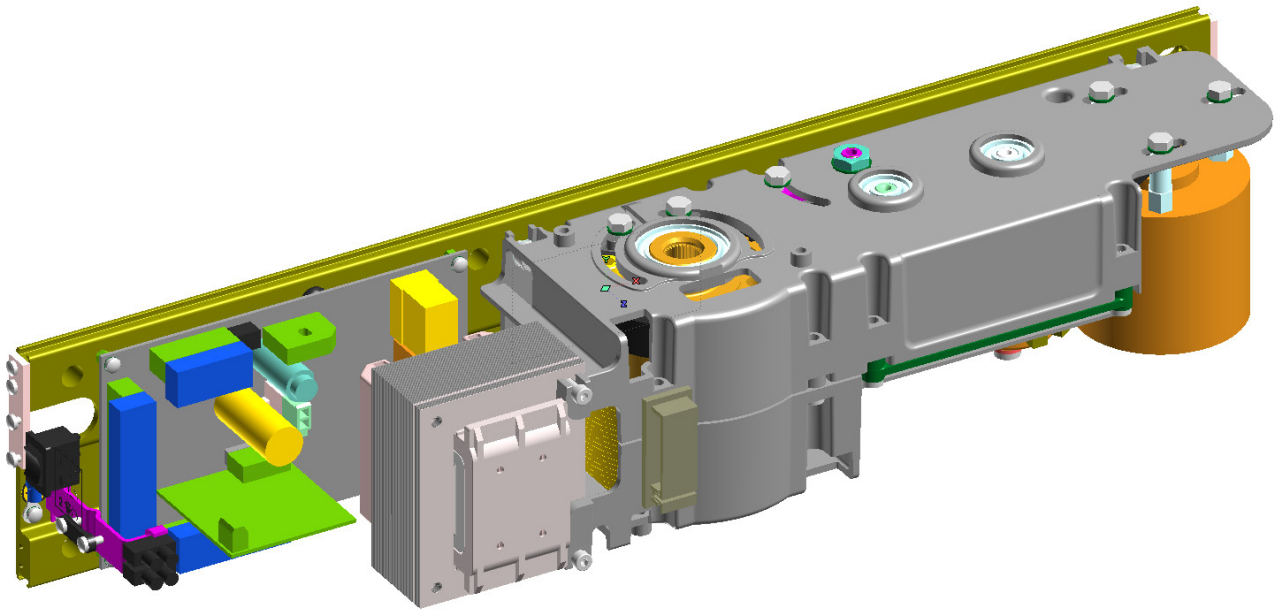
950 N

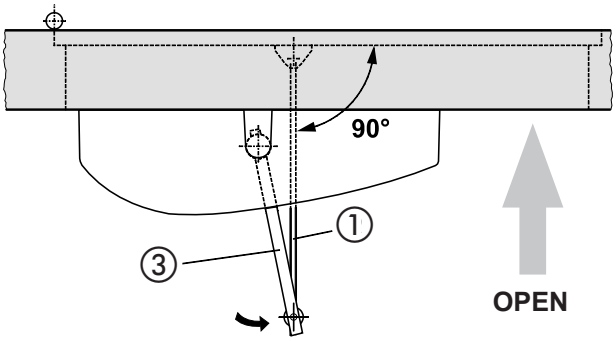


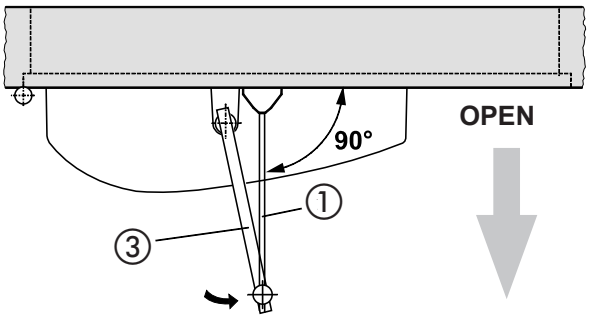
safe zone

EN 16005

FAAC

BRACCIO ARTICOLATO
ARTICULATED ARM
BRAS ARTICULÉ
BRAZO ARTICULADO
GELENKARM
KNIKARM
LEDAD ARM





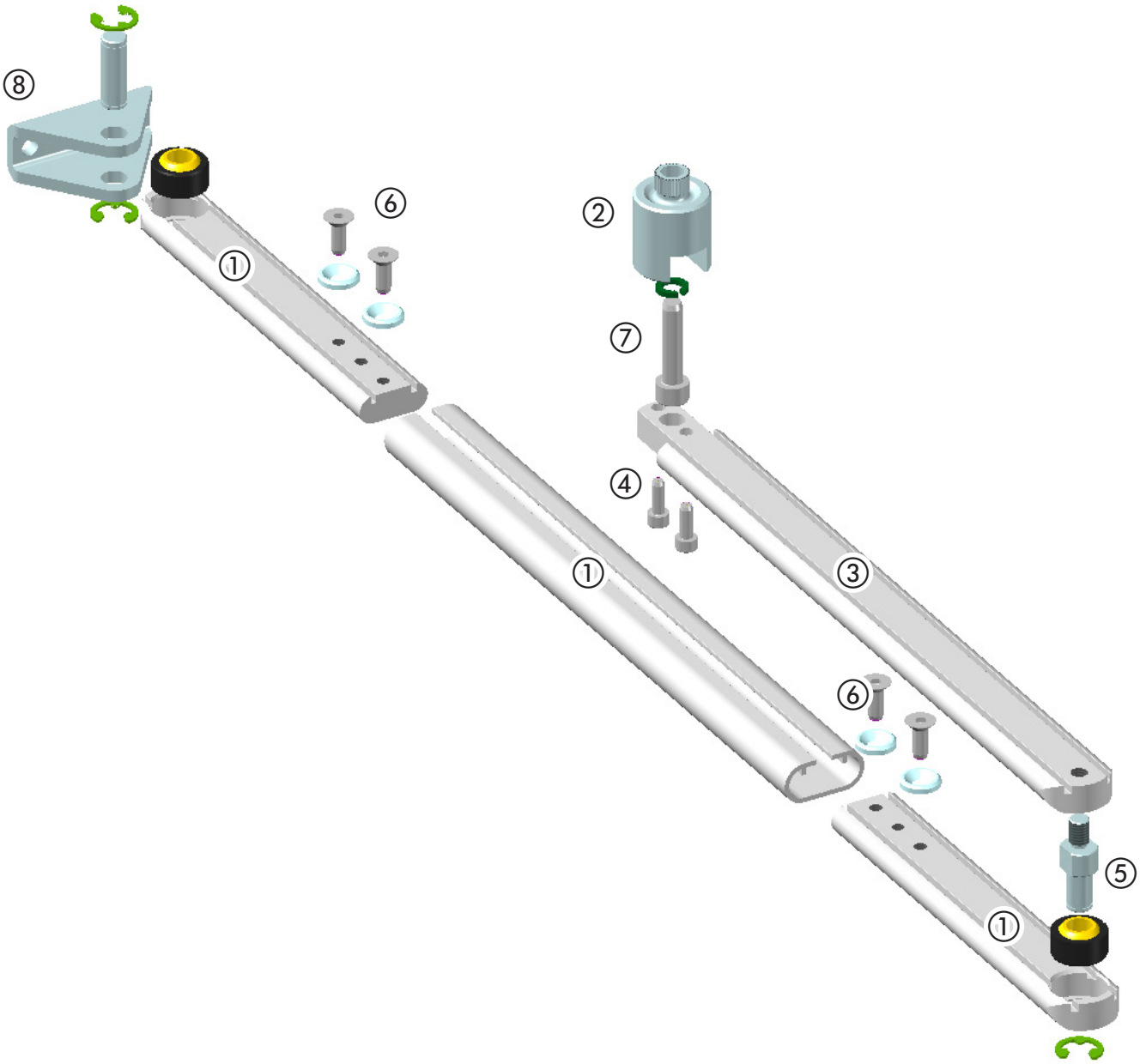


TAVOLA A : BRACCIO ARTICOLATO A SPINGERE CON MONTAGGIO OPERATORE SULL'ARCHITRAVE

TABLE A : ARTICULATED PUSH ARM WITH OPERATOR INSTALLATION ON THE LINTEL

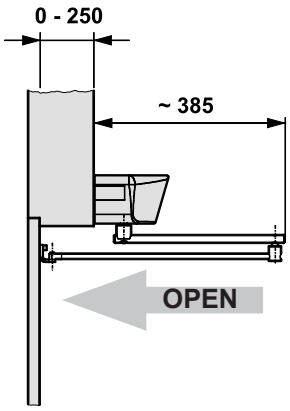
TABLE A : BRAS ARTICULÉ À POUSSÉE AVEC MONTAGE DE L'OPÉRATEUR SUR LE LINTEAU

LÁMINA A : BRAZO ARTICULADO DE EMPUJE CON MONTAJE DEL OPERADOR EN EL DINTEL

ÜBERSICHT A : DRUCKGELENKARM MIT MONTAGE DES ANTRIEBS AM STURZ

TEKENING A : KNIKARM MET DUWSYSTEEM MET MONTAGE AANDRIJVING OP DE BOVENDORPEL

BILD A : LEDAD TRYCKARM MED DÖRRÖPPNARE MONTERAD PÅ KARMÖVERSTYCKET



* Quota con albero standard 20 mm. Nel caso fosse necessario aumentare la distanza tra l'operatore ed il braccio, utilizzare le prolunghe opzionali (Quota con albero 50 mm = 87 mm. - Quota con albero 80 mm = 117 mm)

* Standard shaft dimension 20 mm. Should it become necessary to increase the distance between the operator and the arm, use the optional extensions (dimension with 50 mm shaft = 87 mm - with 80 mm shaft = 117 mm)

* Cote avec arbre standard de 20 mm. S'il est nécessaire d'augmenter la distance entre l'opérateur et le bras, utiliser les rallonges en option (Cote avec arbre de 50 mm = 87mm. - Cote avec arbre de 80 mm = 117 mm)

* Cota con árbol estándar 20 mm. Si fuera necesario aumentar la distancia entre el operador y el brazo, utilizar los alargues opcionales (Cota con árbol 50 mm = 87mm. - Cota con árbol 80 mm = 117 mm)

* Maß mit Standardwelle 20 mm. Wenn der Abstand zwischen dem Antrieb und dem Arm erhöht werden muss, die optionalen Verlängerungen verwenden (Maß mit 50-mm-Welle = 87 mm; Maß mit 80-mm-Welle = 117 mm)

* Afstand met standaardas 20 mm. Indien de afstand tussen de aandrijving en de arm groter moet zijn, gebruik dan de optionele verlengstukken (Afstand met as 50 mm = 87mm. - Afstand met as 80 mm = 117 mm)

* Mått med standardaxel 20 mm. Om det är nödvändigt att öka avståndet mellan dörröppnaren och armen, använd de extra förlängningarna. (Mått med axel på 50 mm = 87 mm - mått med axel på 80 mm = 117 mm)

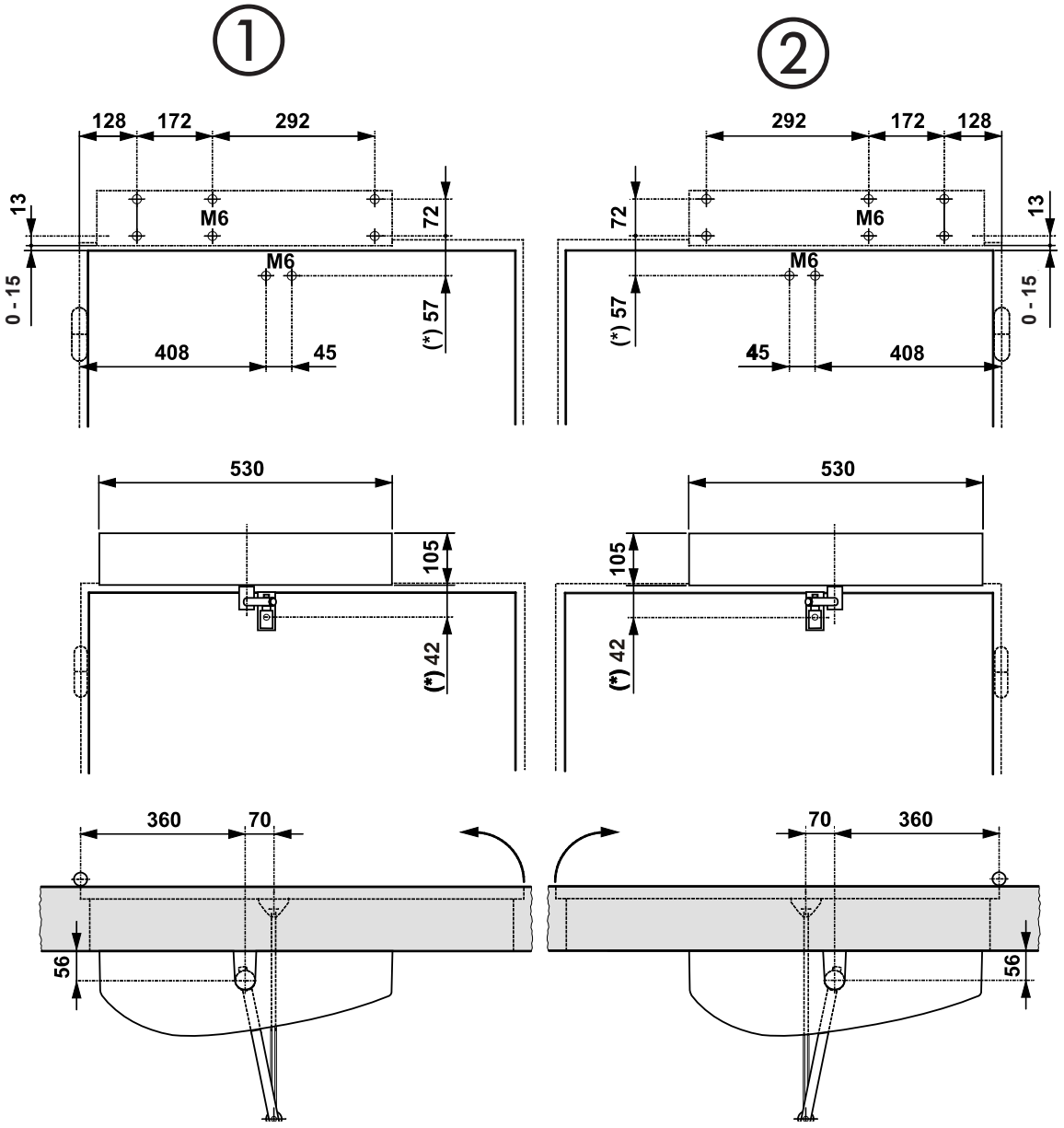


TAVOLA B : BRACCIO ARTICOLATO A SPINGERE CON MONTAGGIO OPERATORE SULLA PORTA

TABLE B : ARTICULATED PUSH ARM WITH OPERATOR INSTALLATION ON THE DOOR

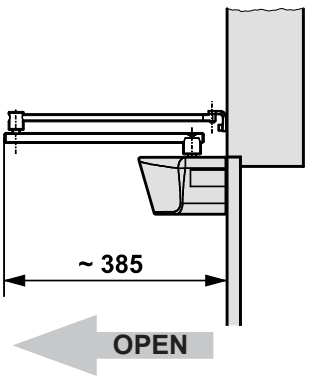
TABLE B : BRAS ARTICULÉ À POUSSÉE AVEC MONTAGE DE L'OPÉRATEUR SUR LA PORTE

LÁMINA B : BRAZO ARTICULADO DE EMPUJE CON MONTAJE DEL OPERADOR EN LA PUERTA

ÜBERSICHT B : DRUCKGELENKARM MIT MONTAGE DES ANTRIEBS AM TOR

TEKENING B : KNIKARM MET DUWSYSTEEM MET MONTAGE AANDRIJVING OP DE DEUR

BILD B : LEDAD TRYCKARM MED DÖRRÖPPNARE MONTERAD PÅ DÖRREN



* Quota con albero standard 20 mm. Nel caso fosse necessario aumentare la distanza tra l'operatore ed il braccio, utilizzare le prolunghe opzionali (Quota con albero 50 mm = 87 mm. - Quota con albero 80 mm = 117 mm)

* Standard shaft dimension 20 mm. Should it become necessary to increase the distance between the operator and the arm, use the optional extensions (dimension with 50 mm shaft = 87 mm - with 80 mm shaft = 117 mm)

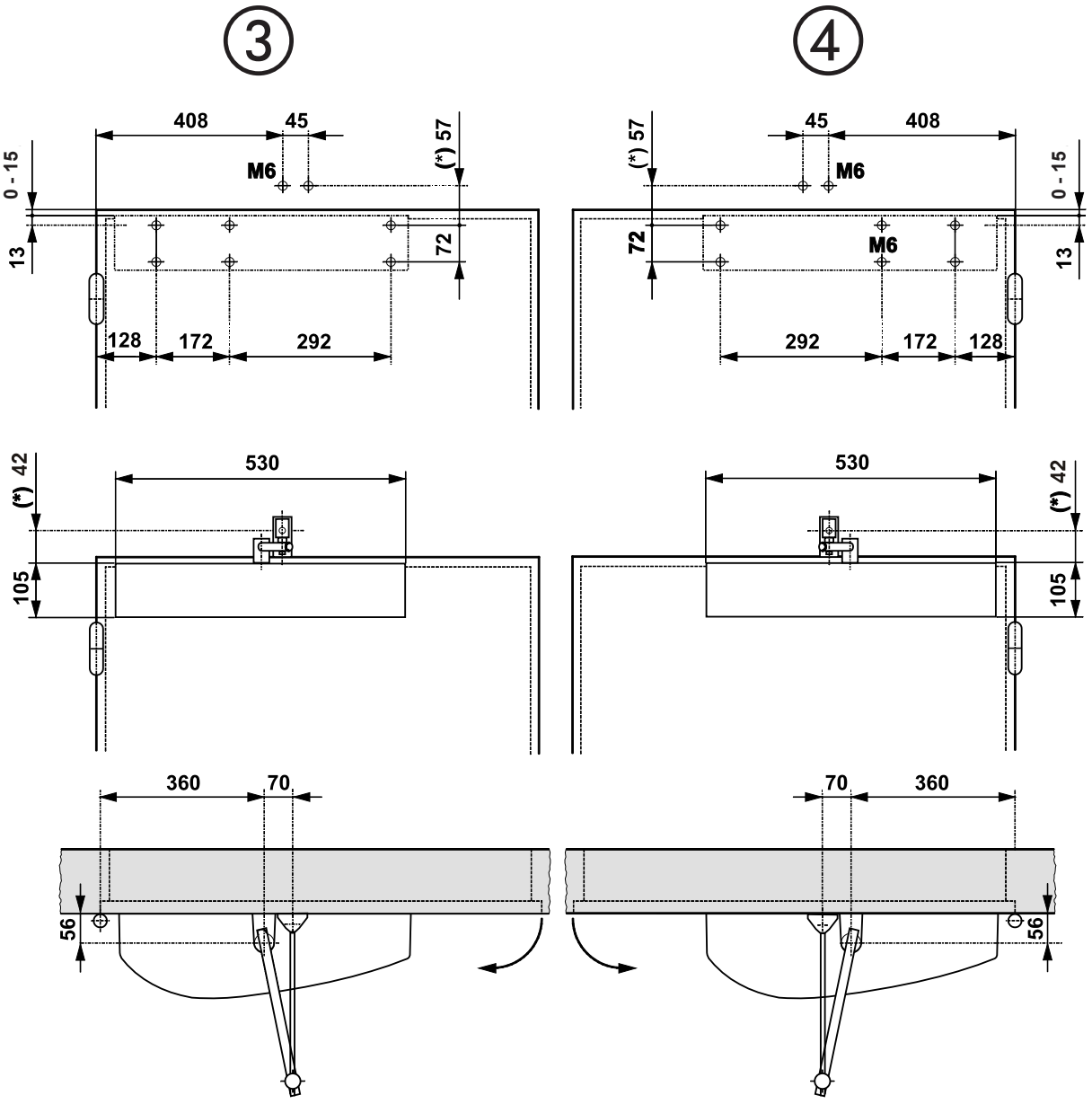
* Cote avec arbre standard de 20 mm. S'il est nécessaire d'augmenter la distance entre l'opérateur et le bras, utiliser les rallonges en option (Cote avec arbre de 50 mm = 87mm. - Cote avec arbre de 80 mm = 117 mm)

* Cota con árbol estándar 20 mm. Si fuera necesario aumentar la distancia entre el operador y el brazo, utilizar los alargues opcionales (Cota con árbol 50 mm = 87mm. - Cota con árbol 80 mm = 117 mm)

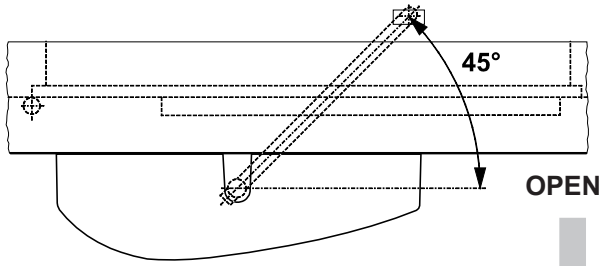
* Maß mit Standardwelle 20 mm. Wenn der Abstand zwischen dem Antrieb und dem Arm erhöht werden muss, die optionalen Verlängerungen verwenden (Maß mit 50-mm-Welle = 87 mm; Maß mit 80-mm-Welle = 117 mm)

* Afstand met standaardas 20 mm. Indien de afstand tussen de aandrijving en de arm groter moet zijn, gebruik dan de optionele verlengstukken (Afstand met as 50 mm = 87mm. - Afstand met as 80 mm = 117 mm)

* Mått med standardaxel på 20 mm. Om det är nödvändigt att öka avståndet mellan dörröppnaren och armen, använd de extra förlängningarna. (Mått med axel på 50 mm = 87 mm - mått med axel på 80 mm = 117 mm.)



BRACCIO A PATTINO
SLIDING ARM
BRAS À PATIN
BRAZO DE PATÍN
GLEITKUFENARM
ARM MET GLIJSCHOEN
GLIDARM



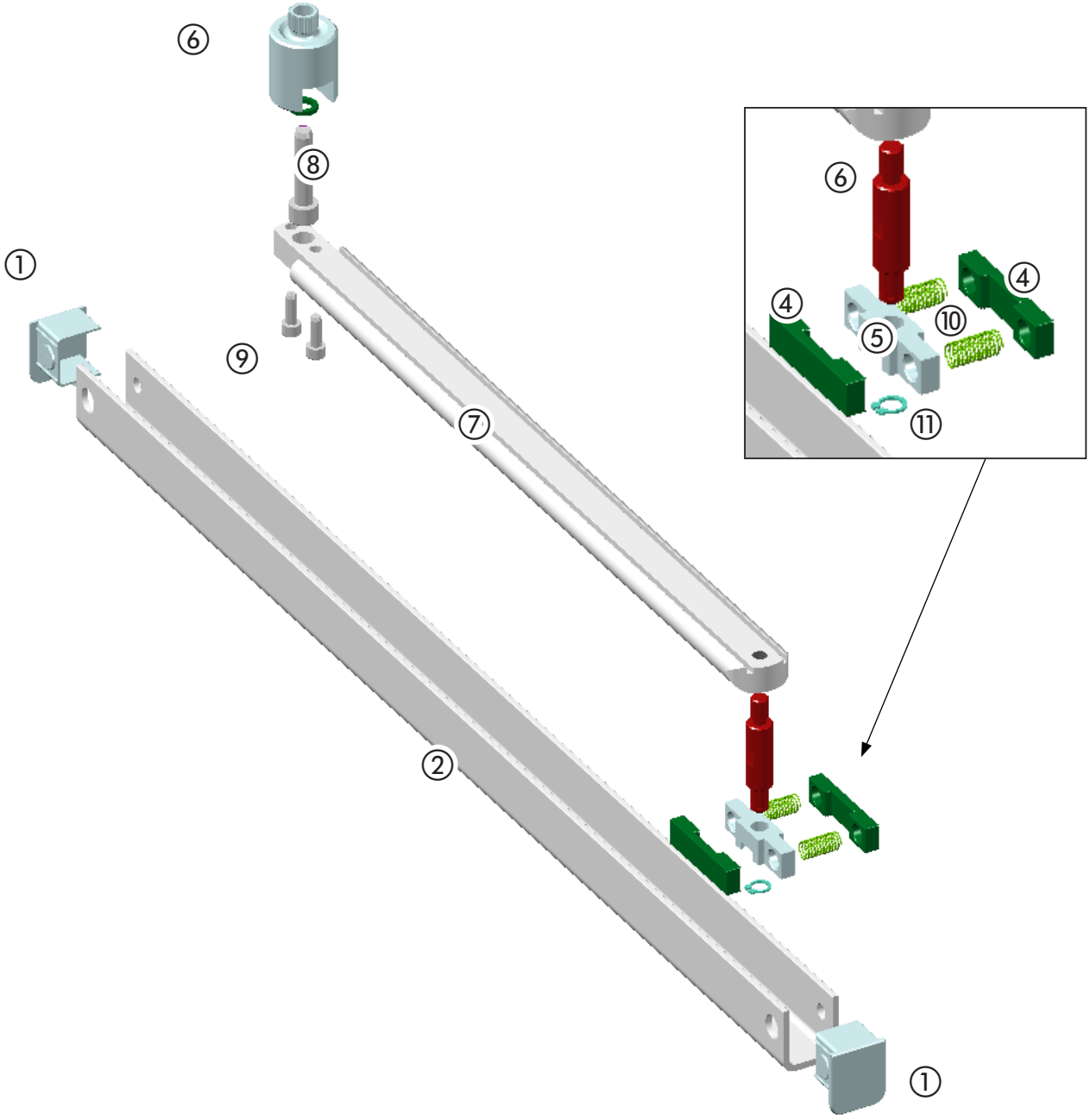
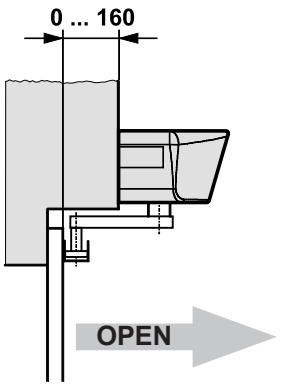


TAVOLA C : BRACCIO A PATTINO L=430 mm CON MONTAGGIO OPERATORE SULL'ARCHITRAVE
TABLE C : SLIDING ARM L=430 mm WITH OPERATOR INSTALLATION ON THE ARCHITRAVE
TABLE C : BRAS À PATIN L=430 mm AVEC MONTAGE DE L'OPÉRATEUR SUR LE LINTEAU
LÁMINA C : BRAZO DE PATÍN L=430 mm CON MONTAJE DEL OPERADOR EN EL DINTEL
ÜBERSICHT C : GLEITKUFENARM L = 430 mm MIT MONTAGE DES ANTRIEBS AM STURZ
TEKENING C : ARM MET GLIJSCHOEN L=430 mm MET MONTAGE AANDRIJVING OP DE BOVENDORPEL
BILD C : ARM MET GLIJSCHOEN L=430 mm MET MONTAGE AANDRIJVING OP DE BOVENDORPEL



* Quota con albero standard 20 mm. Nel caso fosse necessario aumentare la distanza tra l'operatore ed il braccio, utilizzare le prolunghe opzionali (Quota con albero 50 mm = 107mm. - Quota con albero 80 mm = 137 mm)

* Standard shaft dimension 20 mm. Should it become necessary to increase the distance between the operator and the arm, use the optional extensions (dimension with 50 mm shaft = 107 mm - with 80 mm shaft = 137 mm)

* Cote avec arbre standard de 20 mm. S'il est nécessaire d'augmenter la distance entre l'opérateur et le bras, utiliser les rallonges en option (Cote avec arbre de 50 mm = 107mm. - Cote avec arbre de 80 mm = 137 mm)

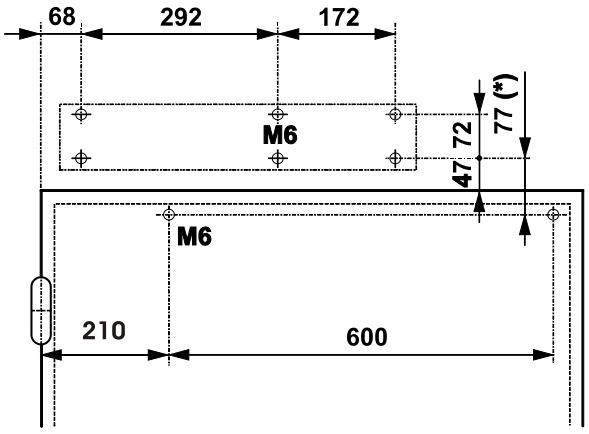
* Cota con árbol estándar 20 mm. Si fuera necesario aumentar la distancia entre el operador y el brazo, utilizar los alargues opcionales (Cota con árbol 50 mm = 107mm. - Cota con árbol 80 mm = 137 mm)

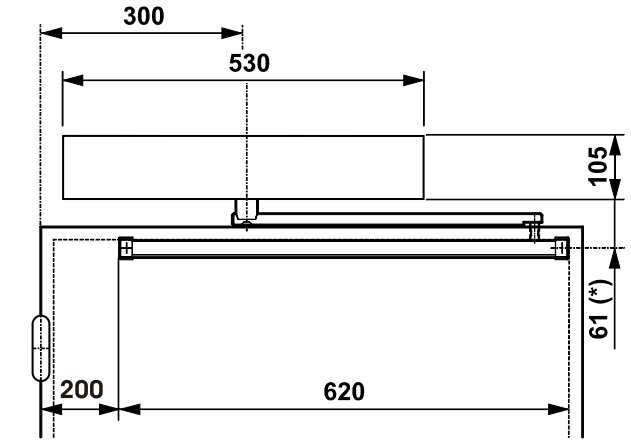
* Maß mit Standardwelle 20 mm. Wenn der Abstand zwischen dem Antrieb und dem Arm erhöht werden muss, die optionalen Verlängerungen verwenden (Maß mit 50-mm-Welle = 107 mm; Maß mit 80-mm-Welle = 137 mm)

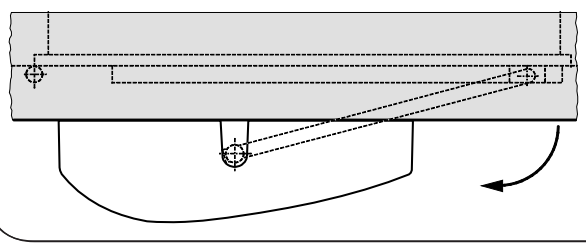
* Afstand met standaardas 20 mm. Indien de afstand tussen de aandrijving en de arm groter moet zijn, gebruik dan de optionele verlengstukken (Afstand met as 50 mm = 107mm. - Afstand met as 80 mm = 137 mm)

* Mått med standardaxel 20 mm. Om det är nödvändigt att öka avståndet mellan dörröppnaren och armen, använd de extra förlängningarna. (Mått med axel på 50 mm = 107mm - mått med axel 80 mm = 137 mm.)

5







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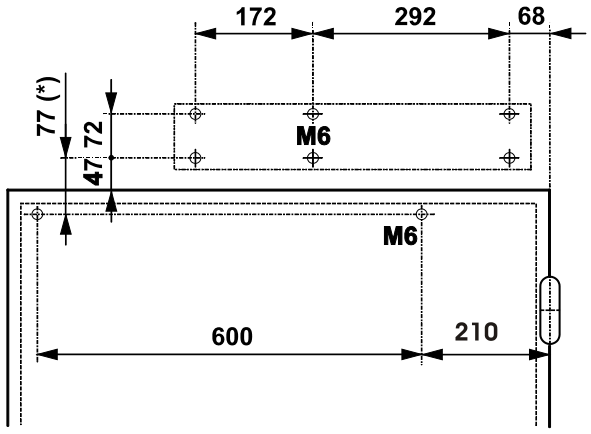
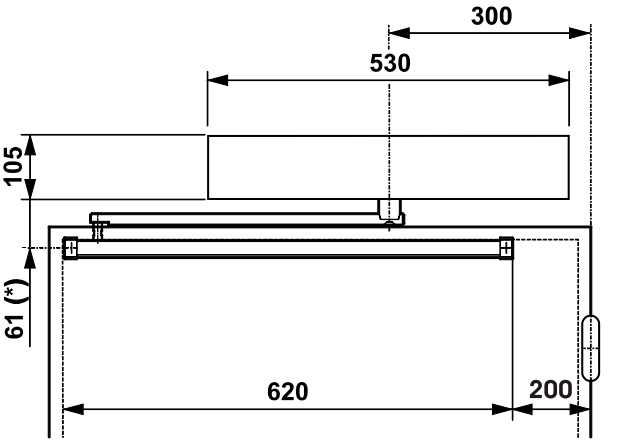




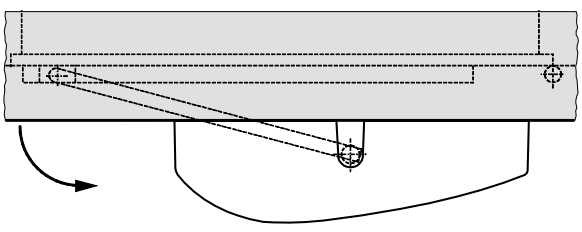
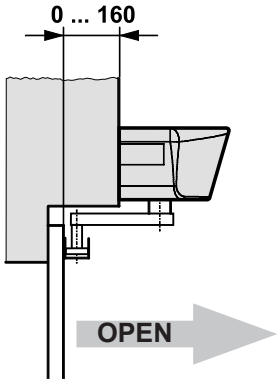


TAVOLA D : BRACCIO A PATTINO L=330 mm CON MONTAGGIO OPERATORE SULL'ARCHITRAVE
TABLE D : SLIDING ARM L=330 mm WITH OPERATOR INSTALLATION ON THE ARCHITRAVE
TABLE D : BRAS À PATIN L=330 mm AVEC MONTAGE DE L'OPÉRATEUR SUR LE LINTEAU
LÁMINA D : BRAZO DE PATÍN L=330 mm CON MONTAJE DEL OPERADOR EN EL DINTEL
ÜBERSICHT D : GLEITKUFENARM L = 330 mm MIT MONTAGE DES ANTRIEBS AM STURZ
TEKENING D : ARM MET GLIJSCHOEN L=330 mm MET MONTAGE AANDRIJVING OP DE BOVENDORPEL
BILD D : GLIDARM L = 330 mm MED DÖRRÖPPNAREN MONTERAD PÅ KARMÖVERSTYCKET



* Quota con albero standard 20 mm. Nel caso fosse necessario aumentare la distanza tra l'operatore ed il braccio, utilizzare le prolunghe opzionali (Quota con albero 50 mm = 107mm. - Quota con albero 80 mm = 137 mm)

* Standard shaft dimension 20 mm. Should it become necessary to increase the distance between the operator and the arm, use the optional extensions (dimension with 50 mm shaft = 107 mm - with 80 mm shaft = 137 mm)

* Cote avec arbre standard de 20 mm. S'il est nécessaire d'augmenter la distance entre l'opérateur et le bras, utiliser les rallonges en option (Cote avec arbre de 50 mm = 107mm. - Cote avec arbre de 80 mm = 137 mm)

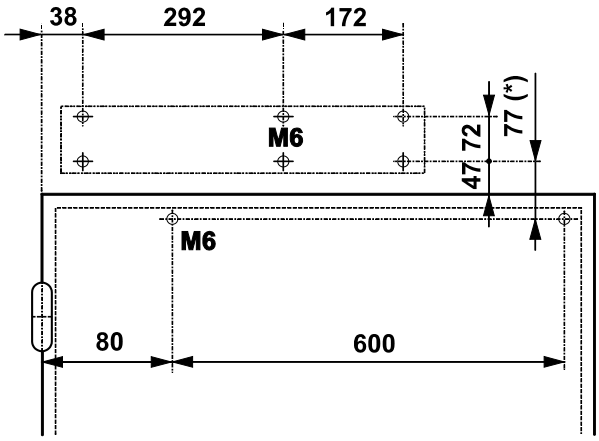
* Cota con árbol estándar 20 mm. Si fuera necesario aumentar la distancia entre el operador y el brazo, utilizar los alargues opcionales (Cota con árbol 50 mm = 107mm. - Cota con árbol 80 mm = 137 mm)

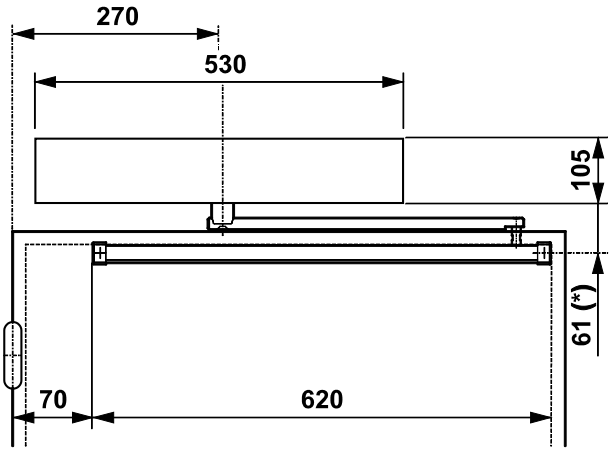
* Maß mit Standardwelle 20 mm. Wenn der Abstand zwischen dem Antrieb und dem Arm erhöht werden muss, die optionalen Verlängerungen verwenden (Maß mit 50-mm-Welle = 107 mm; Maß mit 80-mm-Welle = 137 mm)

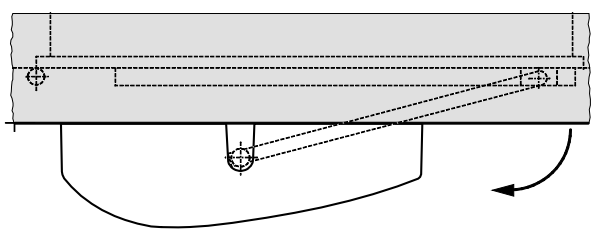
* Afstand met standaardas 20 mm. Indien de afstand tussen de aandrijving en de arm groter moet zijn, gebruik dan de optionele verlengstukken (Afstand met as 50 mm = 107mm. - Afstand met as 80 mm = 137 mm)

* Mått med standardaxel 20 mm. Om det är nödvändigt att öka avståndet mellan dörröppnaren och armen, använd de extra förlängningarna. (Mått med axel på 50 mm = 107mm - mått med axel 80 mm = 137 mm.)

7







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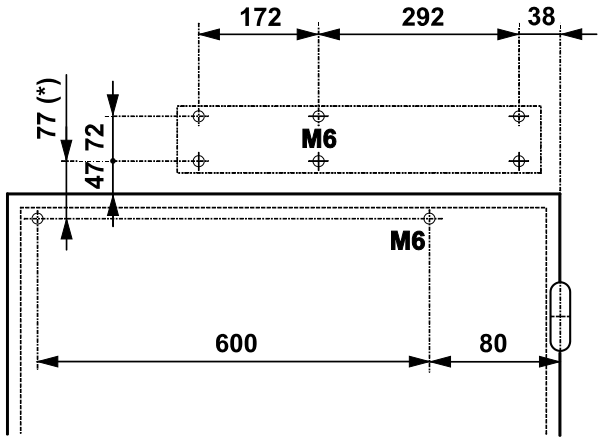
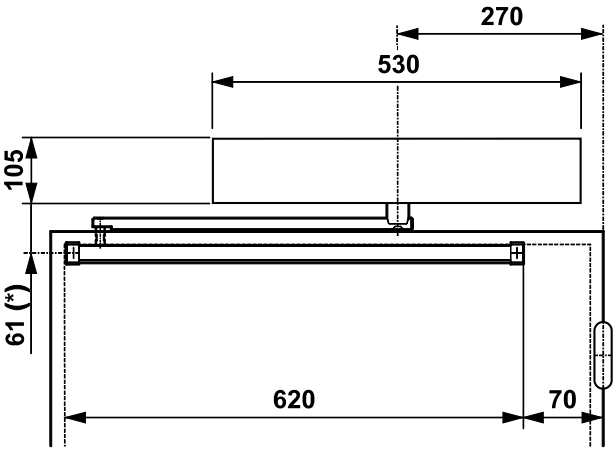
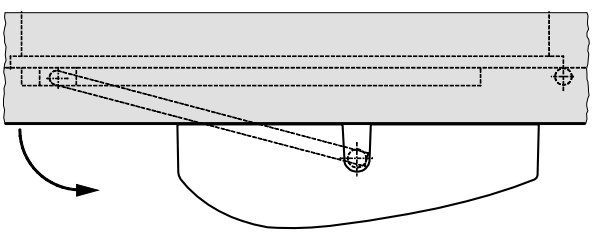
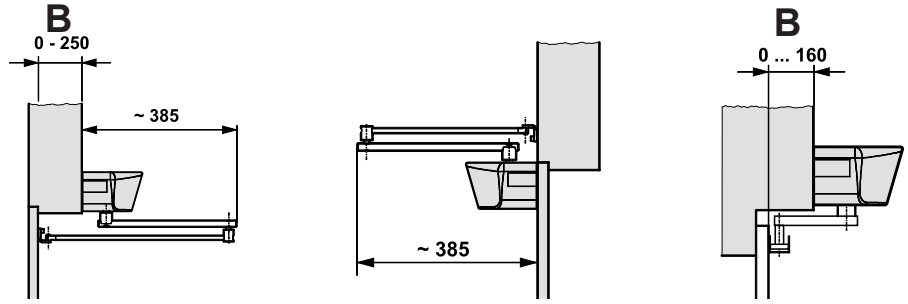






LOW ENERGY



BRACCIO ARTICOLATO (B=250-160 mm)- ARTICULATED PUSH ARM (B=250-160 mm) - BRAS ARTICULÉ À POUSSÉE (B=250-160 mm) - BRAZO ARTICULADO DE EMPUJE (B=250-160 mm)- DRUCKGELENKARM (B=250-160 mm) - KNIKARM MET DUWSYSTEEM (B=250-160 mm) - LEDAD ARM (B = 250-160 mm)

- LUNGHEZZA ANTA - LEAF LENGTH - LONGUEUR VANTAIL - FLÜGELLÄNGE - LONGITUD HOJA - LENGTE VLEUGEL DÖRRBLADETS LÄNGD (mm)	PESO PORTA - LEAF WEIGHT - POIDS VANTAIL - FLÜGELGEWICHT - PESO DE LA HOJA - GEWICHT VLEUGEL - DÖRRBLADETS VIKT (Kg)											
	20	40	80	100	120	140	160	180	200	220	240	260
700	8	5	3	2	2	2	1	1	1	1	1	1
800	7	4	2	2	1	1	1	1	1			
900	6	3	2	1	1	1	1					
1000	5	3	1	1	1							
1100	4	2	1	1								
1200	4	2	1									
1300	3	2										
1400	3	1										

- Velocità apertura e chiusura da impostare tramite KP CONTROLLER
- Opening and closing speed to be set via KP CONTROLLER
- Vitesse d'ouverture et de fermeture à régler par KP CONTROLLER
- Über den KP CONTROLLER einzugebende Öffnungs- und Schließungsgeschwindigkeit
- Velocidad de apertura y cierre para configurar mediante KP CONTROLLER
- Snelheid openen en sluiten in te stellen via KP CONTROLLER
- Öppnings- och stängningshastighet ställs in med programmeringsenheten KP CONTROLLER

BRACCIO ARTICOLATO (B=0 mm-) ARTICULATED PUSH ARM (B=0 mm) - BRAS ARTICULÉ À POUSSÉE (B= 0 mm) - BRAZO ARTICULADO DE EMPUJE (B= 0 mm) - DRUCKGELENKARM (B= 0 mm) - KNIKARM MET DUWSYSTEEM (B= 0 mm) - LEDAD ARM (B = 0 mm)

- LUNGHEZZA ANTA - LEAF LENGTH - LONGUEUR VANTAIL - FLÜGELLÄNGE - LONGITUD HOJA - LENGTE VLEUGEL DÖRRBLADETS LÄNGD (mm)	PESO PORTA - LEAF WEIGHT - POIDS VANTAIL - FLÜGELGEWICHT - PESO DE LA HOJA - GEWICHT VLEUGEL - DÖRRBLADETS VIKT (Kg)											
	20	40	80	100	120	140	160	180	200	220	240	260
700	8	5	3	2	2	2	1	1	1	1	1	1
800	7	4	2	2	1	1	1	1	1			
900	6	3	2	1	1	1	1					
1000	5	3	1	1	1							
1100	4	2	1	1								
1200	4	2	1									
1300	3	2										
1400	3	1										

- Velocità apertura e chiusura da impostare tramite KP CONTROLLER
- Opening and closing speed to be set via KP CONTROLLER
- Vitesse d'ouverture et de fermeture à régler par KP CONTROLLER
- Über den KP CONTROLLER einzugebende Öffnungs- und Schließungsgeschwindigkeit
- Velocidad de apertura y cierre para configurar mediante KP CONTROLLER
- Snelheid openen en sluiten in te stellen via KP CONTROLLER
- Öppnings- och stängningshastighet ställs in med programmeringsenheten KP CONTROLLER

BRACCIO A PATTINO L=430 mm CON MONTAGGIO OPERATORE SULL'ARCHITRAVE (B=160mm)
SLIDING ARM L=430 mm WITH OPERATOR INSTALLATION ON THE ARCHITRAVE (B=160mm)
BRAS À PATIN L=430 mm AVEC MONTAGE DE L'OPÉRATEUR SUR LE LINTEAU (B=160mm)
BRAZO DE PATÍN L=430 mm CON MONTAJE DEL OPERADOR EN EL DINTEL (B=160mm)
GLEITKUFENARM L = 430 mm MIT MONTAGE DES ANTRIEBS AM STURZ (B=160mm)
ARM MET GLIJSCHOEN L=430 mm MET MONTAGE AANDRIJVING OP DE BOVENDORPEL (B=160mm)
GLIDARM L = 430 mm MED DÖRRÖPPNAREN MONTERAD PÅ KARMÖVERSTYCKET (B = 160 mm)

- LUNGHEZZA ANTA - LEAF LENGTH - LONGUEUR VANTAIL - FLÜGELLÄNGE - LONGITUD HOJA - LENGTE VLEUGEL DÖRRBLADETS LÄNGD (mm)	PESO PORTA - LEAF WEIGHT - POIDS VANTAIL - FLÜGELGEWICHT - PESO DE LA HOJA - GEWICHT VLEUGEL - DÖRRBLADETS VIKT (Kg)													
	20	40	80	100	120	140	160	180	200	220	240	260	280	300
850	10	6	4	3	3	2	2	2	2	1	1	1	1	1
900	9	6	4	3	2	2	2	2	1	1	1	1	1	1
1000	8	5	3	2	2	2	1	1	1	1	1	1	1	
1100	7	4	2	2	2	1	1	1	1	1				
1200	6	4	2	2	1	1	1	1						
1300	6	3	2	1	1	1	1							
1400	5	3	1	1	1	1								

- Velocità apertura e chiusura da impostare tramite KP CONTROLLER
- Opening and closing speed to be set via KP CONTROLLER
- Vitesse d'ouverture et de fermeture à régler par KP CONTROLLER
- Über den KP CONTROLLER einzugebende Öffnungs- und Schließungsgeschwindigkeit
- Velocidad de apertura y cierre para configurar mediante KP CONTROLLER
- Snelheid openen en sluiten in te stellen via KP CONTROLLER
- Öppnings- och stängningshastighet ställs in med programmeringsenheten KP CONTROLLER

BRACCIO A PATTINO L=430 mm CON MONTAGGIO OPERATORE SULL'ARCHITRAVE (B=80mm)
SLIDING ARM L=430 mm WITH OPERATOR INSTALLATION ON THE ARCHITRAVE (B=80mm)
BRAS À PATIN L=430 mm AVEC MONTAGE DE L'OPÉRATEUR SUR LE LINTEAU (B=80mm)
BRAZO DE PATÍN L=430 mm CON MONTAJE DEL OPERADOR EN EL DINTEL (B=80mm)
GLEITKUFENARM L = 430 mm MIT MONTAGE DES ANTRIEBS AM STURZ (B=80mm)
ARM MET GLIJSCHOEN L=430 mm MET MONTAGE AANDRIJVING OP DE BOVENDORPEL (B=80mm)
GLIDARM L= 430 mm MED DÖRRÖPPNAREN MONTERAD PÅ KARMÖVERSTYCKET (B = 80 mm)

- LUNGHEZZA ANTA - LEAF LENGTH - LONGUEUR VANTAIL - FLÜGELLÄNGE - LONGITUD HOJA - LENGTE VLEUGEL DÖRRBLADETS LÄNGD (mm)	PESO PORTA - LEAF WEIGHT - POIDS VANTAIL - FLÜGELGEWICHT - PESO DE LA HOJA - GEWICHT VLEUGEL - DÖRRBLADETS VIKT (Kg)											
	20	40	80	100	120	140	160	180	200	220	240	260
850	8	5	3	2	2	2	1	1	1	1	1	1
900	7	4	2	2	2	1	1	1	1	1		
1000	6	4	2	2	1	1	1	1				
1100	5	3	1	1	1	1						
1200	5	3	1	1	1							
1300	4	2	1	1								
1400	4	2	1									

- Velocità apertura e chiusura da impostare tramite KP CONTROLLER
- Opening and closing speed to be set via KP CONTROLLER
- Vitesse d'ouverture et de fermeture à régler par KP CONTROLLER
- Über den KP CONTROLLER einzugebende Öffnungs- und Schließungsgeschwindigkeit
- Velocidad de apertura y cierre para configurar mediante KP CONTROLLER
- Snelheid openen en sluiten in te stellen via KP CONTROLLER
- Öppnings- och stängningshastighet ställs in med programmeringsenheten KP CONTROLLER

BRACCIO A PATTINO L=430 mm CON MONTAGGIO OPERATORE SULL'ARCHITRAVE (B=0 mm)
SLIDING ARM L=430 mm WITH OPERATOR INSTALLATION ON THE ARCHITRAVE (B=0mm)
BRAS À PATIN L=430 mm AVEC MONTAGE DE L'OPÉRATEUR SUR LE LINTEAU (B=0mm)
BRAZO DE PATÍN L=430 mm CON MONTAJE DEL OPERADOR EN EL DINTEL (B=10mm)
GLEITKUFENARM L = 430 mm MIT MONTAGE DES ANTRIEBS AM STURZ (B=0mm)
ARM MET GLIJSCHOEN L=430 mm MET MONTAGE AANDRIJVING OP DE BOVENDORPEL (B=0mm)
GLIDARM L= 430 mm MED DÖRRÖPPNAREN MONTERAD PÅ KARMÖVERSTYCKET (B = 0 mm)

- LUNGHEZZA ANTA - LEAF LENGTH - LONGUEUR VANTAIL - FLÜGELLÄNGE - LONGITUD HOJA - LENGTE VLEUGEL DÖRRBLADETS LÄNGD (mm)	**PESO PORTA - LEAF WEIGHT - POIDS VANTAIL - FLÜGELGEWICHT - PESO DE LA HOJA - GEWICHT VLEUGEL - DÖRRBLADETS VIKT (Kg)**											
	20	**40**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**
850	6	3	2	1	1	1	1					
900	5	3	1	1	1	1						
1000	4	2	1	1								
1100	4	2	1									
1200	3	1										
1300	2	1										
1400	2	1										

- Velocità apertura e chiusura da impostare tramite KP CONTROLLER
- Opening and closing speed to be set via KP CONTROLLER
- Vitesse d'ouverture et de fermeture à régler par KP CONTROLLER
- Über den KP CONTROLLER einzugebende Öffnungs- und Schließungsgeschwindigkeit
- Velocidad de apertura y cierre para configurar mediante KP CONTROLLER
- Snelheid openen en sluiten in te stellen via KP CONTROLLER
- Öppnings- och stängningshastighet ställs in med programmeringsenheten KP CONTROLLER

BRACCIO A PATTINO L=330 mm CON MONTAGGIO OPERATORE SULL'ARCHITRAVE (B=160mm)
SLIDING ARM L=330 mm WITH OPERATOR INSTALLATION ON THE ARCHITRAVE (B=160mm)
BRAS À PATIN L=330 mm AVEC MONTAGE DE L'OPÉRATEUR SUR LE LINTEAU (B=160mm)
BRAZO DE PATÍN L=330 mm CON MONTAJE DEL OPERADOR EN EL DINTEL (B=160mm)
GLEITKUFENARM L = 330 mm MIT MONTAGE DES ANTRIEBS AM STURZ (B=160mm)
ARM MET GLIJSCHOEN L=330 mm MET MONTAGE AANDRIJVING OP DE BOVENDORPEL (B=160mm)
GLIDARM L= 330 mm MED DÖRRÖPPNAREN MONTERAD PÅ KARMÖVERSTYCKET (B = 160mm)

- LUNGHEZZA ANTA - LEAF LENGTH - LONGUEUR VANTAIL - FLÜGELLÄNGE - LONGITUD HOJA - LENGTE VLEUGEL DÖRRBLADETS LÄNGD (mm)	**PESO PORTA - LEAF WEIGHT - POIDS VANTAIL - FLÜGELGEWICHT - PESO DE LA HOJA - GEWICHT VLEUGEL - DÖRRBLADETS VIKT (Kg)**													
	20	**40**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**
700	14	9	6	5	4	4	4	3	3	3	3	2	2	2
800	12	8	5	4	4	3	3	3	2	2	2	2	2	1

- Velocità apertura e chiusura da impostare tramite KP CONTROLLER
- Opening and closing speed to be set via KP CONTROLLER
- Vitesse d'ouverture et de fermeture à régler par KP CONTROLLER
- Über den KP CONTROLLER einzugebende Öffnungs- und Schließungsgeschwindigkeit
- Velocidad de apertura y cierre para configurar mediante KP CONTROLLER
- Snelheid openen en sluiten in te stellen via KP CONTROLLER
- Öppnings- och stängningshastighet ställs in med programmeringsenheten KP CONTROLLER

BRACCIO A PATTINO L=330 mm CON MONTAGGIO OPERATORE SULL'ARCHITRAVE (B=80mm)
SLIDING ARM L=330 mm WITH OPERATOR INSTALLATION ON THE ARCHITRAVE (B=80mm)
BRAS À PATIN L=330 mm AVEC MONTAGE DE L'OPÉRATEUR SUR LE LINTEAU (B=80mm)
BRAZO DE PATÍN L=330 mm CON MONTAJE DEL OPERADOR EN EL DINTEL (B=80mm)
GLEITKUFENARM L = 330 mm MIT MONTAGE DES ANTRIEBS AM STURZ (B=80mm)
ARM MET GLIJSCHOEN L=330 mm MET MONTAGE AANDRIJVING OP DE BOVENDORPEL (B=80mm)
GLIDARM L= 330 mm MED DÖRRÖPPNAREN MONTERAD PÅ KARMÖVERSTYCKET (B = 80 mm)

- LUNGHEZZA ANTA - LEAF LENGTH - LONGUEUR VANTAIL - FLÜGELLÄNGE - LONGITUD HOJA - LENGTE VLEUGEL DÖRRBLADETS LÄNGD (mm)	**PESO PORTA - LEAF WEIGHT - POIDS VANTAIL - FLÜGELGEWICHT - PESO DE LA HOJA - GEWICHT VLEUGEL - DÖRRBLADETS VIKT (Kg)**													
	20	**40**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**
700	13	8	5	5	4	3	3	3	3	2	2	2	2	2
800	11	7	4	4	3	3	2	2	2	2	2	1	1	1

- Velocità apertura e chiusura da impostare tramite KP CONTROLLER
- Opening and closing speed to be set via KP CONTROLLER
- Vitesse d'ouverture et de fermeture à régler par KP CONTROLLER
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- Snelheid openen en sluiten in te stellen via KP CONTROLLER
- Öppnings- och stängningshastighet ställs in med programmeringsenheten KP CONTROLLER

BRACCIO A PATTINO L=330 mm CON MONTAGGIO OPERATORE SULL'ARCHITRAVE (B=00mm)
SLIDING ARM L=330 mm WITH OPERATOR INSTALLATION ON THE ARCHITRAVE (B=0mm)
BRAS À PATIN L=330 mm AVEC MONTAGE DE L'OPÉRATEUR SUR LE LINTEAU (B=0mm)
BRAZO DE PATÍN L=330 mm CON MONTAJE DEL OPERADOR EN EL DINTEL (B=0mm)
GLEITKUFENARM L = 330 mm MIT MONTAGE DES ANTRIEBS AM STURZ (B=0mm)
ARM MET GLIJSCHOEN L=330 mm MET MONTAGE AANDRIJVING OP DE BOVENDORPEL (B=0mm)
GLIDARM L= 330 mm MED DÖRRÖPPNAREN MONTERAD PÅ KARMÖVERSTYCKET (B = 0 mm)

- LUNGHEZZA ANTA - LEAF LENGTH - LONGUEUR VANTAIL - FLÜGELLÄNGE - LONGITUD HOJA - LENGTE VLEUGEL DÖRRBLADETS LÄNGD (mm)	**PESO PORTA - LEAF WEIGHT - POIDS VANTAIL - FLÜGELGEWICHT - PESO DE LA HOJA - GEWICHT VLEUGEL - DÖRRBLADETS VIKT (Kg)**													
	20	**40**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**
700	9	6	3	3	2	2	2	2	1	1	1	1	1	1
800	8	5	3	2	2	2	1	1	1	1	1	1		

- Velocità apertura e chiusura da impostare tramite KP CONTROLLER
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- Vitesse d'ouverture et de fermeture à régler par KP CONTROLLER
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- Velocidad de apertura y cierre para configurar mediante KP CONTROLLER
- Snelheid openen en sluiten in te stellen via KP CONTROLLER
- Öppnings- och stängningshastighet ställs in med programmeringsenheten KP CONTROLLER

EC DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINE

The undersigned, representing the following manufacturer :

Manufacturer : FAAC S.p.A.

Address : Via Calari ,10 - 40069 Zola Predosa BOLOGNA - ITALIA

herewith declares that to the partly completed machinery :

Description : Automated system for swing doorsf
Model : 950N

the essential requirements of the following EC directive (including all applicable amendments)

- 2006/42/EC Machinery Directive

have been applied and fulfilled, and that the relevant technical documentation is compiled in accordance with part B of Annex VII of the above mentioned Machinery Directive.

The above identified partly completed machinery is also in compliance with the all the relevant provisions of the following EC directive (including all applicable amendments)

- 2004/108/EC EMC Directive

The following harmonized standards have been applied:

- EN 16005:2012
- EN 61000-6-2:2005
- EN 61000-6-3:2007

The above identified partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the above mentioned Machinery Directive 2006/42/EC.

Bologna, 23-04-2014

CEO
A. Marcellan

950 N

1 PRELIMINARY CHECKS

For correct operation of the automated system, the existing door structure must feature the following:

1. Length and weight corresponding to the description contained in section 3.1
2. Max. post depth corresponding to the description contained in section 3.2
3. Sturdy and rigid leaf structure.
4. Existing hinges in good condition.
5. Smooth and even movement of the leaf, without irregular friction during the entire stroke.
6. Door "neutral" position during the entire stroke. Should the door tend to close or open, check the alignment of the hinges.
7. Presence of mechanical limit switches or others integrated in the automated system being used.

2 DESCRIPTION AND TECHNICAL SPECIFICATIONS

The 950 N automated system for leaf doors is an enbloc consisting of an electromechanical device that allows door opening by means of a transmission arm. The door closes itself using a spring system.
The operator can be installed either on the architrave or directly on the door structure.
The protective housing contains the electronic control unit for system programming and operation control. The 950 N operator is a reversible operator. Therefore, in the event of power drop, the door can be opened manually.

This instruction is valid for firmware version 3.2 or later.

Automated system power supply	230 V~* or 115 V~* (+6% -10%) (* Depending on the model)
Absorbed power	100 W
Absorbed current	0,5 A
Electric motor	24 V= with encoder
Dimensions	530 x 105 x 160 L x H x D
Weight	10 Kg
Operating ambient temperature	- 20° C.....+55°C
Protection class	IP 23 (indoor use)
Maximum leaf dimensions and weight	Section 3
Use frequency	continuous
ROT	Continuous use at 55°C
Operation with no power	manual push or pull opening depending on the arm
Type of transmission arms	• Articulated • Sliding L=330 mm • Sliding L=430 mm
Anti-crushing device	With reverse in case of obstacle (standard supply)
Maximum opening angle	Section 3.3
Opening time	adjustable from 4 to 10 seconds
Closing time	adjustable from 4 to 10 seconds
Accessories power supply+ Electric lock power supply	24 V **=** 1000mA max
Operating modes (by selector switch)	Open - Automatic - Manual or Night
Pause time	adjustable from 0 to 30 seconds
Modes adjustable	With trimmer: see figure 5 With dip switch: see figures 4 and 6
Terminal board outputs	• Board fault signal • Electric lock activation • Accessories power supply • Door status signal • Exchange relay controlled from card reader • 2-leaf connection signal • Signal for interlock between two doors
Terminal board inputs	• Opening commands • Emergency command • Key command • Card reader command • Fire protection command • Opening STOP safety device with re-opening on release • Safety device with inversion during closure
Rapid connectors	• KP controller/SDK light (optional) • Radio rp, minidec, decoder board connector • Mode selector switch connector
Mode selection	• Mode selector switch • KP controller • SDK light

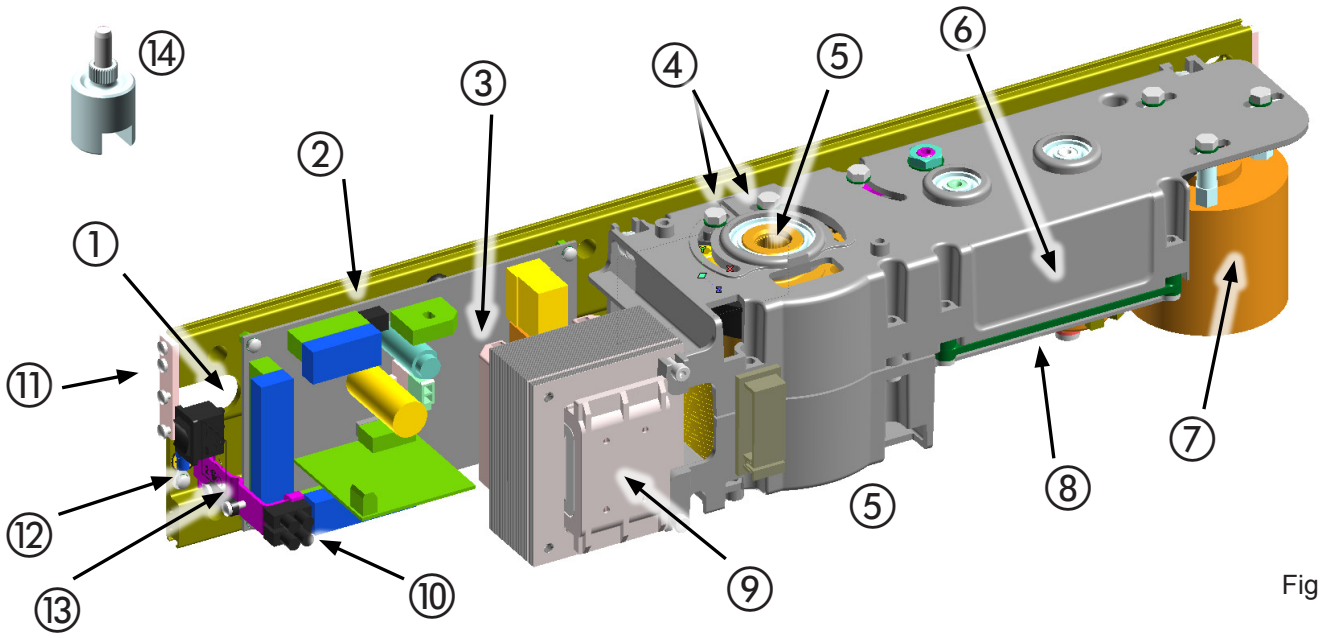


Fig.1

1. Cable routing holes
2. Support profile
3. 950 I/O unit
4. Mechanical stops adjustment
5. Motion transmission shaft coupling
6. Drive unit and return spring
7. Electric motor
8. 950 MPS programming unit
9. Transformer
10. Mains power supply terminal board
11. Housing securing bracket
12. Earthing terminal
13. Power supply cable securing terminal
14. Extension coupling (standard height 20 mm; 50 or 80 mm optional)

3 APPLICATION LIMITS

3.1 APPLICATION LIMITS DEPENDING ON LEAF WEIGHT AND LENGTH

LEAF LENGTH (mm)	MAX LEAF WEIGHT (Kg)		
	ARTICULATED PUSH ARM	SLIDING ARM L=330 mm	SLIDING ARM L=430 mm
700	367	286	
750	320	249	
800	281	219	
850	249		194
900	222		173
950	199		155
1000	180		140
1050	163		127
1100	149		116
1150	136		106
1200	125		97
1250	115		90
1300	107		83
1350	99		77
1400	92		71

3.2 MAXIMUM DOORPOST DEPTH

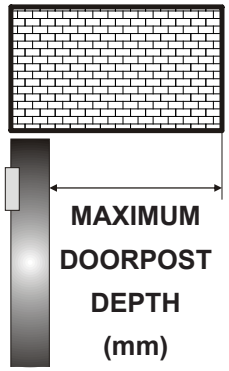


Fig.2

TABLE A	TABLE B
ARTICULATED ARM Outward opening	ARTICULATED ARM Inward opening
0 - 250 mm	0 mm

TABLE C	TABLE D
SLIDING ARM L=430 mm Inward opening	SLIDING ARM L=330 mm Inward opening
0 - 160 mm	0-160 mm

3.3 MAXIMUM DOOR OPENING ANGLE

ARTICULATED ARM		
INSTALLATION TYPE	**DOORPOST DEPTH (mm)**	**MAXIMUM OPENING ANGLE**
Operator on architrave	0	100°
	125	110°
	250	125°
Operator on door	0	100°

SLIDING ARM		
INSTALLATION TYPE	**DOORPOST DEPTH (mm)**	**MAXIMUM OPENING ANGLE**
Operator on architrave arm L=430 mm	0	90°
	160	105°
Operator on architrave arm L=330 mm	0	90°
	160	90°

4 INSTALLATION

4.1 SECURING THE OPERATOR

The architrave (or door) structure designed for securing the operator must not be warped. -The operator must be secured parallel with the floor.

Should use of a sliding arm be required, install the transmission arm before securing the operator to the architrave (see paragraph 4.2.2 or 4.2.3)

1) With regard to the operator securing position (on the architrave or door) and the type of arm used (push or sliding) refer to the corresponding installation Table and drill the holes required for securing the operator and the pull arm.

Please note: The two intermediate operator securing holes are not centred (see installation Tables). The offset holes make it possible to secure the operator in the correct sense of rotation of the mechanism. The installation Tables are as follows:

Table. A: ARCHITRAVE INSTALLATION (ARTICULATED PUSH ARM): outward opening.
Table. B: DOOR INSTALLATION (ARTICULATED PUSH ARM): inward opening.
Table. C: ARCHITRAVE INSTALLATION (SLIDING ARM LENGTH 430 mm): inward opening.
Table. D: ARCHITRAVE INSTALLATION (SLIDING ARM LENGTH 330 mm): inward opening.

2) Install the housing securing brackets (fig.1 ref. ©) and tighten the fixing screws. Insert the fixing screws in the housing, without tightening them completely.

3) Secure the operator using the six M6 screws and washers in the previously drilled holes, as per the drilling templates

4.2 INSTALLING THE TRANSMISSION ARMS

It is always advisable to adjust the mechanical stops inside the opening/ closing operator so that they are occupied when the leaf reaches its mechanical stops.

4.2.1 INSTALLING THE ARTICULATED ARM

Refer to the figure on page 1

1) Close the door.
2) Release the telescopic arm ① by loosening the coupling screws to allow it to slide.
3) Secure the coupling ② , to the operator motion transmission shaft connection, using the provided screw ⑦ so that the arm is installed perpendicular to the operator ③.
4) Secure the arm ③ to the coupling ② using the two provided screws ④ .

Should a greater distance be required between the operator and the arm, use the shaft extensions, available as accessories, until the desired distance is reached.

5) Turn the arm ③ until the arm ① is perpendicular to the closed door or architrave.
6) Secure the arm plate ⑧ to the door or to the architrave using two M6 screws and washers.
7) Tighten the four screws ⑥ securing the telescopic arm ① .
8) Manually verify that the door freely opens and closes completely and stops on the leaf mechanical stop.
Important: The two transmission arms must never touch each other.

4.2.2 INSTALLING THE SLIDING ARM (inward opening)

IMPORTANT: When installing an sliding arm, before powering the system, set micro-switch nr. 2 to ON.

Refer to the figure on page 4.

Install the arm ⑦ on the transmission shaft before securing the operator to the architrave.

1) Insert the screw ⑧ in the coupling ⑥ .
2) Secure the arm ⑦ to the coupling ⑥ using the two provided screws ⑨.
3) Insert the coupling ⑥ on the operator transmission shaft so that the arm is secured at a 45° angle outward.
4) Tighten the operator screw ⑧.

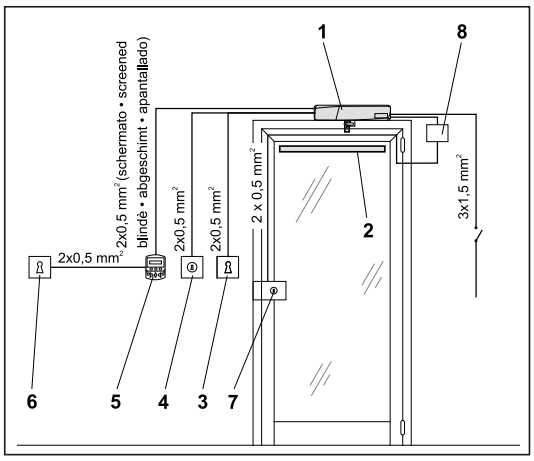
Should a greater distance be required between the operator and the arm, use the shaft extensions, available as accessories, until the desired distance is reached

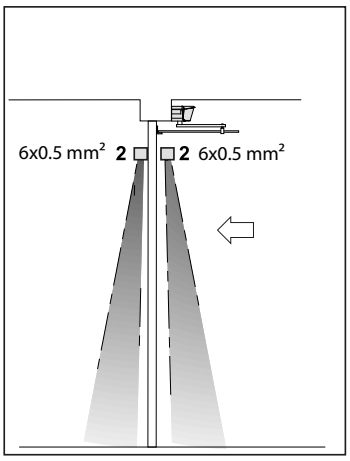
5) Screw the part ⑥ to the arm ⑦ .
6) Insert the part ⑤ into the part ⑥ and join them using a Seeger ring ⑪

7) Assemble the sliding block ④ with the springs ⑩
8) Insert the Teflon sliding block inside the track ② .
9) Manually pull the arm ⑦ inward and secure the track to the closed door using two M6 screws.
10) Insert the two lateral plugs ① in the track.
11) Manually verify that the door freely opens and closes completely and stops on the mechanical stops.

5 ELECTRICAL PREPARATIONS

For electrical cable installation, use adequate rigid and/or flexible tubes. Always separate the low-voltage accessories connection cables from the power supply cables. To avoid possible interference, use separate sheathing.





1. 950 N Operator
2. Monitored infrared sensors
3. Key release for external use (KEY command)
4. Emergency open/close button
5. KP-CONTROLLER programming unit (optional)
6. KP-CONTROLLER locking key switch (optional)
7. Electric lock 24V= max 0.5 A
8. Shunt box

In case of operator on-door installation, make all electrical connections using a shunt box and suitable flexible tubes/couplings, available commercially.

Fig.3

6 PROGRAMMING THE 950 MPS BOARD

950 MPS

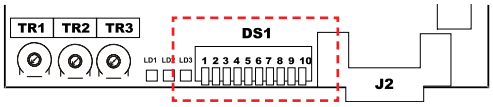
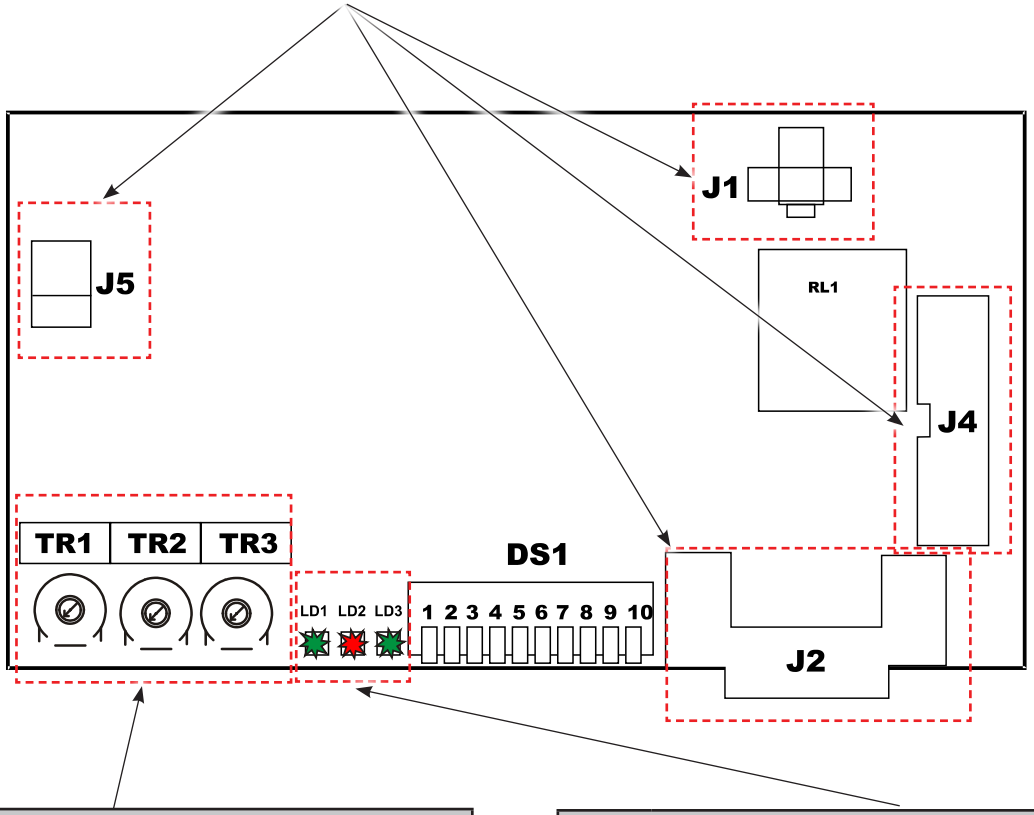


Fig.4

DS1 950 MPS SETTING				
N°	FUNCTION	OFF	ON	NOTE
1	Final closing stroke	Disabled	Enabled	In the closed door position, it allows the door to be kept constantly pressurised via the motor. (do not enable if push and go is ON)
2	Set-up procedure	Articulated arm and/or openings up to 90°	Sliding arm and/or openings greater than 90°	
3	External selector switch in position 2	Position 2 set on Manual	Position 2 set on Night	Allows to decide which mode is to be associated to position 2 of the external selector switch
4	Push and go	Disabled	Enabled	Set the outer selector switch to position 0 (automatic) and push or pull the door to open it. (do not enable if the final closing stroke is ON)
5	Leaf delay at opening (master/slave application)	Disabled	Enabled	
6	Special automatic function (Not available in the master and slave application)	Disabled	Enabled	When in automatic mode, if this parameter is enabled, the motor will not prevent manual opening. (you can't change the close speed)
7	STOP safety detection area during opening (For the sensor wiring in double-leaf configuration, refer to chapter 8.3.5)	Disabled	Enabled	Enabling this function prevents the sensor from detecting a wall or objects close to the fully open position. Not to be enabled when the users are mostly children or elderly, disabled or frail." **NOTE: when this function is enabled it is crucial to carry-out the set-up with the sensor connected.**
8	SCP (Selectable Close Powering) Additional force before closing NOTE: With dip switch 9 set to OFF, this function is never active NOTE: with dip-switch 9 OFF (low energy active) do not use this function.	Disabled	Enabled	When this function is enabled, it reduces the sensitivity of the electronic anti-crushing device. The activation of this function is useful whenever high friction, particularly hard door gaskets or electric locks with difficult latching are present.
9	FAILSAFE (safety devices test as per EN 16005) LOW ENERGY (low energy operation as required by EN 16005)	FAILSAFE TEST NOT ACTIVE LOW ENERGY ACTIVE	FAILSAFE TEST ACTIVE LOW ENERGY NOT ACTIVE	If set to the ON position, dip sw 9 selects the activation of the opening/closing function test of the safety sensors. If set to the OFF position, the sensor test is disabled and the movement of leaf can be set in the "Low energy" mode as required by Standard EN 16005. When dip switch 9 is ON, the "interlock" function and the gong are no longer available.
10	Board updating using the RS232 port	Disabled	Enabled	Allows enabling of the RS232 port for connection with the PC to perform firmware updates.

950 MPS BOARD CONNECTORS	
J1	24V= connector
J2	RS232 connector
J4	Connector for connecting to the 950 I/0 board
J5	Motor connector



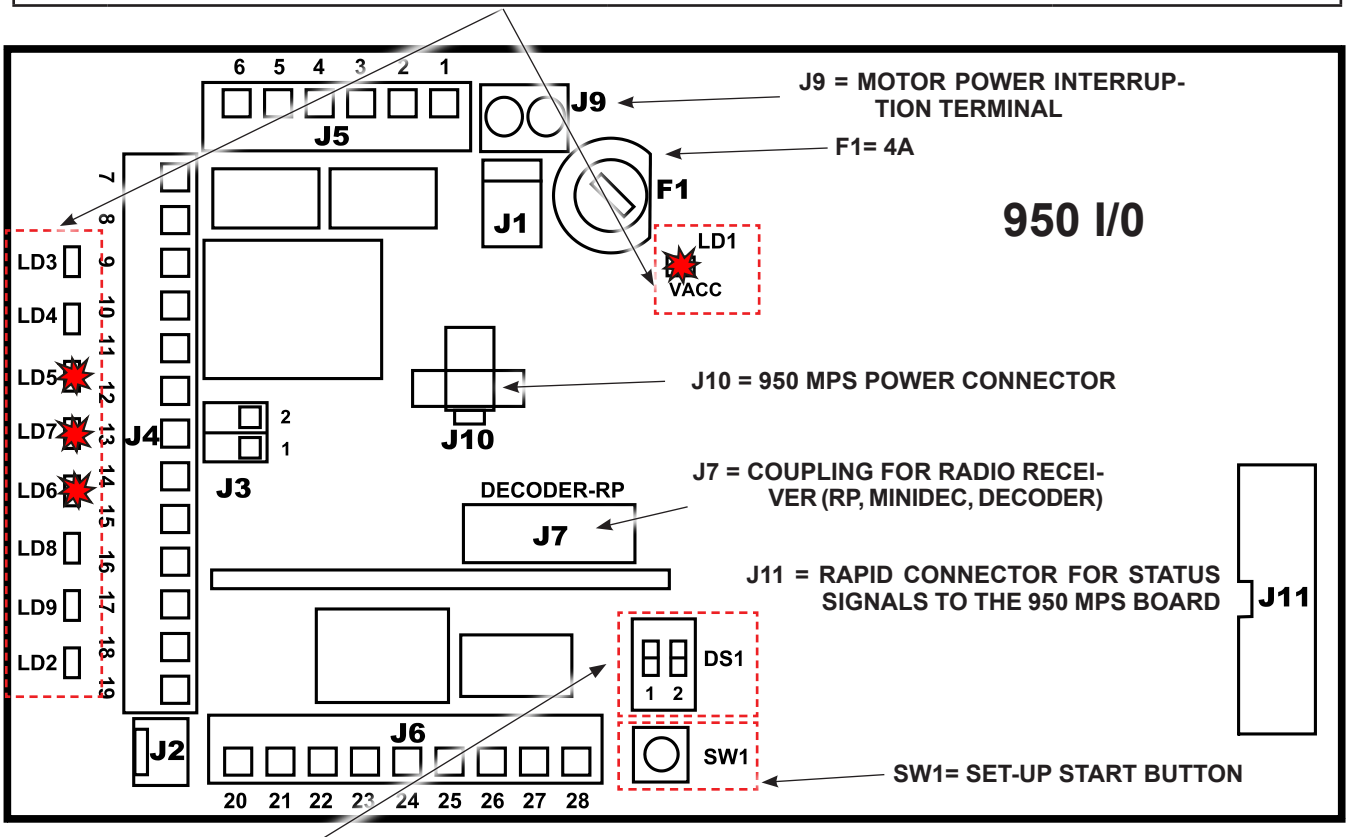
950 MPS BOARD TRIMMERS	
TR 1	Opening time adjustment (4 - 10 seconds)
TR 2	Closing time adjustment (4 - 10 seconds)
TR 3	Pause time adjustment (0 - 30 seconds)

950 MPS BOARD LEDs	
LD1	Green LED indicating the electric motor power
LD2	Red signal LED: • Rapid flashing SET-UP in progress • Slow flashing active fault
LD3	Green LED for 5 V = power supply

Fig.5

7 PROGRAMMING AND DESCRIPTION OF THE 950 I/O BOARD

950 I/O BOARD LEDs			
LED	ON	OFF	NOTE
LD1	Accessories power present	No accessories power	
LD2	Card reader active	Card reader not active	Signals the status of input 17
LD3	Internal opening command active	Internal opening sensor not active	Signals the status of input 10
LD4	External opening command active	External opening sensor not active	Signals the status of input 11
LD5	Emergency command not active	Emergency command active	Signals the status of input 12
LD6	**The opening STOP safety sensor is not engaged**	STOP safety active	Signals the status of input 13
LD7	**The closing safety sensor is not engaged**	Closing phase safety occupied	Signals the status of input 14
LD8	Key command active	Key command not active	Signals the status of input 15
LD9	Fire-prevention command active	Fire-prevention command not active	Signals the status of input 16
BOLD PRINT INDICATES THE DEFAULT CONDITION WITH DOOR IN REST POSITION			



950 I/O DS1 SETTING			
N°	FUNCTION	OFF	ON
1	Pause time following opening using the "push and go" function.	2 seconds	Value set in automatic mode (using TR3 or KP controller trimmers)
2	Opening delay for door with electric lock	200 milliseconds (the electric lock remains active up to a 70° opening)	1100 milliseconds (the electric lock remains active for over a 70° opening) Inversion stroke starting from a closed position.

Fig.6

950 O/I BOARD CONNECTORS		
J1	Secondary for transformer	
J2	Rapid connector for Manual/Night, Open, Automatic mode selector switch	
J3	Connector for KP CONTROLLER programming unit	
J5	**1**	Common contact for electric lock
	2	Normally open contact for activating the electric lock (max contact capacity 0.5A 24V). The contact will close following an open command, during the approximately 70° stroke and with the door in manual mode.
	3	Normally closed contact for activating the electric lock (max contact capacity 0.5A 24V). The contact will open following an open command, during the approximately 70° stroke and with the door in manual mode.
	4	Door closed status (normally open contact, max 0.5A / 24V). The contact will close when the door is closed.
	5	Common contact for door status
	6	Door open status (normally open contact, max 0.5A / 24V). The contact will close when the door is opened.
J4	**7-8**	GND = control board power supply negative
	9	+ 24 V= control board power supply positive
	10	Internal open command (normally open contact). In night mode does not open door.
	11	External open command (normally open contact). In night mode does not open door.
	12	Emergency command (normally closed contact). If open, it commands door closing (the mode can be modified using the KP controller)
	13	Safety command during closing phase (normally closed contact). If open during closing, it reverses the opening motion. As long as it is open it inhibits closing.
	14	Opening STOP safety device command. If open, it blocks the motion and restores it when it is no longer engaged. As long as it is open, it inhibits the opening (normally closed contact)
	15	Key command (normally open contact). If closed, it commands door opening in any mode.
	16	Fire alarm command (normally open contact). If closed, it commands door closing.
	17	Command coming from the card reader positive (24V signal = between 17 and 18). The pause time is fixed on 10 seconds.
	18-19	GND = control board power supply negative
J6	**20**	Exchanging relay - Common contact
	21	Exchanging relay - (normally open contact). This output closes when the card reader input is activated, for 2 seconds.
	22	Exchanging relay - (normally closed contact). This output opens when the card reader input is activated, for 2 seconds.
	23	Board fault output - Common contact
	24	Board fault output (normally open contact). This output closes when there is a board fault (see section 11.3)
	25	+24 V=
	26	GND = control board power supply negative
	27	Interlock output if dip 9 = OFF Failsafe output for sensor monitoring if dip 9 = ON
	28	“Two leaf” output
J9	Terminal for interrupting motor power (if interrupted, it cuts off power to the motor)	

8 950 I/0 BOARD ELECTRICAL WIRING

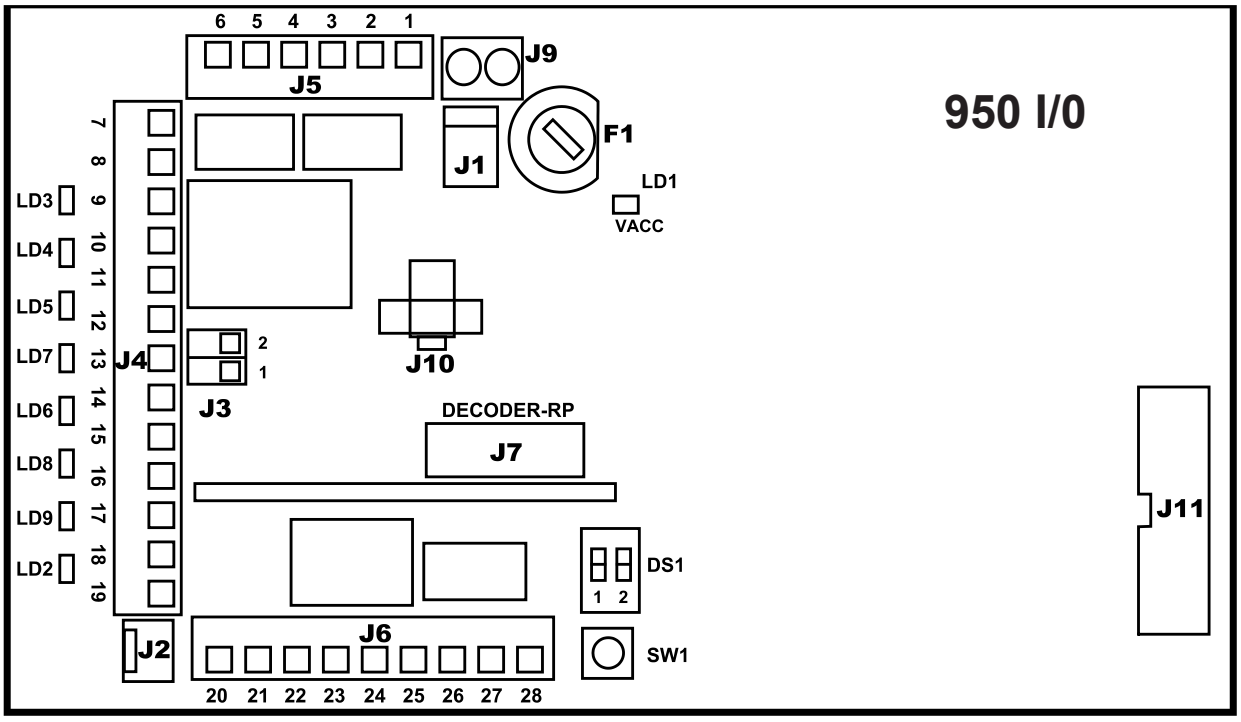


Fig.7

8.1 COMMAND INPUTS INPUT COMMANDS WITH LOW ENERGY FUNCTION ON (DIP 9 = OFF)

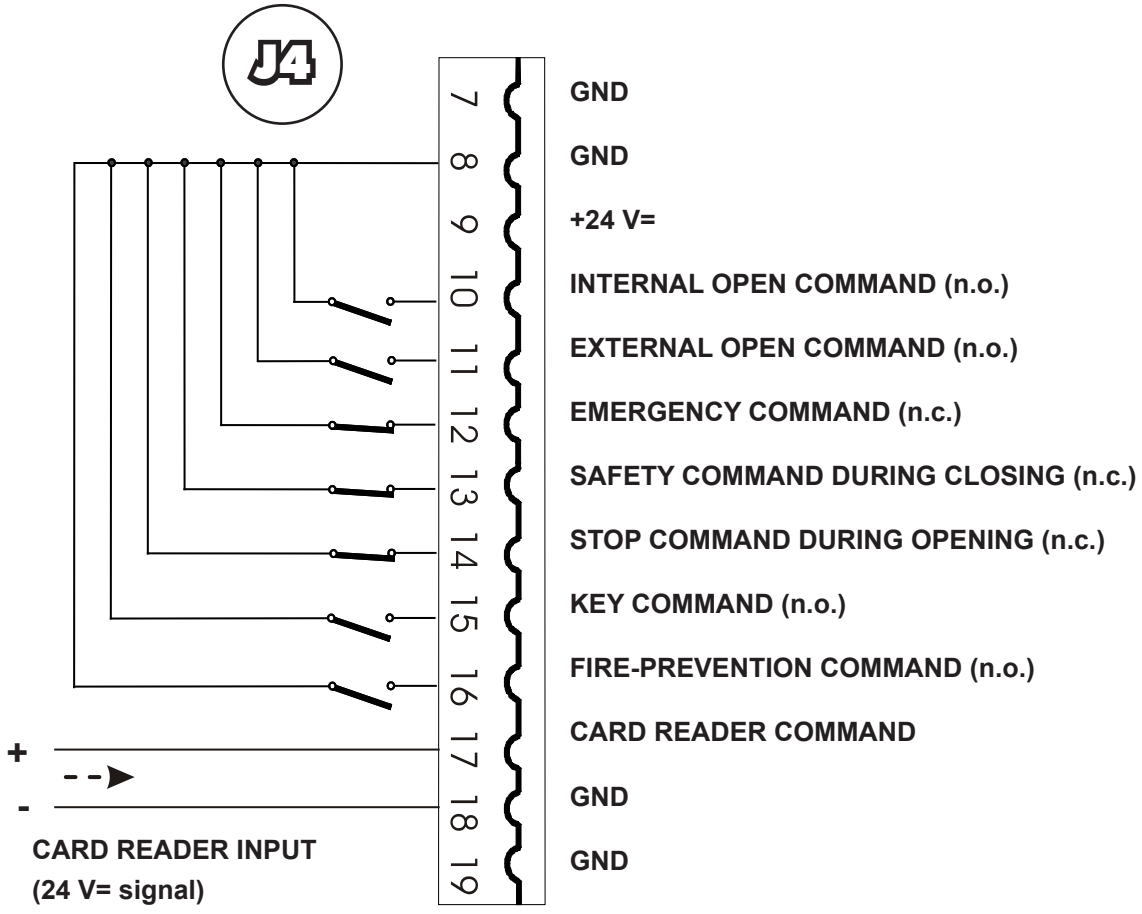


Fig.8

8.2 COMMAND/SAFETY INPUTS WITH LOW ENERGY FUNCTION OFF (DIP 9 = ON) (SAFETY SENSORS NOT MONITORED)

If non-monitored sensors are to be installed, connect the sensor contact common (NC) to terminal 27 of equipment 950 I/O. The possible input of the safety sensor not used must be connected to terminal 27.

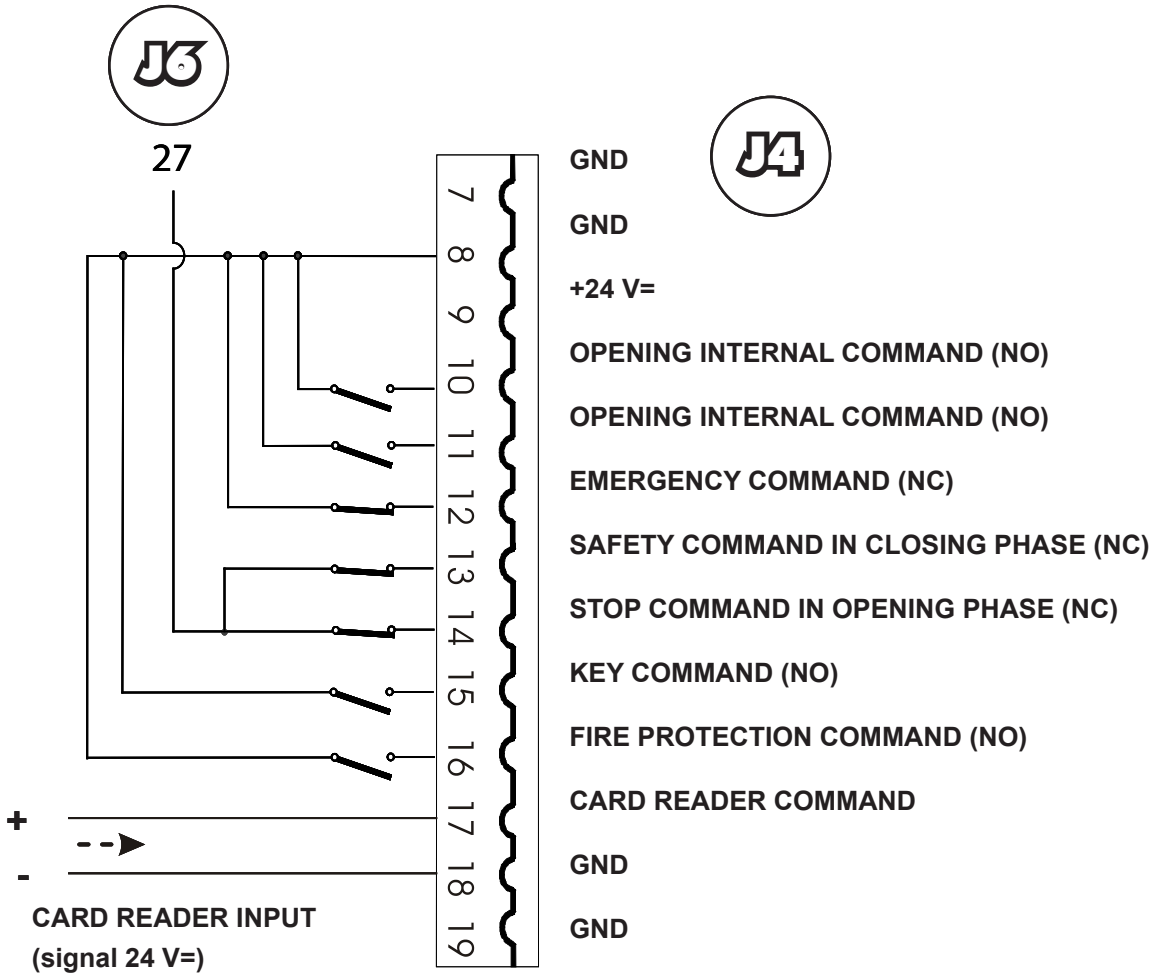


Fig.9

8.3 CONNECTING MONITORED SENSORS XPB34-1 ON / XPB70-1 ON / XPB90-2 ON AND LOW ENERGY FUNCTION OFF (DIP 9=ON)

Sensor monitoring according to EN 16005 is only guaranteed in models XPB34-1 ON / XPB70-1 ON / XPB90-2 ON. The XSH accessory must be used to connect two safety sensors per leaf in the 2-leaf configuration.

Chapters 8.3.1 - 8.3.2 - 8.3.3

Chapters 8.3.4 - 8.3.5

ENGLISH

8.3.1 CONNECTING THE OPENING SAFETY MONITORED SENSOR

XPB ON SENSOR **950 I/O BOARD**

SET DIP 1 OF THE

SENSOR TO ON

IMPORTANT: If this sensor is not present, terminal 14 must be connected to 27 of board 950 I/O.

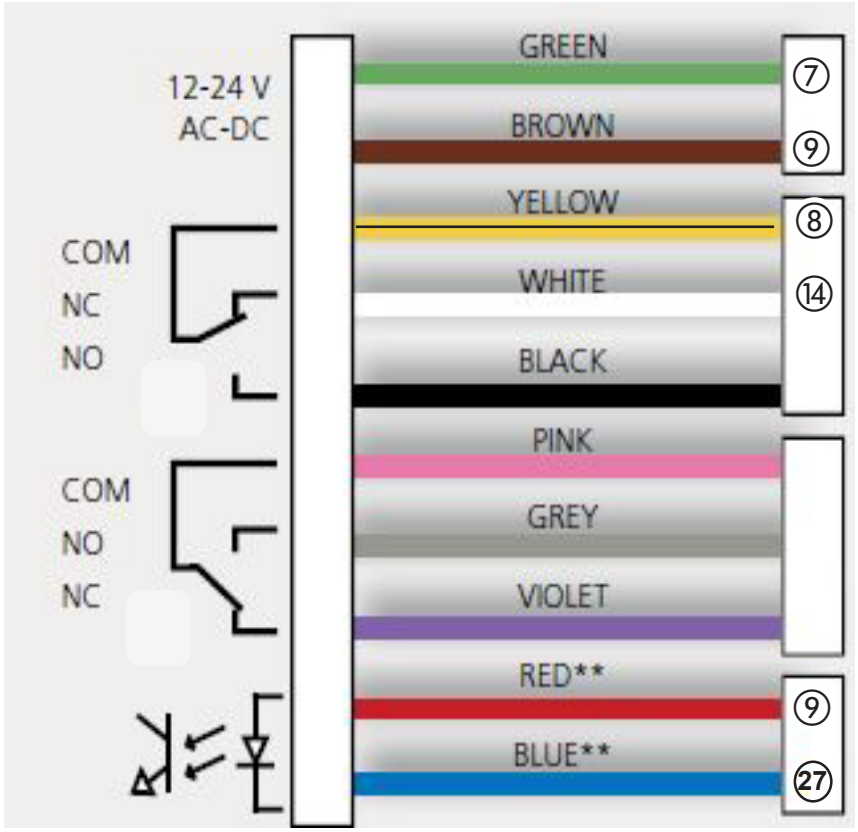


Fig.9a

8.3.2 CONNECTING THE CLOSING SAFETY MONITORED SENSOR

XPB ON SENSOR **950 I/O BOARD**

SET DIP 1 OF THE

SENSOR TO OFF

IMPORTANT: If this sensor is not present, terminal 13 must be connected to 27 of board 950 I/O.

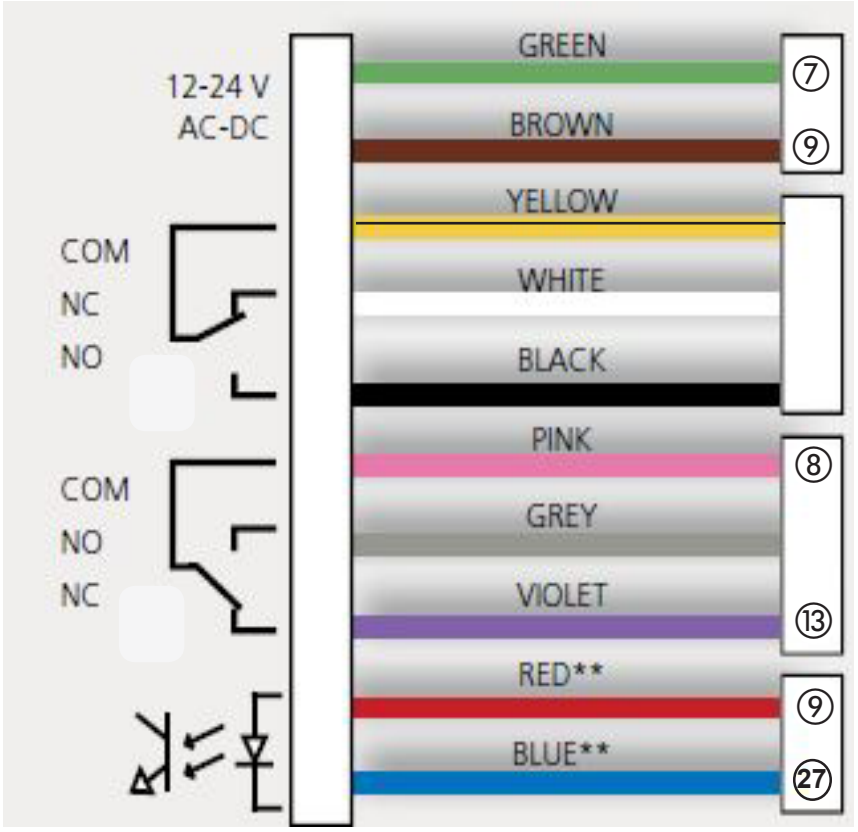
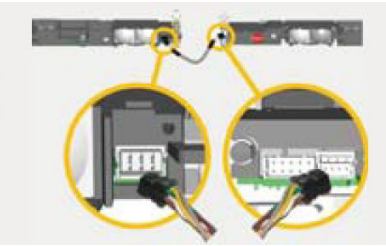


Fig.9b

8.3.3 CONNECTING THE OPENING SAFETY SENSOR AND CLOSING SAFETY SENSOR ON THE SAME LEAF WITH A CASCADE CONNECTION

1. ASSEMBLE THE SENSORS ON BOTH SIDES OF THE DOOR
2. ON THE CLOSING SAFETY SENSOR, SET DIP 1 TO OFF

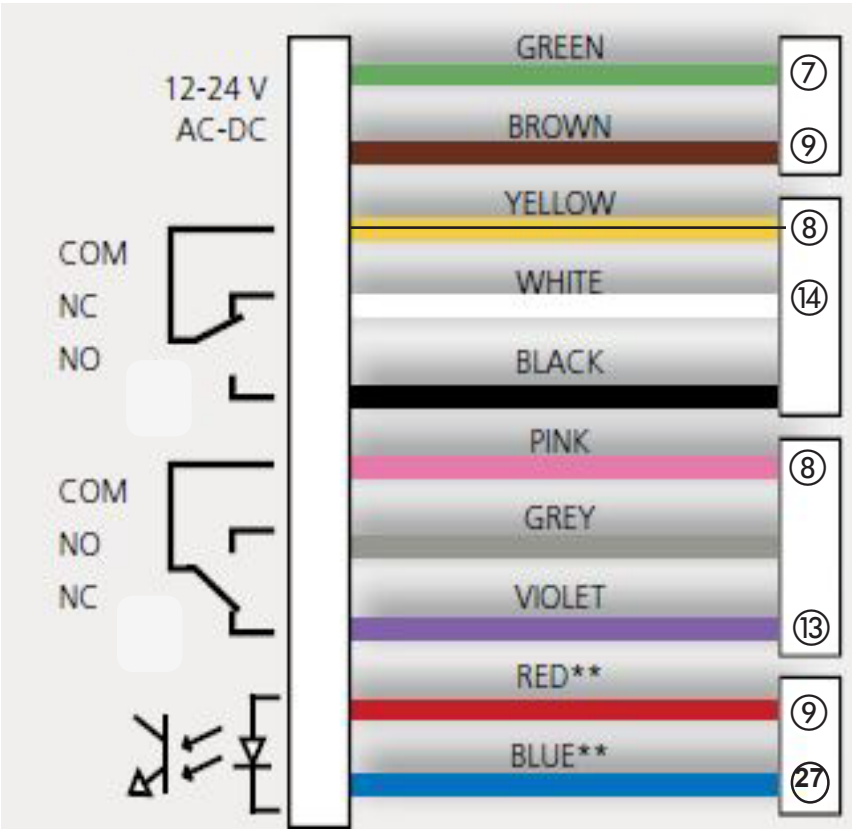
3. ON THE OPENING SAFETY SENSOR, SET DIP 1 TO ON



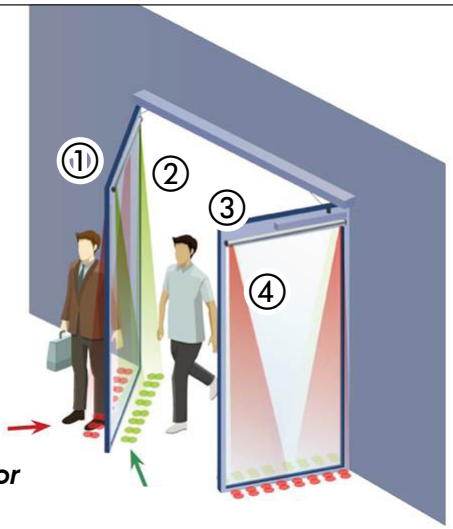
4. CONNECT THE MASTER SENSOR TO THE SLAVE SENSOR VIA THE RELATIVE WIRE

5. CONNECT THE MASTER SENSOR TO THE 950 I/O EQUIPMENT AS DESCRIBED BELOW. DO NOT CONNECT THE TERMINALS OF THE SLAVE SENSOR

XPB MASTER SENSOR ***950 I/O BOARD***



8.3.4 CONNECTING THE OPENING AND CLOSING SAFETY SENSORS WITH A DOUBLE LEAF AND XSH CONNECTION



Opening sensor

Closing sensor

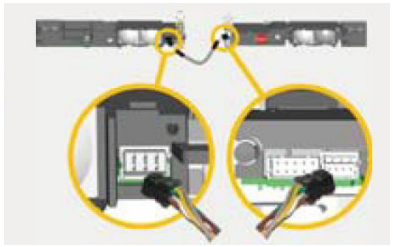
Important: Only set the dip 9 to ON (enabled sensor test) on the 950MPS master board

Use the cable supplied with the XSH for the connection between XSH and 950 I/O board

① Master leaf opening safety devicer
② Master leaf closing safety device
③ Slave leaf closing safety device
④ Slave leaf opening safety device

1. ASSEMBLE THE SENSORS ON BOTH SIDES OF THE DOOR
2. SET DIP 1 TO OFF ON THE CLOSING SAFETY SENSORS

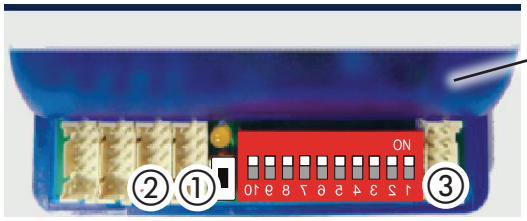
3. SET DIP 1 TO ON ON THE OPENING SAFETY SENSOR



4. CONNECT THE SENSORS OF THE SAME DOOR TO EACH OTHER

5. USE THE CABLE SUPPLIED WITH XSH TO CONNECT THE TWO GROUPS OF SENSORS TO INPUT ① AND ② RESPECTIVELY
6. USE **THE CABLE SUPPLIED WITH XSH** TO CONNECT THIS TO THE 950 I/O MASTER BOARD ACCORDING TO THE FOLLOWING DIAGRAM

DIP SWITCH XSH									
1	2	3	4	5	6	7	8	9	10
OFF	ON	ON	ON	ON	OFF	OFF	OFF	ON	OFF



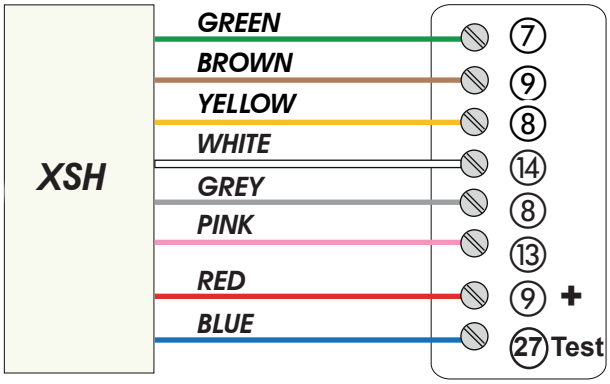
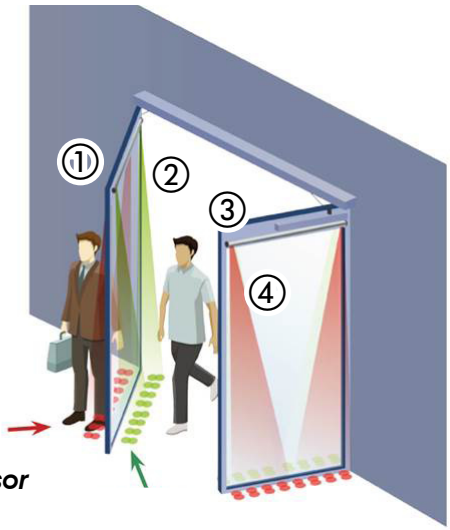


Fig.9d

950 I/O master BOARD

For more details on the XSH, refer to the instructions in this

8.3.5 CONNECTING THE OPENING AND CLOSING SAFETY SENSORS WITH A DOUBLE LEAF INPUT; CONNECTION VIA XSH AND THE POSSIBILITY OF EXCLUDING THE OPENING STOP SENSORS IN THE LAST DEGREES



Opening sensor

Closing sensor

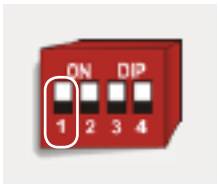
This type of wiring allows the opening safety exclusion function to be enabled in the last few centimetres before the wall on both leaves.

Important: Set dip 9 to ON (enabled sensor test) on both 950 MPS boards and dip 7 to ON (opening stop sensor exclusion in the last degrees)

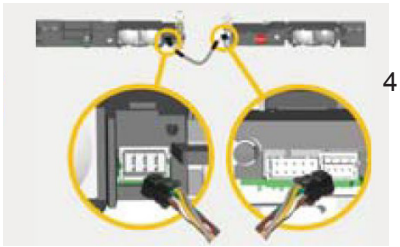
Use the cable supplied with the XSH for the connection between XSH and 950 I/O board

① Master leaf opening safety device
② Master leaf closing safety device
③ Slave leaf closing safety device
④ Slave leaf opening safety device

1. ASSEMBLE THE SENSORS ON BOTH SIDES OF THE DOOR
2. SET DIP 1 TO OFF ON THE CLOSING SAFETY SENSORS



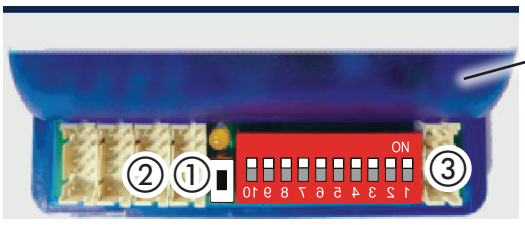
3. SET DIP 1 TO ON ON THE OPENING SAFETY SENSOR



4. CONNECT THE SENSORS OF THE MASTER DOOR TO EACH OTHER

5. TUSE THE CABLE SUPPLIED WITH XSH TO CONNECT THE SENSORS OF THE MASTER DOOR TO THE INPUT ① OF THE XSH
6. USE THE CABLE SUPPLIED WITH XSH TO CONNECT THE CLOSING SAFETY SENSOR OF THE SLAVE DOOR TO THE INPUT ② OF THE XSH
7. USE **THE CABLE SUPPLIED WITH XSH** TO CONNECT THIS TO THE 950 I/O MASTER BOARD ACCORDING TO THE FOLLOWING DIAGRAM

DIP SWITCH XSH									
1	2	3	4	5	6	7	8	9	10
OFF	ON	ON	ON	ON	OFF	OFF	OFF	ON	OFF



For more details on the XSH, refer to the instructions in this

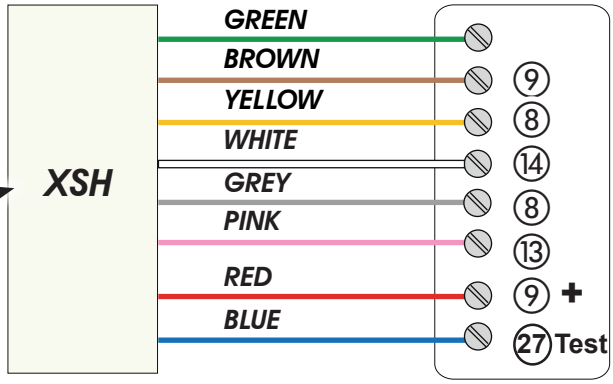


Fig.9e

950 I/O master BOARD

ENGLISH

1. CONNECT THE OPENING SAFETY SENSOR OF THE SALVE DOOR TO THE 950 I/O SLAVE BOARD WITH THE CABLE SUPPLIED WITH THE SENSOR.

SENSOR XPB ON THE SLAVE DOOR ***SLAVE 950 I/O BOARD***

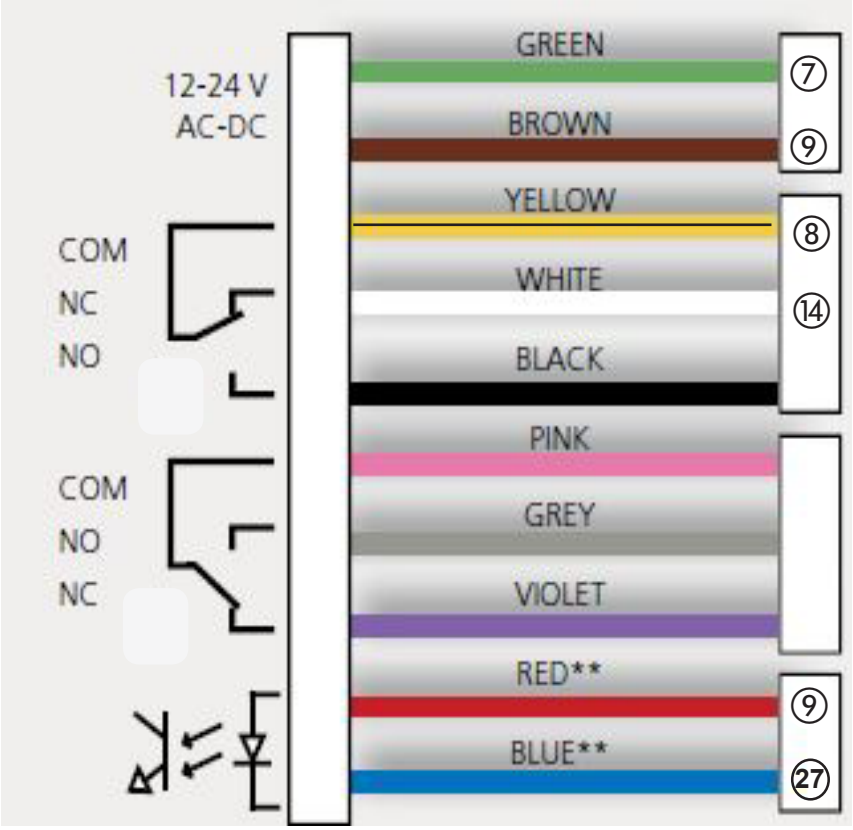


Fig.9 f

8.4 ELECTRICAL LOCK COMMAND OUTPUT

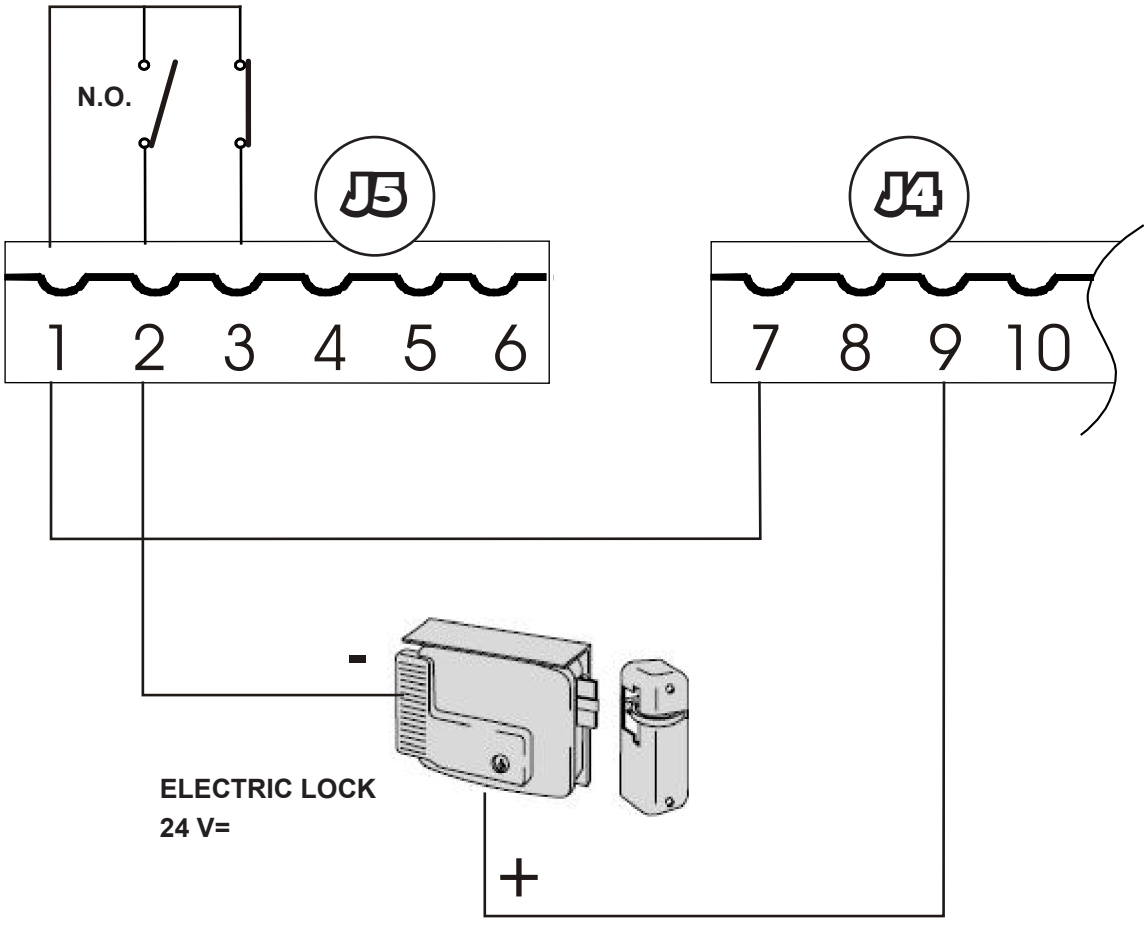


Fig.10

8.5 ELECTROMAGNET COMMAND OUTPUT

950 I/0

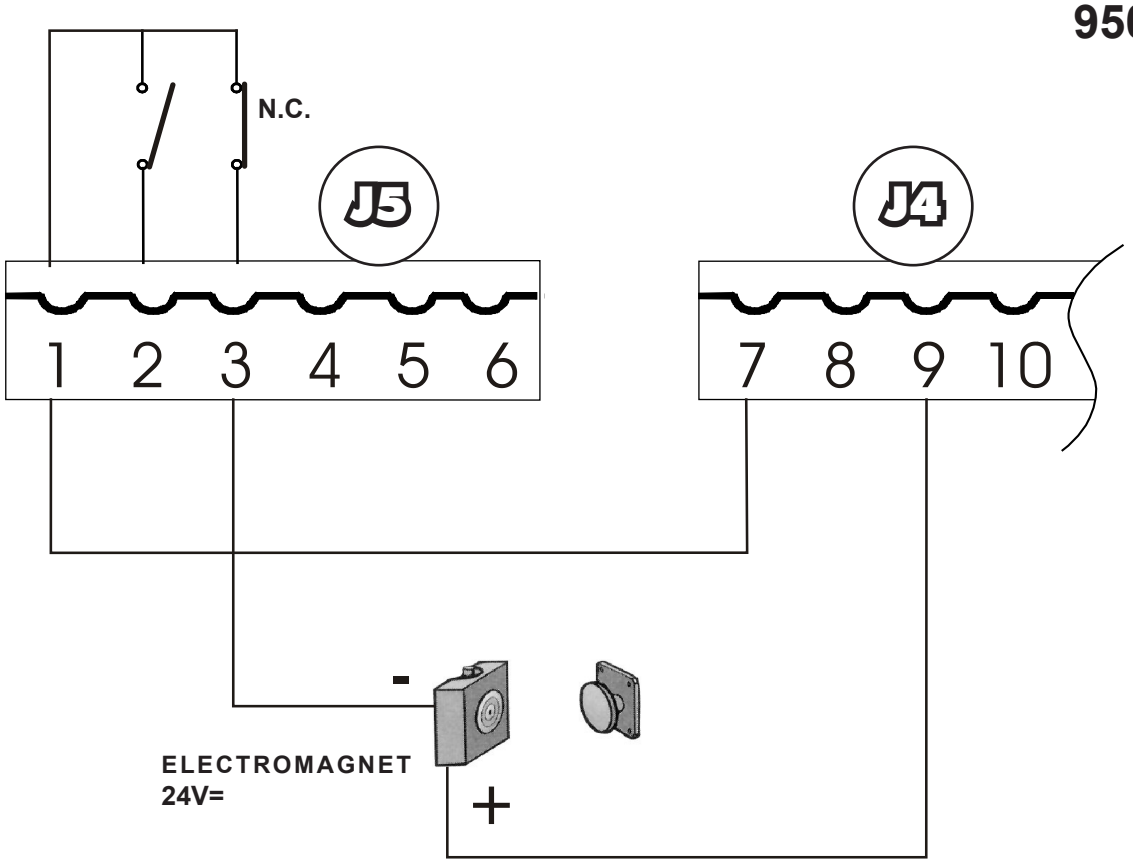


Fig.11

8.6 DOOR STATUS OUTPUT (Max contact capacity 0.5 A / 24 V=)

950 I/0

CLOSED DOOR N.O. CONTACT
(Closes when the door is closed)

OPEN DOOR N.O. CONTACT
(Closes when the door is open)

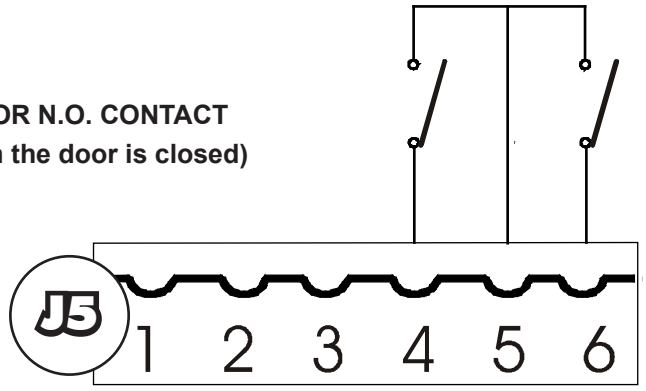


Fig.12

8.7- BOARD FAULT OUTPUT (Max contact capacity 0.5 A / 24 V=)

950 I/0

BOARD FAULT OUTPUT N.O. CONTACT
(It closes when an automated system fault is active)

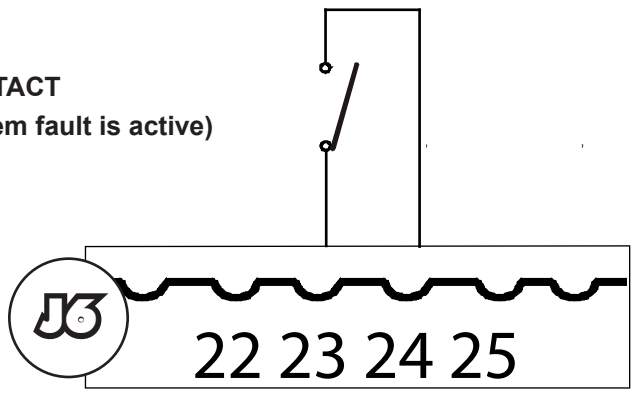
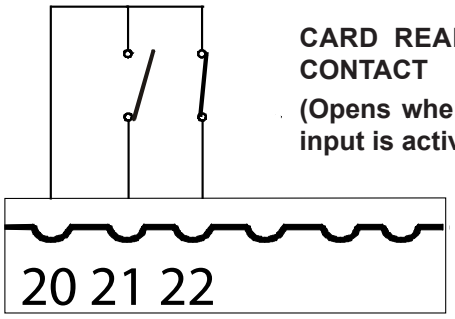


Fig.13

8.8 CARD READER CONTACT OUTPUT (Max contact capacity 0.5 A / 24 V=)

CARD READER INPUT N.O. CONTACT

(Closes when the card reader input is active)



CARD READER INPUT N.C. CONTACT

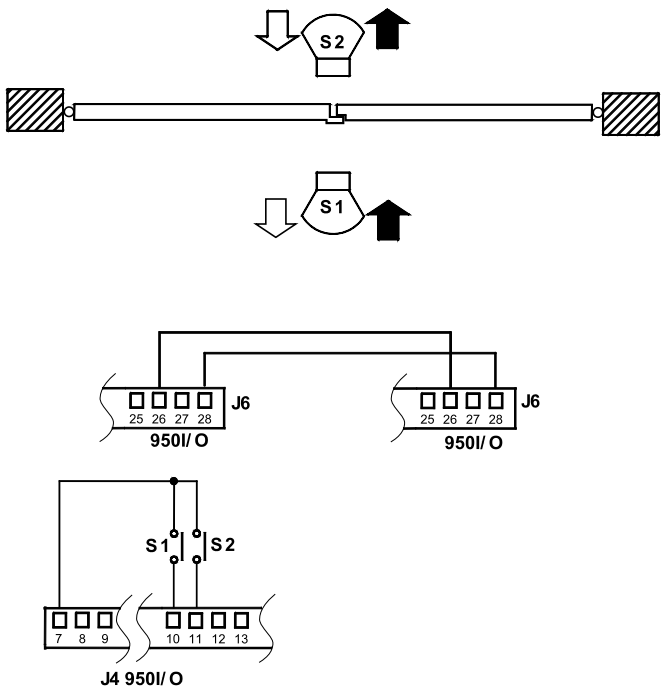
(Opens when the card reader input is active)

950 I/0

Fig.14

8.2 APPLICATION WITH 2-LEAF DOOR (MASTER AND SLAVE)

The 2 LEAVES function, adjustable via the KP CONTROLLER, allows you to control two opposing doors with a synchronised movement.
The leaf controlled by the master automated system is the first to start opening and, when it has reached the opening angle set for the leaf delay, the slave will also begin its movement. In the same way, when closing, the master will start moving only when the slave has reached the closing angle set for the leaf delay.
Detection of an obstacle by one of the two automated systems causes immediate reversal of both.



The partial opening function makes it possible to control total opening only of the master.
The operating functions must be set only on the master automated system (or on the KP-Controller connected to it).
1. Connect the 950I/O board of the two automated systems as shown in fig.
2. Connect all the sensors and pulse transmitters only to the master.
3. Programme the following functions (see advanced prog.):

- "2-Leaf" active on both doors;
- select "MASTER" for the door that must start the opening movement first and "SLAVE" for the other;
- set the same motion parameters on both automated systems;
- if you wish to disconnect the KP-Controller from the slave door, the function "MAINTAIN SETTINGS" must be set to ON;

NOTE: the set-up must be carried out independently

9 MODE SELECTION

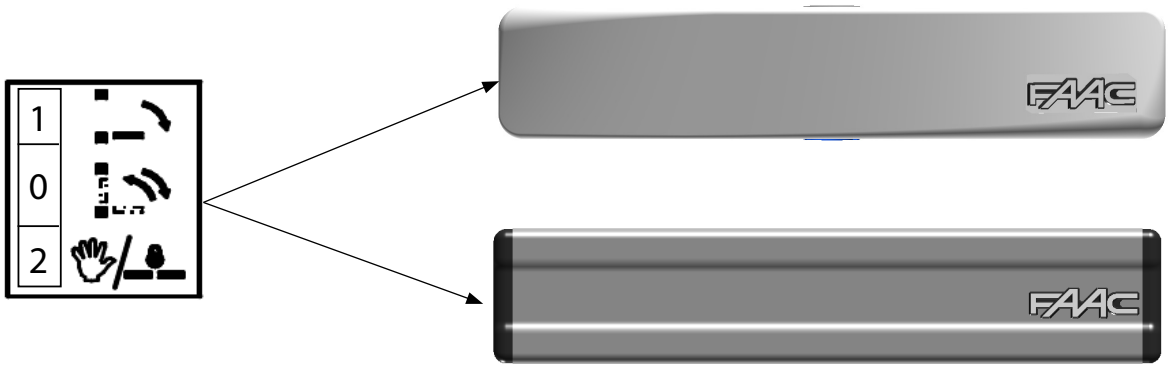


Fig.17

The 950N operator features a 3-position mode selector switch (0-1-2) located on the side of the housing. The selector switch must be set on a mode. The connection cable to the 950 I/O must be positioned so as to avoid damaging it.

If the kp controller or sdk light is used, the selector switch will have no effect on the automated system.

SELECTOR POSITION	MODE	DESCRIPTION
1 	DOOR OPEN	When this mode is selected, the door opens and stays open.
0 	AUTOMATIC	When this mode is selected, and when an internal/external command is activated, the door will open and close again after the pause time.
2  DIP N° 3 OFF	MANUAL	The door can be opened manually (the lock, if present, will remain inactive)
2  DIP N°3 ON	NIGHT	The external and internal commands are inactive. Door opening can be commanded only by activating the Key command.

ENGLISH

10 OPERATION

Make the electrical connections on the 950 I/O control board as shown in section 8, connect the electrical mains supply to the corresponding terminal (fig.I-ref. ⑩) and ensure that the earthing cable is crimped to the terminal (fig.1-ref. ⑫) screwed on to the support profile (fig.I-ref. ②). Finally, tighten the terminal (fig.I-ref. ⑬)
Set the trimmer (see fig.5) and program the micro-switches (see fig.4 and 6) depending on need. To access the equipment, run the cables through the provided conduit (fig.I-ref. ①) or open the tabs on the sides of the housing.

IMPORTANT: When installing a sliding arm or for opening greater than 90° , before powering the system, set micro-switch nr. 2 of the 950 MPS to ON.

2) Place the door in close position.
3) Power the operator.
4) Ensure that green LEDs LD1 and LD3 on the 950 MPS board are ON.
5) Ensure that the status LEDs on the 950 I/O board are in default status, as shown in the table in figure 6.
6) Perform a SET-UP cycle, as described in paragraph 10

10.1 SET-UP PROCEDURE

It is advisable to repeat the set-up procedure after having modified the opening and closing speed.

With the automated system powered, press SW1 (950 I/0) for at least 5 sec. until the red LED LD2 located on the 950 MPS board is ON. The LED will begin flashing indicating that the SET UP procedure is in progress. During this procedure the following parameters are adjusted:
- door mass measurement;
- identification of the limit switch positions;

The door will open at reduced speed and will close approximately half way and then reverse to opening.
Closing is determined by the spring return action.
The process is inhibited in one of the following conditions:

1. Mode selector switch in position 2 (MANUAL/NIGHT) or KP-CONTROLLER programmer in MANUAL or NIGHT position
2. Accessories connected incorrectly (electric lock, command/safety elements);
3. Incorrect position of the programming unit micro-switches.

To repeat the set-up process, press SW1 for more than 5 seconds. Once the procedure is completed, ensure that the door opens and closes correctly.

If a KP controller is used, the procedure can be performed directly from it.

11 FAILSAFE TEST TO MONITOR THE SAFETY SENSORS (dip switch 9 ON) EN 16005

sensor monitoring, as required by EN 16005, is only guaranteed if sensors XPB34-1 ON / XPB70-1 ON / XPB90-2 ON are used

The failsafe test allows the operator's electronic board 950N to monitor any safety sensors installed, before each movement. **Dip 9 must be set to ON in order to enable it.**
If the failsafe test is not successful, the movement in that direction is inhibited until the test is successful. If the KP Controller is connected, the following alarms are displayed:
ALARM 13 = failsafe test failed on closing -
ALARM 14 = failsafe test failed on opening.
If both alarms are triggered, the first one to be detected is displayed.

Set DIP 9 to ON for the interlock function between two doors and the gong cannot be activated.

.12 LOW ENERGY (dip switch 9 OFF) EN 16005

Standard EN 16005 stipulates that in LOW ENERGY mode, the kinetic energy of a moving door must not exceed 1.69 J. For this to happen, Dip 9 must be set to OFF and the opening and closing speed must be adjusted via the KP CONTROLLER. These settings must guarantee compliance with the values in the table below.

The "LOW ENERGY" tables found on page 7 can provide an indicative value of the speed to be set. However, the speed value set must be verified that it guarantees compliance with EN 16005.

The table provides the settings regarding the minimum opening and closing time with reference to the most common widths and masses of doors					
LEAF WIDTH (m)	LEAF WEIGHT (Kg)				
	50	60	70	80	90
	OPENING/CLOSING TIME (s)				
0.75	3.0	3.0	3.0	3.0	3.5
0.85	3.0	3.0	3.5	3.5	4.0
1.00	3.5	3.5	4.0	4.0	4.5
1.20	4.0	4.5	4.5	5.0	5.5

- Never enable the SCP function when the LOW ENERGY function is ACTIVE.

12 ASSEMBLING THE HOUSING

12.1 ASSEMBLING THE PLASTIC HOUSING

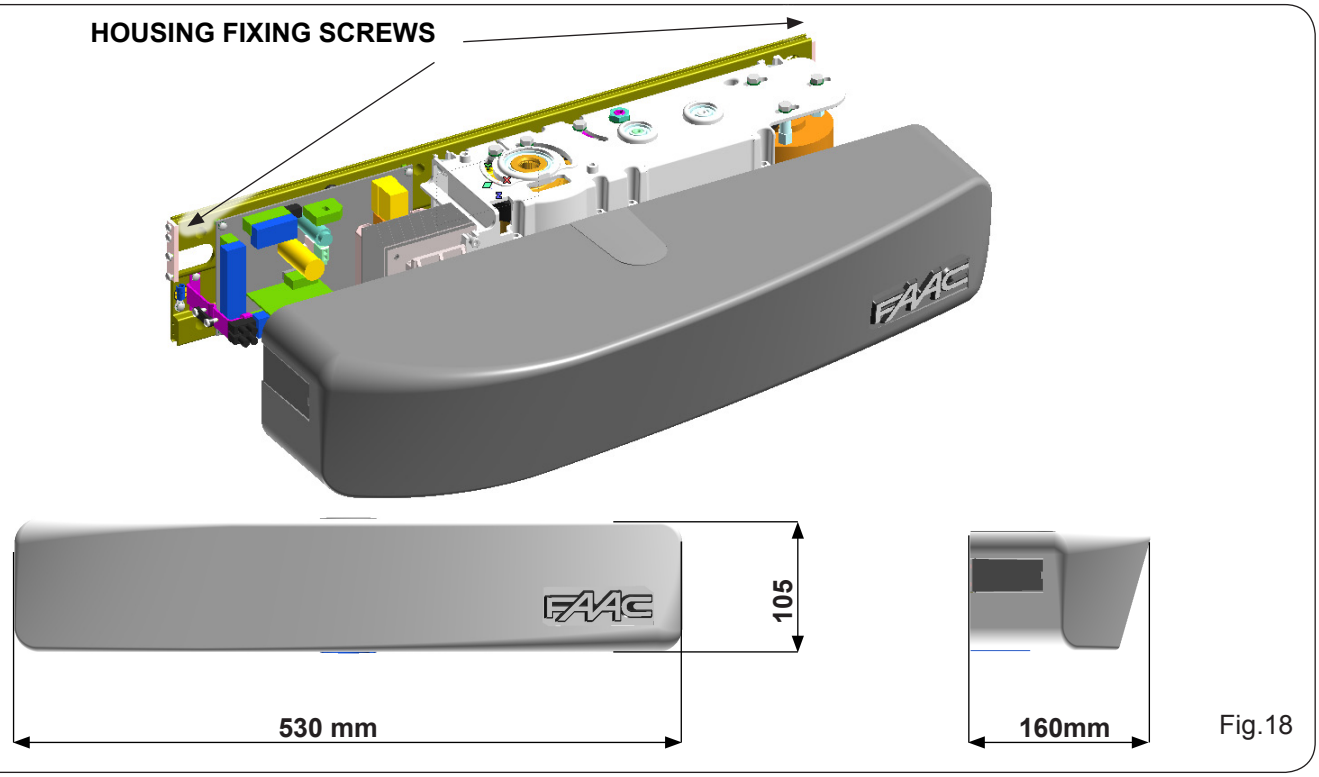
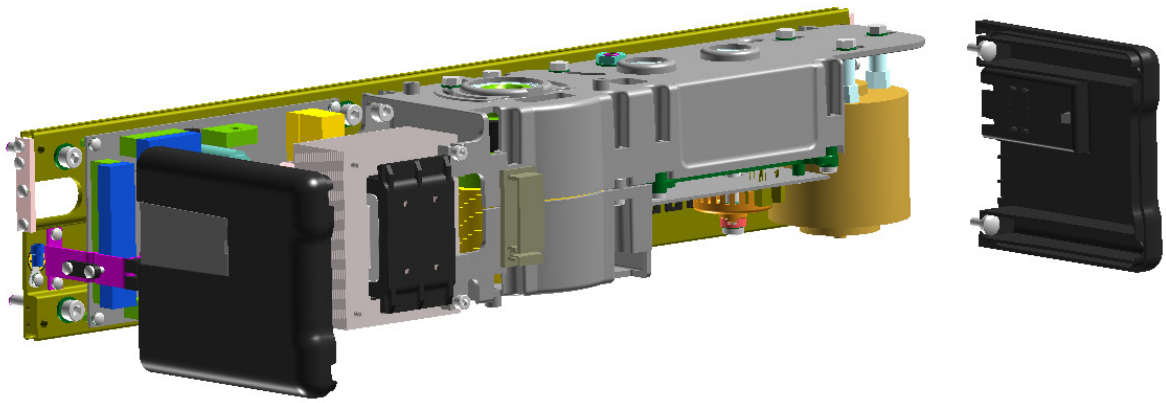
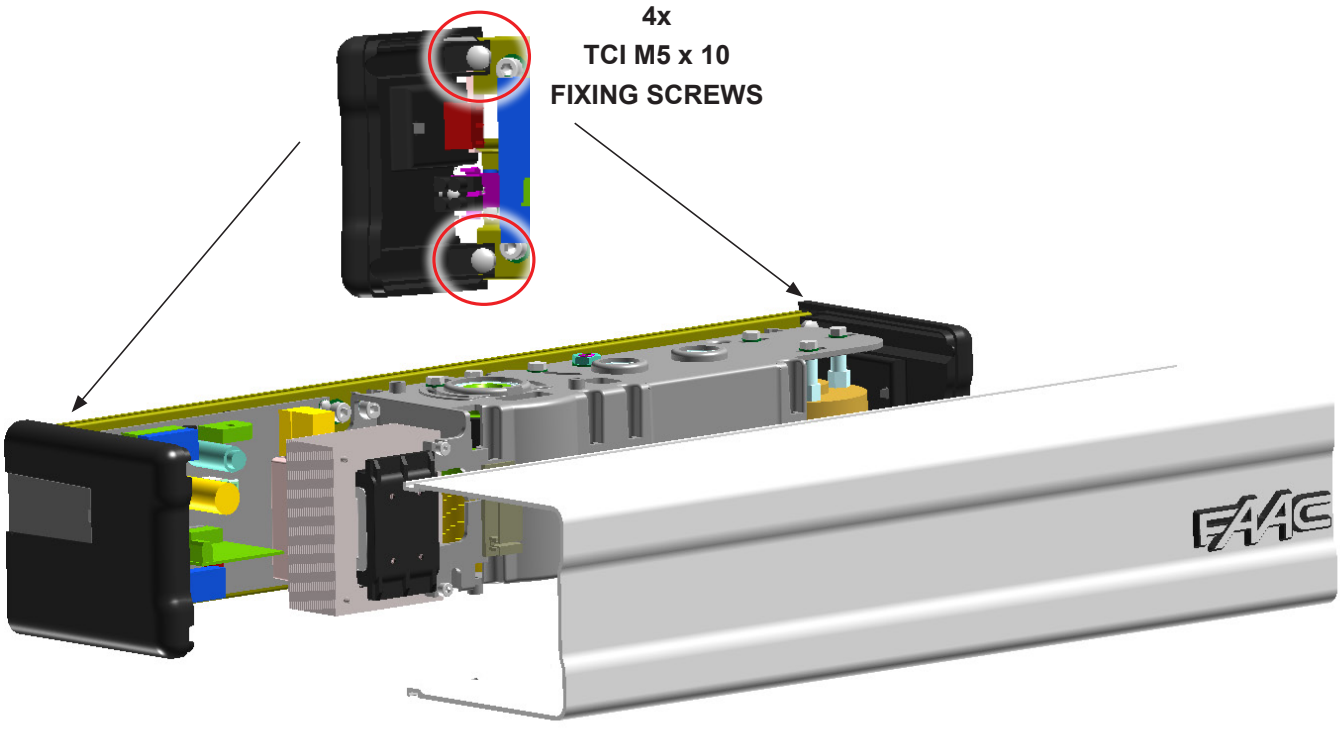


Fig.18

12.2 ASSEMBLING THE ALUMINIUM HOUSING





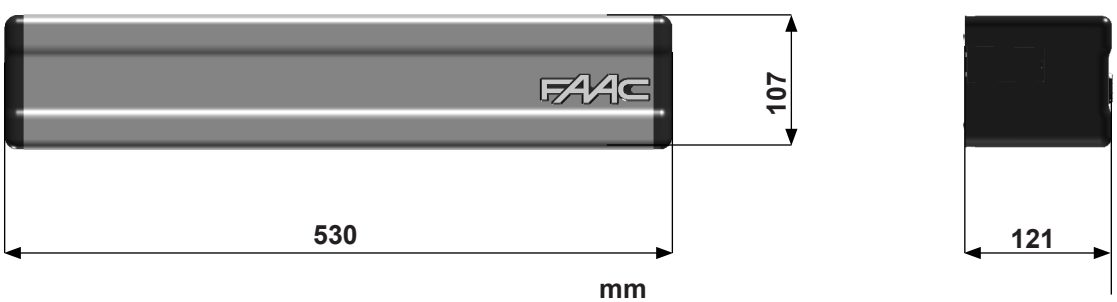
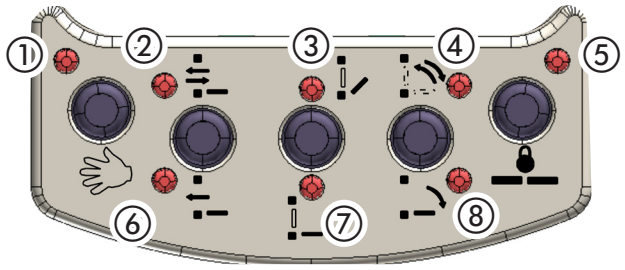


Fig.19

13 DIAGNOSTICS

The KP-CONTROLLER (even without display) features a diagnostic function which, in case of fault, interrupts every 2 sec. normal visualisation of the operating mode and signals for 1 sec. the fault condition through a combination of flashing LEDs. Refer to the table in figure for the LED combinations and consequently the type of fault. Should more than one fault occur simultaneously, the code of the first one detected will be visualised.



LED ON: ● LED OFF: ○

FAULT NUMBER	MEANING	LED STATUS:							
		①	②	③	④	⑤	⑥	⑦	⑧
3	Attempt to force door open in progress	○	○	●	○	○	○	●	○
7	Emergency input active	○	○	●	●	○	○	●	○
8	Obstacle when opening detected three consecutive times. Reset required	○	○	○	○	○	○	○	●
9	Obstacle when closing detected three consecutive times. Reset required	○	○	○	○	○	○	●	●
10	Electric lock locked closed	○	○	●	○	○	○	○	●
12	No 24V= accessories power	○	○	○	●	○	○	○	●
13	failsafe test failed on closing	○	○	○	●	○	○	●	●
14	failsafe test failed on opening	○	○	●	●	○	○		●
15	Set-up prevented	○	○	●	●	○	○	●	●
18	Leaf stroke too long	○	●	●	○	○	○	○	○
20	Leaf stroke insufficient	○	●	○	●	○	○	○	○
22	Leaf too heavy	○	●	●	●	○	○	○	○
24	Motor failure	○	●	○	○	○	○	○	●
26	950 MPS board failure	○	●	●	○	○	○	○	●
28	Set-up cycle requested	○	●	○	●	○	○	○	●
29	Encoder failure	○	●	○	●	○	○	●	●
30	Motor drive on 950 MPS board failure	○	●	●	●	○	○	○	●
31	EEPROM failure	○	●	●	●	○	○	●	●
32	Master and slave communication error	○	○	○	○	○	●	○	○
	KP controller and 950 I/0 board communication error	●	●	●	●	●	●	●	●

950N AUTOMATED SYSTEM User's Guide

Carefully read the instructions before using the product and keep for future use.

GENERAL SAFETY REGULATIONS

The 950N automated system, if correctly installed and used, guarantees a high level of safety. A few simple behaviour rules can avoid accidental inconveniences::

- Do not stand and do not allow children, people or things to stand near the automated system, especially during operation.
- Do not allow children to play with the door.
- Do not voluntarily prevent movement of the door.
- Ensure that the system "automatic door" signals are kept efficient and in perfect view.
- In case of malfunction, select MANUAL MODE and wait for the technical intervention of qualified personnel.
- Do not modify any of the automated system components.
- Do not attempt direct repair or action and refer only to qualified FAAC personnel.
- Have the efficiency of the automated system, the safety devices and the earthing checked at least every 6 months by qualified personnel.

DESCRIPTION

The 950N reversible automated system for leaf doors is an enbloc consisting of an electromechanical device that allows door opening by means of a transmission arm. The protective housing contains the electronic control unit for system programming and operation control. The 950N automated system features a selector switch for choosing the operating logic, as shown in fig. 1. As an alternative to the function selector switch, it is possible to install a "KP Controller" programming unit (fig.2) available as an accessory.

OPERATING MODES

Selection is done by pressing the keys located on the fixed section of the programmer; the mode is identified by the lighting of the corresponding LED.

Note: once the "Night" or "Manual" modes have been set, the corresponding keys must be pressed again to exit them.

MANUAL OPERATION

Should manually operating the door be required due to power cut-offs or automated system inefficiency, proceed as described below:

MODE SELECTOR SWITCH -

Set the selector switch to "2" MANUAL/NIGHT (fig.1) and manually open or close the door.

KP-CONTROLLER PROGRAMMER, SDK LIGHT

Press the Manual button (fig.2). The corresponding LED will go on fixed.

RESTORING NORMAL OPERATION

MODE SELECTOR SWITCH

Set the selector switch to "0" AUTOMATIC (fig.1).

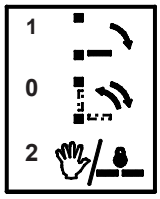
KP-CONTROLLER PROGRAMMER

Press the Manual button again to exit and then select the desired mode using the buttons (fig.2). The selected mode will be indicated by the corresponding LED going on fixed.

POSITION "1": OPEN

When this mode is selected, the door opens and stays open. Door closing can be commanded only by activating the Emergency input.

POSITION "0": AUTOMATIC



When an internal/external or key command is activated, the door will open and close again after the pause time.

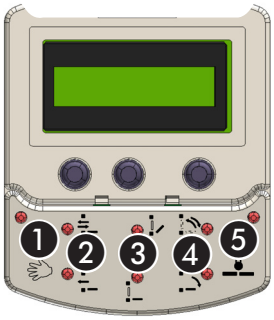
POSITION "2": MANUAL/NIGHT

Position "2" can select two different operating modes depending on how the 950 N unit is programmed. The two modes are:

MANUAL: The door can be opened manually.

NIGHT: The external and internal commands are inactive. Door opening can be commanded only by activating the Key command.

Fig.1

KP CONTROLLER	BUTTON NUMBER	MODE	LOGO
	①	MANUAL	
	②	TWO-WAY	
		ONE DIRECTION	
	③	PARTIAL OPENING	
		COMPLETE OPENING	
	④	AUTOMATIC	
		DOOR OPEN	
	⑤	NIGHT	

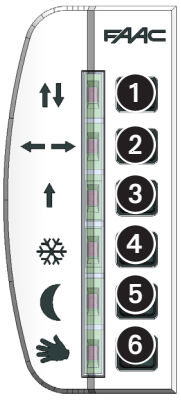
SDK LIGHT	BUTTON NUMBER	MODE	LOGO
	①	AUTOMATIC	
	②	DOOR OPEN	
	③	ONE DIRECTION	
	④	PARTIAL OPENING	
	⑤	NIGHT	
	⑥	MANUAL	

Fig.2

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