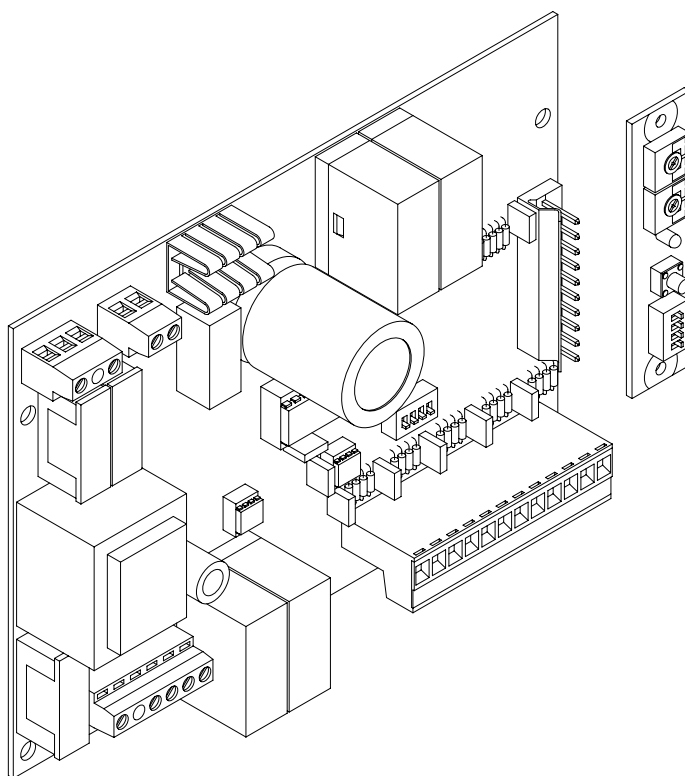




CENTRALINA A MICROPROCESSORE PER
CONTROL UNIT WITH MICROCONTROLLER FOR
MIKROCONTROLLER-STEUERUNG FÜR
CENTRALE A MICROCONTRÔLEUR POUR
CENTRALITA A MICROPROCESADOR POR

AU.TR
AU.TRL



Libro istruzioni
Operating instructions
Betriebsanleitung
Livret d'instructions
Libro de instrucciones

UNIONE NAZIONALE COSTRUTTORI
AUTOMATISMI PER CANCELLI, PORTE,
SERRANDE ED AFFINI

Dichiarazione CE di conformità
EC declaration of conformity
EG-Konformitätserklärung

Déclaration CE de conformité
Declaracion CE de conformidad

Con la presente dichiariamo che il nostro prodotto
We hereby declare that our product
Hiermit erklaren wir, dass unser Produkt
Nous déclarons par la présente que notre produit
Por la presente declaramos que nuestro producto

AU.TR

è conforme alle seguenti disposizioni pertinenti:
complies with the following relevant provisions:
folgenden einschlägigen Bestimmungen entspricht:
correspond aux dispositions pertinentes suivantes:
satisface las disposiciones pertinentes siguientes:

Direttiva sulla compatibilità elettromagnetica (89/336/CCE, 93/68/CEE)
EMC guidelines (89/336/EEC, 93/68/EEC)
EMV-Richtlinie (89/336/EWG, 93/68/EWG)
Directive EMV (89/336/CCE, 93/68/CEE) (Compatibilité électromagnétique)
Reglamento de compatibilidad electromagnética (89/336/MCE, 93/68/MCE)

Norme armonizzate applicate in particolare:
Applied harmonized standards, in particular:
Angewendete harmonisierte Normen, insbesondere:
Normes harmonisées utilisées, notamment:
Normas armonizadas utilizadas particularmente:

EN 55022, EN 61000-3-2, EN 61000-3-3, EN 50082-1

Norme e specifiche tecniche nazionali applicate in particolare:
Applied national technical standards and specifications, in particular:
Angewendete nationale Normen und technische Spezifikationen, insbesondere:
Normes et spécifications techniques nationales qui ont été utilisées, notamment:
Normas y especificaciones técnicas nacionales que se utilizaron particularmente:

UNI 8612

Data/Firma

Direttiva sulla bassa tensione (73/23/CEE, 93/68/CEE)
Low voltage guidelines (73/23/EEC, 93/68/EEC)
Tiefe Spannung Richtlinie (73/23/EWG, 93/68/EWG)
Directive bas voltage (73/23/CEE, 93/68/CEE)
Reglamento de bajo Voltaje (73/23/MCE, 93/68/MCE)

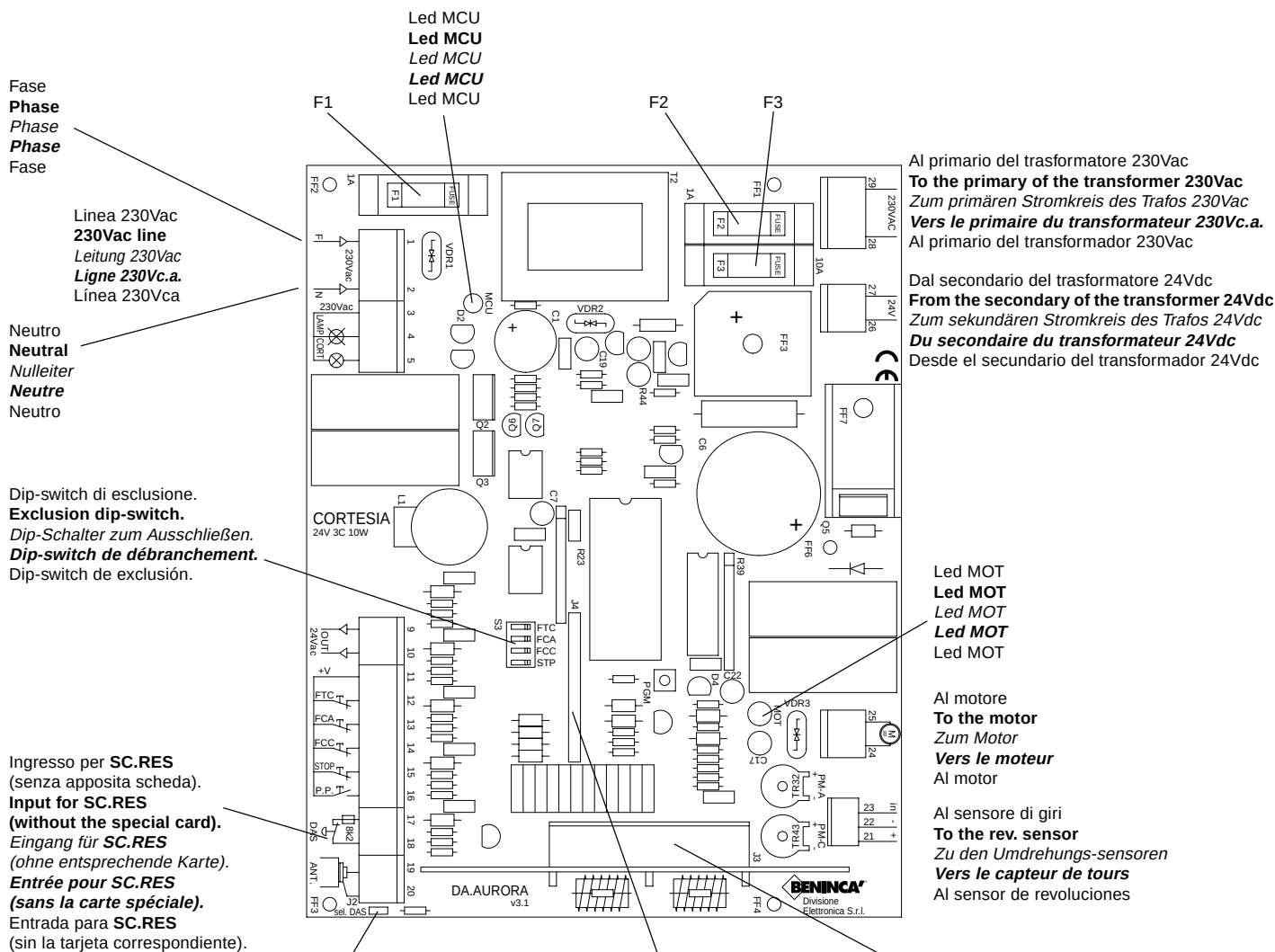
Norme armonizzate applicate in particolare:
Applied harmonized standards, in particular:
Angewendete harmonisierte Normen, insbesondere:
Normes harmonisées utilisées, notamment:
Normas armonizadas utilizadas particularmente:

EN 60204-1, EN 60335-1

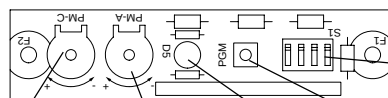
Data/Firma



Automatismi Beninca Srl
Via Capitello, 45
36066 SANDRIGO (VI)
ITALIA



Ponticello da chiudere solo se si utilizza il bordo sensibile SC.RES senza l'apposita scheda.
Jumper to be short-circuited only if the SC.RES sensitive edge is used without the special card.
Die Brücke nur schließen, wenn die empfindliche Kante SC.RES ohne entsprechende Karte verwendet wird.
Pontet à fermer seulement lorsqu'on utilise le bourrelet sensible SC.RES sans la carte spéciale.
Puenete a cerrar sólo si se usa el borde sensible SC.RES sin la tarjeta correspondiente.



Regolazione potenza motore in chiusura PM-C.
Adjustment of motor power in the closing phase PM-C.
Motorleistung beim Schließen einstellen PM-C.
Réglage puissance moteur en fermeture PM-C.
Regulación potencia motor en cierre PM-C.

Regolazione potenza motore in apertura PM-A.
Adjustment of motor power in the opening phase PM-A.
Motorleistung beim Öffnen einstellen PM-A.
Réglage puissance moteur en ouverture PM-A.
Regulación potencia motor en apertura PM-A.

Dip-switch di programmazione.
Programming dip-switch.
Dip-Schalter zur Programmierung.
Dip-switch de programmation.
Dip-switch de programación.

Pulsante di programmazione.
Programming push button.
Eichungstaste zur Programmierung.
Bouton de programmation.
Botón de programación.

Led di programmazione.
Programming LED.
Eichungsleuchte zur Programmierung.
Led de programmation.
LED de programación.

N.B.: I dip-switch di programmazione hanno un doppio utilizzo: nel normale funzionamento impostano le funzioni elencate in tabella 4; nella programmazione selezionano prima la funzione (tabella 5 parte 1) e poi il valore selezionato (tabella 5 parte 2).

N.B.: the programming dip-switches have a double use: in the normal operation they serve to preset functions listed in table 4; in the programming mode, they first select the function (table 5, part 1) and then the selected value (table 5, part 2).

N.B.: Die Dip-Schalter zur Programmierung haben eine zweifache Funktion: im normalen Betrieb werden die in der Tabelle 4 aufgelisteten Funktionen eingestellt; durch die Programmierung, wählen sie zuerst die Funktion (Tabelle 5, Teil 1) und dann den Wert (Tabelle 5, Teil 2).

N.B.: Les dip-switch de programmation ont une double utilisation: en fonctionnement normal ils programment les fonctions énumérées au tableau 4; dans la programmation en sélectionnant d'abord la fonction (tableau 5 partie 1), puis la valeur sélectionnée (tableau 5 partie 2).

N.B.: Los dip-switch de programación tienen un doble uso: en el funcionamiento normal configuran las funciones indicadas en la tabla 4; en la programación seleccionan primero la función (tabla 5, parte 1) y seguidamente el valor seleccionado (tabla 5, parte 2).

Centralina per AU.TR

La centrale a microprocessore "AU.TR" può essere utilizzata per comandare motori a 24Vdc di potenza non superiore ad 80W.

Ingressi/Uscite - tabella 1

(1,2)	Ingresso 230Vac= Alimentazione centrale 230Vac - 50Hz (fase= mors.1, neutro= mors.2)
(3,4)	Uscita lampeggiante= Al lampeggiante. Lampada 230V - 25W max.
(3,5)	Uscita luce di cortesia= Lampada 230V - 25W max.
(9,10)	Uscita 24Vac= Uscita alimentazione 24Vac stabilizzati.
(11)	Uscita +V= Morsetto comune per gli ingressi FTC-FCA-FCC-STOP-PP
(12)	Ingresso FTC= Ingresso per il contatto N.C. della fotocellula.
(13)	Ingresso FCA= Ingresso per il finecorsa di apertura (solo se si utilizza un finecorsa esterno). Contatto N.C.
(14)	Ingresso FCC= Ingresso per il finecorsa di chiusura (solo se si utilizza un finecorsa esterno). Contatto N.C.
(15)	Ingresso STOP= Contatto normalmente chiuso.
(16)	Ingresso P.P.= Ingresso Passo-Passo collegato in parallelo all'uscita della scheda radio. Contatto N.A.
(17,18)	Ingresso DAS = Ingresso per bordo sensibile SC.RES utilizzato senza apposita scheda. N.B.: Se non viene utilizzato il bordo sensibile SC.RES , i morsetti 17 e 18 devono essere ponticellati.
(19,20)	Ingresso antenna= Ingresso antenna per scheda ricevente (Antenna= mors.19, Calza= mors.20).
(21,22,23)	Ingresso sensore= Ingresso per il sensore di giri (precablato).
(24,25)	Uscita motore= Al motore 24Vdc (precablato).
(26,27)	Ingresso 24Vac= Ingresso dal secondario del trasformatore 24Vac.
(28,29)	Uscita 230Vac= Al primario trasformatore 230Vac.
J2	Ponticello per SC.RES (chiudere solo in caso di utilizzo di SC.RES senza apposita scheda).
J3	Connettore per scheda radio.

Led - tabella 2

MCU	Alimentazione centrale. Se il led è spento controllare il fusibile F1 (1A).
MOT	Alimentazione motore. Se il led è spento controllare il fusibile F3 (10A).

Trimmer - tabella 3

PM-A	Regolazione della potenza motore in apertura (ruotare in senso orario per aumentare la potenza).
PM-C	Regolazione della potenza motore in chiusura (ruotare in senso orario per aumentare la potenza).

Installazione della centrale

- Dopo aver valutato le caratteristiche e i rischi dell'impianto, escludere tutti gli ingressi normalmente chiusi che non si desidera utilizzare: STOP(15), FCC(14), FCA(13), FTC(12), utilizzando i 4 dip-switch di esclusione. Le corrispondenze sono: 1= FTC, 2= FCA, 3= FCC, 4= STOP.
- Collegare gli eventuali ingressi di comando: PP(16), STOP(15).
- Collegare l'alimentazione 24Vac(9,10) ad eventuali dispositivi collegati alla centrale (fotocellule, ricevitori,...) rispettando la corretta polarità. Collegare il lampeggiante. Dopo aver ricontrollato i collegamenti, alimentare la centrale ai morsetti di ingresso 230Vac (1,2).
All'accensione dovrebbero essere accesi i led MCU e MOT. Il led PROG deve lampeggiare.
- La prima manovra della centrale è eseguita a velocità ridotta per ricavare la corsa del cancello. Regolare i trimmer PM-A e PM-C a metà.
 - Premere il pulsante di programmazione. Il led di programmazione comincia a lampeggiare velocemente.
 - Impostare i dip-switch di programmazione nel seguente modo: 1- OFF, 2- ON, 3-OFF, 4- ON.
 - Premere il pulsante di programmazione. Il led di programmazione rimane acceso a luce fissa.
 - Dare un comando di apertura (PP, radiocomando).
 - La centrale esegue il prelampeggio e quindi inizia la fase di apertura a velocità ridotta.
 - Quando la porta ha raggiunto l'apertura voluta, dare un altro impulso con il radiocomando o con il passo-passo.
 - Il lampeggiante non si spegne e dopo qualche secondo inizia automaticamente la chiusura a velocità ridotta.
 - Quando la porta è a qualche centimetro da terra, dare un altro impulso con il passo-passo o con il radiocomando tenendo presente che lo spazio che la separa dal suolo verrà tolto alla luce di apertura nella prossima manovra.
 - Il led comincia a lampeggiare lentamente per indicare il ritorno al normale funzionamento.

Dopo questa taratura ci sono dei valori che vengono settati come indicato con "default" nella parte 2 di tabella 5; se si desidera variare dette funzioni procedere come descritto in **"Funzioni Programmabili"**, altrimenti settare i dip-switch per le **"Funzioni Normali"** come da tabella 4.

Dopo la taratura della corsa, è necessario eseguire la regolazione dei trimmer PA e PC, che consentono di limitare la potenza fornita dal motore.

ATTENZIONE! Durante la calibrazione i dispositivi di rilevamento ostacoli, ad eccezione del limitatore di corrente (regolazione di potenza) sono disattivati.

Funzioni normali dip-switch - tabella 4

DSW1	Funzionamento pulsante "P.P." OFF: sequenza Apre/Stop/Chiude/Stop ... ON: sequenza Apre/Chiude/Apre/Chiude ...
DSW2	Chiusura automatica OFF: disabilitata ON: abilitata
DSW3	Funzione "Condominiale" (il pulsante "P.P." consente solo l'apertura) OFF: disabilitata ON: abilitata
DSW4	Prelampeggio OFF: disabilitato ON: abilitato

Funzioni programmabili

Le funzioni programmabili sono accessibili:

- all'accensione della centrale;
- dopo aver premuto il pulsante "STOP";
- al termine della fase di chiusura;
- fermando la fase di chiusura con il pulsante "P.P."

Sequenza di programmazione della centrale		
A		Il led PGM lampeggia lentamente per indicare il funzionamento normale della centrale.
B		Premere il pulsante PGM per entrare in modalità di programmazione.
C		Il led PGM lampeggia velocemente per indicare il funzionamento in modalità di programmazione.
D		Selezionare la funzione desiderata impostando i dip-switch come riportato nella parte 1 della tabella 5.
E		Premere il pulsante PGM per attivare la funzione.
F		Il led PGM rimane acceso in attesa dell'immissione del valore desiderato.
G		Impostare i dip-switch come riportato nella seconda colonna della tabella 1.
H		Premere il pulsante PGM per confermare il valore.
I		Il led PGM riprende a lampeggiare velocemente. Per modificare un'altra funzione, ripetere la procedura dal punto D.
J		Per memorizzare le funzioni e uscire dalla modalità di programmazione, posizionare tutti i dip-switch in posizione OFF e premere il pulsante PGM.

Nota: Per inserire il rallentamento durante l'ultimo tratto di apertura, agire come descritto sul menù 2.

N.B.: Utilizzare questa opzione solo per porte sezionali.

Tabella 5																																																																																									
Funzione - parte 1		Valori selezionabili - parte 2																																																																																							
Fine Programmazione Dip-switch 1+4= Off/Off/Off/Off																																																																																									
Menù 1 Dip-switch 1+4= On/Off/Off/Off		Dip-switch1 = funzionamento luce di cortesia. Off: normale (default) On: lampeggiante Dip-switch2 = Diminuzione del tempo di chiusura dopo aver passato la fotocellula. Off: nessuna variazione (default) On: il tempo di chiusura si riduce a 1/4 del valore totale. Dip-switch3 = Chiusura automatica in caso di arresto con il pulsante "P.P." durante la fase di apertura. Off: chiusura automatica disabilitata (default) On: chiusura automatica abilitata. Dip-switch4 = Funzionamento luce lampeggiante: Off: lampeggio costante (default) On: lampeggio lento in fase di apertura, lampeggio veloce in fase di chiusura.																																																																																							
Menù 2 Dip-switch 1+4= Off/On/Off/Off		Dip-switch1 = Lampeggio durante il tempo di attesa per la chiusura automatica: Off: lampeggiante spento (default) On: lampeggiante acceso. Dip-switch2 = Intervento fotocellule durante la fase di apertura: Off: nessun intervento (default) On: arresto finchè la fotocellula rimane impegnata. Dip-switch3 = Rallentamento al termine dell'apertura. Off: rallentamento attivato On: rallentamento disattivato (default) Dip-switch4 = Non utilizzato.																																																																																							
Tempo d'attesa per la chiusura automatica. Dip-switch 1+4= On/On/Off/Off																																																																																									
Il tempo d'attesa è azzerato, se il contatto d'ingresso FTC viene aperto.		<table><tr><th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>Dsw4</th><th>Secondi</th></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>20</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>Off</td><td>40</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>Off</td><td>60</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>Off</td><td>80 (default)</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>Off</td><td>100</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>Off</td><td>120</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>Off</td><td>140</td></tr><tr><td>On</td><td>On</td><td>On</td><td>Off</td><td>160</td></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>On</td><td>180</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>On</td><td>200</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>On</td><td>220</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>On</td><td>240</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>On</td><td>260</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>On</td><td>280</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>On</td><td>300</td></tr><tr><td>On</td><td>On</td><td>On</td><td>On</td><td>320</td></tr></table>			Dsw1	Dsw2	Dsw3	Dsw4	Secondi	Off	Off	Off	Off	20	On	Off	Off	Off	40	Off	On	Off	Off	60	On	On	Off	Off	80 (default)	Off	Off	On	Off	100	On	Off	On	Off	120	Off	On	On	Off	140	On	On	On	Off	160	Off	Off	Off	On	180	On	Off	Off	On	200	Off	On	Off	On	220	On	On	Off	On	240	Off	Off	On	On	260	On	Off	On	On	280	Off	On	On	On	300	On	On	On	On	320
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Durata luce di cortesia Dip-switch 1+4= Off/Off/On/Off																																																																																									
Il tempo di accensione della luce di cortesia viene azzerato se il contatto dell'ingresso FTC viene aperto e quindi chiuso (passaggio di persone o veicoli) durante il tempo di attesa della chiusura automatica.		<table><tr><th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>Dsw4</th><th>Secondi</th></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>0</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>Off</td><td>20</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>Off</td><td>40</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>Off</td><td>60</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>Off</td><td>80 (default)</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>Off</td><td>100</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>Off</td><td>120</td></tr><tr><td>On</td><td>On</td><td>On</td><td>Off</td><td>140</td></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>On</td><td>160</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>On</td><td>180</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>On</td><td>200</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>On</td><td>220</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>On</td><td>240</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>On</td><td>260</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>On</td><td>280</td></tr><tr><td>On</td><td>On</td><td>On</td><td>On</td><td>300</td></tr></table>			Dsw1	Dsw2	Dsw3	Dsw4	Secondi	Off	Off	Off	Off	0	On	Off	Off	Off	20	Off	On	Off	Off	40	On	On	Off	Off	60	Off	Off	On	Off	80 (default)	On	Off	On	Off	100	Off	On	On	Off	120	On	On	On	Off	140	Off	Off	Off	On	160	On	Off	Off	On	180	Off	On	Off	On	200	On	On	Off	On	220	Off	Off	On	On	240	On	Off	On	On	260	Off	On	On	On	280	On	On	On	On	300
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Tabella 5																																											
Continua ... Funzione - parte 1		Continua ... Valori selezionabili - parte 2																																									
Sensibilità alle variazioni di velocità durante la corsa normale. Dip-switch 1÷4= On/Off/On/Off (Default= 25%). ON 1 2 3 4		Imposta la soglia di intervento in caso di riduzione della velocità del motore. <table><tr><th>Dsw1</th><th>Dsw2</th><th colspan="2">% Variazione in chiusura</th></tr><tr><td>Off</td><td>Off</td><td colspan="2">5% (molto sensibile)</td></tr><tr><td>On</td><td>Off</td><td colspan="2">10%</td></tr><tr><td>Off</td><td>On</td><td colspan="2">25%</td></tr><tr><td>On</td><td>On</td><td colspan="2">50% (default)</td></tr></table> <table><tr><th>Dsw3</th><th>Dsw4</th><th colspan="2">% Variazione in apertura</th></tr><tr><td>Off</td><td>Off</td><td colspan="2">5% (molto sensibile)</td></tr><tr><td>On</td><td>Off</td><td colspan="2">10%</td></tr><tr><td>Off</td><td>On</td><td colspan="2">25%</td></tr><tr><td>On</td><td>On</td><td colspan="2">50% (default)</td></tr></table>		Dsw1	Dsw2	% Variazione in chiusura		Off	Off	5% (molto sensibile)		On	Off	10%		Off	On	25%		On	On	50% (default)		Dsw3	Dsw4	% Variazione in apertura		Off	Off	5% (molto sensibile)		On	Off	10%		Off	On	25%		On	On	50% (default)	
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On	On	50% (default)																																									
Potenza motore durante il rallentamento. Dip-switch 1÷4= Off/Off/Off/On ON 1 2 3 4		<table><tr><th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>% Potenza</th></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>20%</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>30%</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>40% (default)</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>50%</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>60%</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>70%</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>80%</td></tr><tr><td>On</td><td>On</td><td>On</td><td>90%</td></tr></table>		Dsw1	Dsw2	Dsw3	% Potenza	Off	Off	Off	20%	On	Off	Off	30%	Off	On	Off	40% (default)	On	On	Off	50%	Off	Off	On	60%	On	Off	On	70%	Off	On	On	80%	On	On	On	90%				
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Spazio di rallentamento. Dip-switch 1÷4= On/Off/Off/On ON 1 2 3 4		<table><tr><th>Dsw1</th><th>Dsw2</th><th>Spazio in rapporto alla corsa completa</th></tr><tr><td>Off</td><td>Off</td><td>1/4</td></tr><tr><td>On</td><td>Off</td><td>1/8</td></tr><tr><td>Off</td><td>On</td><td>1/16 (default)</td></tr><tr><td>On</td><td>On</td><td>1/32</td></tr></table>		Dsw1	Dsw2	Spazio in rapporto alla corsa completa	Off	Off	1/4	On	Off	1/8	Off	On	1/16 (default)	On	On	1/32																									
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On	Off	1/8																																									
Off	On	1/16 (default)																																									
On	On	1/32																																									
		Dip-switch3= Off Dip-switch4= Off																																									

N.B.: Se la porta non chiude totalmente e poi apre di una quantità sempre maggiore, aumentare la potenza del motore durante il rallentamento.
 Se, quando la porta arriva in chiusura, la cinghia si allenta e poi sbatte, diminuire la potenza del motore durante il rallentamento (vedere l'esempio di programmazione).

Esempio di programmazione

Per diminuire la potenza del motore durante il rallentamento dal 40% impostato al 30% agire come segue:

- 1 Premere il pulsante di programmazione: il led di programmazione comincia a lampeggiare velocemente.
- 2 Impostare i dip-switch come da tabella 5 parte 1: 1- OFF, 2- OFF, 3- OFF, 4- ON.
- 3 Premere il pulsante di programmazione.
- 4 Il led di programmazione rimane acceso a luce fissa.
- 5 Impostare i dip-switch come da tabella 5 parte 2: 1- ON, 2- OFF, 3- OFF, 4- ininfluente.
- 6 Premere il pulsante di programmazione.
- 7 Il led di programmazione riprende a lampeggiare velocemente.
- 8 Ripetere la procedura dal punto 2 per modificare altre funzioni oppure settare tutti i dip-switch in OFF e premere il pulsante per memorizzare le funzioni variate.
- 9 Settare i dip-switch per le **"Funzioni Normali"** (vedi tabella 4).

Control unit with microcontroller for AU.TR

The microprocessor control unit "AU.TR" can be used to control 24Vdc motors, with a power not higher than 80W.

Inputs/Outputs - table 1

(1,2)	Input 230VAC= Power supply of control unit, 230VAC - 50Hz (phase= term.1, neutral= term.2)
(3,4)	Output, flashing light= To the flashing light. Lamp, 230V - 25W max.
(3,5)	Output, courtesy light= Lamp, 230V - 25W max.
(9,10)	Output, 24Vac= Output, power supply, 24Vac stabilized.
(11)	Output +V= Common terminal for FTC-FCA-FCC-STOP-PP inputs.
(12)	Input, FTC= Input for the N.C. contact of the photocell
(13)	Input, FCA= Input for the opening limit switch (only if an external limit switch is used). N.C. contact.
(14)	Input, FCC= Input for the closure limit switch (only if an external limit switch is used). N.C. contact.
(15)	Input, STOP= Normally closed contact
(16)	Input, P.P.= Step-by-step input, connected in parallel at the output of the radio board. N.O. contact.
(17,18)	Input, DAS= Input for sensitive edge SC.RES used without the special card. N.B.: If the sensitive edge SC.RES is not used, terminals 17 and 18 must be short-circuited.
(19,20)	Input, Antenna= Antenna input for receiver card. (Antena= term.19, Braiding= term. 20).
(21,22,23)	Input, Sensor= Input for the rev. sensor (pre-cabled)
(24,25)	Output, motor= To the motor 24Vdc (pre-cabled)
(26,27)	Input, 24Vac= From the secondary of the 24Vac transformer
(28,29)	Output, 230Vac= To the primary of the 230Vac transformer
J2	Jumper for SC.RES (close only if SC.RES is used without the appropriate card).
J3	Connector for radio board.

Led - Table 2

MCU	Power supply for control unit. If the LED is off, check the fuse F1 (1A).
MOT	Power supply of the motor. If the LED is off, check the fuse F3 (10A).

Trimmer - Table 3

PM-A	Adjust the motor power in the opening phase (rotate clockwise to increase the power).
PM-C	Adjust the motor power in the closing phase (rotate clockwise to increase the power).

Installation of the control unit

- After assessing the characteristics and the risks of the installation, short-circuit all normally closed inputs which are not in use: STOP(15), FCC(14), FCA(13), FTC(12), by using the 4 exclusion dip-switches. The correspondences are: 1= FTC, 2= FCA, 3= FCC, 4= S TOP.
- Connect the control inputs: PP(16), STOP(15).
- Connect the 24Vac power supply (9,10) to any devices connected to the control unit (photocells, receivers, ...), keeping to the correct polarity. Connect the flashing light. After checking the connections again, power the control unit to the input terminals, 230Vac(1,2). When the unit is switched on, the LEDs MCU and MOT should be on. The LED PROG should flash.
- The first operation of the control unit is carried out at reduced speed to measure the gate stroke. Adjust the trimmers PM-A and PM-C to half their value.
 - Press the programming button. The programming LED starts flashing rapidly.
 - Preset the programming dip-switches as follows: 1-OFF, 2-ON, 3-OFF, 4-ON.
 - Press the programming button. The programming LED stays on with fixed light.
 - Send an opening control signal (PP, remote control).
 - The control unit carries out the pre-warning flashing and then the opening phase starts at reduced speed.
 - When the door has reached the desired opening, send another impulse signal with the remote control or the step-by-step control.
 - The flashing light does not switch off and after some seconds the closing phase starts automatically at reduced speed.
 - When the door is at a few centimetres from the ground, give another impulse control with the step-by-step control or the remote control, keeping in mind that the distance between the ground and the door will be deducted from the opening of passage in the next operation.
 - The LED starts flashing slowly to indicate the return to normal operation.

Some values are set as indicated with "default" in part 2 of table 5. After the above adjustment, if the functions related to these values are to be modified, proceed as described in the "Programmable functions" section, otherwise preset the dip-switches for "Normal functions", as per table 4. After the stroke regulation, the trimmers PA and PC must be adjusted. They permit to control the power supplied by the motor.

WARNING! During the adjustment operation, the obstacle detection devices, except for the current limiting device (power adjuster), are switched off.

Normal functions of dip-switches – table 4

DSW1	Button "P.P." operation OFF: Open/Stop/Close/Stop sequence ON: Open/Close/Open/Close sequence
DSW2	Automatic closure OFF: disabled ON: enabled
DSW3	"Multi-users" function (the "P.P." button allows only the opening) OFF: disabled ON: enabled
DSW4	Pre-warning flashing OFF: Disabled ON: enabled

Programmable functions

The programmable functions are accessible:

- when the control unit is switched on;
- after pressing the "STOP" button;
- at completion of the closing phase;
- by stopping the closing phase with the "P.P." button.

Programming sequence of the control unit		
A		The LED PGM flashes slowly to indicate the normal operation of the control unit.
B		Press the button PGM to enter the programming mode.
C		The LED PGM flashes rapidly to indicate the operation in the programming mode.
D		Select the desired function by presetting the dip-switch as shown in table 5, part 1.
E		Press the button PGM to activate the function.
F		The LED PGM stays on waiting for the desired value to be typed in.
G		Preset the dip-switch as shown in the second column of table 1.
H		Press the button PGM to confirm the value.
I		The LED PGM starts to flash rapidly again. To modify another function, repeat the procedure from point D.
J		To store the functions in memory and exit from the programming mode, position all the dip-switches on OFF and press the button PGM.

Note: To insert braking during the last opening length, proceed as described on menu 2.

N.B.: Use this option for sectional doors only.

Table 5																																																																																						
Function - part 1	Selectable values - part 2																																																																																					
End of programming Dip-switch 1÷4= Off/Off/Off/Off	End of the programming phase and storage of changes in memory.																																																																																					
Menu 1 Dip-switch 1÷4= On/Off/Off/Off	Dip-switch1 = operation of courtesy light Off: normal (default) On: flashing Dip-switch2 = reduction of closing time after passing the photocell. Off: no change (default) On: the closing time is reduced to 1/4th of the total value. Dip-switch3 = Automatic closure if the gate movement is stopped with button "P.P" in the opening phase. Off: disabled automatic closure (default) On: enabled automatic closure. Dip-switch4 = Operation of the flashing light. Off: constant flashing (default) On: slow flashing in the opening phase, rapid flashing in the closing phase.																																																																																					
Menu 2 Dip-switch 1÷4= Off/On/Off/Off	Dip-switch1 = Flashing during the dwell time for the automatic closure. Off: flashing light off (default) On: flashing light on Dip-switch2 = Switching of photocells during the open. phase. Off: no activation (default) On: stop until the photocell remains activated. Dip-switch3 = Braking at end of opening. Off: braking activated On: braking deactivated (default). Dip-switch4 = Not in use.																																																																																					
Dwell time for automatic closure Dip-switch 1÷4= On/On/Off/Off	<table><tr><th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>Dsw4</th><th>Seconds</th></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>20</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>Off</td><td>40</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>Off</td><td>60</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>Off</td><td>80 (default)</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>Off</td><td>100</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>Off</td><td>120</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>Off</td><td>140</td></tr><tr><td>On</td><td>On</td><td>On</td><td>Off</td><td>160</td></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>On</td><td>180</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>On</td><td>200</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>On</td><td>220</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>On</td><td>240</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>On</td><td>260</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>On</td><td>280</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>On</td><td>300</td></tr><tr><td>On</td><td>On</td><td>On</td><td>On</td><td>320</td></tr></table>	Dsw1	Dsw2	Dsw3	Dsw4	Seconds	Off	Off	Off	Off	20	On	Off	Off	Off	40	Off	On	Off	Off	60	On	On	Off	Off	80 (default)	Off	Off	On	Off	100	On	Off	On	Off	120	Off	On	On	Off	140	On	On	On	Off	160	Off	Off	Off	On	180	On	Off	Off	On	200	Off	On	Off	On	220	On	On	Off	On	240	Off	Off	On	On	260	On	Off	On	On	280	Off	On	On	On	300	On	On	On	On	320
Dsw1	Dsw2	Dsw3	Dsw4	Seconds																																																																																		
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Duration of courtesy light Dip-switch 1÷4= Off/Off/On/Off	<table><tr><th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>Dsw4</th><th>Seconds</th></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>0</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>Off</td><td>20</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>Off</td><td>40</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>Off</td><td>60</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>Off</td><td>80 (default)</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>Off</td><td>100</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>Off</td><td>120</td></tr><tr><td>On</td><td>On</td><td>On</td><td>Off</td><td>140</td></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>On</td><td>160</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>On</td><td>180</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>On</td><td>200</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>On</td><td>220</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>On</td><td>240</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>On</td><td>260</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>On</td><td>280</td></tr><tr><td>On</td><td>On</td><td>On</td><td>On</td><td>300</td></tr></table>	Dsw1	Dsw2	Dsw3	Dsw4	Seconds	Off	Off	Off	Off	0	On	Off	Off	Off	20	Off	On	Off	Off	40	On	On	Off	Off	60	Off	Off	On	Off	80 (default)	On	Off	On	Off	100	Off	On	On	Off	120	On	On	On	Off	140	Off	Off	Off	On	160	On	Off	Off	On	180	Off	On	Off	On	200	On	On	Off	On	220	Off	Off	On	On	240	On	Off	On	On	260	Off	On	On	On	280	On	On	On	On	300
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Table 5																																											
Continued ... Function - part 1		Continued ... Selectable values - part 2																																									
Sensitivity to speed changes during the normal stroke. Dip-switch 1+4= On/Off/On/Off (Default= 25%). Sensitivity to speed changes during braking. Dip-switch 1+4= Off/Off/On/On (Default= 25%).	 	It presets the intervention threshold if the motor speed is reduced. <table><tr><th>Dsw1</th><th>Dsw2</th><th colspan="2">% Changes in the clos. phase</th></tr><tr><td>Off</td><td>Off</td><td colspan="2">5% (very sensitive)</td></tr><tr><td>On</td><td>Off</td><td colspan="2">10%</td></tr><tr><td>Off</td><td>On</td><td colspan="2">25%</td></tr><tr><td>On</td><td>On</td><td colspan="2">50% (default)</td></tr></table> <table><tr><th>Dsw3</th><th>Dsw4</th><th colspan="2">% Changes in the open. phase</th></tr><tr><td>Off</td><td>Off</td><td colspan="2">5% (very sensitive)</td></tr><tr><td>On</td><td>Off</td><td colspan="2">10%</td></tr><tr><td>Off</td><td>On</td><td colspan="2">25%</td></tr><tr><td>On</td><td>On</td><td colspan="2">50% (default)</td></tr></table>		Dsw1	Dsw2	% Changes in the clos. phase		Off	Off	5% (very sensitive)		On	Off	10%		Off	On	25%		On	On	50% (default)		Dsw3	Dsw4	% Changes in the open. phase		Off	Off	5% (very sensitive)		On	Off	10%		Off	On	25%		On	On	50% (default)	
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On	On	50% (default)																																									
Motor power during braking. Dip-switch 1+4= Off/Off/Off/On		<table><tr><th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>% Power</th></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>20%</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>30%</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>40% (default)</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>50%</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>60%</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>70%</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>80%</td></tr><tr><td>On</td><td>On</td><td>On</td><td>90%</td></tr></table>		Dsw1	Dsw2	Dsw3	% Power	Off	Off	Off	20%	On	Off	Off	30%	Off	On	Off	40% (default)	On	On	Off	50%	Off	Off	On	60%	On	Off	On	70%	Off	On	On	80%	On	On	On	90%				
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Braking space. Dip-switch 1+4= On/Off/Off/On		<table><tr><th>Dsw1</th><th>Dsw2</th><th>Space with respect to the compl. stroke</th></tr><tr><td>Off</td><td>Off</td><td>1/4</td></tr><tr><td>On</td><td>Off</td><td>1/8</td></tr><tr><td>Off</td><td>On</td><td>1/16 (default)</td></tr><tr><td>On</td><td>On</td><td>1/32</td></tr></table> Dip-switch3= Off Dip-switch4= Off		Dsw1	Dsw2	Space with respect to the compl. stroke	Off	Off	1/4	On	Off	1/8	Off	On	1/16 (default)	On	On	1/32																									
Dsw1	Dsw2	Space with respect to the compl. stroke																																									
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Off	On	1/16 (default)																																									
On	On	1/32																																									

N.B.: If the door does not completely close and then opens wider and wider, increase the motor power during slowing down.

If, with door reaching the closing position, the belt loosens and clatters, decrease the motor power during slowing down (see programming example).

Programming example

To reduce the motor power during slowing down from the preset 40% to 30%, proceed as follows:

- 1 Press the programming button: the programming LED starts to flash rapidly.
- 2 Preset the dip-switch as shown in table 5, part 1: 1-OFF, 2-OFF, 3-OFF, 4-ON.
- 3 Press the programming button.
- 4 The programming LED stays on with fixed light.
- 5 Preset the dip-switch as shown in table 5, part 2: 1-ON, 2-OFF, 3-OFF, 4-irrelevant.
- 6 Press the programming button.
- 7 The programming LED starts to flash rapidly again.
- 8 To modify other functions, repeat the procedure from point 2 or set all dip-switches on OFF and press the button to store the changed functions in memory.
- 9 Preset the dip-switches for "Normal functions" (see table 4).

MIKROKONTROLLER-STEUERUNG FÜR "AU.TR"

Die Einheit mit Mikroprozessor „**AU.TR**“ kann dazu verwendet werden, um Motoren zu 24Vdc und einer Leistung von nicht mehr als 80W zu bedienen.

Eingänge/Ausgänge - Tabelle 1

- (1,2) Eingang 230Vac= zentrale Speisung 230Vac - 50Hz (Phase = Klemme 1, Nulleiter = Klemme 2).
- (3,4) Ausgang Blinkleuchte= zur Blinkleuchte. Licht 230V, 25W max.
- (3,5) Ausgang Höflichkeitsleuchte= Birne 230V, 25W max.
- (9,10) Ausgang 24Vac= Ausgang Speisung 24Vac stabilisiert.
- (11) Ausgang +V= Gemeinsame Klemme für Eingänge FTC-FCA-FCC-STOP-PP.
- (12) Eingang FTC= Eingang für den Ruhekontakt der Photozelle.
- (13) Eingang FCA= Eingang für den Endschalter zum Öffnen (nur wenn ein äußerer Endschalter verwendet wird). Ruhekontakt.
- (14) Eingang FCC= Eingang für den Endschalter zum Schließen (nur wenn ein äußerer Endschalter verwendet wird). Ruhekontakt.
- (15) Eingang STOP= Ruhekontakt
- (16) Eingang P.P.= Schritt für Schritt Eingang, parallel mit dem Ausgang der Funkkarte verbunden. Arbeitskontakt.
- (17,18) Eingang **DAS**= Eingang für empfindliche Kante **SC.RES**, wird ohne entsprechende Karte verwendet.
N.B.: Wenn die empfindliche Kante **SC.RES** eingesetzt wird, müssen die Klemmen 17 und 18 überbrückt werden.
- (19,20) Eingang Antenne= Eingang Antenne für die Empfängerkarte (Antenne= Klemme 19, Geflecht= Klemme 20).
- (21,22,23) Eingang Sensor= Eingang für den Umdrehungssensor (vorverkabelt)
- 24,25 Ausgang Motor= Zum Motor 24Vdc (vorverkabelt)
- 26,27 Eingang 24Vac= Eingang vom sekundären Stromkreis des Trafos 24Vac
- 28,29 Ausgang 230Vac= Zum primären Eingang des Trafos 230Vac
- J2 Brücke für **SC.RES** (nur schließen wenn **SC.RES** ohne entsprechende Karte verwendet wird)
- J3 Verbinder für Funkkarte

Led - Tabelle 2

- MCU Zentrale Speisung. Wenn die Leuchte ausgeschaltet ist, Sicherung F1 (1A) kontrollieren
- MOT Motorenspeisung. Wenn die Leuchte ausgeschaltet ist, Sicherung F3 (10A) kontrollieren

Trimmer - Tabelle 3

- PM-A Einstellung der Motorleistung beim Öffnen (in den Uhrzeigersinn drehen, um die Leistung zu erhöhen).
- PM-C Einstellung der Motorleistung beim Schließen (in den Uhrzeigersinn drehen, um die Leistung zu erhöhen).

Installation der Zentrale

- 1 Nachdem die Anlage auf Eigenschaften und Risiken geprüft worden ist, alle Ruhekontakte der Eingänge die nicht verwendet werden, schließen: STOP(15), FCC(14), FCA(13), FTC(12) und dazu die 4 Dip-Schalter zum Ausschließen verwenden. Die Übereinstimmungen sind folgende: 1=FTC, 2=FCA, 3=FCC, 4=STOP
- 2 Eventuelle Eingänge zur Steuerung verbinden: PP(16), STOP(15)
- 3 Speisung zu 24Vac (9,10) mit den Vorrichtungen verbinden, die ggf. an die Einheit geschlossen sind (Photozellen, Empfänger, ...) und dabei die richtige Polung beachten. Die Blinkleuchte anschließen. Nachdem die Verbindungen nochmals überprüft worden sind, die Einheit an der Eingangsklemme 230Vac (1,2) speisen. Beim Einschalten sollten die Leuchten MCU und MOT aufleuchten. Die Leuchte PROG muss blinken.
- 4 Bei der ersten Steuerung der Anlage, wird die Geschwindigkeit verringert, um den Hub des Tors festlegen zu können. Trimmer PM-A und PM-C auf halben Weg einstellen.
 - Programmierungstaste drücken. Die Programmierungsleuchte beginnt schnell zu blinken.
 - Dip-Schalter zur Programmierung folgendermaßen einstellen: 1-OFF, 2-ON, 3-OFF, 4-ON.
 - Programmierungstaste drücken. Die Leuchte leuchtet nun fest.
 - Den Öffnungsbefehl geben (PP, Fernbedienung)
 - Die Einheit beginnt zu blinken und die Tür wird bei verlangsamer Geschwindigkeit geöffnet.
 - Wenn sich die Tür soweit wie gewünscht geöffnet hat, mit der Fernbedienung einen weiteren Impuls geben oder die Tür Schritt für Schritt bedienen.
 - Die Blinkleuchte schaltet nicht aus und nach einigen Sekunden wird die Tür automatisch bei verringerter Geschwindigkeit geschlossen.
 - Bevor die Tür vollständig geschlossen ist (einige Zentimeter vom Boden) einen weiteren Impuls mit der Schritt für Schritt Steuerung oder mit der Fernbedienung geben, wobei zu bemerken ist, dass beim nächsten Öffnungsvorgang der Hub um den Abstand vom Boden gekürzt wird.
 - Die Leuchte beginnt langsam zu blinken, um zu melden, dass nun auf den normalen Betrieb geschaltet worden ist.

Nach dieser Eichung werden noch einige Werte eingestellt; diese sind im „Default“ der Tabelle 5, Teil 2 angegeben; sollen diese Funktionen geändert werden, laut den Anweisungen des Kapitels „**Programmierbare Funktionen**“ vorgehen; anderenfalls die Dip-Schalter für die „**Normalen Funktionen**“ laut Tabelle 4 einstellen. Nachdem der Hub geeicht worden ist, müssen die Trimmer PA und PC eingestellt werden, die die Motorleistung beschränken.

ACHTUNG! Bei der Kalibrierung sind die Hindernisermittlungsvorrichtungen mit Ausnahme des Strombegrenzers (Leistungseinstellung) außer Betrieb.

Normale Funktionen Dip-Schalter - Tabelle 4

DSW1 Tastenfunktion „P.P.“

OFF: Reihenfolge Öffnen/Stop/Schließen/Stop...

ON: Reihenfolge Öffnen//Schließen/Öffnen/Schließen...

DSW2 Automatisch schließen

OFF: gesperrt

ON: freigegeben

DSW3 Funktion „Wohngemeinschaft“ (kann durch Taste „P.P.“ nur geöffnet werden).

OFF: gesperrt

ON: freigegeben

DSW4 Vorblinken

OFF: gesperrt

ON: freigegeben

Programmierbare Funktionen

Die programmierbaren Funktionen sind in folgenden Fällen zugänglich:

- beim Einschalten der Einheit
- nachdem die „STOP“ Taste gedrückt worden ist
- nachdem der Schließvorgang beendet worden ist
- wenn der Schließvorgang durch die Taste „P.P.“ abgebrochen wird.

Einheit programmieren: Vorgehensweise		
A		Die PGM Leuchte blinkt langsam und meldet den normalen Betrieb der Einheit.
B		Taste PGM drücken, um den Programmierungsmodus einzuschalten.
C		Die PGM Leuchte blinkt schnell und meldet dass der Programmierungsmodus eingeschaltet ist.
D		Die gewünschte Funktion wählen; dazu die Dip-Schalter laut Tabelle 5, Teil 1 einstellen.
E		PGM Taste drücken, um die Funktion einzuschalten.
F		Die PGM Leuchte bleibt eingeschaltet bis der gewünschte Wert eingegeben wird.
G		Dip-Schalter laut den Anweisungen in der zweiten Spalte der Tabelle 1 einstellen.
H		PGM Taste drücken, um den eingegebenen Wert zu bestätigen.
I		Die PGM Leuchte blinkt wieder schnell. Um eine andere Funktion einzustellen, den Vorgang ab Punkt D wiederholen.
J		Um die Funktionen zu speichern und die Programmierung auszuschalten, alle Dip-Schalter auf OFF stellen und PGM Taste drücken.

Bemerkung: Um die letzte Strecke beim Öffnen zu verlangsamen, laut Anweisungen des Menüs 2 vorgehen.

N.B.: Diese Option nur für sektionale Türen verwenden.

Tabelle 5																																																																																						
Funktion - Teil 1	Einstellbare Werte - Teil 2																																																																																					
Programmierungsende Dip-switch 1+4= Off/Off/Off/Off	Programmierungsphase beenden und Änderungen speichern.																																																																																					
Menü 1 Dip-switch 1+4= On/Off/Off/Off	Dip-Schalter1 = Funktion Höflichkeitsleuchte Off: normal (default) On: blinkend Dip-Schalter2 = Verringerung der Schließzeit nach überschreiten der Photozelle. Off: keine Änderung (default) On: die Schließzeit wird um 1/4 des Gesamtwertes gekürzt. Dip-Schalter3 = automatisch schließen, falls durch die Taste „P.P.“ der Öffnungsvorgang angehalten wird. Off: automatisch schließen gesperrt (default) On: automatisch schließen freigegeben. Dip-Schalter4 = Betrieb der Blinkleuchte: Off: blinkt konstant (default) On: blinkt langsam beim Öffnen, blinkt schnell beim Schließen																																																																																					
Menü 2 Dip-switch 1+4= Off/On/Off/Off	Dip-Schalter1 = blinken während der Wartezeit beim automatischen Schließvorgang: Off: Blinkleuchte ausgeschaltet (default) On: Blinkleuchte ein. Dip-Schalter2 = Einschalten der Photozelle beim Öffnen: Off: kein Eingriff (default) On: anhalten solange die Photozelle eingeschaltet bleibt. Dip-Schalter3 = Geschwindigkeitsabnahme am Ende der Öffnung. Off: Geschwindigkeitsabnahme aktiviert. On: Geschwindigkeitsabnahme nicht aktiviert (default). Dip-Schalter4 = nicht verwendet.																																																																																					
Wartezeit für den automatischen Schließvorgang. Dip-switch 1+4= On/On/Off/Off	<table><tr><th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>Dsw4</th><th>Sekunden</th></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>20</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>Off</td><td>40</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>Off</td><td>60</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>Off</td><td>80 (default)</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>Off</td><td>100</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>Off</td><td>120</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>Off</td><td>140</td></tr><tr><td>On</td><td>On</td><td>On</td><td>Off</td><td>160</td></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>On</td><td>180</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>On</td><td>200</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>On</td><td>220</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>On</td><td>240</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>On</td><td>260</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>On</td><td>280</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>On</td><td>300</td></tr><tr><td>On</td><td>On</td><td>On</td><td>On</td><td>320</td></tr></table>	Dsw1	Dsw2	Dsw3	Dsw4	Sekunden	Off	Off	Off	Off	20	On	Off	Off	Off	40	Off	On	Off	Off	60	On	On	Off	Off	80 (default)	Off	Off	On	Off	100	On	Off	On	Off	120	Off	On	On	Off	140	On	On	On	Off	160	Off	Off	Off	On	180	On	Off	Off	On	200	Off	On	Off	On	220	On	On	Off	On	240	Off	Off	On	On	260	On	Off	On	On	280	Off	On	On	On	300	On	On	On	On	320
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Dauer der Höflichkeitsleuchte Dip-switch 1+4= Off/Off/On/Off	<table><tr><th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>Dsw4</th><th>Sekunden</th></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>0</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>Off</td><td>20</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>Off</td><td>40</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>Off</td><td>60</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>Off</td><td>80 (default)</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>Off</td><td>100</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>Off</td><td>120</td></tr><tr><td>On</td><td>On</td><td>On</td><td>Off</td><td>140</td></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>On</td><td>160</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>On</td><td>180</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>On</td><td>200</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>On</td><td>220</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>On</td><td>240</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>On</td><td>260</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>On</td><td>280</td></tr><tr><td>On</td><td>On</td><td>On</td><td>On</td><td>300</td></tr></table>	Dsw1	Dsw2	Dsw3	Dsw4	Sekunden	Off	Off	Off	Off	0	On	Off	Off	Off	20	Off	On	Off	Off	40	On	On	Off	Off	60	Off	Off	On	Off	80 (default)	On	Off	On	Off	100	Off	On	On	Off	120	On	On	On	Off	140	Off	Off	Off	On	160	On	Off	Off	On	180	Off	On	Off	On	200	On	On	Off	On	220	Off	Off	On	On	240	On	Off	On	On	260	Off	On	On	On	280	On	On	On	On	300
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Tabelle 5																																							
Fortsetzung ... Funktion - Teil 1		Fortsetzung ... Einstellbare Werte - Teil 2																																					
Empfindlichkeit gegenüber der Geschwindigkeitsänderung während des normalen Hubs. Dip-switch 1+4= On/Off/On/Off (Default= 25%). Empfindlichkeit gegenüber der Geschwindigkeitsänderung während der Geschwindigkeitsabnahme. Dip-switch 1+4= Off/Off/On/On (Default= 25%).		Schaltschwelle bei Verringerung der Motorgeschwindigkeit. <table><tr><th>Dsw1</th><th>Dsw2</th><th>% Veränderung beim Schließ.</th></tr><tr><td>Off</td><td>Off</td><td>5% (sehr empfindlich)</td></tr><tr><td>On</td><td>Off</td><td>10%</td></tr><tr><td>Off</td><td>On</td><td>25%</td></tr><tr><td>On</td><td>On</td><td>50% (default)</td></tr></table> <table><tr><th>Dsw3</th><th>Dsw4</th><th>% Veränderung beim Öffnung</th></tr><tr><td>Off</td><td>Off</td><td>5% (sehr empfindlich)</td></tr><tr><td>On</td><td>Off</td><td>10%</td></tr><tr><td>Off</td><td>On</td><td>25%</td></tr><tr><td>On</td><td>On</td><td>50% (default)</td></tr></table>		Dsw1	Dsw2	% Veränderung beim Schließ.	Off	Off	5% (sehr empfindlich)	On	Off	10%	Off	On	25%	On	On	50% (default)	Dsw3	Dsw4	% Veränderung beim Öffnung	Off	Off	5% (sehr empfindlich)	On	Off	10%	Off	On	25%	On	On	50% (default)						
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Raum der Geschwindigkeitsabnahme. Dip-switch 1+4= On/Off/Off/On		<table><tr><th>Dsw1</th><th>Dsw2</th><th>Raum im Verhältnis zum gesamten Hub</th></tr><tr><td>Off</td><td>Off</td><td>1/4</td></tr><tr><td>On</td><td>Off</td><td>1/8</td></tr><tr><td>Off</td><td>On</td><td>1/16 (default)</td></tr><tr><td>On</td><td>On</td><td>1/32</td></tr></table> Dip-switch3= Off Dip-switch4= Off		Dsw1	Dsw2	Raum im Verhältnis zum gesamten Hub	Off	Off	1/4	On	Off	1/8	Off	On	1/16 (default)	On	On	1/32																					
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On	Off	1/8																																					
Off	On	1/16 (default)																																					
On	On	1/32																																					

N.B.: Wenn die Tür nicht richtig schließt und sich jedes Mal etwas weiter öffnet, die Motorleistung bei der Geschwindigkeitsabnahme erhöhen.
Wenn die Tür die Verschlussposition erreicht und der Riemen locker wird und anschlägt, die Motorleistung bei der Geschwindigkeitsabnahme verringern (siehe Programmierungsbeispiel).

Programmierungsbeispiel:

Um die Motorleistung bei der Geschwindigkeitsabnahme von 40%, wie eingestellt, auf 30% zu verringern, folgendermaßen vorgehen:

- 1 Programmierungstaste drücken; die Programmierungsleuchte beginnt schnell zu blinken.
- 2 Dip-Schalter laut Tabelle 5, Teil 1 einstellen: 1-OFF, 2-OFF, 3-OFF, 4-ON
- 3 Programmierungstaste drücken
- 4 Die Programmierungsleuchte leuchtet fest.
- 5 Dip-Schalter laut Tabelle 5, Teil 2 einstellen: 1-ON, 2-OFF, 3-OFF, 4-ohne Einfluß
- 6 Programmierungstaste drücken.
- 7 Die Programmierungsleuchte blinkt wieder schnell.
- 8 Den Vorgang ab Punkt 2 wiederholen, um andere Funktionen zu ändern oder alle Dip-Schalter auf OFF schalten und die Taste drücken, um die geänderten Funktionen zu speichern.
- 9 Dip-Schalter für die „Normalen Funktionen“ (siehe Tabelle 4) einstellen.

Centrale à microcontrôleur pour "AU.TR"

La centrale à microprocesseur "AU.TR" peut être utilisée pour commander des moteurs à 24Vc.c. dont la puissance ne dépasse pas les 80W.

Entrées/Sorties - tableau 1

- (1,2) Entrée 230Vc.a.= Alimentation centrale 230Vc.a. - 50Hz (phase= borne1, neutre= D borne2).
- (3,4) Sortie clignotant= Vers le clignotant. Ampoule 230V - 25W max.
- (3,5) Sortie éclairage de courtoisie= Ampoule 230V - 25W max.
- (9,10) Sortie 24V c.a.= Sortie alimentation 24Vc.a. stabilisés.
- (11) Sortie +V= Borne commune pour les entrées FTC-FCA-FCC-STOP-PP
- (12) Entrée FTC= Entrée pour le contact N.F. de la photocellule.
- (13) Entrée FCA= Entrée pour le fin de course d'ouverture (seulement si on utilise un f.c. extérieur). Contact N.F.
- (14) Entrée FCC= Entrée pour le fin de course de fermeture (seulement si on utilise un f.c. extérieur). Contact N.F.
- (15) Entrée STOP= Contact normalement fermé.
- (16) Entrée P.P.= Entrée Pas à Pas connectée en parallèle à la sortie de la carte radio. Contact N.O.
- (17,18) Entrée DAS= Entrée pour bourrelet sensible SC.RES utilisé sans carte spéciale.
N.B.: Si le bourrelet sensible SC.RES n'est pas utilisé, un pontet devra être établi entre les bornes 17 et 18.
- (19,20) Entrée antenne= Entrée antenne pour carte récepteur (Antenne= borne 19, Tresse= borne 20)
- (21,22,23) Entrée capteur= Entrée pour le capteur de tours (précâblé).
- (24,25) Sortie moteur= Vers le moteur 24Vc.c. (précâblé).
- (26,27) Entrée 24Vc.a.= Entrée à partir du secondaire du transformateur 24Vc.a..
- (28,29) Sortie 230Vc.a.= Vers le primaire du transformateur 230Vc.a..
- J2 Pontet pour SC.RES (fermer seulement en cas d'utilisation de SC.RES sans carte spéciale).
- J3 Connecteur de carte radio.

Led - tableau 2

MCU Alimentation centrale. Si la led est éteinte contrôler le fusible F1 (1A).

MOT Alimentation moteur. Si la led est éteinte contrôler le fusible F3 (10A).

Trimmer - tableau 3

PM-A Réglage de la puissance du moteur en ouverture (tourner dans le sens des aiguilles d'une montre pour augmenter la puissance).

PM-C Réglage de la puissance moteur en fermeture (tourner dans le sens des aiguilles d'une montre pour augmenter la puissance).

Installation de la centrale

- 1 Après avoir évalué les caractéristiques et les risques de l'installation, couper toutes les entrées normalement fermées qu'on ne désire pas utiliser: STOP(15), FCC(14), FCA(13), FTC(12), à l'aide des 4 dip-switch d'exclusion. Les correspondances sont: 1= FTC, 2= FCA, 3= FCC, 4= STOP.
- 2 Brancher les entrées de commande éventuelles: PP(16), STOP(15).
- 3 Brancher l'alimentation 24Vc.a. (9,10) aux dispositifs éventuellement connectés à la centrale (photocellules, récepteurs, ...) en respectant la polarité. Connecter le clignotant. Après avoir recontrôlé les connexions, alimenter la centrale aux bornes d'entrée 230Vc.a. (1,2). Au branchement les leds MCU et MOT devraient être allumées. La led PROG doit clignoter.
- 4 La première manœuvre de la centrale est exécutée à la vitesse réduite pour obtenir la course du portail. Régler les trimmers PM-A et PM-C à mi-course.
 - Appuyer sur la touche de programmation. La led de programmation commence à clignoter rapidement.
 - Programmer les dip-switch de programmation de la manière suivante: 1-OFF, 2-ON, 3-OFF, 4-ON.
 - Appuyer sur la touche de programmation. La led de programmation demeure allumée avec une lumière fixe.
 - Donner une commande d'ouverture (PP, radiocommande).
 - La centrale effectue le préclignotement puis l'ouverture à vitesse réduite commence.
 - Lorsque la porte a atteint l'ouverture désirée, donner une autre impulsion avec la radiocommande ou avec le pas à pas.
 - Le clignotant ne s'éteint pas et après quelques secondes, la fermeture à vitesse réduite commence automatiquement.
 - Lorsque la porte se trouve à quelques centimètres du sol, donner une autre impulsion avec le pas à pas ou avec la radiocommande sans oublier que l'espace qui la sépare du sol sera ôté à la lumière d'ouverture lors de la prochaine manœuvre.
 - La led commence à clignoter lentement pour indiquer le retour au fonctionnement normal.

Après cet étalonnage, certaines valeurs sont réglées de la manière indiquée par "default" dans la partie 2 du tableau 5; si on désire varier ces fonctions, procéder de la manière décrite dans "Fonctions Programmables", autrement, régler les dip-switch pour les "Fonctions Normales" conformément aux indications du tableau 4.

Après l'étalonnage de la course, effectuer le réglage des trimmers PA et PC, qui consentent de limiter la puissance fournie par le moteur.

ATTENTION! Durant l'étalonnage, les dispositifs de relèvement des obstacles, exception faite du limiteur de courant (réglage de puissance) sont débranchés.

Fonctions normales dip-switch - tableau 4

- DSW1 Fonctionnement bouton "P.P."
Off: séquence Ouvre/Stop/Ferme/Stop ...
On: séquence Ouvre/Ferme/Ouvre/Ferme ...
- DSW2 Fermeture automatique
Off: invalidée
On: validée
- DSW3 Fonction "Copropriété" (la touche "P.P." consent seulement l'ouverture).
Off: invalidée
On: validée
- DSW4 Préclignotement
Off: invalidé
On: validé

Fonctions programmables

Le fonctions programmables sont accessibles:

- au branchement de la centrale;
- après avoir appuyé sur la touche "STOP";
- à la fin de la fermeture;
- en arrêtant la fermeture par la touche "P.P."

Séquence de programmation de la centrale:		
A		La led PGM clignote lentement indiquant le fonctionnement normal de la centrale.
B		Appuyer sur la touche PGM pour entrer en modalité de programmation.
C		La led PGM clignote rapidement indiquant le fonctionnement en modalité de programmation.
D		Sélectionner la fonction désirée en programmant les dip-switch de la manière indiquée dans la partie 1 du tableau 5.
E		Appuyer sur la touche PGM pour activer la fonction.
F		La led PGM demeure allumée dans l'attente de l'entrée de la valeur désirée.
G		Programmer les dip-switch de la manière indiquée dans la seconde colonne du tableau 1.
H		Appuyer sur la touche PGM pour confirmer la valeur.
I		La led PGM reprend à clignoter rapidement. Pour modifier une autre fonction, répéter la procédure du point D.
J		Pour mémoriser les fonctions et quitter la modalité de programmation, placer tous les dip-switch sur OFF et appuyer sur la touche PGM.

Note: Pour insérer le ralentissement durant le dernier tronçon d'ouverture, intervenir de la manière décrite dans le menu 2.

N.B.: Se servir de cette option exclusivement pour les portes sectionnelles.

Tableau 5																																																																																									
Fonction - partie 1		Valeurs sélectionnables -partie 2																																																																																							
Fin programmation Dip-switch 1÷4= Off/Off/Off/Off		Termine la programmation et sauvegarde les modifications.																																																																																							
Menu 1 Dip-switch 1÷4= On/Off/Off/Off		Dip-switch1 = fonctionnement éclairer de courtoisie. Off: normal (default) On: clignotant Dip-switch2 = Diminution du temps de fermeture après avoir passé la photocellule. Off: aucune variation (default) On: le temps de fermeture se réduit à 1/4 de la valeur totale Dip-switch3 = Fermeture automatique en cas d'arrêt avec la touche "P.P" durant l'ouverture. Off: fermeture automatique invalidée (default) On: fermeture automatique validée. Dip-switch4 = Fonctionnement lumière clignotante: Off: clignotement constant (default) On: clignotement lent durant l'ouverture, clignotement rapide durant la fermeture.																																																																																							
Menu 2 Dip-switch 1÷4= Off/On/Off/Off		Dip-switch1 = Clignotement durant le temps d'attente pour la fermeture automatique: Off: clignotant éteint (default) On: clignotant allumé. Dip-switch2 = Intervention photocellules durant l'ouverture: Off: aucune intervention (default) On: arrêt tant que la photocellule demeure engagée. Dip-switch3 = Ralentissement à la fin de l'ouverture. Off: ralentissement branché. On: ralentissement débranché (default). Dip-switch4 = Non utilisé.																																																																																							
Temps d'attente pour la fermeture automatique. Dip-switch 1÷4= On/On/Off/Off		<table><tr><th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>Dsw4</th><th>Seconds</th></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>20</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>Off</td><td>40</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>Off</td><td>60</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>Off</td><td>80 (default)</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>Off</td><td>100</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>Off</td><td>120</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>Off</td><td>140</td></tr><tr><td>On</td><td>On</td><td>On</td><td>Off</td><td>160</td></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>On</td><td>180</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>On</td><td>200</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>On</td><td>220</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>On</td><td>240</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>On</td><td>260</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>On</td><td>280</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>On</td><td>300</td></tr><tr><td>On</td><td>On</td><td>On</td><td>On</td><td>320</td></tr></table>			Dsw1	Dsw2	Dsw3	Dsw4	Seconds	Off	Off	Off	Off	20	On	Off	Off	Off	40	Off	On	Off	Off	60	On	On	Off	Off	80 (default)	Off	Off	On	Off	100	On	Off	On	Off	120	Off	On	On	Off	140	On	On	On	Off	160	Off	Off	Off	On	180	On	Off	Off	On	200	Off	On	Off	On	220	On	On	Off	On	240	Off	Off	On	On	260	On	Off	On	On	280	Off	On	On	On	300	On	On	On	On	320
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Suite ... Fonction - partie 1		Suite ... Valeurs sélectionnables -partie 2																																									
Sensibilité aux variations de vitesse durant la course normale. Dip-switch 1+4= On/Off/On/Off (Default= 25%). Sensibilité aux variations de vitesse durant le ralentissement. Dip-switch 1+4= Off/Off/On/On (Default= 25%).		Programme le seuil d'intervention en cas de réduction de la vitesse du moteur. <table><tr><th>Dsw1</th><th>Dsw2</th><th colspan="2">% Variation en fermeture</th></tr><tr><td>Off</td><td>Off</td><td colspan="2">5% (très sensible)</td></tr><tr><td>On</td><td>Off</td><td colspan="2">10%</td></tr><tr><td>Off</td><td>On</td><td colspan="2">25%</td></tr><tr><td>On</td><td>On</td><td colspan="2">50% (default)</td></tr></table> <table><tr><th>Dsw3</th><th>Dsw4</th><th colspan="2">% Variation en ouverture</th></tr><tr><td>Off</td><td>Off</td><td colspan="2">5% (très sensible)</td></tr><tr><td>On</td><td>Off</td><td colspan="2">10%</td></tr><tr><td>Off</td><td>On</td><td colspan="2">25%</td></tr><tr><td>On</td><td>On</td><td colspan="2">50% (default)</td></tr></table>		Dsw1	Dsw2	% Variation en fermeture		Off	Off	5% (très sensible)		On	Off	10%		Off	On	25%		On	On	50% (default)		Dsw3	Dsw4	% Variation en ouverture		Off	Off	5% (très sensible)		On	Off	10%		Off	On	25%		On	On	50% (default)	
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Puissance moteur durant le ralentissement. Dip-switch 1+4= Off/Off/Off/On		<table><tr><th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>% Puissance</th></tr><tr><td>Off</td><td>Off</td><td>Off</td><td>20%</td></tr><tr><td>On</td><td>Off</td><td>Off</td><td>30%</td></tr><tr><td>Off</td><td>On</td><td>Off</td><td>40% (default)</td></tr><tr><td>On</td><td>On</td><td>Off</td><td>50%</td></tr><tr><td>Off</td><td>Off</td><td>On</td><td>60%</td></tr><tr><td>On</td><td>Off</td><td>On</td><td>70%</td></tr><tr><td>Off</td><td>On</td><td>On</td><td>80%</td></tr><tr><td>On</td><td>On</td><td>On</td><td>90%</td></tr></table>		Dsw1	Dsw2	Dsw3	% Puissance	Off	Off	Off	20%	On	Off	Off	30%	Off	On	Off	40% (default)	On	On	Off	50%	Off	Off	On	60%	On	Off	On	70%	Off	On	On	80%	On	On	On	90%				
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Espace de ralentissement. Dip-switch 1+4= On/Off/Off/On		<table><tr><th>Dsw1</th><th>Dsw2</th><th>Espace par rapport à la course complète</th></tr><tr><td>Off</td><td>Off</td><td>1/4</td></tr><tr><td>On</td><td>Off</td><td>1/8</td></tr><tr><td>Off</td><td>On</td><td>1/16 (default)</td></tr><tr><td>On</td><td>On</td><td>1/32</td></tr></table>		Dsw1	Dsw2	Espace par rapport à la course complète	Off	Off	1/4	On	Off	1/8	Off	On	1/16 (default)	On	On	1/32																									
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Off	On	1/16 (default)																																									
On	On	1/32																																									
Dip-switch3= Off Dip-switch4= Off																																											

N.B.: Si la porte ne ferme pas totalement pour s'ouvrir ensuite d'une quantité toujours plus grande, augmenter la puissance du moteur durant le ralentissement. Si, lorsque la porte arrive en fermeture, la courroie se relâche et elle bat ensuite, diminuer la puissance du moteur durant le ralentissement (voir l'exemple de programmation).

Exemple de programmation

Pour diminuer la puissance du moteur durant le ralentissement du 40% programmé au 30%, intervenir de la manière suivante:

- 1 Appuyer sur la touche de programmation: la led de programmation commence à clignoter rapidement.
- 2 Programmer les dip-switch conformément au tableau 5 partie 1: 1- OFF, 2- OFF, 3- OFF, 4- ON.
- 3 Appuyer sur la touche de programmation.
- 4 La led de programmation demeure allumée avec une lumière fixe.
- 5 Programmer les dip-switch comme illustré au tableau 5 partie 2: 1- ON, 2- OFF, 3- OFF, 4- sans influence.
- 6 Appuyer sur la touche de programmation.
- 7 La led de programmation reprend à clignoter rapidement.
- 8 Répéter la même marche à partir du point 2 pour modifier d'autres fonctions ou régler tous les dip-switch sur OFF et appuyer sur la touche pour mémoriser les fonctions qui ont été changées.
- 9 Régler les dip-switch pour le "Fonctions Normales" (voir tableau 4).

Centralita a microprocesador por AU.TR

Se puede utilizar la central con microprocesador "AU.TR" para controlar motores de 24Vcc con potencia no superior a 80W.

Entradas/Salidas - tabla 1

(1,2)	Entrada 230Vca= Alimentación central 230Vca - 50Hz (fase = borne 1, neutro = borne 2)
(3,4)	Salida intermitente= Al intermitente. Lámpara 230V - 25W máx.
(3,5)	Salida luz interior= Lámpara 230V - 25W máx.
(9,10)	Salida 24Vca= Salida alimentación 24Vca estabilizados.
(11)	Salida +V= Borne común para las entradas FTC-FCA-FCC-STOP-PP
(12)	Entrada FTC= Entrada para el contacto N.C. de la fotocélula.
(13)	Entrada FCA= Entrada para el final de carrera de apertura (sólo si se utiliza un f.c. externo). Contacto N.C.
(14)	Entrada FCC= Entrada para el final de carrera de cierre (sólo si se utiliza un f.c. externo). Contacto N.C.
(15)	Entrada STOP= Contacto normalmente cerrado.
(16)	Entrada P.P.= Entrada paso-paso conectada en paralelo con la salida de la tarjeta radio. Contacto N.A.
(17,18)	Entrada DAS = Entrada para borde sensible SC.RES utilizado sin la tarjeta correspondiente. N.B.: Si no se utiliza el borde sensible SC.RES , es preciso conectar con puente los bornes 17 y 18.
(19,20)	Entrada antena= Entrada antena para tarjeta receptora (Antena = borne 19, Precinta = borne 20).
(21,22,23)	Entrada sensor= Entrada para el sensor de revoluciones (precableado).
(24,25)	Salida motor= Al motor 24Vcc (precableado).
(26,27)	Entrada 24Vca= Entrada desde el secundario del transformador 24Vca.
(28,29)	Salida 230Vca= Al primario transformador 230Vca.
J2	Puente para SC.RES (cerrar sólo en caso de uso de SC.RES sin tarjeta correspondiente).
J3	Conector para tarjeta radio.

Led - tabla 2

MCU	Alimentación central. Si el LED está apagado comprobar el fusible F1 (1A).
MOT	Alimentación motor. Si el LED está apagado comprobar el fusible F3 (10A).

Trimmer - tabla 3

PM-A	Regulación de la potencia motor en apertura (girar hacia la derecha para aumentar la potencia).
PM-C	Regulación de la potencia motor en cierre (girar hacia la derecha para aumentar la potencia).

Instalación de la central

- Después de haber evaluado las características y los riesgos de la instalación, excluir todas las entradas normalmente cerradas que no se desea utilizar: STOP(15), FCC(14), FCA(13), FTC(12), mediante los 4 dip-switch de exclusión. Las correspondencias son: 1 = FTC, 2 = FCA, 3 = FCC, 4 = STOP.
- Conectar las eventuales entradas de accionamiento: PP(16), STOP(15).
- Conectar la alimentación 24Vca (9,10) con eventuales dispositivos conectados con la central (fotocélula, receptores, ...) respetando las polaridades correctas. Conectar el intermitente. Después de haber comprobado de nuevo las conexiones, alimentar la central en los bornes de entrada 230Vca (1,2). Al encendido deberían estar encendidos los LED MCU y MOT. El LED PROG debe estar intermitente.
- La primera maniobra de la central es efectuada a velocidad reducida para determinar la carrera de la verja. Ajustar mediante los trimmer PM-A y PM-C en medio.
 - Apretar el botón de programación. El LED de programación empieza a destellar rápidamente.
 - Configurar los dip-switch de programación como sigue: 1- OFF, 2- ON, 3-OFF, 4- ON.
 - Apretar el botón de programación. El LED de programación queda encendido con luz fija.
 - Dar un comando de apertura (PP, mando a distancia).
 - La central ejecuta la intermitencia previa y seguidamente comienza la fase de apertura a baja velocidad.
 - Cuando la porta ha alcanzado la apertura deseada dar otro impulso con el mando a distancia o con el paso-paso.
 - El intermitente no se apaga y al cabo de unos segundos comienza automáticamente el cierre a baja velocidad.
 - Cuando la porta está a pocos centímetros del suelo, dar otro impulso con el paso-paso o con el mando a distancia, teniendo presente que el espacio que la separa del suelo será restado de la luz de apertura en la maniobra sucesiva.
 - El LED empieza a destellar lento para indicar la vuelta al funcionamiento normal.

Después de este calibrado hay unos valores que se configuran tal y como indicado con "valor por omisión" en la parte 2 de la tabla 5; si se desea modificar dichas funciones proceder como descrito en "**Funciones Programables**", de lo contrario configurar los dip-switch para las "**Funciones Normales**" como indicado en la tabla 4. Después del calibrado de la carrera es preciso efectuar la regulación de los trimmer PA y PC, que permiten limitar la potencia proporcionada por el motor.

ATENCIÓN! Durante el calibrado, los dispositivos detectores de obstáculos, con la excepción del limitador de corriente (regulación de potencia), están desactivados.

Funciones normales dip-switch - tabla 4

DSW1	Funcionamiento botón "P.P." Off: secuencia Abre/Stop/Cierra/Stop ... On: secuencia Abre/Cierra/Abre/Cierra ...
DSW2	Cierre automático Off: inhabilitado On: habilitado
DSW3	Función "Comunidad" (el botón "P.P." permite sólo la apertura) Off: inhabilitada On: habilitada
DSW4	Intermitencia previa Off: inhabilitada On: habilitada

Funciones programables

Se accede a las funciones programables:

- al encendido de la central;
- después de haber apretado el botón "STOP";
- al final de la fase de cierre;
- deteniendo la fase de cierre con el botón "P.P."

Secuencia de programación de la central		
A		El LED PGM destella despacio para indicar el funcionamiento normal de la central.
B		Apretar el botón PGM para entrar en la modalidad de programación.
C		El LED PGM destella rápidamente para indicar el funcionamiento en la modalidad de programación.
D		Seleccionar la función deseada configurando los dip-switch como indicado en la parte 1 de la tabla 5.
E		Apretar el botón PGM para activar la función.
F		El LED PGM queda encendido a la espera de la introducción del valor deseado.
G		Configurar los dip-switch como indicado en la segunda columna de la tabla 1.
H		Apretar el botón PGM para confirmar el valor.
I		El LED PGM destella de nuevo rápidamente. Para modificar otra función repetir el procedimiento desde el punto D.
J		Para memorizar las funciones y salir de la modalidad de programación, colocar todos los dip-switch en la posición OFF y apretar el botón PGM.

Nota: Para activar la reducción de velocidad durante el último tramo de apertura, actuar como descrito en el menú 2.

N.B.: Utilizar esta opción sólo para puertas de secciones.

Tabla 5																																																																																									
Función - parte 1		Valores seleccionables - parte 2																																																																																							
Fin programación Dip-switch 1+4= Off/Off/Off/Off		Termina la fase de programación y guarda las modificaciones.																																																																																							
Menú 1 Dip-switch 1+4= On/Off/Off/Off		Dip-switch1 = funcionamiento luz interior. Off: normal (por omisión) On: intermitente Dip-switch2 = Reducción del tiempo de cierre después de haber pasado la fotocélula. Off: ninguna variación (por omisión) On: el tiempo de cierre se reduce a 1/4 del valor total. Dip-switch3 = Cierre automático en caso de parada con el botón "P.P." durante la fase de apertura. Off: cierre automático inhabilitado (por omisión) On: cierre automático habilitado. Dip-switch4 = Funcionamiento luz intermitente: Off: intermitencia constante (por omisión) On: intermitencia lenta en fase de apertura, intermitencia rápida en fase de cierre.																																																																																							
Menú 2 Dip-switch 1+4= Off/On/Off/Off		Dip-switch1 = Intermitencia durante el tiempo de espera para el cierre automático: Off: intermitente apagado (por omisión) On: intermitente encendido. Dip-switch2 = Intervención fotocélula durante la fase de apertura: Off: ninguna intervención (por omisión) On: parada mientras la fotocélula queda tapada. Dip-switch3 = Reducción de la velocidad al final de la apertura. Off: reducción de la velocidad activada. On: reducción de la velocidad desactivada (default). Dip-switch4 = No utilizado.																																																																																							
Tiempo de espera para el cierre automático. Dip-switch 1+4= On/On/Off/Off El tiempo de espera es puesto a cero si el contacto de la entrada FTC se abre.		<table border="1"> <thead> <tr> <th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>Dsw4</th><th>Segundos</th></tr> </thead> <tbody> <tr><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>20</td></tr> <tr><td>On</td><td>Off</td><td>Off</td><td>Off</td><td>40</td></tr> <tr><td>Off</td><td>On</td><td>Off</td><td>Off</td><td>60</td></tr> <tr><td>On</td><td>On</td><td>Off</td><td>Off</td><td>80 (default)</td></tr> <tr><td>Off</td><td>Off</td><td>On</td><td>Off</td><td>100</td></tr> <tr><td>On</td><td>Off</td><td>On</td><td>Off</td><td>120</td></tr> <tr><td>Off</td><td>On</td><td>On</td><td>Off</td><td>140</td></tr> <tr><td>On</td><td>On</td><td>On</td><td>Off</td><td>160</td></tr> <tr><td>Off</td><td>Off</td><td>Off</td><td>On</td><td>180</td></tr> <tr><td>On</td><td>Off</td><td>Off</td><td>On</td><td>200</td></tr> <tr><td>Off</td><td>On</td><td>Off</td><td>On</td><td>220</td></tr> <tr><td>On</td><td>On</td><td>Off</td><td>On</td><td>240</td></tr> <tr><td>Off</td><td>Off</td><td>On</td><td>On</td><td>260</td></tr> <tr><td>On</td><td>Off</td><td>On</td><td>On</td><td>280</td></tr> <tr><td>Off</td><td>On</td><td>On</td><td>On</td><td>300</td></tr> <tr><td>On</td><td>On</td><td>On</td><td>On</td><td>320</td></tr> </tbody> </table>			Dsw1	Dsw2	Dsw3	Dsw4	Segundos	Off	Off	Off	Off	20	On	Off	Off	Off	40	Off	On	Off	Off	60	On	On	Off	Off	80 (default)	Off	Off	On	Off	100	On	Off	On	Off	120	Off	On	On	Off	140	On	On	On	Off	160	Off	Off	Off	On	180	On	Off	Off	On	200	Off	On	Off	On	220	On	On	Off	On	240	Off	Off	On	On	260	On	Off	On	On	280	Off	On	On	On	300	On	On	On	On	320
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Duración luz interior. Dip-switch 1+4= Off/Off/On/Off El tiempo de encendido de la luz interior es puesto a cero si el contacto de la entrada FTC se abre y seguidamente se cierra (pasaje de personas o vehículos) durante el tiempo de espera del cierre automático.		<table border="1"> <thead> <tr> <th>Dsw1</th><th>Dsw2</th><th>Dsw3</th><th>Dsw4</th><th>Segundos</th></tr> </thead> <tbody> <tr><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>0</td></tr> <tr><td>On</td><td>Off</td><td>Off</td><td>Off</td><td>20</td></tr> <tr><td>Off</td><td>On</td><td>Off</td><td>Off</td><td>40</td></tr> <tr><td>On</td><td>On</td><td>Off</td><td>Off</td><td>60</td></tr> <tr><td>Off</td><td>Off</td><td>On</td><td>Off</td><td>80 (default)</td></tr> <tr><td>On</td><td>Off</td><td>On</td><td>Off</td><td>100</td></tr> <tr><td>Off</td><td>On</td><td>On</td><td>Off</td><td>120</td></tr> <tr><td>On</td><td>On</td><td>On</td><td>Off</td><td>140</td></tr> <tr><td>Off</td><td>Off</td><td>Off</td><td>On</td><td>160</td></tr> <tr><td>On</td><td>Off</td><td>Off</td><td>On</td><td>180</td></tr> <tr><td>Off</td><td>On</td><td>Off</td><td>On</td><td>200</td></tr> <tr><td>On</td><td>On</td><td>Off</td><td>On</td><td>220</td></tr> <tr><td>Off</td><td>Off</td><td>On</td><td>On</td><td>240</td></tr> <tr><td>On</td><td>Off</td><td>On</td><td>On</td><td>260</td></tr> <tr><td>Off</td><td>On</td><td>On</td><td>On</td><td>280</td></tr> <tr><td>On</td><td>On</td><td>On</td><td>On</td><td>300</td></tr> </tbody> </table>			Dsw1	Dsw2	Dsw3	Dsw4	Segundos	Off	Off	Off	Off	0	On	Off	Off	Off	20	Off	On	Off	Off	40	On	On	Off	Off	60	Off	Off	On	Off	80 (default)	On	Off	On	Off	100	Off	On	On	Off	120	On	On	On	Off	140	Off	Off	Off	On	160	On	Off	Off	On	180	Off	On	Off	On	200	On	On	Off	On	220	Off	Off	On	On	240	On	Off	On	On	260	Off	On	On	On	280	On	On	On	On	300
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N.B.: Si la puerta no cierra completamente y seguidamente abre siempre más, aumentar la potencia del motor durante la reducción de velocidad.
 Si, cuando la puerta llega al cierre, la correa se afloja y seguidamente sacude, es preciso reducir la potencia del motor durante la reducción de velocidad (ver ejemplo de programación).

Ejemplo de programación

Para reducir la potencia del motor durante la reducción de velocidad desde el 40% configurado al 30%, actuar como sigue:

1. Apretar el botón de programación: el LED de programación empieza a destellar rápidamente.
2. Configurar los dip-switch como indicado en la tabla 5 parte 1: 1- OFF, 2- OFF, 3- OFF, 4- ON.
3. Apretar el botón de programación.
4. El LED de programación queda encendido con luz fija.
5. Configurar los dip-switch como indicado en la tabla 5 parte 2: 1- ON, 2- OFF, 3- OFF, 4- irrelevante.
6. Apretar el botón de programación.
7. El LED de programación destella rápidamente de nuevo.
8. Repetir el procedimiento desde el punto 2 para modificar otras funciones o configurar todos los dip-switch en OFF y apretar el botón para memorizar las funciones cambiadas.
9. Configurar los dip-switch para las "Funciones Normales" (ver tabla 4).

