Metaflex Doors Europe BV
Ambachtsstraat 11
NL - 7122 MP Aalten
T +31 88 14 14 900
info@metaflexdoors.com
www.metaflexdoors.com

User Manual
Sliding Door Automation
(EN)

SDA-04

MDA250 & MDA450
(SW version 6.xx)

SDA-04DCB2

MDA120
(SW version 22.xx)

Version: April 2020
Reference: 10.03.02 REV:03
Type: Translation of the original Dutch document
Order number: 201058

Metaflex. Meet reliability.

This user instruction manual must be used in accordance with the law of the land in which it is being used. The instruction manual must be considered as a part of the sliding door and/or automation and therefore it must be retained for consultation purposes until the equipment is finally decommissioned.

This end-user instruction manual must be retained by the owner or manager of the project in a safe, dry place that is sheltered from the sun. It must always be available for consultation.

In case of damage, the user must obtain a new copy of the instruction manual from Metaflex Doors Europe BV.

Foreword

Dear Customer,

We would like to thank you for the confidence that you have placed in us by purchasing the SDA-04 / SDA-04DCB2 controller.

Installation of the SDA-04 (DCB2) should be carried out by technicians from Metaflex Doors Europe BV (MDE) or Metaflex certified personnel or authorised retailers (hereafter referred to as distributor).

If this is not possible (check with MDE for an authorised distributor), please inform MDE in writing.

If you have any further questions after reading this instruction manual, please contact us.

Metaflex Doors Europe BV
PO Box 300
7120 AH Aalten
The Netherlands

Telephone Benelux : +31 (0)88 1414 600
Telephone EMEA : +31 (0)88 1414 900
www.metaflexdoors.com
info@metaflexdoors.com

Contents

1 General

1.1 Introduction

This manual applies to the SDA-04 and SDA-04DCB2 controllers.
Software 5.0.0 and above is required for the SDA-04 and 20.0.0 for SDA 04DCB2.
(This will be shown on the display while the controller starts up)

The manual consists of 15 chapters.
The Metaflex controllers comply with current safety regulations..

Please read the mechanical and electrical safety regulations below before installing the door and/or controller. Retain this instruction manual carefully so that it may be used for future reference at any time.

1.2 Manufacturer/Distributor

Manufacturer: Metaflex Doors Europe BV
Ambachtsstraat 11
7120 AH Aalten
The Netherlands
www.metaflexdoors.com

Distributor:

Technical Dossier Management:
Metaflex Doors Europe BV (Product Development Department)

1.3 Service/maintenance

In case of problems, faults or questions, please contact:

Metaflex Service	Telephone	+31 88 1414 602*
		E-mail service@metaflexdoors.com

* For service outside the Netherlands, please contact your local distributor.

1.4 Versions

The SDA-04 is available in 2 versions:
SDA-04 : This is suitable for controlling 3-phase AC motors.
SDA-04DCB2 : This is suitable for controlling 24V DC motors.

For technical specifications see "TECHNICAL SPECIFICATIONS".

1.5 Using the instruction manual

Read these instructions carefully before using the sliding door. Retain these instructions so that you can consult them later if necessary. These instructions are written for the door operator.

The installer will use a separate instruction manual for assembly and installation. The installer will use an installation scheme for the applicable controller and will work in accordance with the applicable standards. In case of a fault, consult a Metaflex certified technician.

1.6 Definitions of (end)user/operator/technician

(end)user : Anyone who makes use of the door.

Operator : A trusted user who is familiar with all safety aspects mentioned in this instruction manual. The operator should not carry out any installation work activities unless specifically tasked and authorised.

Technician : The technician is a Metaflex technician (or a technician that has been provided with express written permission from Metaflex) who is qualified to perform engineering tasks on the door.

1.7 Explanation of symbols

	STOP	To avoid personal injury, follow the safety regulations implicitly
	INFORMATION	Additional information is available
	WARNING	It is essential that this instruction is carried out carefully
	WARNING	Dangerous voltage
	WARNING	Danger of entrapment
	WARNING	Danger of crushing injuries to hands and/or fingers

1.8 Compliance with European directives

The installation is in accordance with the following EU directives:

2006/42/	EC	Directive on machinery
2014/30/	EC	Directive on EMC (electromagnetic compatibility)

The CE mark is affixed to the rail of the door.

1.9 Commissioning and risk analysis

1.9.1 Commissioning

Check the earth connection prior to the commissioning of the controller.
If there is no earth connection, the controller must not be commissioned under any circumstances.

1.9.2 Risk analysis

As a user of an automatic system, you are required to carry out a RIE
(Risk Inventory and Evaluation).

With respect to an automatic door, this consists of two things:

1: A list of all (health and safety) risks related to the use of the door.
2: A plan for their resolution.

2 Description of the SDA-04(DCB2)

2.1 Features of the SDA-04(DCB2) controller

2.1.1 Main Features

The main features of the SDA-04(DCB2) controller are:

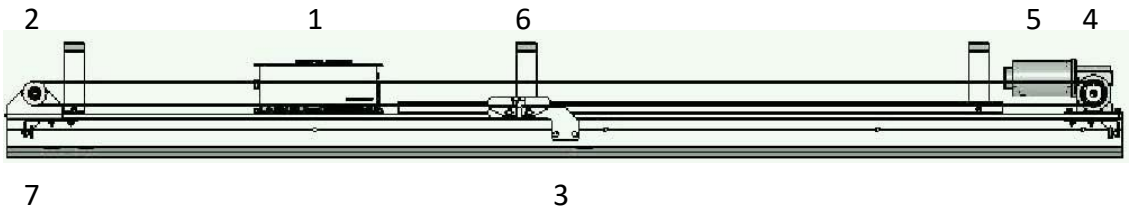
- Ease of use
- High level of safety (active safety equipment)
- Automatic restart and calibration after power failure (SDA-04)
- Low noise level

2.1.2 Specific features of the Metaflex controllers

- The Controller is "auto-adaptive" which means that, for example, in the event of a power failure or an opening/closing movement, the door will carry out a complete configuration.
- When opening the door using the handle, the door will operate full automatically after a few centimetres (adjustable). As a result, even the heaviest doors can be easily opened by hand.
- The controller contains a self-monitoring system. If a fault is detected, the controller displays the nature of the error by displaying an error code on the display. The displayed "service" code can be used to help identify the cause of the fault. This can help avoid long searches for a fault.
- Various types of switches and sensors can be connected to the door so the door can be placed into pre-set positions (open, half open, locked, one-way (only from inside to the outside).
- Emergency release in the event of being locked in, for example, using a break glass sensor.
- Connectivity to the access control, intrusion alarm and/or fire detection system.
- A interlock function is also possible. This function ensures two or more doors that are affected by this function will not open at the same time. This minimises over-pressure, heat loss and the movement of dust and bacteria. This interlock function can be disabled by an (optional) switch to ensure that both doors can be opened in an emergency.

3 Description of the door and its control

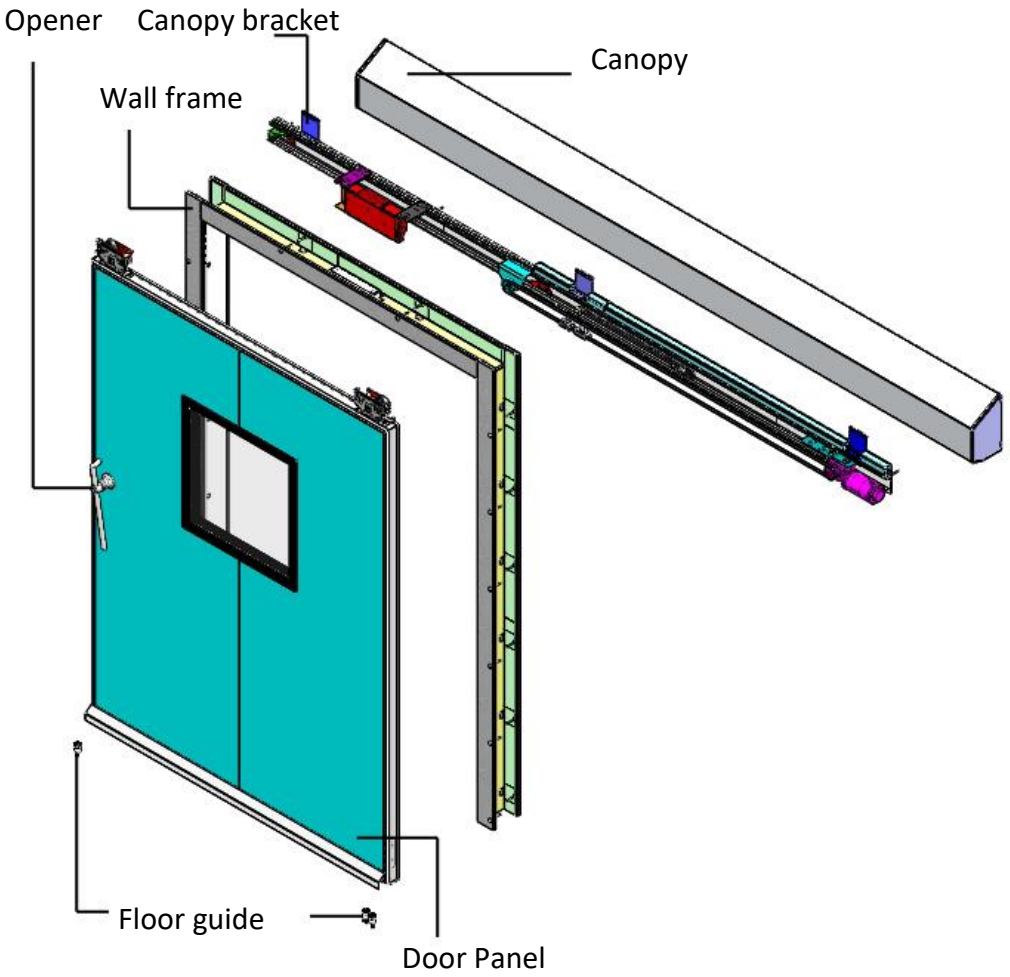
3.1 Basic rail components



Legend

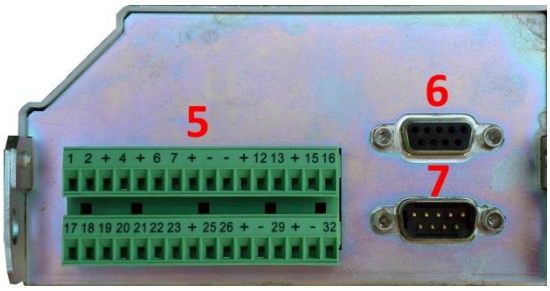
1. SDA-04/SDA-04DCB2 controller (Display is visible from the door opening)
2. Return wheel
3. Driver + toothed belt tensioner
4. Reducer gearbox
5. (AC) motor equipped with pulse generator for frequency control
6. Canopy bracket
7. Running rail

3.2 Basic door components



3.3 Controller connection information

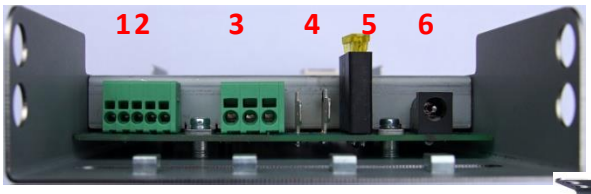
SDA-04

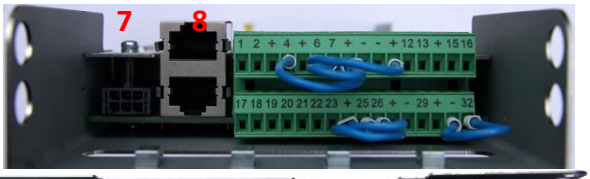


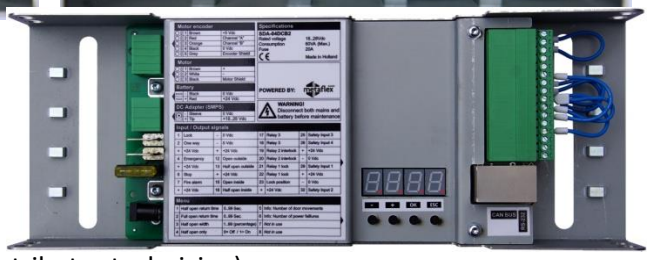
Legend

1. phase motor connector
2. Mains inlet
3. Fuse holder
4. On-off switch
5. Input and output control
6. RS-232 port (to be made use of by MDE/Distributor technician)
7. AC Motor pulse generator connector

SDA-04DCB2







Legend

1. DC Motor pulse generator connector
2. DC Motor power connector
3. Battery connectors
4. Fuse 20A
5. DC power connector
6. RS-232 port (to be made use of by MDE/Distributor technician)
7. CAN Bus interface
8. Input and output control

4. (Safety) regulations

4.1 Mechanical safety regulations

	**Assembly & Repair/Maintenance:** When carrying out any work activities, always switch off the controller and place warning signs so that the door cannot be operated by mistake. All work activities may only be carried out by qualified personnel in compliance with the applicable legal regulations and provisions.
  	**Operation:** During opening: Ensure there are no obstacles in the sliding area. **Protect hands and fingers against crushing hazard:** • Between the end-stop and the door. • Between the wheels and the rail. • Between the wall frame and the recessed hand grip in the form of a cup on the inside of the door panel. During closing: Ensure there are no obstacles in the door opening. **Beware of the potential crushing of body parts:** E.g. By trying to squeeze through a small opening between the door and the frame at the last moment when it is closing.
	**Extra safety measures in particular situations:** When the sliding door is used in a non-industrial environment by children, disabled or elderly people, the fitted safety features must conform to EN16005. Doors must be fitted on both sides with an Active Infrared Sensor in accordance with EN16005. If the sliding space is smaller than 40cm, there should also be a sensor present here. If the target group is making use of the door and the safety features have been removed or disabled, take the door out of operation and contact MDE.

4.2 Electrical safety regulations

- ATTENTION: This device operates using mains power.
- The device must never be opened.
- Defective devices should be sent to MDE for repair.
- Fuses that have blown must always be replaced with the specified type.
- To connect the device to the mains, the supplied power cord must always be used.
- The power cord must only be connected to an earthed outlet socket.
- The device may only be used with the specified motors.
- Only cable/motor combinations approved by Metaflex may be used and the maximum cable length should be 3-3.5 meters.
- The motor cable must not be extended.
- The maximum cable length for any remaining input and output cables that are to be connected is 30 meters. For distances greater than 30m, the signal should be switched via a relay that is closely located to the SDA-04 controller.
- Modifications to the SDA-04 controller are not allowed. Modifications to the device can hamper the functioning and safety performance of the device.
- Settings that are relevant to safety must not be changed.
- The device may only be used within the specified environmental conditions. Outside the specified environmental conditions, safety cannot be guaranteed.
- If the environmental conditions cannot be guaranteed, the controller must be placed in a suitable housing (within which the conditions must meet the technical specifications).

	**Liabilities** Security equipment not supplied by Metaflex can cause damage to the controller. Claims under the factory warranty are not possible in this case. Although MDE has taken the utmost care to ensure the protection of the controller and the monitoring of circuit breakers, all claims arising from the failure of a safety switch will be rejected.
	**Repair** Repairs may only be carried out by MDE/Distributor.

5. Installation, maintenance and dismantling

5.1 Installation

The door and drive unit are installed, connected, set up and tuned by a fitter or an engineer who also connects and programs any accessories. The door controller is adjusted to the options and/or accessories agreed with the (end) user. The relevant options are laid down during hand-over. You can add optional/accessories afterwards. Please contact MDE or one of its dealers for this.

Doors are always delivered fully tested.

5.2 Dismantling

5.2.1 Decommissioning

Decommissioning of the automated door may only be carried out by MDE or a distributor authorised by MDE. Once this decommissioning has been completed (controller and drive mechanism has been removed), the door can be disassembled and disposed of by a third party.

5.2.2 Disassembly

The disassembly must be carried out by at least two persons.
Disassembly must be carried out in the following order:

- Ensure the door has been decommissioned.
- Manually slide the door into the fully closed position.
- Remove the wheels (door panel is now loose!) and remove the door panel.
- Subsequently remove the track and eventually the doorframe and the lower door guides.

6 Accessories and options

Lock/Latch
Electrical/Mechanical balance lock.
Electrical lock operated by a magnetic latch.
Blocking by means of an electric motor interlock (parameter setting).

Medical grounding (conforming to NEN 3134 for S3 areas)
If the sliding doors are required to fulfil the NEN 3134 standard, this can be achieved by attaching the rail and the fixed wall to the door frame via a cable in a cable track. This will ensure that any electrical charge will be discharged through the central earth connection. The door, rail, frame and canopy cover are mounted in such a way that they are completely isolated from the building mass.

	The controller and motor are isolated and mounted on the rail and **must** be connected to the building earth by the installer.

Freeze Protection
Through the provision of a continuous current in the motor drive, a high enough temperature is maintained so that no extra heating is required in the motor and the control box (minimum temperature is -30°C) Attention!!: from -25°C, the motor must be isolated.

Control switches, including:
1. Foot switch
2. Key switch
3. Radar
4. Active/passive infrared sensors
5. Elbow switch
6. Remote control
7. Contact mat
8. Pull switch
9. Code locks
10. Card readers

	Security equipment that is not supplied by MDE can cause damage to the controller. In this case, claims under the factory warranty are not possible. MDE has taken the utmost care to ensure the protection of the controller and the monitoring of circuit breakers and all claims arising from the failure of a security switch will be rejected.

Protection devices on the door
Various protection devices can be connected to the door.

Possible protection devices include:

1. Entrance protection by means of one or two safety devices in the wall frame. Or safety's based on EN16005 by means of sensors which are checked prior to each door movement operation.

2. An active safety edge on the front face of the door.

3. DMS (Deceleration Measurement System) during movement allows the controller to "detect" whether an obstacle is present. If an obstacle is detected, the door will change direction (away from the obstacle).

4. Sliding space security.

7. Configuration

As the (end) user of an SDA-04 or SDA-04DCB2 controller, you have the possibility to change a few parameters yourself. To this end, there are 4 push buttons on the controller "-", "+", "OK" and "ESC".

	Up to the moment that you activate the controller configuration menu, the door can be operated and it may move. Please take note of this and take appropriate measures to prevent it.

7.1 Changing and/or reviewing parameters

	Activating the parameter menu: Press the OK button for 4 seconds. Note : During the time that the parameter menu is activated it is not possible to move the door using the motor.

After activating the parameter menu, parameter 1 will be the first to be displayed.
The number to the left of the display shows the parameter number.
The number to the right shows the value that has been set.

7.1.1. Viewing a parameter

Once in the parameter menu, you can view the value of the parameter by pressing the "-" and the "+" keys. The meaning of each number is shown later in this guide.

7.1.2 Changing a parameter

Select the parameter you want to change.
Then press "OK". If a parameter can be changed, it will flash.
You can now use the "-" and "+" keys to change the corresponding parameter.
Confirm with "OK" and press "ESC" to return to the parameter selection menu.

7.1.3 Leaving the parameter menu

Leave the menu by pressing the "ESC" key twice in succession.
The parameter menu is closed at the time that the controller returns to the home screen and no more parameters are visible.

	Immediately after leaving the parameter menu, the door can be operated once again and begin moving. Please take note of this and take appropriate measures to prevent it.

7.2 Parameter overview (end) user

The following parameters can be accessed by the (end) user and changed or checked:

	Note: Most parameters have a value that is set at the factory. In case of a set parameter it is marked red, underlined and placed between brackets: **(0)**. A number indicates that this value can be changed. Two dashes mean that something must be completed, four dashes mean that a value is expected.

Parameter 0 : (----) Log in to the controller (for authorised personnel only)

- (----) Enter your 4-digit login here to access the installation menu

Parameter 1 : (2) "remain-open" time after reaching the half-open (pedestrian) position

This is the time that elapses between the moment the door arrives at the partly or half open position and begins the movement to return to the closed position. For pulse open/close, the door will undertake this action immediately. Otherwise, the door will close automatically after a set period of time has elapsed, which is settable like shown below.

- 0 - 99 = number of seconds the door will remain open before closing automatically.
- t0 = Pulse open/pulse closed, the door stays open until the next operation action
- t1 = Pulse open/pulse closed, the door closes when Timer 1 has counted down to zero (parameter 3)
- t2 = Pulse open/pulse closed, the door closes when Timer 2 has counted down to zero (parameter 4)

Parameter 2 : (2) "remain-open" time after reaching the full-open (vehicles) position

This is the time that elapses between the moment the door arrives at the fully or completely open position and begins the movementto return to the closed position. For pulse open/close, the door will undertake this action immediately. Otherwise, the door will close automatically after a set period of time has elapsed, which is settable like shown below.

- 0 - 99 = number of seconds the door will remain open before closing automatically.
- t0 = Pulse open/pulse close, the door stays open until the next operation action
- t1 = Pulse open/pulse close, the door closes when Timer 1 has counted down to zero (parameter 3)
- t2 = Pulse open/pulse close, the door closes when Timer 2 has counted down to zero (parameter 4)

Parameter 3 : (0) Timer 1

Adjustable timer (0 seconds - 10 minutes) to be used for a number of timer controlled actions such as temporarily disabling the interlock function or cancelling the open position in toggle mode.

- 0 = Factory default, timer is off
- 0.01- 10.00 = Adjustable time in minutes and seconds which serves as the starting point for the timer to count down from.

Parameter 4 : (0) Timer 2
Adjustable timer (0 seconds - 10 minutes) to be used for a number of timer controlled actions such as temporarily disabling the interlock function or cancelling the open position in toggle mode.

- 0 = Factory default, timer is off
- 0.01- 10.00 = Adjustable time in minutes and seconds which serves as the starting point for the timer to count down from

Parameter 5 : (50) Pedestrian passage width ('Half Open' or 'Width')
This parameter sets the width that the door will open for the passage of pedestrians, which is set as a percentage of the total width of the door opening. The width is adjustable between 1% and 99% of the total door width.

- 50 = factory standard setting: door will open up to 50%
- 1-99 = sets the percentage width that the door will open

Parameter 6 : (0) Limit door opening to "half open" position
When activated, the door will only open to the maximum width for the passage of pedestrians (parameter 5) despite being commanded to open fully.
For example,during the winter in order to reduce heat loss when opening an outside door.

- 0 = Fully open control works normally
- 1 = Fully open control works as a people passage (partly open)

Parameter 7 : *Reserved for future applications*
Parameter 8 : *Reserved for future applications*
Parameter 9 : *Reserved for future applications*

Parameter 10 : (----) Displays the actual number of door movements
Indicates the number of door movements in units of 100
(e.g. the number 5 will represent 500 door movements)

Parameter 11 : (----) Displays the actual number of power cycles
Indicates the number of times the power has switched off and on again

Parameter 12 : (12--) Fault log
Last known error message (n)

Parameter 13 : (13--) Fault log
Penultimate error message (n-1)

Parameter 14 : (14--) Fault log, (n-2)

Parameter 15 : (15--) Fault log, (n-3)

Parameter 16 : (16--) Fault log, (n-4)
Note : See Chapter 9 for an explanation of each fault code

Parameter 17 : *Reserved for future applications*

Parameter 18 : *Reserved for future applications*
Parameter 19 : *Reserved for future applications*

8 Parameter settings (short version)

8.1 Parameter list user menu

Nr	Name	Description	Range
1	Semi-open waiting time	Delay time for closing the door (-- = pulse mode)	-- or 0..99 sec
2	Fully open waiting time	Delay time for closing the door (-- = pulse mode)	-- or 0..99 sec
3	Timer 1	Adjustable countdown timer	0..600sec
4	Timer 2	Adjustable countdown timer	0..600sec
5	Half open width	Width of the pedestrian passageway with respect to total	10..99%
6	Max. Opening	1=max. half-open / 0=normal opening	0/1
10	Number of door movements	Number of times door has opened (in units of 100)	0..9999
11	Number of power failures	Number of times voltage switched on	0..9999
12	Log book message	Last registered fault	Code see list
13	Log book message	Fault (n-1) penultimate	Code see list
14	Log book message	Fault (n-2)	Code see list
15	Log book message	Fault (n-3)	Code see list
16	Log book message	Fault (n-4)	Code see list

9 Display codes and troubleshooting

The controller software is designed so that all inputs generate a code so that it is possible to see the status of an input, and therefore the door status, at all times.

- Locked
- Fire
- Emergency
- One-way
- Emergency stop
- Open

All doors actions and possible faults are simultaneously provided with a code, making troubleshooting easy and allowing fault codes to be passed to the service department.

	**Attention:** If several messages are active simultaneously, they will be displayed on the display of the SDA-04 in succession

General	External operation/control

	Meaning	Clear message
Fo	Full-open Outside	Remove signal (Input 12)
Ho	Half-open Inside	Remove signal (Input 13)
F,	Full-open Inside	Remove signal (Input 15)
H,	Half-open Inside	Remove signal (Input 16)
General	**Special operation**	
	Meaning	**Meaning**
LL	Initialisation in process	Waiting until configuration is complete
iLoc	Lock or interlock input 1 is active	Cancel contact or interlock (Input 1)
ONE-	One-way active	Key or rotary switch (Input 2)
unLo	Any active electrical interlocks are released	Restore "N.C." (Input 4)
StOP	Emergency stop operated	Emergency stop is operated (Input 6 (or 1))
F, rE	Door assumes fire position	Restore "N.C." (Input 5)
Lo	Lock problem -> no feedback	Open circuit or lock not locking (Input 23)
General	**Obstruction messages**	
	Meaning	**Clear message**
o 1	Obstruction in indentation	Remove obstruction
o2	Obstruction during opening	Remove obstruction, door is too heavy, check mechanical adjustments
o3	Obstruction during closing	Remove obstruction, door is too heavy, check mechanical adjustments
bo	Indentation boost = retighten in indentation when closing	Call service
oc	DMS obstruction check	Remove obstruction or door has too much resistance

EN16005	**Activated safety devices**	
	Meaning	**Clear message**
PS 1	Safety 1 (AIR, not rail side)	(Input 29): Remove the object from the detection zone
PS 2	Safety 2 (AIR, rail side)	(Input 32): Remove the object from the detection zone
PS 3	Safety 3 (AIR3, rail side)	(Input 25): Remove the object from the detection zone
PS 4	Safety 4 (AIR4, sliding space)	(Input 26): Remove the object from the detection zone
LEGACY	**Activated safety devices**	

	Meaning	Clear message
2	Safety 2 active (1st AIR)	AIR1-beam is broken (Input 29)
3	Safety 3 active (2nd AIR)	AIR2-beam is broken (Input 32)
1	Safety 1 active	(Safety list operated, obstacle removal by ruler (input 25)
EdgE	Self-monitoring safety system or sliding space security	Repair safety list or remove obstruction (Input 26)

SDA-04AC	Hardware-related messages	
_ ._ _	SDA-04AC with 90 Watt AC motor at rest, no current activities and/or errors	
_ _ ._	SDA-04AC with 370 Watt AC motor at rest, no current activities and/or errors	
	Meaning	**Clear message**
E 01	Controller low voltage fault	Check mains supply - reset
E 02	Controller high voltage fault	Check mains supply - reset
E 03	Current surge or short circuit to earth	Replace controller and/or motor
E 04	I^2T motor monitoring	Motor overloaded, mechanical check
E 05	I^2T motor frequency regulator	Controller overloaded, mechanical check
E 06	Motor temperature too high	Check situation
E 07	Temperature controller too high	Check situation
E 08	No parameter setting/EEPROM or teaching-in error	Reset controller / Call service
E 09	Toothed belt broken or extreme structural opening width	Check toothed belt
E 10	Fault during teaching-in process	Reset controller, check mechanical adjustment of door
E 11	Pulse generator fault	Check connector / change the motor
E 12	Safety fault	Check safety sensor or that for parameter 63 value 5 or 6 is enabled
E 13	Motor resistance does not match 90/370W	Controller setting is incorrect or motor is defective, call service
E 14	Warning: Frequency regulator temperature too high	Allow controller to cool down

SDA-04DCB2	Hardware-related messages SDA-04DCB2	
. . . .	SDA-04DCB2 with 100 Watt DC motor at rest, no current activities and/or errors	
	Meaning	**Clear message**
E 01	Controller low voltage fault	Check mains supply - reset
E 03	Current surge or short circuit to earth	Replace controller and/or motor
E 08	No parameter setting/EEPROM or teaching-in error	Reset controller / Call service

E 09	Toothed belt broken or extreme structural opening width	Check toothed belt
E 10	Fault during teaching-in process	Reset controller, check mechanical adjustment of door.
E 11	Pulse generator fault	Check connections, repair / replace the motor
E 15	Battery faulty or not found	Check connections, repair / replace the battery
E rE	Motor polarity reversed	Switch the motor connections
bAtt	Battery voltage is too low	Check the battery charge / replace the battery

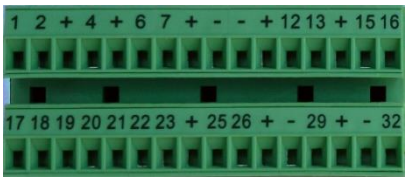
10 Electrical connections

This chapter describes all the control and protection inputs and outputs of the SDA-04. These signals are all provided on the two green connectors on the right side of the controller. The chart below provides each input/output terminal number, the function name, the description and an example of its application.

10.1 Input signals of the SDA-04

Controller connector information

The inputs and outputs of the SDA-04 and the SDA-04DCB2 are the same. Connectors are mutually interchangeable.



Enabled	Name of function	Description
1	Lock	This input is used to put the door in the closed position; the SDA sends a lock signal (if present).
2	One_way	This input is used to block one-way passage.
4	Emergency	This input is used to unlock the SDA locks in an emergency.
6	Emergency_ stop	This input is used to switch off the electrical door drive in an emergency.
7	Fire	This input is used in the event of a fire to place the door in the 'Escape door position' or the 'Fire door position'.
12	Open_ outside	This input is used to bring the door to the 100% open position or to allow the door to close in the event of a 'Pulse open/close' system. When 'one_way', action is blocked.
13	Halfopen_ outside	This input is used to bring the door to the "Half open" position or to allow the door to close in the event of a 'Pulse open/Pulse close' system when the 'one_way' action is blocked.

15	Open_inside	This input is used to bring the door to the 100% open position or to allow the door to close in the event of a 'Pulse open/Pulse close' system when 'one_way' inside signals can open the door.
16	Halfopen _ inside	This input is used to bring the door to the "Half open" position or to allow the door to close in the event of a 'Pulse open/Pulse close' system when 'one_way' inside signals can open the door.
23	Lock_pos	This is an input to which the feedback signal of a lock can be connected.
25	Safety edge	This is the input to which the safety list can be connected. At the same time, this input can also be used for sliding space security.
26	Edge_ctrl/	This input can be used for the self-monitoring of safety systems or as an input for the sliding space protection. When this signal is activated, the door only moves at a ´slow speed´.
26	Sliding space Security	The input edge_control can also be used as an input for the sliding space security.
29	Safety 1	This input is used for the signal of the 1st safety device.
32	Safety 2	This input is used for the signal of the 2nd safety device.

10.2 Safety overview

Danger	Solution	Display message
Entrapment	Safety list	1
	Stop button (panic button)	StOP
Collision	Safety	SF 1 or SF 2
	DMS	oc
	Door blocking	o1, o2 or o3
	Sliding space security	E
Fire	Escape or fire door setting	FF
Confinement	Emergency unlock (break glass)	uL

10.3 Examples of operation

Desired door operation	Possible means	Display message
Fully open	Elbow switch	Fo or F1
Pedestrian passageway	Hand sensor (radar)	Ho or H1
Permanently open	Code keypad	
One-way traffic	Rotary switch	ONE-

Close/lock	Key switch	iLoc
Emergency power	Emergency power supply	
Maximum opening	Set parameter 4 to 1	

Additional information regarding fire signals
A fire alarm system can control the door controller (SDA-04).
The controller will be set up as a fire door or an escape door:

Escape door action
When the fire contact (N.C.) is broken, an escape door will move to the open position.
The door will not carry out any other commanded operations while the fire contact is broken.

Fire door action
When the fire contact (N.C.) is broken, a fire door will move to the closed position.
- All other control signals will be ignored while the fire contact is broken.
- All electric lock activities will be disabled.

If the door is moved by hand in the open direction, the controller will take over.
However, the controller will close the door as soon as possible without waiting for a return time to elapse.

Smoke partition action
Works as a fire door action with the only difference being that local control remains possible.

11 Technical specifications

11.1 SDA-04 with AC motor

Primary (supply) voltage	: 195 - 253 Volt AC
Net frequency	: 47 - 63 Hz
Power consumption	: Min. 10VA, Max 1900 VA
Power	: Max. 1800N (370W motor)
Fuse (fuse in AC mains inlet)	: 2 x 6.3 Amp, slow, 5x20mm, IEC127
Ambient operating temperature in use	: 0 to +50 degrees Celsius
Ambient operating temperature in storage	: -25 to +60 degrees Celsius
Protection factor	: IP 30
Humidity	: 50…..95%, not condensed
Dimensions (WxHxD)	: 336x123x65mm
Weight	: 2.35 kg
Output voltage	: Maximum 260 Volt RMS, 0….100 Hz. (regulated)
Power supply for accessories	: 24Vdc, maximum 1 Amp.
Safety inputs 29 and 32	: Switch to + 24VDC or 0VDC (controller power supply)
Input signals	: Switch to 24VDC (controller power supply)
Output signals (relay)	: Maximum 24 VAC/DC----500mA

Motors

90 Watt	: WDH250wpx 90W
370Watt	: WDH250wpx 370W

11.2 SDA-04DCB2 with DC motor

Power supply

Primary (supply) voltage	: 100 - 240 VAC
Primary power	: 1.4A
Net frequency	: 47 - 63 Hz
Secondary (regulated) voltage	: 24 VDC
Secondary (regulated) current	: 2.5A
Power consumption	: Min. 10VA, Max 50VA
Mains fuse	: short-circuit proof, self-healing
Fuse (battery)	: 20A

Control

Ambient operating temperature in use	: 0 to + 50 °C
Ambient operating temperature in storage	: -25 to +60 °C
Output voltage	: Max. 24V (stabilised)
Power supply for accessories	: 24VDC, (1A is available)
Output signals (relay)	: Max. 24V @ 500mA
Protection factor	: IP 30
Humidity	: 50…..95%, not condensed
Dimensions (WxHxD)	: 336x123x65mm (excl. batteries)
Weight	: 0,75 kg (excl. batteries)

Battery	: CSB-GP1222
Ambient operating temperature in use	: 25 °C + 30 °C
Ambient operating temperature in storage	: -15 to +40 °C

Motors

Metaflex ZW63-015-24-E WS1 (Door DIN-L)
Metaflex ZW63-015-24-E WS2 (Door DIN-R)

Maximum door weight	: 120 kg

12 Software versions

The available functionality depends on the SDA-04 controller software version. Immediately after switching on, the version number will be displayed for 1 second. The SDA-04 will meet the requirements for the versions in the table below:

SDA-04 Controller featuring EN16005 software	
Version	**Description**
4.06	Former version
5.00	Changed complete software, incl. Parameters and added multiple functionalities
6.xx	New hardware version, Parameters stayed identical
SDA-04DCB2 Controller featuring EN16005 software	
Version	**Description**
21.00	Former version
22.00	Changed complete software, incl. Parameters and added multiple functionalities

13 Maintenance and repair

If a fault occurs, check the controller for any code being displayed. Chapter 10 explains the meanings of the codes so that you can decide whether an input is active or a fault has occurred.

If a fault occurs, you can interrupt the mains voltage for 10 sec. in order to send a reset command to the controller (the SDA-04DCB2 requires both the power supply and the battery to be disconnected). If the fault keeps recurring, contact the Dealer/MDE Service Department.

Note! It is important that you communicate the code in the display (if any) to the Service Department.

Fault: No door action and no display
There is no power supply. Check the 230Vac mains power supply and the fuses in the mains input behind the On/Off switch. (Only use fuses of the type indicated: 2x 6.3A slow-acting, 5x20mm IEC127)

	**Attention:** SDA-04 or SDA-04DCB2 controllers must only be repaired by MDE or its dealers