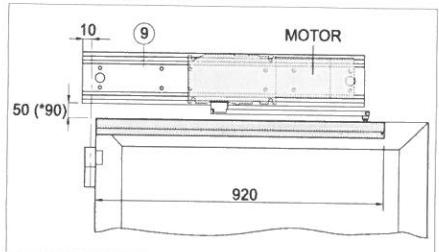
6. INSTALLATION WITH WELBRAS ARM

Use the WELBRAS inswing door arm for doors that open inwards as seen from the geared motor side.



5. INSWING DOOR ARM INSTALLATION

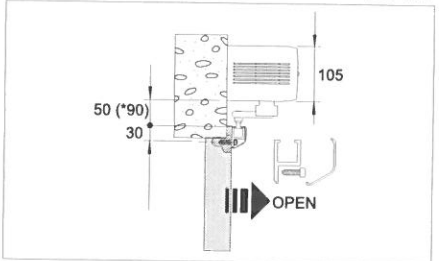
Use the inswing door arm WELBS for doors that open inwards as seen from the geared motor side.



Fasten the base plate [9] to the wall so it is stable and level using the measurements indicated in the figure.

Fix the sliding guide on the door wing as indicated in the figure (if the door wing is not as wide as the guide, cut off the excess part of the guide).

(* If necessary use the WELD40 extension to lengthen the measurement between the automation and the arm to 90 mm.



13

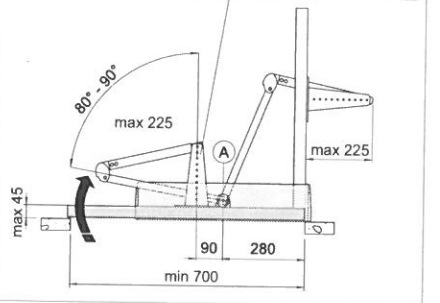
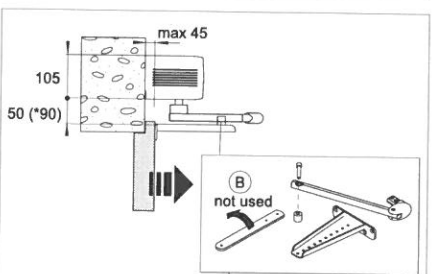
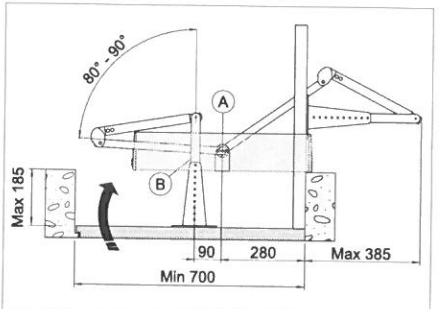
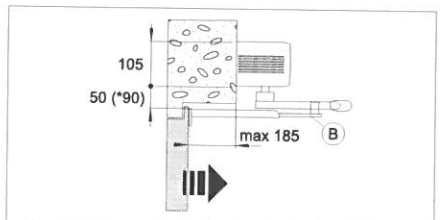
WEL - IP1891

Fasten the base plate [9] to the wall so it is stable and level using the measurements indicated in the figure.

Also drill a hole in the door wing where the WELBRAS arm is to be fixed.

The fixing distance of the WEL automatic mechanism from the door can be up to 185 mm towards the outside or can reach up to 45 mm towards the interior as shown in the figure.

(* If necessary use the WELD40 extension to lengthen the measurement between the automation and the arm to 90 mm.



Reposition the components on the base plate.

Note: in the version with the WELBRAS jointed arm, the motor must always be positioned on the side opposite the hinges.

Check that the WELBRAS arm is properly assembled (see preparation in chapter 6.1).

Fix the arm to the automation at point [A]. Fix and regulate the arm [B] in such a way as to form an angle of 80° - 90° as shown in the figure.

If necessary remove the arm [B] and join the WELBRAS arm using the spacer and screw provided.

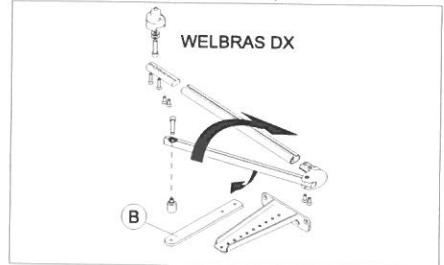
Important: fixing the arm to the door wing for automation with a WELS and WELE closure spring, is difficult because of the thrust of the spring.

Move the door manually and check that it opens and closes properly without friction. Install the open door stop.

Note: the floor stops must be fastened in a visible position so there is no risk of people tripping over them.

6.1 Preparation of the WELBRAS arm

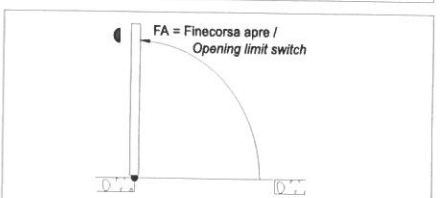
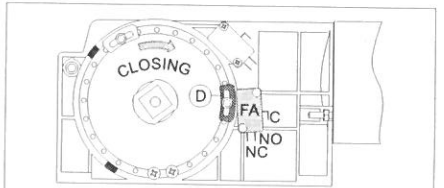
If necessary, reverse the WELBRAS arm assembly as indicated in the figure in the direction the door opens.



7. REGULATION OF THE OPEN LIMIT SWITCH

Connect limit switch FA as illustrated in the electronic control panel manual. Move the position of sliding block [D] so as to activate the opening limit switch FA before the opening stop.

Warning: the FA limit switch is optional for the WELM and WELS automations.



Note: if the limit switches are positioned in the upper part of the gearmotor, make sure that a sufficient distance is maintained to allow adjustment.

WEL - IP1891

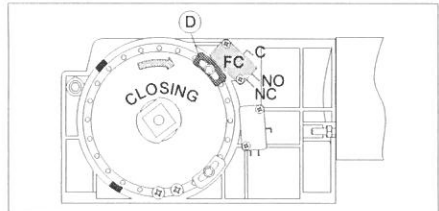
14

8. REGULATION OF AUTOMATION WITH SPRING

The regulation of automation with WELS and WELE spring must be carried out while the power supply is off.

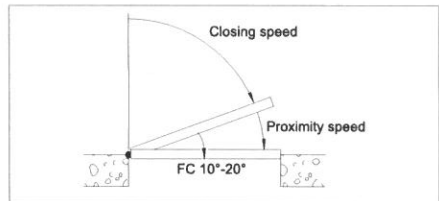
8.1 Regulation of the proximity limit switch close

Connect limit switch FC as illustrated in the electronic control panel manual.



When the position of the sliding block [D] is moved in such way as to activate the proximity limit switch it closes FC, around 10° - 20° before the closure stop.

Note: if the limit switches are positioned in the upper part of the gearmotor, make sure that a sufficient distance is maintained to allow adjustment.

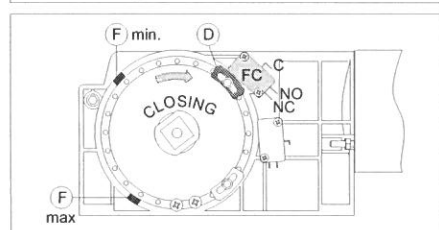
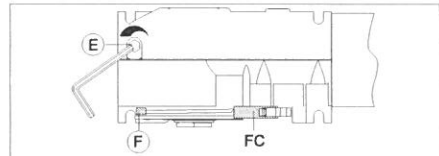


8.2 Regulation of the spring thrust

Power off 230 V~ power supply and batteries (if present):

- position the door at approx. 45°;
- load the spring till a correct closing is reached the screw [E] in an anticlockwise direction up to 52 turns.

Note: the indicator [F] is moved in the direction of the CLOSING arrow.



8.3 Closing speed adjustment

Adjust the closing and approach speed (WELS only: proximity speed of the BRAKE card), as illustrated in the electronic control panel manual.

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9. ELECTRICAL CONNECTIONS

The electrical connections and the start up are shown in the control panel installation manual.

10. SERVICING SCHEDULE (every 6 months)

Power off 230 V~ power supply and batteries (if present):

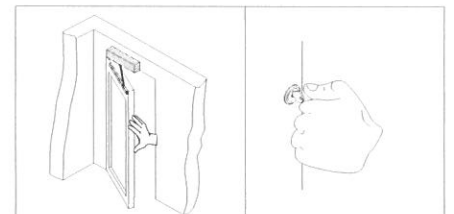
- Clean and lubricate the moving components.
 - Check that all securing screws are well tightened.
 - Check all wiring.
 - Check battery efficiency (if present).
 - Check proper door spring closure (only WELS and WELE).
- Power on 230 V~ power supply and batteries (if present):
- Check for the stability of the door and that the movement is steady, without friction.
 - Check the condition of the pintles or hinges.
 - Check that all controls and safety devices are properly functioning.

Important: for spare parts, see the spare price list.

OPERATING INSTRUCTIONS FOR WEL SWING DOORS

RELEASE OPERATION

In the case of a malfunction in the automation or in the opening or safety devices, disconnect the mains power supply and only call in professionally competent personnel. The door can be moved manually and, if it has an electric lock, use the special key to unlock it.



GENERAL SAFETY PRECAUTIONS

The following precautions are an integral and essential part of the product and must be supplied to the user. Read them carefully as they contain important indications for the safe installation, use and maintenance. These instructions must be kept and forwarded to all possible future user of the system.

This product must be used only for that which it has been expressly designed. Any other use is to be considered improper and therefore dangerous. The manufacturer cannot be held responsible for possible damage caused by improper, erroneous or unreasonable use. Avoid operating in the proximity of the hinges or moving mechanical parts. Do not enter the field of action of the motorised door or gate while in motion.

Do not obstruct the motion of the motorised door or gate as this may cause a situation of danger. Do not allow children to play or stay within the field of action of the motorised door or gate. Keep remote control or any other control devices out of the reach of children, in order to avoid possible involuntary activation of the motorised door or gate.

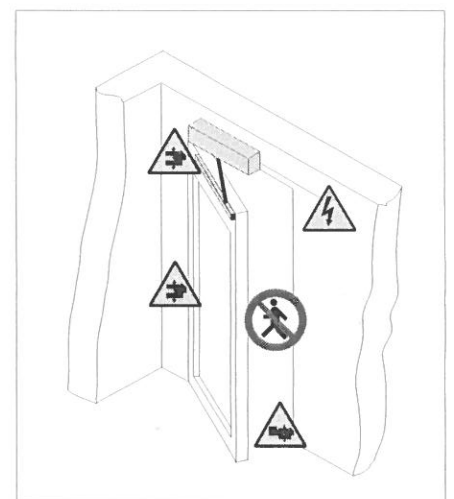
In case of break down or malfunctioning of the product, disconnect from mains, do not attempt to repair or intervene directly and contact only qualified personnel.

Failure to comply with the above may create a situation of danger.

All cleaning, maintenance or repair work must be carried out by qualified personnel.

In order to guarantee that the system works efficiently and correctly it is indispensable to comply with the manufacturer's indications thus having the periodic maintenance of the motorised door or gate carried out by qualified personnel.

In particular regular checks are recommended in order to verify that the safety devices are operating correctly. All installation, maintenance and repair work must be documented and made available to the user.



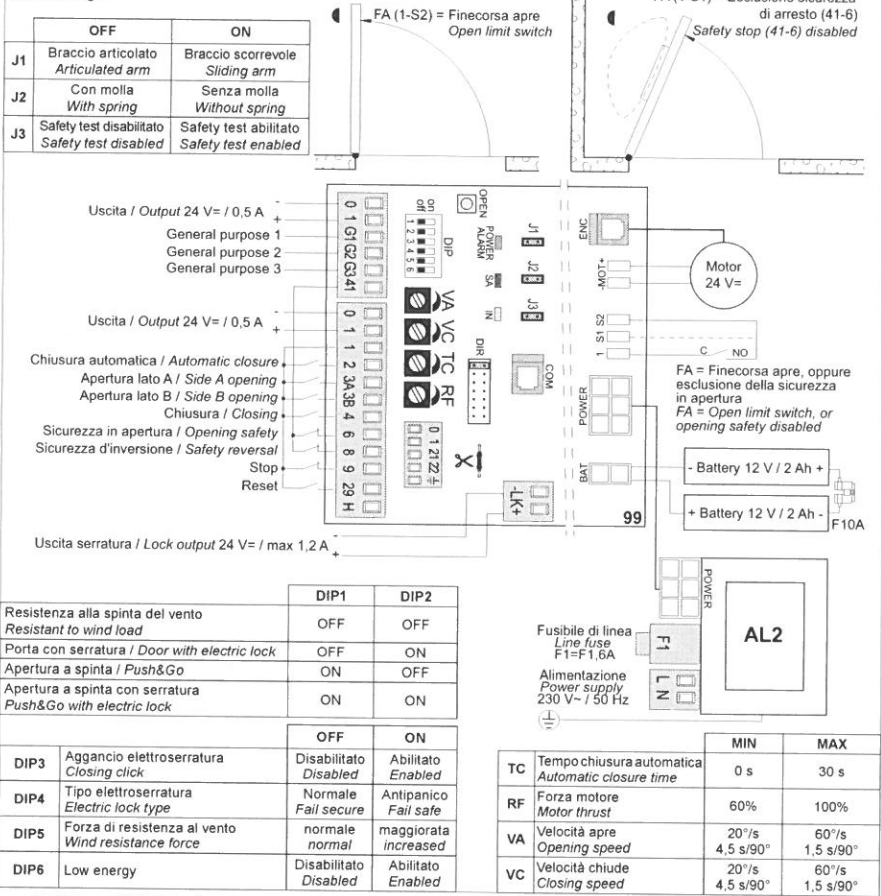
Installer:

DITEC
AUTOMATIC
ENTRANCE
SPECIALISTS
DITEC S.p.A.
Via Mons. Banfi, 3
21042 Caronno Pertusella (VA) - ITALY
Tel. +39 02 963911 - Fax +39 02 9650314
www.ditec.it - ditec@ditecva.com



TEAR OFF AND DELIVER TO USER

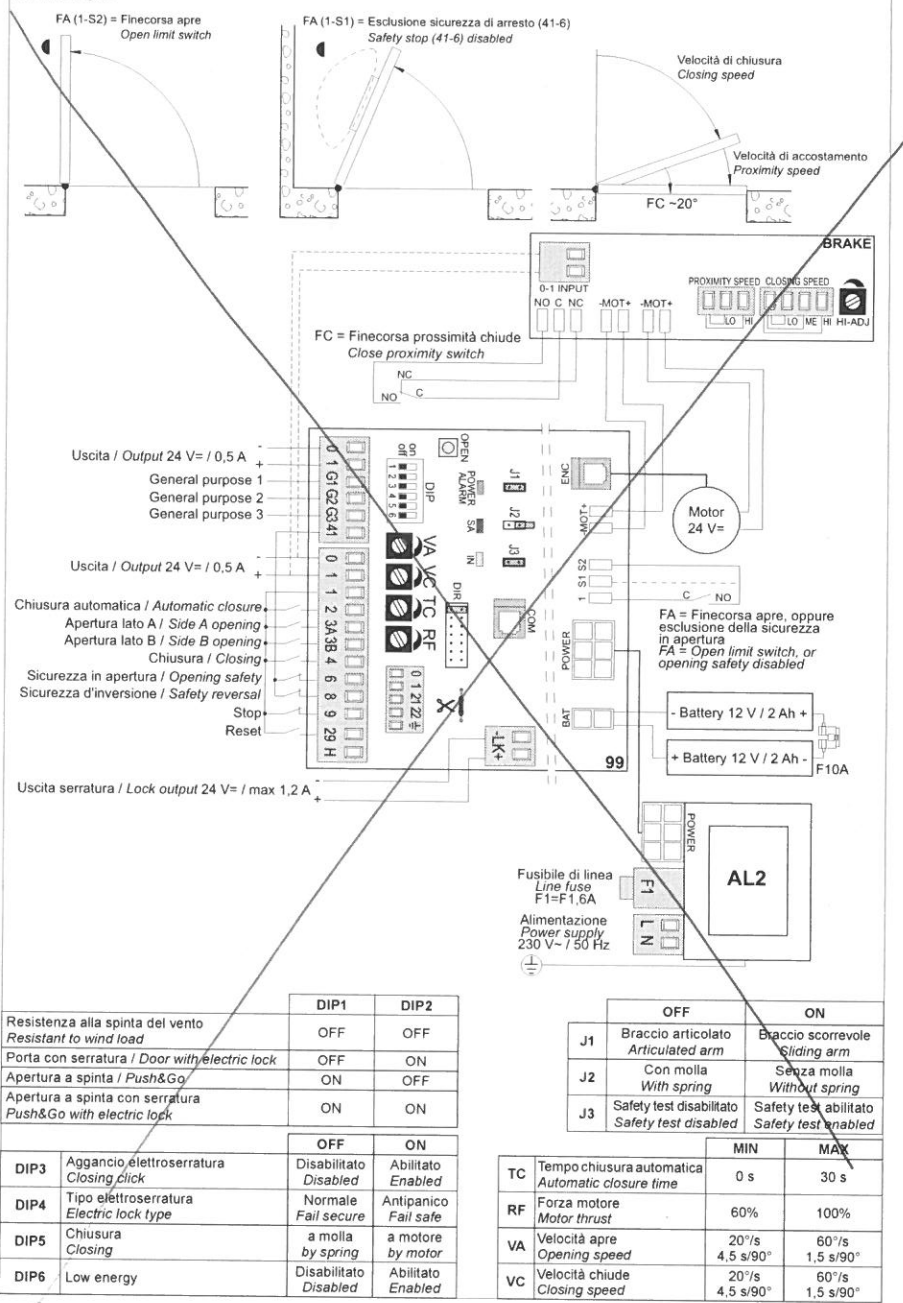
- I Manuale di installazione quadro elettronico 99 per automazione WEL.
- GB Electronic control panel 99 installation manual for WEL automations.
- F Notice d'installation de la carte électronique 99 pour automatisme WEL.
- D Installationsanleitung für Steuerung 99 für WEL.
- E Manual de instalación cuadro electrónico 99 para automación WEL.
- P Manual de instalação do quadro electrónico 99 para a automação WEL.

WELM Fig. 1


DITEC S.p.A.
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www.ditec.it - ditec@ditecva.com



ISO 9001
Cert. n° 0957

WELS Fig. 2


AVVERTENZE GENERALI PER LA SICUREZZA

Il presente manuale di installazione è rivolto esclusivamente a personale professionalmente competente. L'installazione, i collegamenti elettrici e le regolazioni devono essere effettuati nell'osservanza della Buona Tecnica e in ottemperanza alle norme vigenti. Leggere attentamente le istruzioni prima di iniziare l'installazione del prodotto. Una errata installazione può essere fonte di pericolo. Prima di iniziare l'installazione verificare l'integrità del prodotto. Per l'eventuale riparazione o sostituzione dei prodotti dovranno essere utilizzati esclusivamente ricambi originali.

1. DATI TECNICI

Fare riferimento ai dati tecnici e alla dichiarazione CE di conformità presenti nel manuale dell'automazione WEL.

2. COLLEGAMENTI ELETTRICI

Attenzione: ponticellare tutti i contatti N.C. se non utilizzati. I morsetti con numero uguale sono equivalenti.

2.1 Comandi

Comando	Funzione	Descrizione
1 — 2	N.O.	CHIUSURA AUTOMATICA Un contatto permanente abilita la chiusura automatica, oppure la chiusura automatica può essere gestita mediante i selettori di funzione COMH-K e COME.
1 — 3A	N.O.	APERTURA LATO A La chiusura del contatto attiva la manovra di apertura.
1 — 3B	N.O.	APERTURA LATO B La chiusura del contatto attiva la manovra di apertura.
1 — 4	N.O.	CHIUSURA La chiusura del contatto attiva la manovra di chiusura.
41 — 6	N.C.	SICUREZZA IN APERTURA Con J3=ON, l'apertura del contatto provoca l'arresto del movimento durante la fase di apertura. Alla richiusura del contatto 41-6, l'automazione riprende la manovra di apertura interrotta. Se l'automazione è chiusa, l'apertura del contatto 41-6 impedisce la manovra di apertura.
41 — 8	N.C.	SICUREZZA DI INVERSIONE Con J3=ON, l'apertura del contatto provoca l'inversione del movimento (riapertura) durante la fase di chiusura.
1 — 9	N.C.	STOP L'apertura del contatto provoca l'arresto di qualsiasi movimento e l'esclusione di ogni funzione normale o di emergenza. Attenzione: alla richiusura del contatto la porta riprende la manovra interrotta.
1 — 29	N.O.	POWER RESET La chiusura del contatto annulla tutti i dati acquisiti. Dopo 3 s l'automazione può procedere ad una nuova acquisizione.
H — 3A	N.O.	APERTURA DISABILI LATO A La chiusura del contatto attiva la manovra di apertura. Il tempo di sosta della porta aperta è prolungato di 30 s rispetto a TC.
H — 3B	N.O.	APERTURA DISABILI LATO B La chiusura del contatto attiva la manovra di apertura. Il tempo di sosta della porta aperta è prolungato di 30 s rispetto a TC.
OPEN	APERTURA SETTINGS RESET	Una breve pressione attiva la manovra di apertura. Tenere premuto il pulsante OPEN (per 4 s), fino a quando il led IN comincia a lampeggiare. Per confermare l'operazione premere nuovamente entro 4 s il pulsante OPEN per la durata di 2 s. Dopo tale operazione, le impostazioni dei trimmer e dei dip switch prevalgono sulle eventuali impostazioni software del DMCS oppure remote mediante TEL2. Inoltre vengono eliminate le eventuali impostazioni effettuate mediante il selettore di funzioni COME.


2.2 Dispositivi di sicurezza autocontrollati

Comando	Funzione	Descrizione
1 — 6	N.C.	SICUREZZA IN APERTURA L'apertura del contatto provoca l'arresto del movimento durante la fase di apertura. Alla richiusura del contatto 1-6, l'automazione riprende la manovra di apertura interrotta. Se l'automazione è chiusa, l'apertura del contatto 1-6 impedisce la manovra di apertura.
1 — 8	N.C.	SICUREZZA DI INVERSIONE L'apertura del contatto provoca l'inversione del movimento (riapertura) durante la fase di chiusura.
41 —	SAFETY TEST	Con J3=ON, collegare il morsetto 41 del quadro elettronico al corrispondente morsetto di test presente sui dispositivi di sicurezza. Mediante il morsetto 41 viene attivato un test del dispositivo di sicurezza prima di ogni manovra. Se il test fallisce il led SA lampeggia e il test viene ripetuto.

2.3 Uscite e accessori

Uscita	Valore	Descrizione
1 — + 0 — -	24 V = / 0,5 A (max)	Alimentazione accessori. Uscita per alimentazione accessori esterni. N.B.: l'assorbimento massimo di 0,5 A corrisponde alla somma di tutti i morsetti 1.
0 — - 1 — + G1 — G2 — G3 —	24 V = / 0,1 A	General Purpose. Vedere istruzioni chiavi hardware.
41 —		Safety test.
- LK +	24 V = / 1,2 A (max)	Elettroserratura. Uscita per alimentazione elettroserratura o elettroblocco. L'alimentazione dell'elettroserratura ha un anticipo di 0,1 s e una durata di 1 s. Se viene utilizzata una serratura motorizzata è possibile impostare un anticipo di 0,1+2,0 s e una durata di 0,5+5,5 s mediante software DMCS. N.B.: è possibile utilizzare l'uscita per elettroserrature da 12 V fino alla corrente massima di 1,2 A.
0 — - 1 — + 21 — 22 — ±		Consente il collegamento di 1 o 2 selettori COME, oppure il collegamento del software DMCS, oppure il collegamento in rete di massimo 4 automazioni WEL. N.B.: usare cavo schermato tipo trasmissione dati.
COM		Consente il collegamento di dispositivi predisposti (ad esempio un selettore COME).
		Se si collegano in rete più di 2 automazioni WEL, seguire le istruzioni indicate nel manuale del software DMCS e, dove previsto, tagliare la resistenza dei quadri elettronici.
DIR		Connettore ad innesto per chiave hardware.
- MOT + ENCODER POWER		Collegamento motore-encoder. Collegare il motore e l'encoder al quadro elettronico mediante i cavi in dotazione (come indicato in fig. 1-2). Collegamento alimentatore AL2.
1 — S1		Esclusione della sicurezza in apertura. La chiusura del contatto esclude in fase di apertura della porta il funzionamento del dispositivo di sicurezza installato sull'anta, in modo che non venga rilevata la parete.
1 — S2		Fincorsa apre. La chiusura del contatto, provoca l'arresto del movimento durante la fase di apertura prima della battuta meccanica di arresto (evitando il contatto tra l'anta e l'arresto meccanico). N.B.: dopo la regolazione del fincorsa resettare l'automazione (1-29 oppure POWER OFF).
BAT	2 x 12 V / 2 Ah	Kit batterie. Collegando il kit batterie WELBAT si garantisce il funzionamento in modo continuità anche in mancanza di tensione di rete. Il quadro elettronico collega la batteria solo in presenza di rete e la mantiene carica; la utilizza in tampono o in assenza di rete e la stacca quando la tensione scende sotto 12 V dopo 30 s. Per caricare le batterie, collegare la rete e il kit batterie almeno 30 min prima di avviare l'impianto. Per disalimentare il quadro elettronico è necessario togliere l'alimentazione e scollegare le batterie. Attenzione: per consentire la ricarica, il kit batterie deve essere sempre collegato al quadro elettronico. Verificare periodicamente l'efficienza del kit batterie. E' possibile selezionare mediante telecomando o software DMCS (personal computer) il funzionamento della batteria in modo antipanico oppure in modo continuità con l'ultima manovra in chiusura o in apertura. In modo antipanico, in assenza di tensione di rete, l'automazione esegue una manovra di apertura a bassa velocità. (Solo per WELM) Quando la porta è aperta, le batterie e il quadro elettronico vengono disalimentati. N.B.: il quadro elettronico è impostato con batteria in modo continuità e ultima manovra in chiusura.

GENERAL SAFETY PRECAUTIONS

 This installation manual is intended for professionally competent personnel only. Installation, electrical connections and adjustments must be performed in accordance with Good Working Methods and in compliance with applicable regulations. Before installing the product, carefully read the instructions. Bad installation could be hazardous. Before installing the product, make sure it is in perfect condition. For repairs or replacements of products only original spare parts must be used.

GB


1. TECHNICAL DATA

Refer to technical data and CE declaration of conformity contained in the manuals for WEL automations.

2. ELECTRICAL CONNECTIONS

Attention: link up all N.C. contacts (if not used) by means of jumpers. The terminal bearing the same number are equivalent.


2.1 Controls

Control	Function	Description
1 — 2	N.O. AUTOMATIC CLOSING	A permanent contact enables the automatic closing. Selector switches COMH-K and COME automatically select the automatic closing.
1 — 3A	N.O. OPENING SIDE A	The opening manoeuvre starts when the contact is closed.
1 — 3B	N.O. OPENING SIDE B	The opening manoeuvre starts when the contact is closed.
1 — 4	N.O. CLOSING	The closing manoeuvre starts when the contact is closed.
41 — 6	N.C. OPENING SAFETY	With J3=ON, it stops movement during opening. With contact 41-6 closed, the interrupted opening operation is restored. If the automation is closed, contact 41-6 opened prevents opening operation.
41 — 8	N.C. REVERSAL SAFETY CONTACT	With J3=ON, the opening of the contact during the closure manoeuvre causes the movement to invert (opening).
1 — 9	N.C. STOP	All movements are stopped when the contact is opened. All normal or emergency operations are excluded when the contact is opened. <i>Warning: when the contact closes again the door proceeds with the interrupted manoeuvre.</i>
1 — 29	N.O. POWER RESET	All acquired data is annulled when the contact is closed. The automation can start acquisition again after 3 seconds.
H — 3A	N.O. OPENING SIDE A FOR HANDICAPPED PEOPLE	It triggers opening operation. The time the door remains open is 30 s longer than TC.
H — 3B	N.O. OPENING SIDE B FOR HANDICAPPED PEOPLE	It triggers opening operation. The time the door remains open is 30 s longer than TC.
OPEN	OPENING	Press shortly to activate opening operation.
	SETTINGS RESET	Keep OPEN button pressed for 4 s, until IN led starts flashing. Press again (within 4 s) the OPEN button for 2 s to confirm operation. This operation allows trimmer and dip-switch settings to prevail over any DMCS software setting or remote setting by TEL2. Any setting by means of COME function selector will be eliminated as well.

2.2 Autocontrolled safety devices

Control	Function	Description
1 — 6	N.C. OPENING SAFETY	It stops movement during opening. With contact 1-6 closed, the interrupted opening operation is restored. If the automation is closed, contact 1-6 opened prevents opening operation.
1 — 8	N.C. REVERSAL SAFETY CONTACT	The opening of the contact during the closure manoeuvre causes the movement to invert (opening).
41 —	SAFETY TEST	With J3=ON, connect terminal 41 of the control panel to the corresponding test terminal on the safety device. Terminal 41 activates a test of the safety device on each cycle. If the test fails the SA led flashes and the test is repeated.

2.3 Output and accessories

Output	Value	Description
1 — + 0 — -	24 V = / 0,5 A (max)	Accessories power supply. External accessories power supply output. <i>Note: 0,5 A max current absorption corresponds to the sum of all terminals 1.</i>
0 — - 1 — + G1 — + G2 — + G3 — +	24 V = / 0,1 A	General Purpose. See hardware key instructions.
41 —		Safety test.
- LK +	24 V = / 1,2 A (max)	Electric lock. Output for electric lock or electric block supply. The power supply to the electric lock has a lead time of 0.1 s and a duration of 1 s. If a motorized lock is used, it is possible to set a lead time of 0.1-2.0 s and a duration of 0.5-5.5 s by means of the DMCS software. <i>Note: 12 V electric lock output can be used up to 1,2 A max current.</i>
0 — - 1 — + 21 — + 22 — + ⊥		It allows 1 or 2 COME selectors connection, or DMCS software connection, or network connection of a maximum of 4 WEL automations. <i>Note: use data-transfer-type shielded cable.</i>
COM		This allows the connecting of any rearranged control devices (COME).
		If more than 2 WEL automations are networked, follow the instructions in the DMCS software manual and, where necessary, cut the resistance of the electronic panels.
DIR		Hardware key coupling connector.
- MOT + ENCODER POWER		Motor-encoder connection. Connect motor and encoder to electronic panel by means of supplied cables (as shown in fig. 1-2).
1 — S1		AL2 power supply device connection.
1 — S2		Opening stop safety excluded. Contact closing causes the safety device mounted on the wing to be excluded during opening stage, so that the wall is not detected.
BAT	2 x 12 V / 2 Ah	Limit switch open. Contact closing causes the movement to stop during opening stage before the wing reaches the mechanical stop (thus avoiding contact between the wing and the mechanical stop). <i>Note: after adjusting the limit switch, reset the automation (1-29 or POWER OFF).</i> Batteries kit. WELBAT battery kit connection enables operation in continuity mode also in the event of power failure. The electronic control panel connects the battery only if power supply is present and keeps it charged; it uses it as a buffer battery or in the event of power failure and disconnects it when voltage drops under 22 V after 30 s. To charge battery, connect mains and battery kit at least 30 min. before starting up the system. To stop powering the electronic panel, turn off power supply and disconnect battery. <i>Warning: to allow recharge, battery kit must be always connected to electric control. Regularly check for battery kit efficiency.</i> Battery anti-panic mode or continuity mode operation can be selected by means of a remote control or DMCS software (pc) with last operation either as opening or closing. With anti-panic mode, in the event of power failure, the automation carries out a low-speed opening operation. (Only for WELM) When the door is open, battery and electronic control panel are disconnected from mains. <i>Note: the electronic control panel is set in continuity mode and the last operation closes.</i>

2.4 Trimmer

	Description	MIN.	MAX.
TC	Automatic closure time. It adjusts the time that elapses between the ending of opening control and the beginning of the automatic closing. Time is renewed by controls 1-3A, 1-3B, H-3A, H-3B and 41-8.	0 s	30 s
RF	Motor torque. It adjusts motor torque. RF trimmer also adjusts thrust on obstacles. If an obstacle is present, during opening operation it stops movement, whereas during closing operation it reverts movement. After the obstacle has been removed, the door automatically searches for its stop and continues its stroke at learning speed. <i>Warning: if an opening control is given with the door locked, the following opening operation will be disabled for 15 s.</i>	60%	100%
VA	Opening speed. Adjust the opening speed.	20°/s 4,5 s/90°	60°/s 1,5 s/90°
VC	Closing speed. Adjust the closing speed. <i>Note: in WELS automations, the VC trimmer adjust the closing speed only when contact 0-1 is connected to the BRAKE card and DIP5=ON.</i> Adjustments according to the operating forces. Only for WELS automations without 0-1 connection to the BRAKE card and DIP5=OFF. Perform the following steps: - Set the trimmer VC=MAX. Adjust the correct closing speed as indicated in chapter 3 and ensure that the manoeuvring force and the thrust between the door and the obstacle is lower than the values set out by regulation DIN 18650-1. - Reduce the trimmer VC adjustment and perform the opening and closing manoeuvres. Repeat this step until you find the VC trimmer position that causes the POWER ALARM LED to light up. - Increase by approx. 20% the VC trimmer adjustment.	20°/s 4,5 s/90°	60°/s 1,5 s/90°

2.5 Dip-Switches

Description	DIP1	DIP2
Doors with no electric lock and subject to strong winds. If the wind blows the door open, a closing force is triggered by the motor or by the spring.	OFF	OFF
Doors with electric lock. When the door is closed a closing force is maintained by the motor or the spring.	OFF	ON
Push&Go doors without electric lock. Manual pushing of the door activates automatic opening. When the door is closed a closing force is maintained by the motor or the spring.	ON	OFF
Push&Go doors with electric lock. Manual pushing of the door activates automatic opening. When the door is closed a closing force is maintained by the motor or the spring.	ON	ON

Description	OFF	ON
DIP3 Electric lock fastening.	Disabled.	Enabled. At approximately 20° from the closing stop, the door thrust/speed increases to allow proper fastening when electric locks or electric blocks are present.
DIP4 Electric lock type.	Standard. The electric lock or electric block is generally powered off. When powered it allows door opening.	Anti-panic. The electric lock or electric block is generally powered. When powered off it allows door opening.
DIP5 Spring closing. (Only for WELS with J2=OFF)	Spring closing. With 0-1 not connected to BRAKE card.	Motor closing. With 0-1 connected to BRAKE card. With power supply present the door is closed by motor whereas with power supply off by spring.
DIP5 Closed door maintenance force. (Only for WELM with J2=ON)	Normal.	Increased. In environments with notable pressure differences.
DIP6 Low energy.	Disabled.	Enabled. See chapter 4.

WELS
WELM

2.6 Jumper

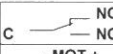






	Description	OFF	ON
J1	Arm type.	WELBA articulated arm.	WELBS sliding arm - WELBRAS.
J2	Closing spring.	WELS.	WELM.
J3	Safety test contact 41.	Disabled.	Enabled.

2.7 Signals

LED	ON	Flashing
POWER ALARM	24 V= power supply.	Encoder / automation fault.
SA	Safeties 41-6 and 41-8 open.	Safety test failure.
IN	During the commands: 1-3A, 1-3B, H-3A, H-3B and 1-4.	Flashes once each time the dip switch and command 1-2 status changes.

3. BRAKE CARD CONTROLS AND OUTPUT

BRAKE card is a component of the WELS automation and allows door spring closing.

	Description
 C	Closing proximity limit-switch. It causes door speed to change during closing operation. <i>Note: adjust limit switch as it is shown in the WEL automation manual.</i>
- MOT +	Motor connection. Connect motor, BRAKE card and electronic control panel as shown in fig. 2.
0-1 INPUT	BRAKE card power supply. By connecting the electronic control panel 0-1 terminals to their respective BRAKE card terminals (as shown in fig. 2) and by setting DIP5=ON, WELS automations can have function diversification: - with power supply present, closing is by motor and it is regulated by electronic control panel VC trimmer; - with power supply off, closing is by spring and it is regulated by BRAKE card closing trimmer and contacts, as indicated below.
	Low closing approaching speed selection contact (for doors without electric lock);
or	
	high closing approaching speed selection contact (for doors with electric lock).
	Low closing speed selection contact;
or	
	medium closing speed selection contact;
or	
	high closing speed selection contact.
	It adjusts closing speed only when high closing speed is selected.

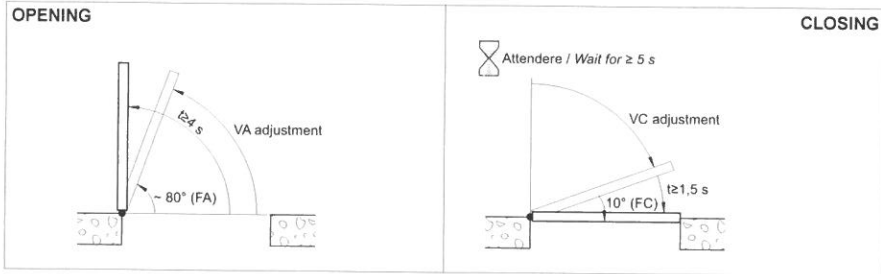
4. DOORS REQUIREMENTS FOR HANDICAPPED PERSONS USE

If the WEL is used on doors for use also by handicapped persons, set DIP6=ON.
 In this way the adjustments are changed as shown in the table.
 When you use the opening for disabled persons control (H-3A and H-3B), the door open time is extended by 30 s as compared with the TC setting.
 Adjust the RF motor force so as to obtain a reading of any obstacles in the door's path.
 Adjust the VA (opening) and VC (closing) so that the opening and closing times (excluding slow-down) are the same as or greater than those indicated in the following table.
 In the case of WELS, reduce the spring's closing force as indicated in the WEL manual, and adjust the closing speed (with no power) as explained in chapter 3.

	Description	MIN	MAX
VA	Opening speed	4"/s	44"/s
	Opening time	22 s/90°	2 s/90°
VC	Closing speed	4"/s	44"/s
	Closing time	22 s/90°	2 s/90°
TC	Automatic closure time	5 s	30 s
RF	Motor torque	60%	100%

Door wing length	Door wing weight				
	50 kg	60 kg	70 kg	80 kg	90 kg
750 mm	3 s	3.1 s	3.2 s	3.3 s	3.5 s
850 mm	3.1 s	3.1 s	3.2 s	3.4 s	3.6 s
1000 mm	3.2 s	3.4 s	3.7 s	4 s	4.2 s
1200 mm	3.8 s	4.2 s	4.5 s	4.8 s	5.1 s

Perform also the adjustments indicated in figure:



GB

5. START UP

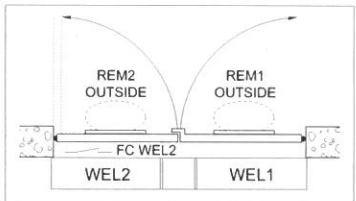
- ATTENTION:** Before performing any procedure, make sure that the device is not powered and that the batteries are disconnected.
- The operations regarding point 5.5 are without safety devices. The trimmer can only be adjusted with door not moving.
- Set dip-switches and jumpers according to door types (with or without electric lock), arm type (articulated or sliding) and automation types (with motor or spring closing).
 - Set TC, VA, VC trimmers at minimum and RF at mid position.
 - Short circuit the safety devices (41-6, 41-8) and the stop (1-9).
 - (Only for WELS) Adjust desired spring closing speed by means of CLOSING SPEED LO-ME-HI jumper and HI-ADJ trimmer. Adjust approaching speed by means of PROXIMITY LO jumper for doors without electric lock and by means of PROXIMITY HI jumper for doors with electric lock.
 - Power and by means of controls 1-3 and 1-4 check that the automation is working properly. Set the automation's speed by means of the VA and VC trimmer.
Attention: upon each turning on the control panel automatically POWER RESETS so as to permit the first opening and closing to be made at low speed in order to learn the end-of-travel positions (acquisition phase).
 - Adjust thrust on obstacles and motor torque by means of RF trimmer, in order to guarantee proper and safe operation.
 - Make an estimate of the risks present and install and connect all the necessary safety devices (41-6, 41-8) to the electronic control panel. Check for their efficiency.
 - Adjust automatic closing (enabled by 1-2 control or by COME-H-K function selector) by means of TC.
 - Connect any control devices and function selectors. Check for their efficiency.
 - If the automation encounters an obstacle during closing, it is detected and the automation opens again. If the obstacle remains, the automation will attempt a closure at 30 s intervals, until the obstacle is effectively removed.
Attention: ensure that the manoeuvring force and the thrust between the door and the obstacle is lower than the values set out by regulation DIN 18650-1.

6. TROUBLESHOOTING

Problem	Possible Causes	Remedy
The door does not open or close or else it does not carry out set functions.	COME-H-K function selector with wrong setting. COME-H-K function selector not working.	Check and adjust COME-H-K function selector settings. Replace COME-H-K function selector.
The door does not open or close.	Power failure. Accessories short circuit. Burnt line fuse. Safety devices are triggered. (SA led on). Radars are not triggered. (IN led off). The door is blocked by bolts and locks. WELS with incorrect VC trimmer adjustment. (POWER ALARM led flashing). Incorrect J3 setting. (SA led flashing).	Make sure electric control panel is powered. (POWER ALARM led on). Disconnect accessories from terminals 0-1 (with 24 V= voltage) and connect them again one at a time. Replace line fuse. Check terminals 6 and 8 of the electronic control panel. Make sure photocells and safety devices are clean and efficient. Make sure radars are working properly. Make sure the wing can move freely. Check the correct adjustment of the VC. (see paragraph 2.3) Check the connections of the safeties as illustrated in paragraphs 2.1 and 2.2.
The door opens but does not close.	Radars are triggered. (IN led on). Automatic closing does not work.	Make sure the radar is not subject to vibrations, nor carrying out false detections or detecting moving objects within its range of action. Check 1-2 jumper and (if present) function selector position.
External safeties are not triggered.	Wrong connections between safety devices and electronic control panel.	Connect in series N.C. safety contacts and remove any jumper.
The door opens by itself.	The radars are unstable or detect moving objects.	Make sure the radar is not subject to vibrations, nor carrying out false detections or detecting moving objects within its range of action.
The door opens/closes for a short interval than stops.	Encoder not working. (POWER ALARM led flashing). Inverted motor wires. (POWER ALARM led flashing). Some friction is present.	Replace encoder. Check motor wires. Manually check that the door wings move freely and adjust the door wing in height by lifting it.

7. EXAMPLE OF APPLICATION

7.1 Automations in parallel with opening safety device



If the door has two overlapping leaves, two automations can be controlled in parallel [WEL1] and [WEL2], using the connections indicated in the drawings.

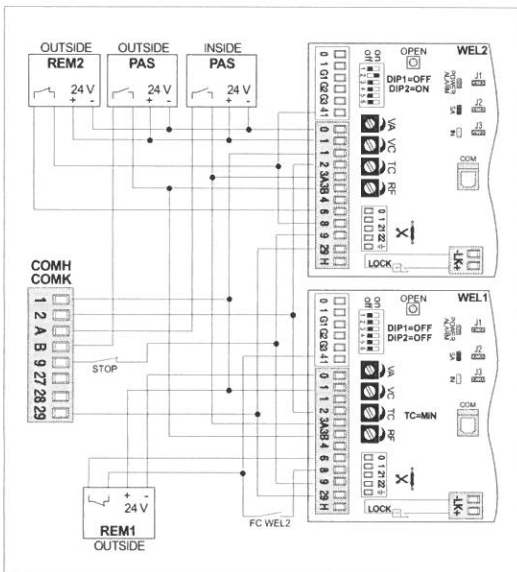
The movement of the two leaves is not synchronised, the first leaf [WEL1] only closes when the second leaf [WEL2] is completely closed.

The opening speed trimmer (VA) must be adjusted in the same position in both automations.

The TC trimmer for the automation that closes the first leaf [WEL1] should be adjusted to minimum.

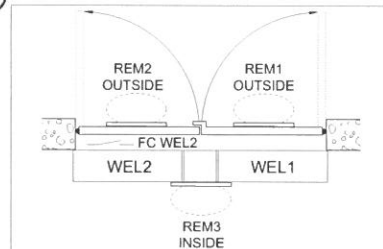
For automatic closing of the first leaf [WEL1], a limit switch must be installed that will be activated when the second leaf [WEL2] is closed. Connect the limit switch as shown in the diagram.

Note: the closure limit switch [FC WEL2] is available with WELM automation, while it is not supplied by us with WELS automations which must be applied to the leaf.



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7.2 Parallel of two automations with opening and closing safety



If the door has two overlapping leaves, two automations can be controlled in parallel [WEL1] and [WEL2], using the connections indicated in the drawings.

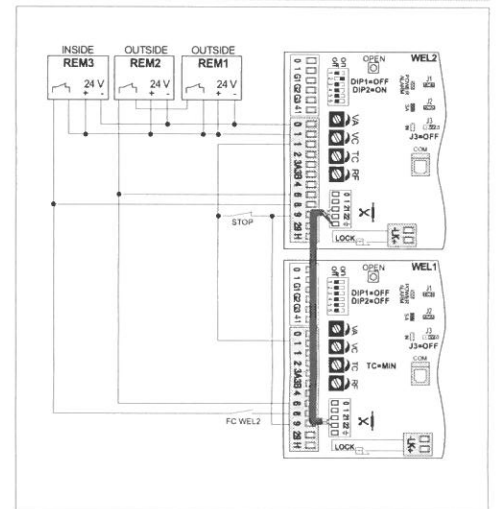
The movement of the two leaves is not synchronised, the first leaf [WEL1] only closes when the second leaf [WEL2] is completely closed.

The opening speed trimmer (VA) must be adjusted in the same position in both automations.

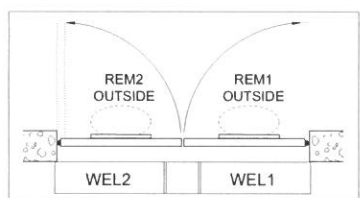
The TC trimmer for the automation that closes the first leaf [WEL1] should be adjusted to minimum.

For automatic closing of the first leaf [WEL1], a limit switch must be installed that will be activated when the second leaf [WEL2] is closed. Connect the limit switch as shown in the diagram.

Note: the closure limit switch [FC WEL2] is available with WELM automation, while it is not supplied by us with WELS automations which must be applied to the leaf.



To use the safety devices (sensors, tread-mats, photocells, etc.) that act on both automations: set J3=OFF, do not connect terminal 41 (SAFETY TEST) and connect safeties 1-6 and 1-8, as indicated in the figure.



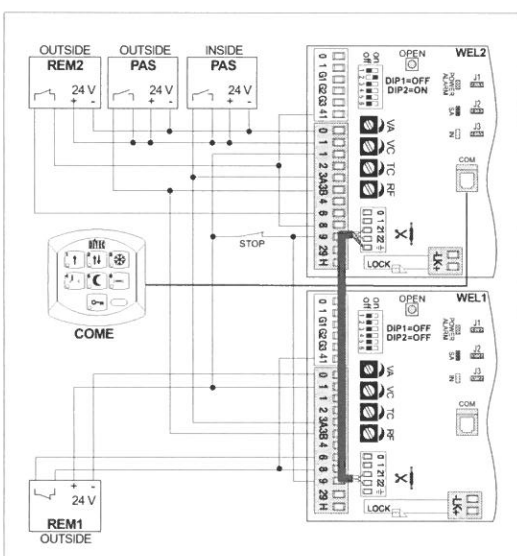
In case of a swing door with two doors without overlap, it is possible to control 2 automations [WEL1] and [WEL2] concurrently, making sure that the connections, as indicated in the figures, have the following variants:

- Set the VA, VC, TC trimmers in the same positions.

- Do not install the limit switch FCWEL2.

The movement of the two doors is not synchronised.

Attention: in case of doors with two doors without overlap, the weight of each door should not exceed 150 kg.

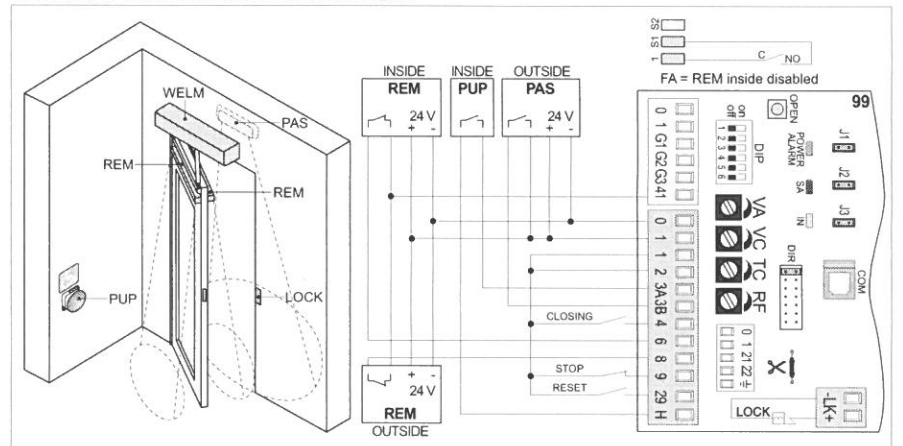


7.3 Door with electric lock, sliding arm (WELBS), motor closing (WELM) and control for disabled people.

The door opens by PAS radar control (1-3B) and PUP push-button (H-3A), closes automatically (1-2), operates opening safety by means of REM device (41-6) and closing safety by means of REM device (41-8).

It is possible to connect a PSE (1-9) emergency stop, a closing control (1-4) and a RESET (1-29) contact.

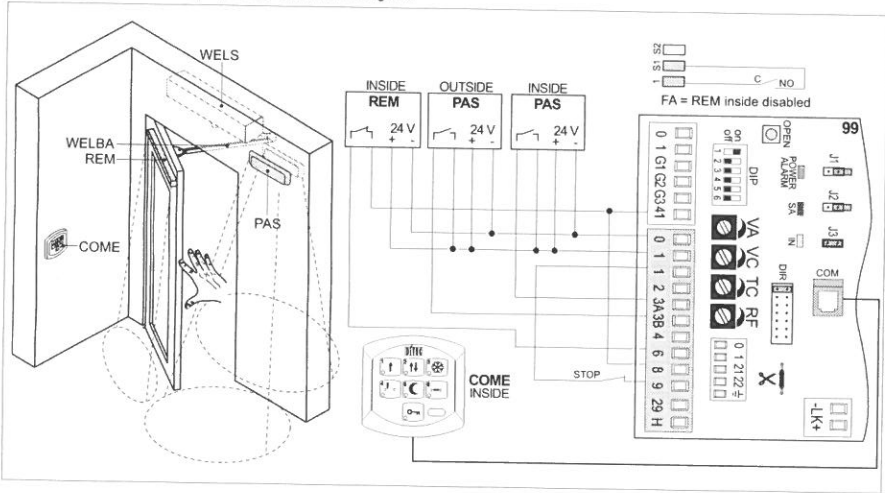
Note: set dip-switches and jumpers as shown in the figure.



7.4 Door without electric lock, with Push&Go opening, articulated arm (WELBA), spring closing (WELS) and COME function selector. GB

The door opens with PAS (1-3A and 1-3B) radar controls and triggers opening safety by means of REM (41-6) device.
 Door function mode is set by means of COME function selector.
 Manual pushing (or pulling) of the door triggers motorized opening.

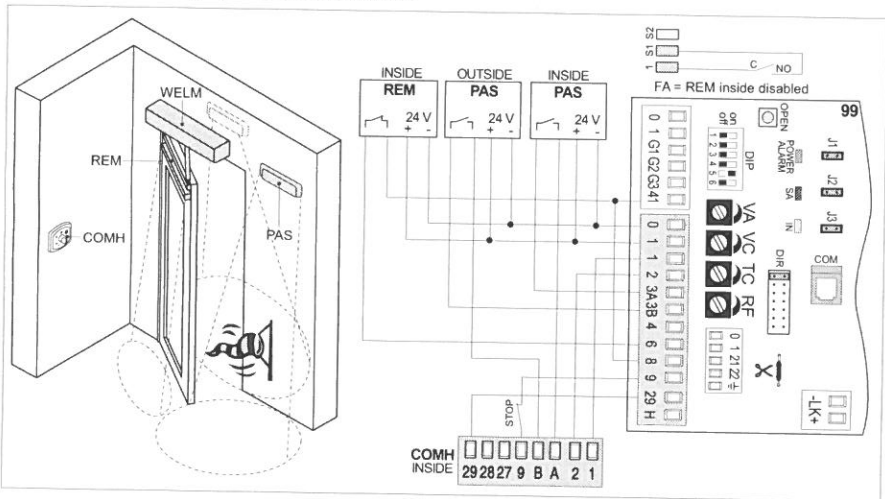
Note: set dip-switches and jumpers as shown in the figure.



7.5 Door without electric lock, subject to strong winds, articulated arm (WELBS), motor closing (WELM) and COMH function selector.

The door opens with PAS (1-3A and 1-3B) radar controls and triggers opening safety by means of REM (41-6) device.
 Door function mode is set by means of COMH function selector.
 In the event of the wind blowing the door open, a closing thrust is triggered by the motor.

Note: set dip-switches and jumpers as shown in the figure.

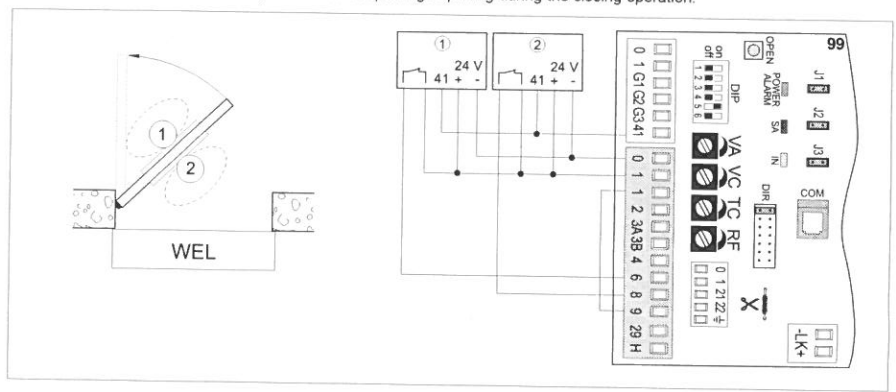


7.6 Door with autocontrolled safety devices GB

Autocontrolled safety devices can be connected as illustrated in the diagram.

Device 1 performs the safety control during opening.

Device 2 performs the reverse safety contact on the passage opening during the closing operation.



CONSIGNES GENERALES DE SECURITE

Le présent manuel d'installation s'adresse exclusivement à un personnel qualifié. L'installation, les branchements électriques et les réglages doivent être effectués conformément à la bonne pratique et aux normes en vigueur. Lire attentivement les instructions avant de commencer l'installation du produit. Une mauvaise installation peut être source de danger. Avant de commencer l'installation, vérifier l'intégrité du produit. En cas de réparation ou de remplacement des produits, utiliser exclusivement les pièces de rechange DITEC.

1. DONNEES TECHNIQUES

Se reporter aux données techniques et à la déclaration CE de conformité présentes dans les notices des automatismes WEL.

2. RACCORDEMENTS ELECTRIQUES

Attention: pointer tous les contacts N.C. s'ils ne sont pas utilisés. Les bornes ayant le même numéro sont équivalentes.


2.1 Commandes

Command	Fonction	Description
1 — 2	N.O.	FERMETURE AUTOMATIQUE Un contact permanent active la fermeture automatique. Le sélecteur COMH-K et COME sélectionne automatiquement la fermeture automatique.
1 — 3A	N.O.	OUVERTURE COTE A La fermeture du contact active la manoeuvre d'ouverture.
1 — 3B	N.O.	OUVERTURE COTE B La fermeture du contact active la manoeuvre d'ouverture.
1 — 4	N.O.	FERMETURE La fermeture du contact active la manoeuvre de fermeture.
41 — 6	N.C.	SECURITE EN OUVERTURE Avec J3=ON. L'ouverture du contact provoque l'arrêt du mouvement pendant la phase d'ouverture. À la refermeture du contact 41-6, l'accès motorisé reprend la manoeuvre d'ouverture interrompue. Si l'accès motorisé est fermé, l'ouverture du contact 41-6 empêche la manoeuvre d'ouverture.
41 — 8	N.C.	SECURITE D'INVERSION Avec J3=ON. L'ouverture du contact provoque l'inverse mouvement (réouverture) pendant la fermeture.
1 — 9	N.C.	STOP L'ouverture du contact provoque l'arrêt immédiat de tout mouvement. Avec le contact 1-9 ouvert, toute fonction normale et d'urgence est exclue. <i>Attention: lorsque le contact se referme, la porte reprend la manoeuvre interrompue.</i>
1 — 29	N.O.	POWER RESET Après 3 s, l'automatisme peut procéder à une nouvelle acquisition.
H — 3A	N.O.	OUVERTURE PERSONNES HANDICAPÉES CÔTÉ A Active la manoeuvre d'ouverture. Le temps d'arrêt de la porte ouverte est prolongé de 30 s par rapport à TC.
H — 3B	N.O.	OUVERTURE PERSONNES HANDICAPÉES CÔTÉ B Active la manoeuvre d'ouverture. Le temps d'arrêt de la porte ouverte est prolongé de 30 s par rapport à TC.
OPEN		OUVERTURE Une pression brève active la manoeuvre d'ouverture. SETTINGS RESET Maintenir enfoncé le bouton OPEN pendant 4 s, jusqu'à ce que la DEL IN commence à clignoter. Pour confirmer l'opération, presser de nouveau, dans un délai de 4 s, le bouton OPEN pendant 2 s. Après cette opération, les paramétrages des trimmers et des interrupteurs DIP prévalent sur tout paramétrage logiciel du DMCS ou à distance par TEL2. Par ailleurs, les paramétrages effectués éventuellement avec le sélecteur de fonctions COME sont éliminés.

2.2 Dispositifs de sécurité autocontrôlés

Commande	Fonction	Description
1 — 6	N.C.	SECURITE EN OUVERTURE L'ouverture du contact provoque l'arrêt du mouvement pendant la phase d'ouverture. À la refermeture du contact 1-6, l'accès motorisé reprend la manoeuvre d'ouverture interrompue. Si l'accès motorisé est fermé, l'ouverture du contact 1-6 empêche la manoeuvre d'ouverture.
1 — 8	N.C.	SECURITE D'INVERSION L'ouverture du contact provoque l'inversion du mouvement (réouverture) pendant la phase de fermeture.
41 —		ESSAI DE SECURITE Avec J3=ON. Raccorder le bornier 41 du tableau électronique au bornier de test correspondant qui se trouve sur le dispositif de sécurité. Un test du dispositif de sécurité est activé à chaque cycle par l'intermédiaire du bornier 41. Si le test échoue le voyant SA clignote et le test doit être répété.

2.3 Sorties et accessoires

Sortie	Valeur	Description
1 — + 0 — -	24 V = / 0,5 A (max)	Alimentation accessoires. Sortie pour alimentation accessoires externes. <i>Remarque: le courant absorbé maximal de 0,5 A correspond à la somme de toutes les bornes 1.</i>
0 — - 1 — + G1 — + G2 — + G3 — +	24 V = / 0,1 A	General Purpose. Voir instructions clés hardware.
41 —		Safety test.
- LK +	24 V = / 1,2 A (max)	Serrure électrique. Sortie pour alimentation serrure électrique ou verrouillage électrique. L'alimentation de l'électroserrure a une avance de 0,1 s et une durée de 1 s. Avec une serrure motorisée il est possible de régler une avance de 0,1-2,0 s et une durée de 0,5-5,5 s. avec le logiciel DMCS. <i>Remarque: il est possible d'utiliser la sortie pour la serrure électrique de 12 V jusqu'au courant maximal de 1,2 A.</i>
0 — - 1 — + 21 — + 22 — + 1 —		Permet la connexion de 1 ou 2 sélecteurs COME, ou la connexion du logiciel DMCS, ou la connexion en réseau de 4 automatismes WEL au maximum. <i>Remarque: utiliser un câble blindé type transmission de données.</i>
COM		Permet de connecter d'éventuels appareils de commande (COME).
		Si plus de 2 automatismes WEL sont connectés en réseau, suivre les instructions indiquées dans la notice du logiciel DMCS et, si nécessaire, couper la résistance des armoires de commande.
DIR		Connecteur enfichable pour clé hardware <i>Remarque: la connexion à la carte embranchement commandes DIR, utilisée seulement comme base porte-cartes, est possible.</i>
- MOT + ENCODER POWER		Connexion moteur-encodeur. Connecter le moteur et l'encodeur à l'armoire de commande avec les câbles livrés (comme indiqué en fig. 1-2).
1 — S1		Connexion alimentateur AL2.
1 — S2		Exclusion de la sécurité d'arrêt. La fermeture du contact exclut, en phase d'ouverture de la porte, le fonctionnement du dispositif de sécurité installé sur le vantail, de sorte que la paroi ne soit pas détectée.
		Fin de course ouverture. La fermeture du contact provoque l'arrêt du mouvement pendant la phase d'ouverture avant la butée mécanique d'arrêt (évitant le contact entre le vantail et l'arrêt mécanique). <i>Remarque: après le réglage de la fin de course réinitialiser l'automatisme (1-29 ou bien POWER OFF).</i>
BAT	2 x 12 V / 2 Ah	Kit de batteries. Connecter le kit de batteries WELBAT pour garantir le fonctionnement en mode continu même en cas de panne de courant. L'armoire de commande connecte la batterie seulement en présence de secteur et la maintient chargée; elle l'utilise comme batterie d'appoint ou en l'absence de secteur, et la déconnecte quand la tension descend au-dessous de 22 V après 30 s. Pour charger les batteries, brancher le secteur et le kit de batteries au moins 30 min avant de mettre en marche l'installation. Pour couper l'alimentation électrique de l'armoire de commande, couper l'alimentation et déconnecter les batteries. <i>Attention: pour permettre la recharge, le kit de batteries doit toujours être connecté à l'armoire de commande. Vérifier périodiquement le bon fonctionnement du kit de batteries.</i> Il est possible de sélectionner par télécommande ou logiciel DMCS (ordinateur individuel) le fonctionnement de la batterie en mode antipanique ou en mode continuité avec la dernière manoeuvre en fermeture ou en ouverture. En mode antipanique, en l'absence de tension de secteur, l'accès motorisé exécute une manoeuvre d'ouverture à basse vitesse. (Seulement pour WELM) Quand la porte est ouverte, les batteries et l'armoire de commande ne sont plus alimentées. <i>Remarque: l'armoire de commande est paramétrée avec batterie en mode continuité et la dernière manoeuvre ferme.</i>