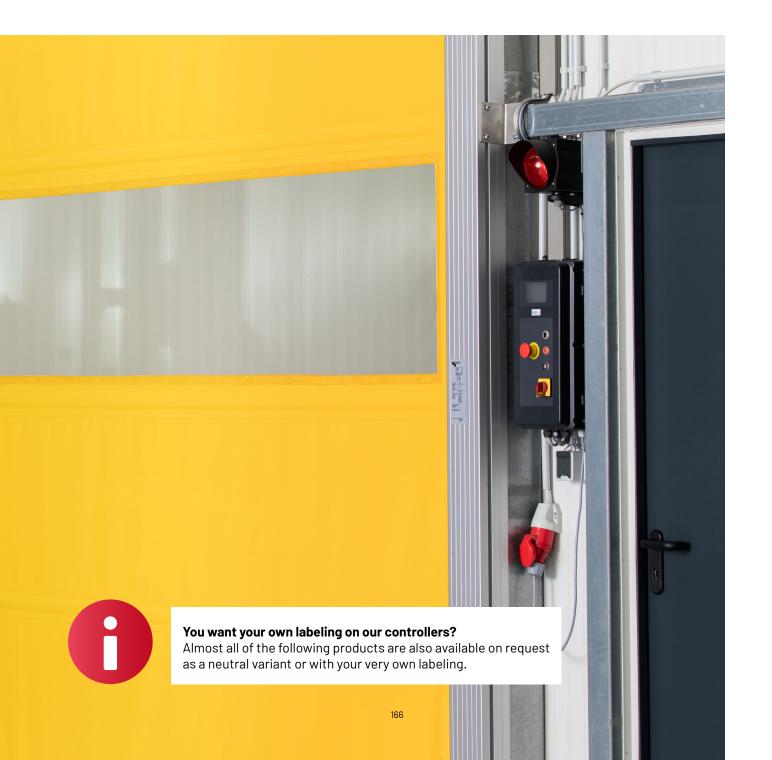
Controls





Ramp Controls



Required Housing Size

	Motherboard	with EM 172	with EM 184	with EM 172 and EM 184	with 2x EM 172 and 1x EM 184	with 1x EM 172 and 2x EM 184
CS 265	Mini	Combi	Combi	Combi	Maxi	Maxi
CS 320	Standard	Combi	Combi	Combi	Maxi	Maxi
CS 320 4 kW	Combi	Combi	Combi	Maxi	Maxi	Maxi
CS 320 FU-I 0,75 kW	Standard	Combi	Combi	Combi	Maxi	Maxi
CS 320 FU-E 0,75 kW	Combi	Maxi	Maxi	Maxi	Maxi	Maxi
CS 320 FU-E 1,5 kW 1 Ph	Maxi	Maxi	Maxi	SH	SH	SH
CS 320 FU-E 1,5 kW	Combi	Maxi	Maxi	Maxi	Maxi	Maxi
CS 320 FU-E 2,2 kW	Combi	Maxi	Maxi	Maxi	Maxi	Maxi
CS 320 FU-E 3,0 kW	Maxi	Maxi	Maxi	SH	SH	SH
CS 320 FU-E 4,0 kW	Maxi	Maxi	Maxi	SH	SH	SH
CS 320 IE	Combi	Combi	Combi	-	_	-
CS 320 FU-E IE 0,75 kW	Maxi	Maxi	Maxi	-	_	-
CS 320 FU-E IE 1,5 kW	Maxi	Maxi	Maxi	_	_	_
CS 320 + RS 200	Combi	Maxi	_	-	_	_
CS 320 + RS 301	Maxi	Maxi	_	-	_	_
CS 265 + RS 200	Combi	Maxi	_	-	_	_
CS 265 + RS 301	Combi	Maxi	_	-	_	_

Technical data

	CS 265 1,5kW	CS 320 4 kW	CS 320 IE	CS 320 2,2 kW	
On-site supply	230 V/3~/50 Hz; 400 V/3~/50 Hz	230 V/1~/50 Hz Hz; 400 V/3~/5	•	400 V/3~/50 H	Z
Control voltage [V]	24 V-DC				
Switching current (max.)[A]	5	9 8			
Load capacity Power (max.) [kW]	1.5	4 2.2			
Protection class	IP65				
Temperature (min./max.)[°C]	-10/45				
Dimensions(WxHxD)[mm]			245x455x190	215x275x190	245x455x190

	CS 320 FU-I 0.75 kW	CS 320 FU-E 1.5 kW	CS 320 FU-E 1.5 kW 1Ph
Input voltage [V]	230 V/1~	400 V/3~	230 V/1~
Output voltage[V]	230 V/1~	400 V/3~	230 V/3~
On-site supply	230 V/1~/50 Hz	400 V/3~/50 Hz	230 V/1~/50 Hz
Control voltage [V]	24 V-DC		
Output current[A]	4.1		7.8
Switching current (max.)[A]	4.1 7.8		7.8
Output power[kW]	0.75 1.5		
Load capacity Power (max.)[kW]] 0.75 1.5		
Protection class	IP65		
Temperature (min./max.)[°C]	-10/45		
Dimensions (WxHxD)[mm]	215x275x190	245x455x190	260x550x245

	CS 320 FU-E 2.2 kW	CS 320 FU-E 3.0 kW	CS 320 FU-E 4.0 kW
Input voltage [V]	400 V/3~		
Output voltage[V]	400 V/3~		
On-site supply	400 V/3~/50 Hz		
Control voltage [V]	24 V-DC		
Output current[A]	5.6	7.3	8.8
Switching current (max.)[A]	5.6	7.3	8.8
Output power[kW]	2.2	3	4
Load capacity Power (max.) [kW]	2.2	3	4
Protection class	ection class IP65		
Temperature (min./max.)[°C]	-10/45		
Dimensions (WxHxD)[mm]	245x455x190 260x550x245		

	CS 320 FU-E IE 0,75 kW	CS 320 FU-E IE 1,5 kW
Input voltage [V]	230 V/1~	400 V/3~
Output voltage[V]	230 V/3~	400 V/3~
On-site supply	230 V/1~/50 Hz	400 V/3~/50 Hz
Control voltage [V]	24 V-DC	
Output current[A]	4.1	
Switching current (max.)[A]	4.1	
Output power[kW]	0.75	1.5
Load capacity Power (max.) [kW]	0.75	1.5
Protection class	IP65	
Temperature (min./max.)[°C]	-10/45	
Dimensions (WxHxD)[mm]	245x455x190	245x275x190

CS 265



The CS 265 basic automatic control unit is the compact option for sectional doors and small roller shutters without brakes. Thanks to its compact design, it can be mounted directly on the operator, but can also be optionally installed in an external housing. The control unit can be actuated via an absolute encoder as well as via mechanical limit switches. End positions and basic functions are programmed via the "intelligent" CSI-15 triple push button. Further function settings can be made via a 3-key navigation on an optional LC display with plain text display.

Features

Functions

- 1 programmable relay output with 44 functions (only via LC display)
- 2 programmable inputs with 27 functions (only via LC display)
- Changing the direction of rotation via circuit board push button/display
- Intermediate position programmable (only with AWG)
- Adjustable power limitation in OPEN direction (only with AWG)
- Rotation direction monitoring and detection (only with AWG)
- · Integrated gate run counter
- Programmable maintenance alarm (PIN code protected)
- Integrated error memory (readout of all error messages indicating frequency and cycle of last occurrence) only with LCD monitor

End position setting

- Via mechanical limit switches (MEC) or via absolute encoders (AWG)
- Setting via platinum pushbutton, external "intelligent" 3-fold pushbutton CS-I 15 or plug-in LCD monitor

Operation

- Intelligent 3-series keypad CS-I 15 (standard) for operation and programming of end positions, unwind direction, open time, radio hand-held transmitters, "quick CLOSE" function and factory setting Readout of cycle number, status and error messages
- 3-button navigation/status and diagnostic messages

Structure and connection

- Integrated in the operator (standard)
- In external housing (optional)
- Switchable transformer from 230 V/1~/3~ to 400 V/3~
- · Short-circuit proof extra-low voltage
- Supply for external devices (24 V-DC/200 mA)
- Illuminated keyboard (night lighting)
- · Connection for elements of the safety circuit
- Connection for closing edge protection (8.2 kOhm and opto) in OPEN direction
- Connection for 2 light barriers (2-wire, relay, NPN, PNP) with/without testing
- Connection for wicket door and slack rope switch PL c cat. 2 (8.2 kOhm) with testing according to EN 12453:2017
- Connection for 2 light grid systems with/without testing
- Interface for connecting expansion modules
- · Pluggable radio receiver

Optional

· Control in steel cabinet

CS 320



The CS 320 comfortable control unit is a special development for rolling, sectional and sliding gates, optimally matched to the requirements in these areas. The fully developed microprocessor control is based on the proven concept of the CS 310 and can be controlled via an absolute encoder as well as via mechanical limit switches. With a wide range of connection and expansion options, even complex control tasks become child's play for the CS 320. For new installations, but also for the safe retrofitting of existing door systems.

Features

Functions

- 4 programmable relay outputs with 44 functions
- 2 programmable inputs with 27 functions
- Changing the direction of rotation via circuit board push button/display
- Intermediate position programmable (only with AWG)
- Adjustable power limitation in OPEN direction (only with AWG)
- Rotation direction monitoring and detection (only with AWG)
- · Integrated gate run counter
- Programmable maintenance alarm (PIN code protected)
- Integrated error memory (readout of all error messages indicating frequency and cycle of last occurrence) only with LCD monitor

End position setting

- Via mechanical limit switches (MEC) and/or via absolute encoders (AWG)
- Setting via circuit board push button or plug-in LCD monitor

Operation

- Circuit board push buttons and LEDs for status indication (standard)
- Pluggable LC display with plain text display
- 3-button navigation/status and diagnostic messages

Structure and connection

- Switchable transformer from 230 V/1~/3~ to 400 V/3~
- Short-circuit proof extra-low voltage
- Illuminated cover keypad (night illumination)
- · Housing protection for printed circuit board
- · Connection for elements of the safety circuit

- Connection for closing edge protection (opto, 8.2 kOhm, pressure wave bar or leading light barrier) in CLOSE direction
- Connection for closing edge protection (8.2 kOhm and opto) in OPEN direction
- Connection for 2 light barriers (2-wire, relay, NPN, PNP) with/without testing
- Connection for wicket door and slack rope switch PL c cat. 2 (8.2 kOhm) with testing according to EN 12453:2017
- Connection for 2 light grid systems with/without testing
- · Connection for radar presence detector
- Interface for connecting a frequency converter
- Interface for connecting expansion modules
- · Slots for radio module and weekly timer
- Slot for 2-channel radio transmission system for wireless signal transmission of closing edge system and/or safety circuit
- Control of the magnetic brake via relay output
- For operators with externally switched brake, a brake monitoring module is additionally installed (BWM1)
- Supply for external devices (24 V-DC/500 mA and 230 V-AC/1 A)

- LCD monitor with plain text display
- · MS-Bus extension module two-way traffic control
- MS-Bus extension module pull-in safety device
- Integrated main switch
- Customized cover lamination

CS 320 IE



The CS 320 IE comfort automatic control unit is specially designed for use in underground garages and with roller grilles and is optimally matched to the requirements in these areas. The control operates on the basis of the CS 320 convenient control and thus has its full range of functions. Supplemented by the MS-BUS extension modules "two-way traffic" and "pull-in protection", not only red/green traffic lights can be controlled separately inside and outside, but also 2 pull-in protection systems can be evaluated - of course taking into account all applicable standards and directives. Thus, the CS 320 IE offers a maximum of functionality, flexibility and safety and is therefore the optimal alternative to existing control solutions in this area.

Features

This control is based on the basic equipment of the CS 320. In addition, it has the following features:

Functions

- Integrated MS-Bus control modules
- Programmable traffic light function (oncoming traffic)
- Evaluation and testing of the pull-in safety devices

Structure and connection

· Pluggable LC display with plain text display

- · Integrated main switch
- Customized cover lamination
- Control in steel cabinet

CS 320 FU



The CS 320 FU is a comfortable automatic control unit with frequency converter. A frequency converter module is added to the standard CS 320 board, thus allowing speed-independent control of gates. This not only ensures optimum dynamics, but also energy-efficient operation of the door system.

2 delivery variants are available:

 $\mbox{CS\,320\,FU-E}$ - the frequency converter is integrated in the control housing

CS 320 FU-I - the frequency inverter is integrated in the operator unit

Features



This control is based on the basic equipment of the CS 320. In addition, it has the following features:

Functions

- Start and end speed separately adjustable for both running directions
- Additionally 2nd final speed adjustable in running direction CLOSE
- Acceleration and deceleration times adjustable for both directions
- Braking points freely selectable/adjustable braking deceleration
- Adjustable power values for adaptation to the motor
- 4 programmable relay outputs with 44 functions
- 2 programmable inputs with 27 functions
- Rotation direction monitoring and detection (only with AWG)
- Integrated gate run counter
- Integrated error memory (readout of all error messages indicating frequency and cycle of last occurrence) only with LCD monitor
- Changing the direction of rotation via circuit board push button/display
- Adjustable power limitation in OPEN direction (only with AWG)
- Intermediate position programmable (only with AWG)

Structure and connection

- Short-circuit proof extra-low voltage
- Supply for external devices (24 V-DC/500 mA and 230 V-AC/1 A)
- · Connection for elements of the safety circuit

- Connection for closing edge protection (opto, 8.2 k0hm, pressure wave bar or leading light barrier) in CLOSE direction
- Connection for closing edge protection (8.2 kOhm and opto) in OPEN direction
- Connection for 2 light barriers (2-wire, relay, NPN, PNP) with/without testing
- Connection for wicket door and slack rope switch PL c cat. 2 (8.2 kOhm) with testing according to EN 12453:2017
- Connection for 2 light grid systems with/without testing
- Control of the magnetic brake via relay output
- For operators with externally switched brake, a brake monitoring module is additionally installed (BWM1)
- Interface for connecting a frequency converter
- Switchable transformer from 230 V/1~/3~ to 400 V/3~
- Pluggable LC display with plain text display

- MS-Bus extension module two-way traffic control
- MS-Bus extension module pull-in safety device
- · Integrated main switch
- Customized cover lamination
- Frequency converter integrated in operator (FU-I version without brake, only 0.75 kW)
- · Control in steel cabinet

CS 320 FU IE



The CS 320 FU IE comfortable automatic control unit is specially designed for use in underground garages and with roller grilles and is optimally matched to the requirements in these areas. The control operates on the basis of the CS 320 IE comfortable control unit and thus has its full range of functions. In this case, the CS 320 IE control system is extended by a frequency converter module, thus allowing speed-independent control of gates. This not only ensures optimum dynamics, but also energy-efficient operation of the door system.

Features



This control is based on the basic equipment of the CS 320. In addition, it has the following features:

Functions

- Start and end speed separately adjustable for both running directions
- Additionally 2nd final speed adjustable in running direction CLOSE
- Acceleration and deceleration times adjustable for both directions
- Braking points freely selectable/adjustable braking deceleration
- Adjustable power values for adaptation to the motor
- 4 programmable relay outputs with 44 functions
- 2 programmable inputs with 27 functions
- Rotation direction monitoring and detection (only with AWG)
- Integrated gate run counter
- Integrated error memory (readout of all error messages indicating frequency and cycle of last occurrence) only with LCD monitor
- Programmable traffic light function (oncoming traffic)
- Evaluation and testing of the pull-in safety devices
- Intermediate position programmable (only with AWG)
- Changing the direction of rotation via circuit board push button/display

Structure and connection

· Short-circuit proof extra-low voltage

- Supply for external devices (24 V-DC/500 mA and 230 V-AC/1 A)
- Connection for elements of the safety circuit
- Connection for closing edge protection (opto, 8.2 kOhm, pressure wave bar or leading light barrier) in CLOSE direction
- Connection for closing edge protection (8.2 kOhm and opto) in OPEN direction
- Connection for 2 light barriers (2-wire, relay, NPN, PNP) with/without testing
- Connection for wicket door and slack rope switch PL c cat. 2 (8.2 kOhm) with testing according to EN 12453:2017
- Connection for 2 light grid systems with/without testing
- Control of the magnetic brake via relay output
- For operators with externally switched brake, a brake monitoring module is additionally installed (BWM1)
- Switchable transformer from 230 V/1~/3~ to 400 V/3~
- Pluggable LC display with plain text display
- MS-Bus extension module two-way traffic control
- MS-Bus extension module pull-in safety device

- Frequency converter integrated in operator (FU-I version without brake, only 0.75 kW)
- · Customized cover lamination
- · Integrated main switch

Accessories for CS Controls

EM 172





EM 172

EM 172 in CS mini housing

Article

Item no.	Description	Price
106309	EM 172 MS-Bus expansion module with 4 inputs and 4 outputs for DIN rail installation, including 0.2 m MS-Bus cable with RJ14 plug and 0.5 m MS-Bus cable with 4-pin flat plug	122.00 €
121722	EM 172 in CS mini housing MS-Bus expansion module with 4 inputs and 4 outputs in CS mini housing, including 3 m MS-Bus cable	205.00 €

Usage

• For CS 265 and CS 320

Technical data

	EM 172	EM 172 in CS mini housing			
Connection type	Pluggable				
Operating voltage [V]	24 V-DC				
Inputs	4 programmable potential-free inputs for p	oushbuttons(NO)			
Outputs	4 programmable potential-free relay conta	4 programmable potential-free relay contacts (CO)			
Contact type	400				
Contact load (max.)	230 V/6 A				
Interfaces	MS bus (RJ14 connector); MS bus (4-pin connector)				
Protection class	IP00	IP65			
Dimensions (WxHxD) [mm]	84x126x48	165x220x105			
Width (pitch units)	5				

Accessories for CS Controls

EM 184





EM 184

EM 184 in CS mini Housing

Article

Item no.	Description	Price
105733	EM 184 MS bus extension module with connection for 2 pull-in safety devices OSE/PNP/relay, DIN rail including, with 0.2 m MS bus cable	108.00 €
121723	EM 184 in CS mini Housing MS bus extension module with connection for 2 pull-in safety devices OSE/PNP/relay, in CS mini housing, with 3 m MS bus cable	191.00 €

Usage

• For Comfort 260 (speed), 270 (speed), 280, 360, 370, 380, 390 (plus), VTA, CS 265 and CS 320

Technical data

	EM 184	EM 184 in CS mini Housing	
Connection type	Pluggable		
Operating voltage [V]	24 V-DC		
Inputs	2 programmable inputs for pull-in fuses with OSE/PNP/relay connection (24-30 V-DC/max. 0.2 A)		
Interfaces	MS bus (RJ14 connector); MS bus (4-pin connector); OSE; PNP		
Protection class	IP00 IP65		
Dimensions (WxHxD) [mm]	45x126x48	165x220x105	
Width (pitch units)	2.5		

Accessories for CS Controls

Plugs Cables Tools



