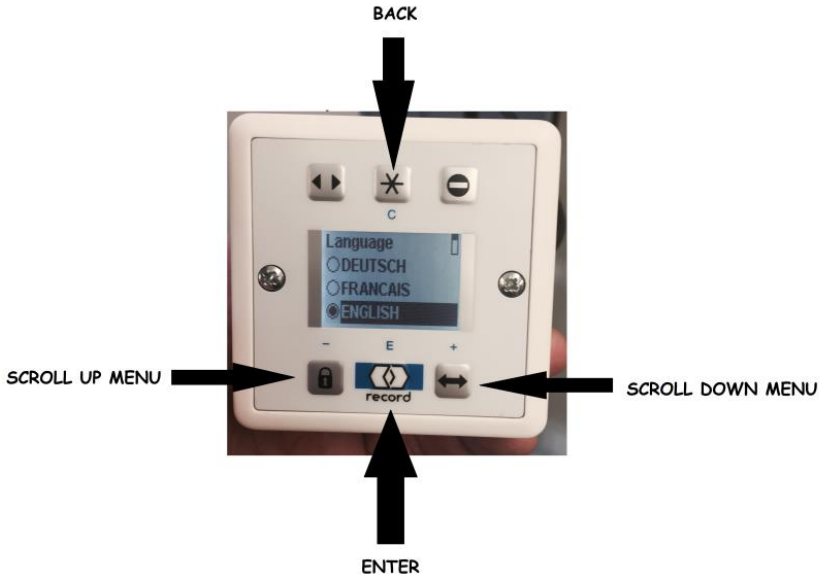
STA 20 Basic quick set up with record sensors

This Quick Guide is intended for use by trained engineers. If you have not had training on the equipment then it is possible to set the doors up unsafely.

All automatic door installations should be installed and set up to comply with EN16005



Once you have mechanically fitted, your SLIDE unit follow this guide:

1. Select English, PRESS ENTER (Record) – Then Press (C)

2. Enter programming mode by holding the Blue button on the main processor for 4 Flashes
   (If first install it may automatically launch the learn cycle)
3. Select **Configure system**.
4. Select **Door type**
5. Select **BASIC ESCAPE ROUTE** (this is for all System 20 sliding doors)
6. Return to the first menu screen and select **Learning system.**
7. Select **Running parameters. And then YES**
8. Please wait till the door is fully open
9. IF MOTOR DIRECTION IS INCORRECT EITHER SWAP BELT BRACKETS TO REVERSE DOOR DIRECTION OR CHANGE JUMPER JP4
10. Press and hold the lock symbol until the door is fully closed and the message on screen changes – Release
11. The door will re-open
12. Press and hold the lock button again until the door is closed – Release the button and it should then say running parameters complete.
13. Select Continue

*It will then ask you if you would like to learn the sensors – if Record sensors are fitted then Select **YES** . If third party sensors are fitted select no*

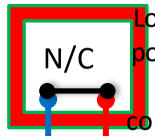
Basic Setup for System 20

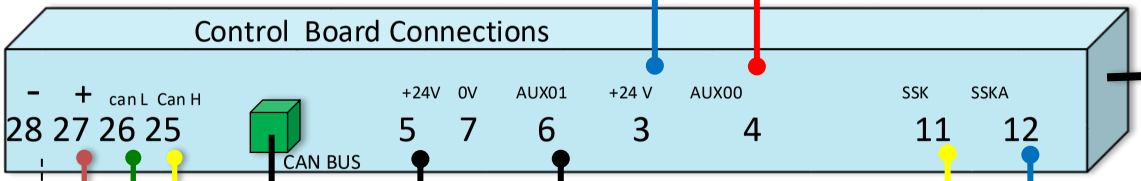
System 20 requires 2xRIC290 to cover the threshold area.
Option 1 can use standard sensors for side safety
Option 2 uses the CAN BUS sensors from Record
Any more items than those shown will require a FEM-0 control board.

N/C fire alarm contact to operate 24hrs all the time.
- Safety Opening (**SOK**)
- *Program the AUX00 to SOK/NSK and then the SOK/NSK menu to SOK*
- *For Open If Not Locked: Daytime operation only, programme for **Emergency Opening***

The Fire Alarm Relay is located in the same position as the spur. An independent conduit is required –

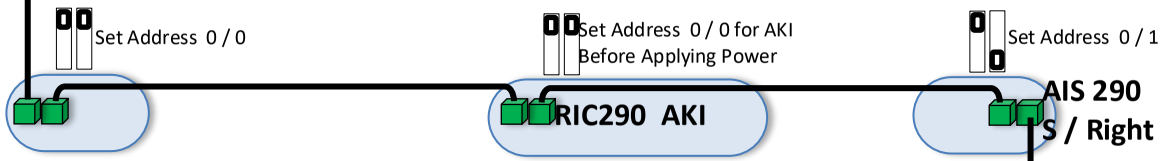
13A Plug Socket *within* 1 meter from the door on the right hand side.

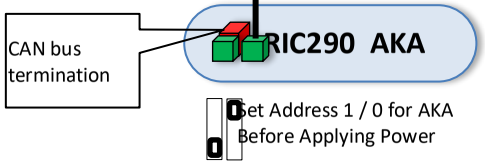




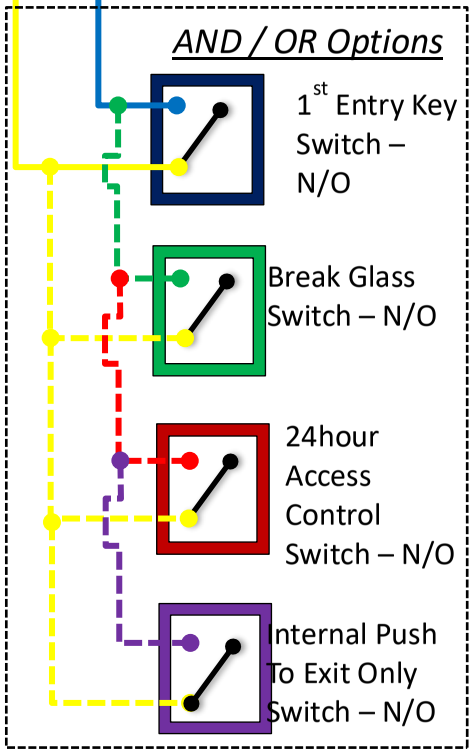
Screened Cable BDE

If using standard switching side screen safety sensors then: Program AUX01 to SIO
And then program the SIO configuration for the door to slow into creep mode upon sensor activation





The Sensors may be surface mounted (AC) or recessed into the cover (GC).
When recessed into the cover a 150mm cover is required



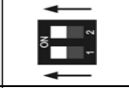
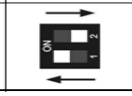
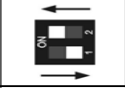
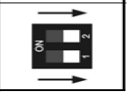
1. Fit Sensors. Please see separate manuals supplied with the sensor for full installation and adjustment details.
2. Set dipswitches so the system knows what type they are – See Below

RIC 290 Dual Threshold and Safety

AKI = Inner Activation	**AKA** = Outer Activation
SI = Inner Threshold Safety	**SA** = Outer Threshold Safety

Most Situations only call for 1x Dual sensor per side of the operator but you can have 2x per side on wider openings and as such you need to address them. E.g AKA 1 = Outer Sensor 1 & AKA 2 = Outer sensor 2.

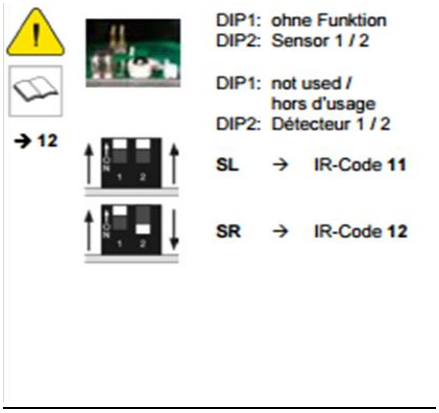
Record Sensors 290
CAN-bus system: Identification of the sensors

Settings * Factory settings	**AKI1*** (IR-Code 1) / **SI1*** (IR-Code 11)	**AKI2** (2) / **SI2** (12)	**AKA1** (3) / **SA1** (13)	**AKA2** (4) / **SA2** (14)
Surface-mounted version **AC**	 			
In-built version **GC**	 			

- DIP1: sensor inside/outside (for ex. AKI/AKA or SI1/SI2)
- DIP2: sensor 1/2 (for ex. left/right)
- Must be adjusted before being connected to the CAN bus!
- Every combination can only be given once

AIS290 Side Screen Sensors

SL = Left hand Side Screen Safety sensor	**SR =** Right hand Side Screen Safety sensor

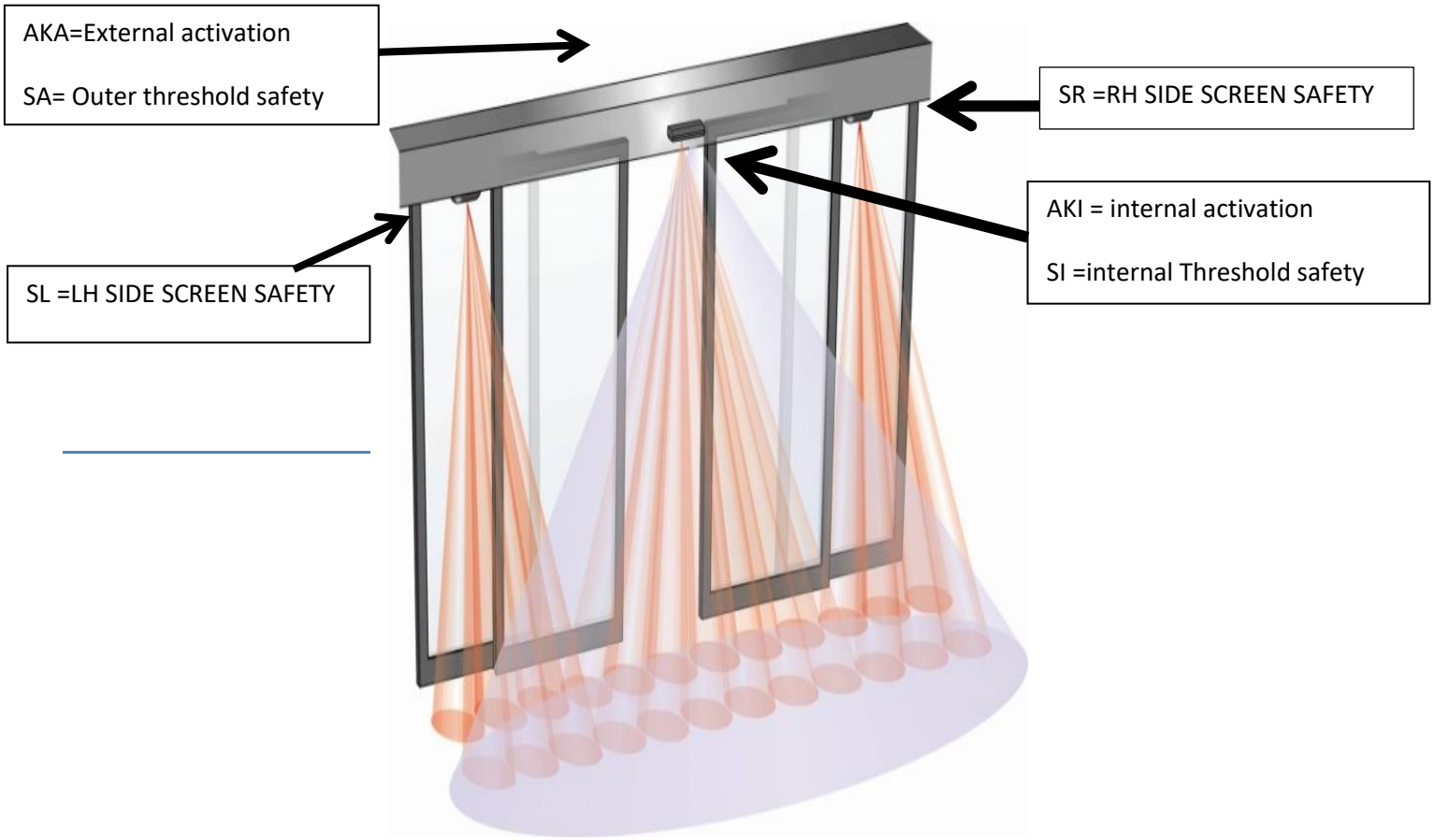


Adjustment of CAN Sensors – All sites are different! It is therefore imperative that the you set up the individual sensors in compliance with EN16005 and site requirements. As well as the mechanical adjustments, depth and angle, there are several adjustments to be made via the BDED.

Enter programming mode by holding the Blue button on the processor for 4 Flashes

1. Select Parameter Sensors:

   On Activations you can change the sensitivity, and on the Threshold and side screen you can change the field of detection.



There are several adjustable parameters for each sensor. Please treat the Activation and safety of each sensor as separate entities.

Activations (AKI & AKA) – Sensitivity 15

Safety (SI & SA) – Filter –10 or 20
Field Size – 3 (BI part)
ROW 1 – ON
ROW 2 – ON
ROW 3 – OFF

If the floor is dark grey or black you may need to remove the X in suppression

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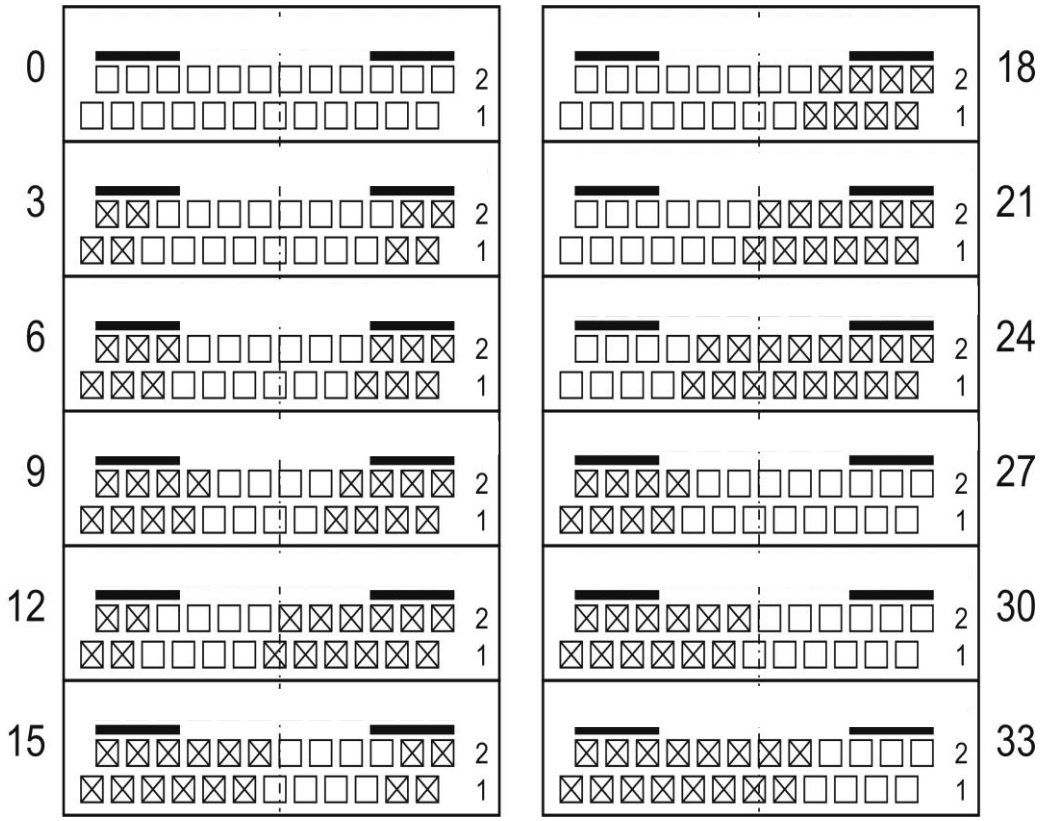
Below is a guide (Birds Eye View) – Of different Threshold safety Fields you can map. To change to the required field map change the corresponding Number – Default is 0
E.g If you had a narrow door way you may select Map 3 or for No Approach from the Right you select Map 18

FIELD SIZE S



Now It Is time to set up Your Speeds & running Parameters

Enter programming mode by holding the Blue button on the controller for 4 Flashes

Param STG

Drive Cycle – Open & Closing Speeds

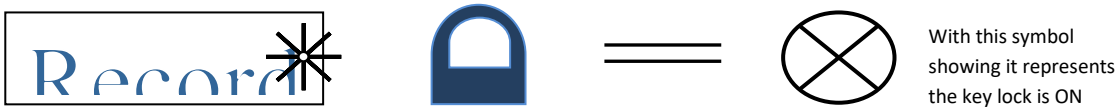
Drive – Open & Close Collision

Guide to Blue Button – Multiple Use (MF)

No of Flashes	Level
1	Single Impulse – Opens Door
3	Learns door parameters (Calibration Run)
4	Programming mode
5	tests the battery on STA 20
8	Factory standards reset
9	Full Reset -9 flash and then pull the emergency stop OUT then IN
14	Soft reset the same as the Record Logo

BDE – Control Switch

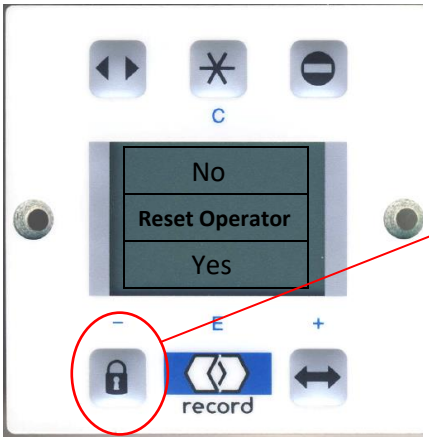
To both **Lock** and **Unlock** the Keypad operation:



With this symbol showing it represents the key lock is ON

To reset the door:

Press and hold the Record logo for 10-13sec. The screen will scroll through various software info, followed by the option to reset **yes / No**. Upon selecting **Yes** the doors will come to the closed position and reset. After 3sec activate the doors to open so they may go through one learn cycle of **open / close** (moves slowly) and complete their reset cycle.



For final exit of the building, place the program selector into the locked function and when you are ready to leave press the lock symbol once to give a single open/close exit.

Once outside, stand clear of the sensors and after the doors are closed, then set your manual locks.

Remember to unlock manual locks prior to using the first entry key switch on the outside of the building.

PARAMETER	Factory setting	Comment
DRIVING CYCLE		
↳ Closing speed	0..**20**..40	Speed = slow – fast Note: - 0 = creeping - with small doors the end speed might not be reached according to acceleration
↳ Opening speed	0..**36**..40	See closing speed
↳ Open		
↳ Acceleration	0..**30**..40	Acceleration = small - big
↳ Deceleration	0..**30**..40	Braking momentum during closing movement Deceleration = small – big braking force
↳ Creep section	**0**..40	Adjustable creep section at the end of the opening movement. Creep section = 0 - 100% of A-dimension Note: - 0 = no creeping - 1 = 2.5% of running section - 40 = 100% of running section
↳ Close		
↳ Acceleration	0..**30**..40	Acceleration = small - big
↳ Deceleration	0..**30**..40	Braking momentum during closing movement Deceleration = small – big braking force
↳ Creep section	**0**..40	Adjustable creep section at the end of the opening movement. Creep section = 0 - 100% of A-dimension Note: - 0 = no creeping - 1 = 2.5% of running section - 40 = 100% of running section
↳ Holding force	0..**20**..40	Holding force in closed position Open time = 0 – 60 seconds Note: In case of high holding force the engine temperature increases due to power loss.
↳ Ramp		For lowerable doors (type OP-door 2) a ramp can be configured in the closed zone. In the area of the ramp the collision surveillance is reduced! The ramp function is only enabled in the opening direction. Before the learning cycle, the door briefly stops after the ramp.
↳ Section	**0**..40	Length of the ramp (at horizontal) i.e. with a D-STA the total opening of the door leaves is twice as big. Note: - 0 = ramp function disabled - 1 = 4 cm horizontal length of the ramp (increments = 0.2 cm) - 40 = 12 cm horizontal length of the ramp
↳ Force	**0**..40	Maximum force in the area of the ramp Note: - 0 = small force, produces a minor acceleration - 40 = important force, produces a major acceleration
↳ Seal	**0**..40	Width of the seal in the closing area. In the adjusted area the collision surveillance is reduced during the closing phase. During the learning the closed position is reached or sought with increased force. Note: - 0 = no seal - 1 = 10 mm seal width (in driving direction) (increments = ca. 0.5 mm) - 40 = 30 mm seal width (in driving direction)
TIME DELAY OPEN		
↳ Time delay open	**0**..40	Hold-open time when actuating via AKA / AKI Open time = 0 – 60 seconds Note: - Time starts when trigger signal disappears - 0 – 20 = increment 1 second → 0 – 20 seconds - 21 – 40 = increment 2 seconds → 22 – 60 seconds
↳ SSK hold-open	0..**4**..40	Hold-open time when opening via SSK SSK open time = 0 – 60 seconds Note: - Time starts when trigger signal disappears - 0 – 20 = increment 1 second → 0 – 20 seconds - 21 – 40 = increment 2 seconds → 22 – 60 seconds
↳ SSK deceleration	**0**..40	Hold-open time when opening via SSK SSK delay = 0 – 8 seconds Note: - 0 = no delay - 40 = opening delayed by 8 seconds
↳ Reset with button		Not with RED
↳ Disabled	**X**	
↳ Enabled		If during the open time, the same activation is actuated again, the open time is considered as terminated and the door closes again. In this context AKI and AKA (or AKI red. and AKA red.) are equivalent. Therefore, after an opening due to e.g. an AKI-signal, the hold-open time can also be ended with an AKA-pulse. This possibility works also for SSK, but not for both inputs AKI/AKA permanently assigned on the FEM 0.
DRIVE		
↳ Reduced opening width	0..**26**..40 with RED 0..**40**	Reduced opening as energy-saving measure Reduced opening width = 20 cm Note: - 0 = minimum opening = 10 cm per door leaf - 40 = complete opening (A dimension) - setting possibility: door on "Continuously open", set reduced opening width with FPC, by validating the door runs to the set position - is ignored in case of 1st opening, SÖK, emergency opening, deadman, TOWA and emergency battery operation The requirements of the different countries referring to the minimum opening must be observed.
↳ Collision CLOSE	0..**20**..40	Reaction point of a collision during closing run (→ main closing edge). The kinetic energy of the running door is partially absorbed by the obstacle, until the control notices the increased expenditure of force. Collision CLOSE:

PARAMETER		Factory setting	Comment
			- 0 = very gentle - 40 = violent
↳ Collision OPEN		0..**20**..40	Reaction point of a collision during opening run (→ lateral closing edge). Collision OPEN: - 0 = very gentle - 40 = violent
↳ Brake			Not with RED
	↳ Without	X	Either motor is without brake or brake is not used.
	↳ Closed position		Is braked in closed position even in operating mode "Locked".
	↳ Open position		Is braked in open position in operating mode "Continuously open" as well as with "Reduced opening" and also in case of release via SSK.
	↳ Closed/Open position		Is braked inclosed and open positions. Open position as described above, in closed position also in operating mode "Locked".
	↳ Closed/One-Way/Locked		Is braked in closed position (mode "One-Way") and in mode "Locked".
	↳ Closed, Locked		Is braked in mode "Locked".
↳ Motor			According to the STM used, not all ATE's are possible.
	↳ Without	X	
	↳ ATE 20		Motor is automatically identified Designation: ATE STA 20 (size 63x55)
	↳ ATE 21		Motor is automatically identified Designation: ATE STA 21 (size 63x25)
	↳ ATE 19 small		Designation: ATE STA 19 (size 63x25) (ATE 19 is not detected automatically)
	↳ ATE 19 big		Designation: ATE 19 (size 63x55) (ATE 19 is not detected automatically)
	↳ ATE 16 normal		Designation: ATE 16 (102-016029001) (ATE 19 is not detected automatically)
	↳ ATE 16 heavy		Designation: ATE 16 (102-016025001) (ATE 16 is not detected automatically)
	↳ ATE 17		Designation ATE 17 (size 63x25) (ATE 17 is not detected automatically)
	↳ ATE 20 Folding door		ATE 20 with special pulley for folder (ATE 20 will be detected automatically and set for door type Folder)
	↳ ATE 16 Folding door		ATE 16 with special pulley for folder (ATE 16 is not detected automatically)
↳ Two motors			
	↳ Disabled	X	
	↳ Enabled		Only possible with STM 20 DUO/RED
↳ Emergency operating BAT			Configured action is carried out with lead-acid battery - when charging voltage is low or - Emergency operation is configured with NiCd battery - in case of power failure Note: - Afterwards STM is disconnected - In spite of the door controller being disconnected an emergency opening via SSK is possible. - RED: an open door can be closed and locked via BDE-V and SSK command.

PARAMETER		Factory setting	Comment
	↳ Close, do not lock		Door closes, but does not lock (with RED not possible/authorised)
	↳ Unlock and open		Door unlocks and opens
	↳ Close and lock		Door closes and locks (not with RED)
	↳Open if not locked	X	Door opens, as long as it is not in mode "Locked"
↳ Power failure			
	↳ Battery operation with RED		Door goes on functioning until battery capacity is low, then the configured Emergency operating BAT is executed. With STM 21 the battery operation isn't possible even with lead acid battery Up to 13 seconds of normal operation, and then the door opens and remains open. BDE-D stays active with notice on the display power failure. By recurrent voltage, the control unit performs a redundancy test and changes again in the original operation mode.
	↳ Emergency operation	X	After a power failure, the door carries out the configured "Emergency operating BAT".
↳ Battery			
	↳ Without battery	X	
	↳ Lead-acid battery		Battery is automatically identified, when it is plugged in (with STM 21, later on also possible for lead-acid batteries with extra charge circuit)
	↳ NiCd		NiCd battery: only usable with STM 21
DOOR SYSTEM			
↳ A-dimension			in mm, range: 0..59'999 (data for folder is a must)
↳ G-dimension			in mm, range: 0..59'999 (not used)
↳ Door leaf			Supports calculation of door parameters
	↳ DST		Bi-parting door D-STA, D-TSA
	↳ EST-L/R		Single-leaf door left / right: E-STA, E-TSA
↳ Interlock (with FEM-1)			Requires a FEM-1, with RED and STM21 not possible The usage of direction detecting sensors is recommended to avoid needless opening movements (depending on the operating mode) A SIS-signal during the closing movement keeps open only the according door The reduced opening width works as usual
	↳ Disabled	X	
	↳ All operating modes		Interlock is active during operating modes Automatic, One-way, Locked The interlock function is out of order, if both doors are in operating mode "continuously open". This operating mode is to be used for the passage of bulky goods. Manual control of the door is not recommended, because it's only possible to open the opposite door, if the door is pushed closed completely in manual mode. A locked outer door will be unlocked and opened with an interlock control unit analogously a SSK.
	↳ Only One-way and Locked		Interlock is active during operating modes One-way and locked. During the automatic mode both doors open at the same time, as soon as activation has taken place on one side. The operating modes Manual and Continuously open are described under the point "All operating modes".
↳ Door type			Attention: a modification of door type causes a reset of the running parameters and sets certain parameters, as e.g. AUX0-IN, to a predefined function.

PARAMETER	Factory setting	Comment
		Some drives only support certain door types.
↳ Basic drive	X	
↳ RED Battery	(X)	Standard door type on RED For the 24 hour redundancy test the door must no longer be necessarily open. In other words, if the door remains closed over 23.5 hours, the redundancy test is carried out in the closed position.
↳ RED door closed		With this door type the redundancy test is exclusively carried out in the closed position. Attention: such a configured door does not comply with the requirements of DIN 18650.
↳ CO48 Ventouse		Mechanical power storage, with separate carriage, which is maintained in closed position by a magnet. Possible on drive height 200
↳ TOS		Surveillance of manual locking devices on the door leaves. Inputs must be programmed on FEM-0: TOS_DV1, TOS_DV2. Operating mode "Automatic" or "One-Way": manual locking device(s) must be open (0V/open on AUX2_IN and AUX3_IN), otherwise door fails to open Operating mode "Locked": manual locking devices must be closed, otherwise anti-burglar protection is not guaranteed anymore → error 29 on BDE-D. SSK function is ensured.
↳ FlipFlow		The bi-parting swing door (DDF) has been successfully integrated. For the FlipFlow the adjustable speed for the safety signals (SÖK and NSK) has been created. Note: - in case of NSK/SÖK movements, no kind of safety is taken into consideration - an increase in speed reduces the personal security at the expense of e.g. the building security
↳ CO48 Sandow direct		Direct sliding-along power storage device Note (automatic adjustments): - Without battery In France only authorized without battery - Cord surveillance on AUX01_IN - Brake closed/open position
↳ Basic escape route		Standard requirement for the UK, always with lead- acid battery Power failure: Reaction according to Emergency operating BAT After come-back of mains voltage, back to previous operating mode Battery problem: In case of a defective or insufficiently charged battery, the door opens and can be reset - by starting again the control unit via FPC or via Emergency Stop - and so be set back again into service.
↳ Breakout USA		Parameter modification: - Emergency stop with reset is disabled - SIO is set on creeping
↳ Ratchet		Function for pulse control (Safety active) AUX0_IN is activated by 0V → 24V changeover (similar to activating a switch) - Door closed: changeover opens the door, which stays

PARAMETER	Factory setting	Comment
		and if no BDE-M outputs are configured
↳ Off		
↳ Locked	(X)	All drives except RED
↳ Automatic	X	Attention: a locked door may change to operating mode "Automatic" in case of an interruption to BDE-D or of a defect of BDE-D. This means setting the desired reaction together with the end-user!
RED	(X)	For RED drives
↳ Continuously open		
Locking		
↳ Locking function		On RED installations only the operation mode "normal locked" is possible. The locking occurs by a RED installation via BDE-V. If locked, the installation can not be used as emergency escape anymore.
↳ Normally locked	X	Is locked through selection of operating modes
↳ One-Way locked		One-way functionality with automatic locking and unlocking via AKI (+ SSK). Mode "Locked" works as usual.
↳ Always locked		Automatic locking and unlocking in modes "Automatic" and "One-Way". Mode "Locked" works as usual.
↳ Locking type		Locking types are not automatically identified. They must be programmed. Not all locking types are authorised/available for all drives.
↳ Without	X	
↳ Motor-powered		VRR 20 (motorised, bi-stable)
↳ Bi-stable		VRR 16 (magnetic, bi-stable)
↳ MPV 20		Multipoint locking device, system 20 (motorised)
↳ MPV 16		Multipoint locking device, system 16 (motorised)
↳ Magnet		Magnet locking device (without VAK) unlockable without current (monostable)
↳ Fail secure		Monostable locking device, lockable without current
↳ Fail safe		Monostable locking device, unlockable without current (France: sécurité positive)
↳ 2-times		Triggering of the additional unit for 2 locks Is used on FBO and PST
↳ Start delay	0..40	Delay: max. 8 seconds until door opens after unlocking
↳ Closed VRR error		
↳ Disabled	X	After locking error and 10 cm opening test, door stays in that position to show the error on BDE-D
↳ Enabled		After locking error and 10 cm opening test, door drives back to closed position. The error remains and is displayed on BDE-D.
↳ Push force	0..40	Increases the closing force for a short time while locking and unlocking, in order to relieve mechanically the locking bolt.
CAN BUS		
↳ Units on CAN bus		Any unit connected is automatically identified and displayed with a 1. Disconnected units are displayed with ? and must be removed manually with FPC. Not available units are displayed with a 0.
↳ FEM-0	0	Extended function module 0

PARAMETER		Factory setting	Comment
			- 2 configurable inputs - 1 configurable relay output (contact → 24V) - 2 ELS-connections (pre-configured) - each 1 AKI-/AKA-connection (pre-configured) - BDE-M connection (pre-configured)
	↳ FEM-1	0	Extended function module 1 - 4 configurable inputs - 14 configurable relay outputs potential-free closed-circuit contact or break contact to be chosen Basic setting: closed-circuit contact → selection with jumper All FEM 1 outputs can be activated with the available configurations. Availability depends on control unit.
	↳ AKI1	0	RAD: motion sensor 1 – outside
	↳ SI1	0	RIC: safety sensor 1 – inside
	↳ AKA1	0	RAD: motion sensor 1 – outside
	↳ SA1	0	RIC: safety sensor 1 – outside
	↳ SL	0	AIR: safety "lateral closing edge" – left
	↳ SR	0	AIR: safety "lateral closing edge" – right
	↳ AKI2	0	RAD: motion sensor 2 – inside
	↳ SI2	0	RIC: safety sensor 2 – inside
	↳ AKA2	0	RAD: motion sensor 2 – outside
	↳ SA2	0	RIC: safety sensor 2 – outside
INPUT/OUTPUT STG			
↳ AUX00_IN & AUX01_IN (inputs STM)			Terminals 4 & 6 on control module STM 20 Note: With safety parameters an open input (= 0V) means that the signal is enabled, i.e. possible circuit interruptions are identified. All key functions only respond to the signal change. A continuously present signal has no influence and a door opened e.g. by button AKI closes after the open time, independently thereof, if the signal is still present.
	↳ Disabled	X	
	↳ SÖK or NSK		Safety opening or closing have first priority **(exception: if pharmacy function is enabled)**. Safety sensors and reverse automatic are not active. Adjustment of functionality under SÖK/NSK. Input voltage: 0V/open = SÖK/NSK enabled 24V = SÖK/NSK disabled
	↳ SURV		Timer Locked Input voltage: 0V/open = operating mode „Locked" 24V = mode according to BDE-D Cannot be unlocked by BDE-D → no priority SSK is active → safety sensors are active Closes and locks also in the modes „Manual" and „Continuously open"
	↳ BDE-M		AUX00_IN – BDE-M → S2 AUX01_IN – BDE-M → S1 or connect to FEM-0 (preconfigured connections) Note: - BDE-M must be activated under control unit - No second BDE-M can be connected - In the operating mode Continuously open the door

PARAMETER		Factory setting	Comment
			opens and changes to manual mode - A parallel operation with BDE-D is possible, operating mode "Locked" has priority → see table

Bedienungseinheit BDE-M			BDE-Stellung	
Pos.	Symbol	Funktion	S2	S1
1		Verriegelt	0	0
2		Einbahn-Betrieb	1	1
3		Offen	0	1
5		Normal-Betrieb	1	0

1 = Kontakt S geschlossen
0 = Kontakt S offen

Bei unterbrochenem BDE-M-Anschluss wird der Code "verriegelt" angenommen.
Verriegelt hat höchste Priorität,
Winterhat Priorität 4

	↳ Continuously open		1st pulse: open, 2nd pulse: original operating mode Note: - Pulse means changeover 24V → 0V/open (similar to releasing a switch) - A locked door can be unlocked, safety sensors are active
	↳SIS		Safety while closing. Door inverts sliding movement and remains open as long as signal is on. Open contact (0V) means active safety.
	↳SIO		Safety while opening. Functionality given in case of release via SSK too. Open contact (0V) means active safety. *Note:* Door stops or slows down according to parameterisation in menu Input/SIO
		RED	The SIO signal is already taken into account from 80% of the opening width of escape route. Between 80 and 100% the door creeps and then the configured value (SIO function) determines whether the door stops or continues to creep.
	↳Button AKI reduced		Opening pulse – applicable ONLY for push-button. Door also closes with pending signal. Opening pulse = Closing contact (0V → 24V changeover) Opens to reduced opening width as soon as input is enabled (24V). A parallel activation (AKI/AKA/SSK) opens the door completely and if signal stays on ("Opening reduced") door remains in open position. Setting "TOWA" is not relevant. *Note:* a locked door cannot be opened through signal "Opening reduced".
		RED	Not available for RED installations.
	↳Inside button reduced (only with RED)		As a complement to a tested trigger sensor in escape route direction, a push button can be fitted as an opener. The opening path over the button is not under surveillance and buttons are consequently not allowed as escape route openers Opening pulse – ONLY appropriate for buttons. Door also closes with pending signal. Opening pulse = closing contact (0V → 24 V changeover) Opens to reduced opening width.
	↳ Broken rubber cord		Surveillance of CO48 cord. A message is displayed on the

PARAMETER		Factory setting	Comment
			BDE-D. All operating modes, incl. "Locked", are still possible. Note: Switch must be closed in case of "good" cord, i.e. 24V on AUX0_IN and must open in case of torn cord → error 20 and door opens if not locked
	↳ Dead man open		As long as signal is on (24V), door opens. If signal disappears, door stops. Works only with door type dead man or if specified by the according door type.
	↳Dead man close		As long as signal is on (24V), door closes. If signal disappears, door stops. Works only by door type dead man.
	↳ Button AKI RED		Opening pulse – ONLY suitable for pushbutton. Door also closes with pending signal. Opening pulse = closing contact (0V → 24V changeover) Not available for RED installations.
	↳ Button inside (only with RED)		As a complement to a tested trigger sensor in escape route direction, a push button can be fitted as an opener. The opening path over the button is not under surveillance and buttons are consequently not allowed as escape route openers. Opening pulse – ONLY appropriate for buttons. Door also closes with pending signal. Opening pulse = closing contact (0V → 24 V changeover)
	↳ Button CLOSED		Closing pulse – Closes the door with door type dead man SIS active and stops the door → after loosing the SIS signal a new close pulse is necessary Closing pulse = 0V → 24V changeover
	↳ Ratchet		Sequential control (pulse).
	↳ Emergency opening		Opens, if not locked, at reduced speed. Afterwards back to original operating mode. Emergency opening happens when contact is open (0V).
	↳SURA		Clock timer "One-Way", if not locked. Open contact (0V) means operating mode "One-Way" is enabled. If it is impossible to set it on "Automatic", etc. via BDE-D → no priority. However, modes "Locked" and "One-Way" have priority.
	↳ Button AKA		Opening pulse – ONLY suitable for pushbutton. Door also closes with pending signal. Opening pulse = closing contact (0V → 24V changeover) No activation with this button in operating mode "One-Way".
	↳ Button AKA reduced		Analogue to button AKI reduced In "One-Way" mode no triggering via this button.
	↳ VRR manual		The according input has to be open (0V). The text on the display changes cyclical between the operation mode and "manually locked". With 24V on the input the drive changes back after about 4 seconds in the original mode. This time window should be enough, to dray out the key from the cylinder, before the door opens after activation of the motion detector. While the VRR manual mode is active (0V), the mode can be changed.
BDE_V1 & BDE_V2 (inputs STM DUO)			Plug J13, connector block 13 & 17 (only STM20/22 DUO)

PARAMETER		Factory setting	Comment
	↳ Disabled	X	
	↳ SURV		Clock timer locked
	↳ Continuously open		1 pulse: open, 2 pulses: closed
	↳ SIS		Safety during closing
	↳ SIO		Safety during opening
	↳ Button AKI reduced		Opening pulse on reduced opening width
	↳ Broken rubber cord		Surveillance of CO48 cord
	↳ Dead man OPEN		As long as signal (24V) is on, door opens. If signal disappears, door stops.
	↳ Dead man CLOSED		As long as signal (24V) is on, door closes. If signal disappears, door stops.
	↳ Button AKI		Opening pulse – ONLY suitable for pushbutton
	↳ Button CLOSED		Closing pulse – Closes the door with door type dead man
	↳ Ratchet		Sequential (pulse) control unit
	↳ Emergency opening		Opens, if not locked, at reduced speed
	↳ SURA		Clock timer "One-Way"
	↳ Button AKA		Opening pulse – ONLY suitable for push button
	↳ Button AKA reduced		Analogue to button AKI reduced
	VRR manual		Manually locked
AUX0_OUT (Exit STM)			Connector block 8, 9, 10 on STM, floating output changeover contact 30 volt DC/1A
	↳ Disabled	X	
	↳ Sensor test		This is required as a functional test for safety sensors and triggers before any potentially dangerous door motion (e.g. closing movement). The relay remains in the idle position and is briefly activated for the sensor test. The changeover contact is so connectable that the test output normally shows 24V and changes briefly to 0V for the sensor test (wiring: 24V on STM terminal 9, test input (+) of the sensor on STM terminal 10). If the test output shows 0V in a normal case and must only be changed to 24V during the sensor test, the STM terminal 9 has to be wired to 24V and the terminal 8 to the test input (+). Please note the relevant overview in chapter 7 of this manual. Often, the test logic (test pulse = 0V or 24V) can be selected directly on the STM.
	↳ Alarm output		After the pre-configured time (Miscellaneous → Alarm display) has run out, the error is displayed on the BDE-D and the relay is deactivated. Therefore, without alarm the relay is activated.
	↳ Gong		No ELS signal (Safety during closing/SIS): Relay is in rest position/off Reacts on ELS- or presence surveillance signal, when door is open/activated. In case of a constant signal, every 10 sec. a pulse will be activated for approx. 1 sec This is applicable as well during the learning phase of a RIC 290
	↳ Locked		Not locked: Relay is in sleep mode/off
	↳ Closed		Output triggers slightly delayed, as soon as the door is closed (static opening D-STA < 20mm) Signalisation in manual mode possible
	↳ Warning		Pre-warning before the door opens/closes and while the door is in motion
ZLP-1			Additional printed circuit board to connect conventional safety light barrier. Once the ZLP-ELS are recognized (auto detected recognition) it can be changed only with the