



EWELLIX

EWELLIX Control Units

BCU, VCU, SCU, MCU, COMPACT, SEM

Product Data Sheet

We pioneer motion

SCHAEFFLER

Contents

1	BCU.....	4
2	VCU.....	8
3	SCU.....	13
4	MCU.....	18
5	COMPACT.....	21
6	SEM.....	25

1 BCU

1

1 BCU



001CF17B

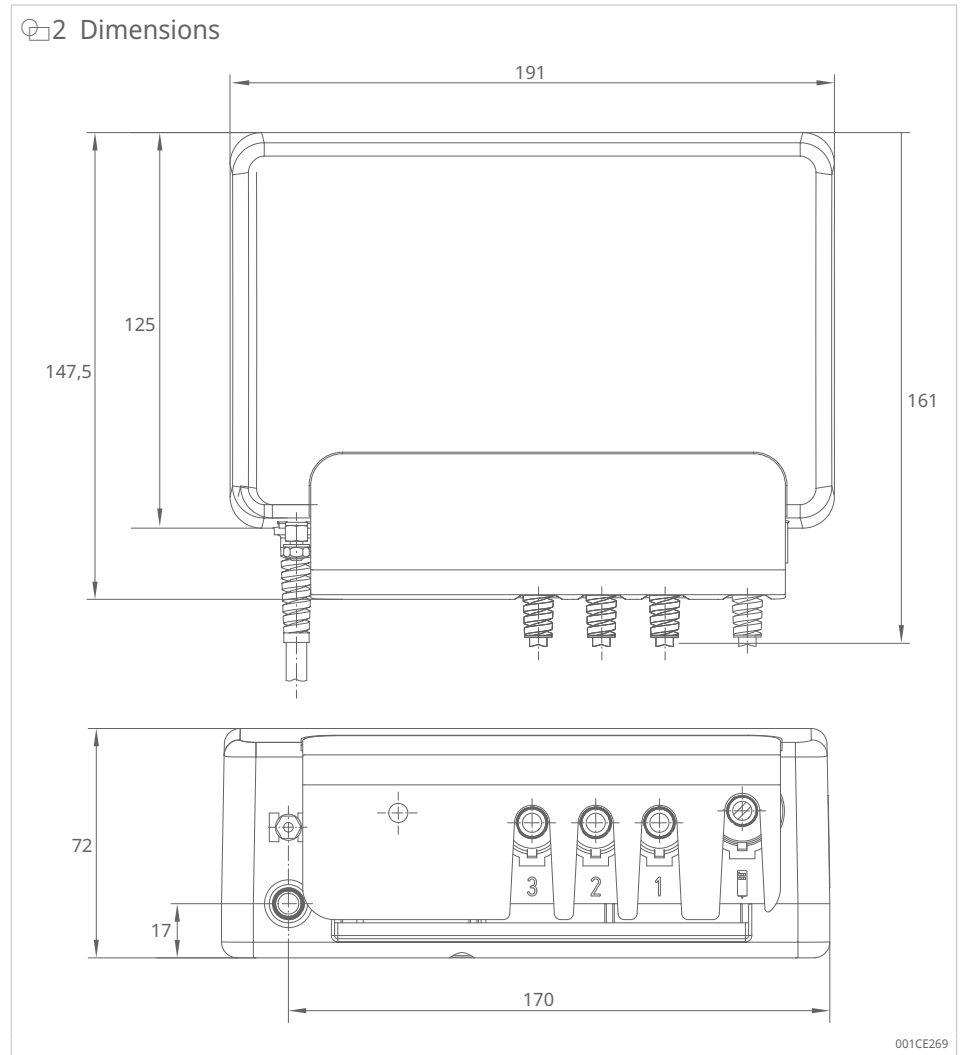
Benefits

- compact 3-channel linear actuator control unit
- single fault safety
- overload and over-temperature protection
- approved for medical applications
- easy to clean
- low standby current

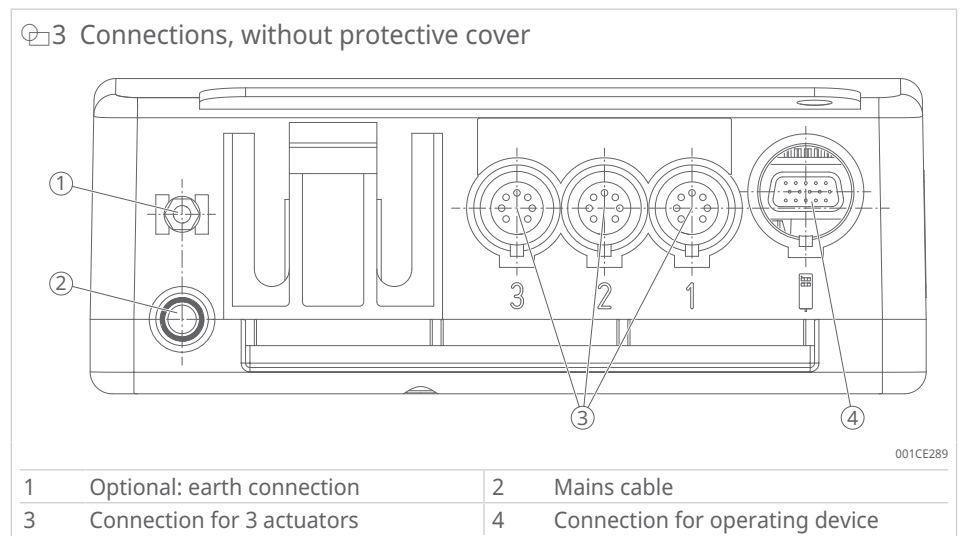
1 Technical data

Feature	Unit	BCU5	BCU8
Actuator connection sockets (DIN 8)	-	3	3
Operation device sockets (HD15)	-	1	1
Single-fault safety	-	Yes	Yes
Encoder signal processing	-	No	No
Input voltage	V AC	120	230
Frequency	Hz	60	50
Input current, max.	A	2.5	1.3
Power consumption in standby	W	1.2	1.5
Output voltage	V DC	24	24
Output current	A	7	7
Duty cycle: intermittent	min	ON: 1 min / OFF: 9 min	ON: 1 min / OFF: 9 min
Duty cycle: short time	min	2	2
Ambient temperature during operation	°C	0 ... +40	0 ... +40
Humidity	%	5 ... 85	5 ... 85
Protection code (IP)	-	IPX4	IPX4
Approvals	-	IEC 60601-1	IEC 60601-1
Mass	kg	2.3	2.3

Dimensional drawings



Wiring diagrams



Suitable control units and accessories

2 Suitable linear actuators, lifting columns, and operating devices

Product		Control unit	
		BCU5	BCU8
Linear actuator	CARE33A	✓	✓
	RU20, RU21, RU22	✓	✓
	MAX10, MAX30	✓	✓
	ECOMAG	✓	✓
Lifting column	THG10	✓	✓
	TLG10	✓	✓
	TLT10	✓	✓
	TFG10	✓	✓
	CPMT1	✓	✓
	TXG10	✓	✓
Operating device	M EHA3	✓	✓
	F STJ	✓	✓
	T STE	✓	✓

- M Hand switch
- F Foot switch
- T Desk switch
- ✓ suitable
- not suitable

Ordering key

4 Ordering designation BCU

BCU
5
3
-2J
3100
-0000

Control unit BCU

Voltage

- 5 AC 120 V, 60 Hz, class I
- 8 AC 230 V, 50 Hz, class II

Mains power supply cable

- 2J Class II, straight, 3.5 m, 2-pin plug, EU (for voltage type 8)
- 2H Class II, straight, 3.5 m, 2-pin plug, UK (for voltage type 8)
- 2L Class I, straight, 3.5 m, 3-pin plug, UL (for voltage type 5)

001DF688

Each BCU requires a BCP.

5 Ordering designation BCP

BCP 11 - A 000 - 0 000

BCU parameterization

Function

11	All channels individually
21	Channel 2+1
30	All channels simultaneously
T1	Trendelenburg

Motor

A	ECO2, ECO3, ECO4, ECO5	3.7A	Actuator 1	-
C	TLT10 ¹⁾ , TXG10 (EXG)	4.7A	Actuator 1	-
E	TFG, ECO6, ECO8, ECO9	5.7A	Actuator 1	-
M	MAX10, MAX30, THG10, TLG10	6.7A		
R	RU20, RU21, RU22	8.5A		
S	CPMT1-1 ²⁾	8.5A		
T	CPMT1-2 ²⁾	8.5A		

Soft start/stop

0	Hard
3	Medium
6	Soft (on request)

¹⁾ TLT is a 2-motor actuator. If simultaneous operation is required, BCP21-CC... is recommended.

²⁾ Reduced stroke forces: CPMT-1 up to 3000 N, CPMT-2 up to 4000 N.

001DF698

2 VCU

⑥ VCU



001CF186

Benefits

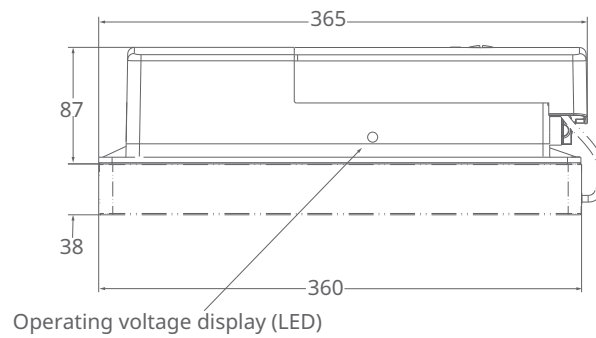
- compact 5-channel linear actuator control unit
- single fault safety
- overload and over-temperature protection
- approved for medical applications
- easy to clean
- low standby current

③ Technical data

Characteristic	Unit	VCU5	VCU8	VCU9
Linear actuator ports (DIN 8)	-	3 or 5	3 or 5	3 or 5
Operation device sockets (HD15)	-	2	2	2
Battery ports	-	1	1	1
End switch ports	-	2	2	2
Single-fault safety	-	Yes	Yes	Yes
Encoder processing	-	No	No	No
Input voltage	V AC	120	230	230
Frequency	Hz	60	50	50
Input current, max.	A	2.5 ... 6.5	1.3 ... 3.3	1.3 ... 3.3
Standby power	W	2.6 ... 3.9	2.6 ... 3.9	2.6 ... 3.9
Output voltage	V DC	24	24	24
Output current, max.	A	7 ... 18	7 ... 18	7 ... 18
Duty cycle: intermittent	min	ON: 1 min / OFF: 9 min	ON: 1 min / OFF: 9 min	ON: 1 min / OFF: 9 min
Duty cycle: short time	min	2	2	2
Ambient temperature	°C	+5 ... +40	+5 ... +40	+5 ... +40
Humidity	%	5 ... 85	5 ... 85	5 ... 85
Protection code (IP)	-	IPX4	IPX4	IPX4
Approvals	-	IEC 60601-1	IEC 60601-1	IEC 60601-1
Weight without battery	kg	2.4 ... 3.8	2.4 ... 3.8	2.4 ... 3.8
Weight with battery	kg	5.4 ... 8.8	5.4 ... 8.8	5.4 ... 8.8

Dimensional drawings

7 Dimensions VCU

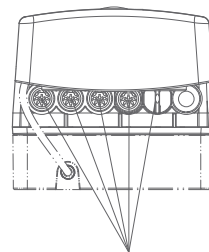


001D370A

2

Wiring diagrams

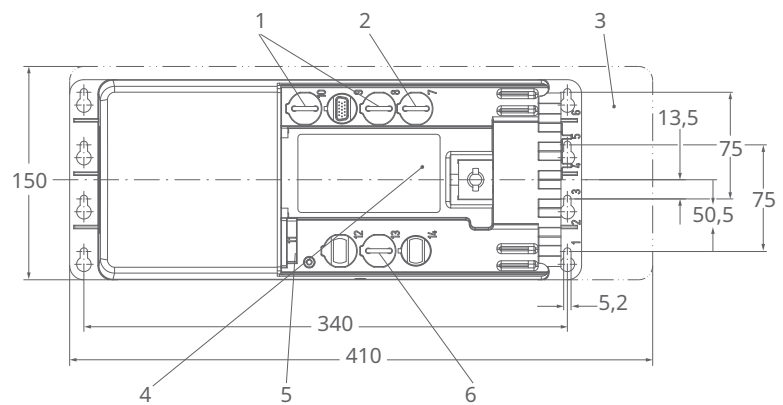
8 Connecting diagram 1 VCU



Bis zu 5 Anschlüsse mit
DIN8 Stecker

001D36E9

9 Connecting diagram 2 VCU

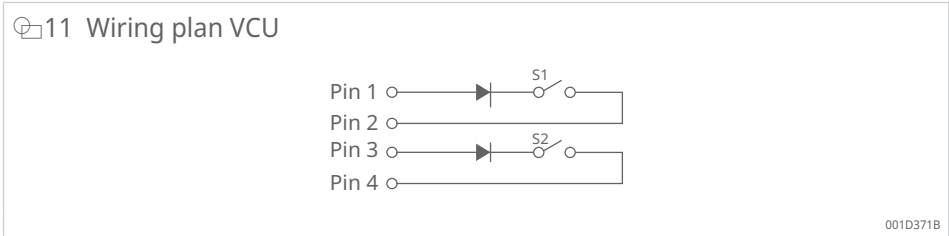
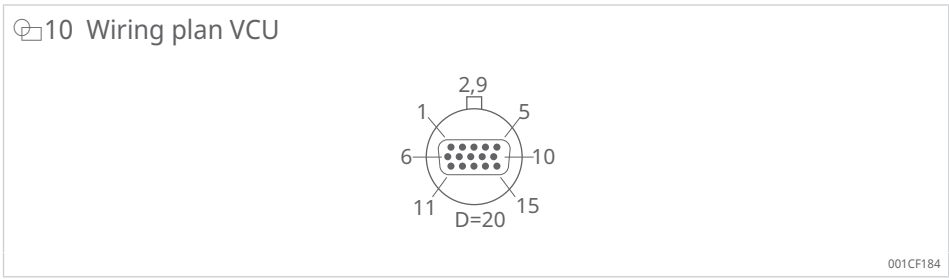


1. Two connections for HD15 operating devices
2. HD15 limit switch connection
3. Additional space for mounting
4. Data plate software
5. Mains connection
6. D-Sub 9 battery connection (optional)

001D36FA

Pin assignment of HD15 connector for limit switches

2



4 Pin assignment of HD15 connector for limit switches VCU

Function	Pin	Wire color (ZKA-160627-2500)
24 V DC (common ground)	1, 3, 5, 7, 9	White/yellow, white/green, gray-pink, black, blue
Switch 1	2	Brown-green
Switch 2	4	Red-blue
NC	6, 8, 10, 11, 12, 14	Violet, red, pink, gray, yellow, brown
DC 20-40 V max. 50 mA	13	Green
GND	15	White

Suitable control units and accessories

5 Suitable linear actuators, lifting columns, and operating devices

Linear system		Control unit		
		VCU5	VCU8	VCU8
Linear actuator	RU20, RU21, RU22	✓	✓	✓
	RU23, RU24, RU25	✓	✓	✓
	MAX10, MAX30	✓	✓	✓
	ECOMAG	✓	✓	✓
Lifting column	THG10	✓	✓	✓
	TLG10	✓	✓	✓
	TLT10	✓	✓	✓
	TFG10	✓	✓	✓
	CPMT1	✓	✓	✓
	TXG10	✓	✓	✓
Operating device	M EHA3	✓	✓	✓
	F STJ	✓	✓	✓
	T STE	✓	✓	✓

- M Hand switch
- F Foot switch
- T Desk switch
- ✓ suitable
- not suitable

Accessories

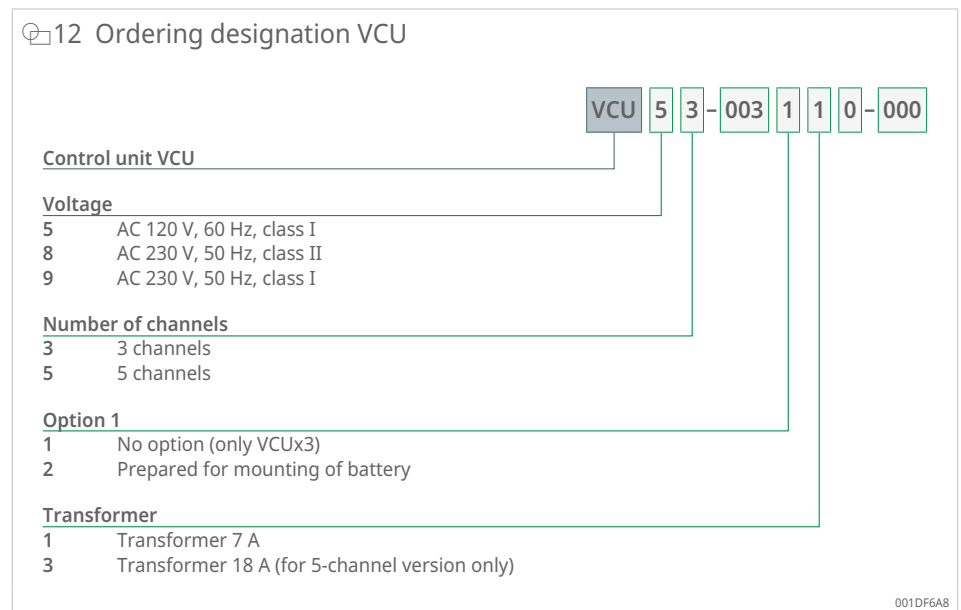
6 Accessories VCU

Description	Plug	Ordering designation	Order number
Mains cable, 2-pole	Euro	ZKA-160608-3500	0105726
Mains cable, 3-pole	Schuko	ZKA-160637-3500	0118821
Mains cable, 3-pole	SEV	ZKA-160638-3500	0118822
Mains cable, 3-pole	UL	ZKA-160639-3500	0105588
Mains cable, 3-pole	UK	ZKA-160609-3500	0105631
Mains cable, 3-pole	UL, hospital grade	ZKA-160640-3500	0118823
Mains cable, 3-pole	Australia, China	ZKA-160661-3500	0129953
Battery pack 2.7 Ah		ZBA-160208-0400	0118806
Holder for 4.5-Ah battery		ZBA-160207-1000	0121266
Removable battery 4.5 Ah		ZBA-160209	0126155

2

Ordering key

12 Ordering designation VCU



13 Ordering designation VCP

VCP 11 - A 0 - 0 000

VCU parameterization

Function

11	All channels individually
21	2 channels simultaneously + 1 or 3 individually
22	2 + 2 channels simultaneously + 1 individually
30	All channels simultaneously, 3-channel version only
41	4 channels simultaneously + 1 individually, 5-channel version only
50	All channels simultaneously, 5-channel version only
T1	Trendelenburg (2 channels) + 1 or 3 individually

Actuators

A	ECO2, ECO3, ECO4, ECO5	3.7A	Actuator 1	-
C	TLT10 ¹⁾ , TXG10 (EXG)	4.7A		-
E	TFG, ECO6, ECO7, ECO8, ECO9	5.7A	Actuator 2	-
M	MAX10, MAX30, TLG10, THG10	6.7A	Actuator 3	-
R	RU20, RU21, RU22	8.5A	Actuator 4	- (For SCUx3: insert zero)
S	CPMT1-1 ²⁾	11.7A	Actuator 5	- (For SCUx3: insert zero)
T	CPMT1-2 ²⁾	10.2A		
U	RU23, RU24, RU25	11,7 A (reduced stroke function: only 8.5 A when using the 7 A transformer)		

Soft start

0	Hard= start 0 ms, stop 0 ms
3	Medium= start 400 ms, stop 200 ms

The SCU solution offers significantly more options than those indicated in the type keys. Please inquire about additional functions such as "virtual limit switches," "external limit switches," etc.

¹⁾ TLT is a 2-motor actuator. For simultaneous operation, VCP21-CC... is recommended.

²⁾ reduced stroke forces: CPMT-1 up to 3000 N, CPMT-2 up to 4000 N when using 7 A transformer

001DF6B8

3 SCU

14 SCU



001CF186

3

Benefits

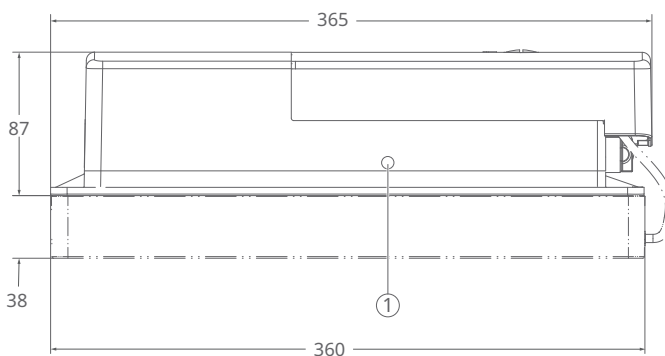
- compact control unit for 6 actuators
- first failure safety
- overload protection and overtemperature protection
- approved for medical applications
- easy to clean
- low standby current
- RS232 interface

7 Technical data

Feature	Unit	SCU1	SCU5	SCU9
Actuator connecting sockets (DIN 8)	-	6	3 or 6	3 or 6
Operation device sockets (HD15)	-	3	3	3
Battery connecting sockets (D-sub 9)	-	1	1	1
Limit switch connecting sockets	-	4	4	4
First failure safety	-	Yes	Yes	Yes
Pulse generator	-	Yes	Yes	Yes
Input voltage	AC V	-	120	230
	DC V	24	-	-
Frequency	Hz	-	60	50
max. input current	A	0.8	4.3	4.3
Standby power	W	0.8	4.3	4.3
Output voltage	DC V	24	24	24
max. output current	A	30	18	18
Duty cycle: intermittent	min	ON: 1 min / OFF: 9 min	ON: 1 min / OFF: 9 min	ON: 1 min / OFF: 9 min
Duty cycle: short time	min	2	2	2
Ambient temperature	°C	+5 ... +40	+5 ... +40	+5 ... +40
Humidity	%	5 ... 85	5 ... 85	5 ... 85
Protection code (IP)	-	IPX4	IPX4	IPX4
Approvals		EN 60601-1	EN 60601-1	EN 60601-1
		UL 60601-1	UL 60601-1	UL 60601-1
Weight without rechargeable battery	kg	1.2	3.8	3.8
Weight with rechargeable battery	kg	4.2	6.8	6.8

Dimensional drawings

15 Dimensions, with rechargeable battery and cover

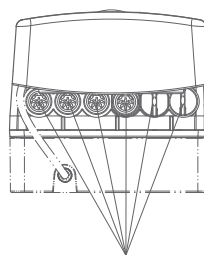


001DC021

1 Operating voltage indicator

Wiring diagrams

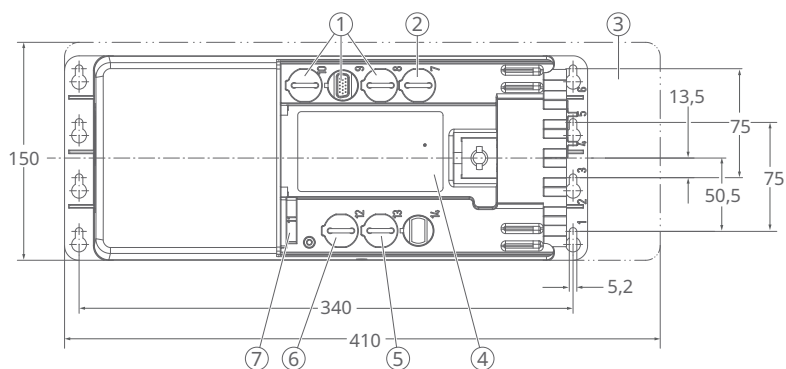
16 Connecting diagram SCU



Up to 6 connections with DIN8 plug

001D372B

17 Dimensions and connections, without cover

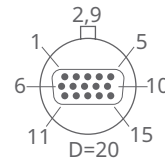


001DC031

1	Connection for 3 operating devices	2	Connection for limit switches
3	Additional space for installation	4	Software product label
5	Optional: connection for rechargeable battery	6	Communication interface
7	Mains connection		

Pin assignment of HD15 connector for limit switches, available on request (requires a customized SCP)

18 Pin assignment SCU



001CF18A

8 Pin assignment of HD15 connector for limit switches, available on request SCU

Function	Pin	Wire color (ZKA-160627-2500)
Switch 1	2	Brown-green
Switch 2	4	Red-blue
Switch 3	6	Brown-green
Switch 4	8	Brown-green
DC 24 V (common ground)	1, 3, 5, 7	White/yellow, white/green, gray/pink, black
Optional external power supply for binary outputs	9	Blue
Binary output 1 (DC 22-40 V /1 A)	10	Pink
Binary output 2 (DC 22-40 V /1 A)	11	Gray
GND for binary outputs	12	Yellow
DC 22-24 V max. 50 mA	13	Green
DC 5 V pulsed	14	Brown
GND	15	White

Suitable control units and accessories

9 Suitable linear actuators, lifting columns, and operating devices

Linear system		Control unit		
		SCU1	SCU5	SCU9
Linear actuator	RU20, RU21, RU22	✓	✓	✓
	RU23, RU24, RU25	✓	✓	✓
	MAX10, MAX30	✓	✓	✓
	ECOMAG: ECO4F, ECO5F, ECO8F, ECO9F	✓	✓	✓
	CAJA35C	✓	✓	✓
Lifting column	THG10	✓	✓	✓
	TLG10	✓	✓	✓
	TLT10	✓	✓	✓
	TFG10	✓	✓	✓
Operating device	M EHA3	✓	✓	✓
	F STJ	✓	✓	✓
	T STE	✓	✓	✓

- M Hand switch
- F Foot switch
- T Desk switch
- ✓ suitable
- not suitable

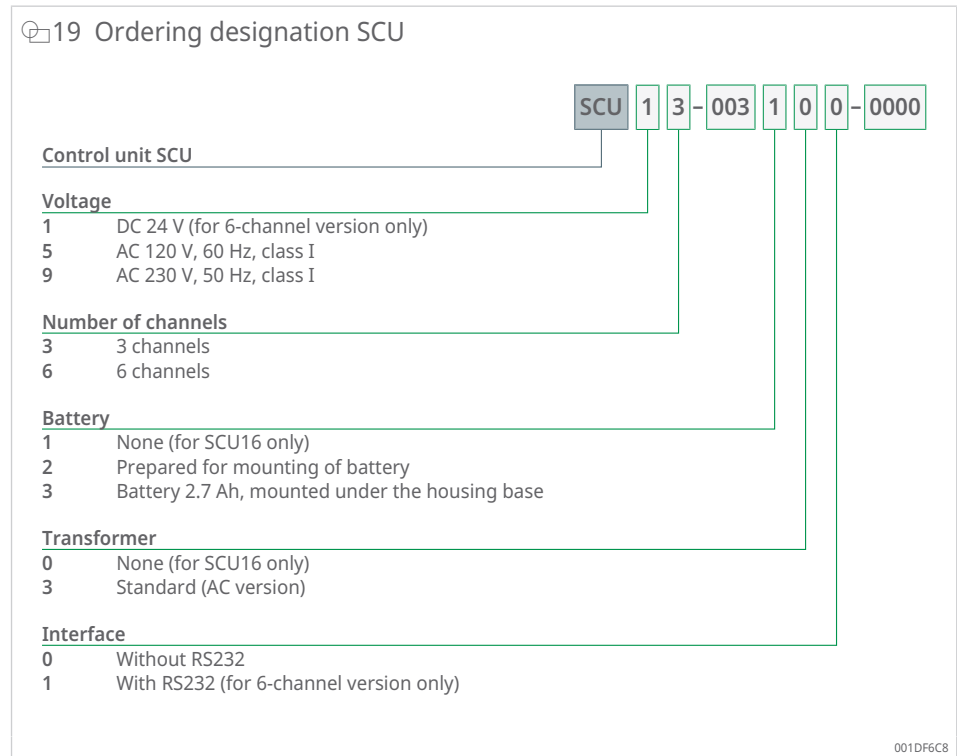
Accessories

10 Accessories SCU

Designation	Plug	Ordering designation	Order number
Mains cable, 3-pole	Schuko	ZKA-160637-3500	0118821
Mains cable, 3-pole	SEV	ZKA-160638-3500	0118822
Mains cable, 3-pole	UL	ZKA-160639-3500	0105588
Mains cable, 3-pole	UK	ZKA-160609-3500	0105631
Mains cable, 3-pole	UL, hospital grade	ZKA-160640-3500	0118823
Mains cable, 3-pole	Australia, China	ZKA-160661-3500	0129953
Holder for 4.5-Ah battery		ZBA-160207-1000	0126155
Removable battery 4.5 Ah		ZBA-160209	0126154

Ordering key

19 Ordering designation SCU



20 Ordering designation SCP

SCP 11 - A - 0 000

SCU parameterization

Function

- 11 All channels individually
- 21 Channels 2+1(+1+1+1)
- 22 Version with six (6) channels: 2+2+1+1
- 30 Version with three (3) channels, all channels simultaneously
- 31 Version with six (6) channels: 3+1+1+1
- 41 Version with six (6) channels: 4+1+1
- 60 Version with six (6) channels, all channels simultaneously
- T1 Trendelenburg T+1 (+1+1)

Actuators

A	ECO4F, ECO5F	3.7A	Actuator 1	-
C	TLT 10 ¹⁾	4.7A	Actuator 2	-
E	TFG10, ECO8F, ECO9F	5.7A	Actuator 3	-
M	MAX10, MAX30, TLG10, THG10	6.7A	Actuator 4	.. ²⁾
R	RU20, RU21, RU22	8.5A	Actuator 5	.. ²⁾
D	MD22, MD23	8.5A	Actuator 6	.. ²⁾
U	RU23, RU24, RU25	11.7A		
S	CPMT1-1	11.7A		
T	CPMT1-2	10.2A		

Soft start

- 0 Hard
- 3 Medium
- 6 Soft (on request)

The SCU solution offers significantly more options than those indicated in the type keys. Please inquire about additional functions such as "virtual limit switches," "external limit switches," etc.

¹⁾ TLT is a 2-motor actuator. If simultaneous operation is required, VCP21-CC... is recommended.

²⁾ for SCUx3: insert zero

001DF6D8

4 MCU

21 MCU



001CF18D

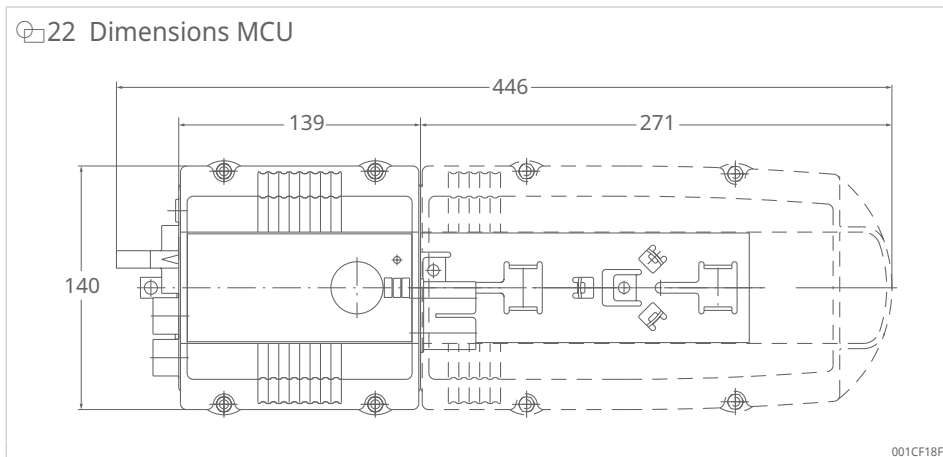
Benefits

- suitable for mobile applications
- LED indicator for battery charge level
- acoustic signal for low charge status

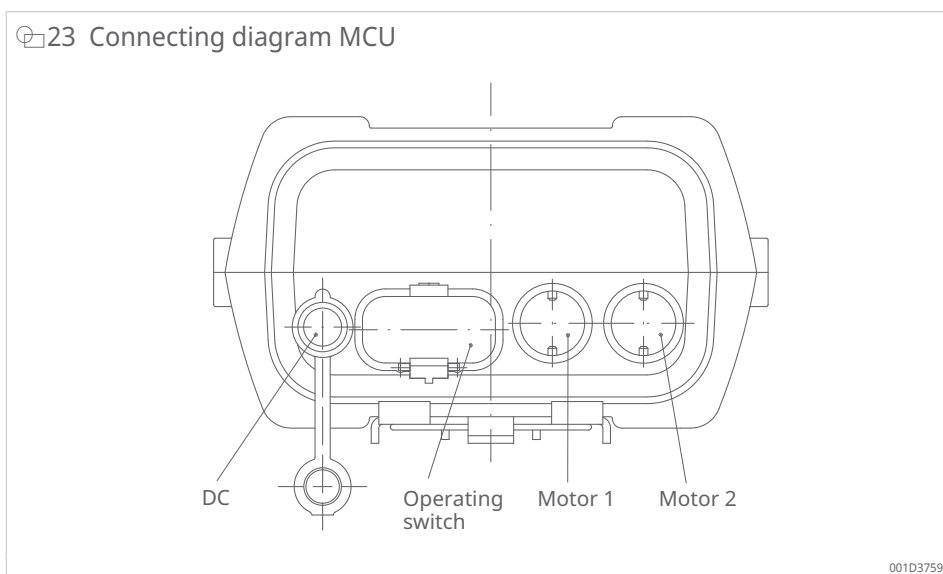
11 Technical data MCU

Feature	Unit	MCU
Motor connections	No.	2
Operating device connections	No.	1
Battery connections	No.	1
Input voltage	V DC	28
Output voltage	V DC	24
Output current (max)	A	9.5
Duty cycle: intermittent	min	1/9
Ambient temperature	°C	+10 to +40
Humidity	%	85
Protection code (IP)	-	IPX4
Approvals	EN/UL	EN 60601-1/DIN EN 60601-1-2 UL 2601/EN ISO 10535
Mass	kg	4.9

Dimensional drawings



Wiring diagrams



Suitable control units and accessories

12 Suitable linear actuators, lifting columns, and operating devices

Linear system		Control unit
		MCU
Linear actuator	MAX1, MAX3	✓
	ECOMAG	✓
Lifting column	THG	✓
	TLG	✓
	TLT1	✓
Operating device	M EHA1	✓
	F STF	✓
	T STA	✓

- M Hand switch
- F Foot switch
- T Desk switch
- ✓ suitable
- not suitable

Accessories

13 Accessories

Designation	Plug	Ordering designation	Order number
Battery 4.5 Ah	-	ZBA-142211	0126153
Mains adapter AC 100 V ... AC 240 V	Euro	ZDV-142378-2500	0132841
Mains adapter AC 100 V ... AC 240 V	UL	ZDV-142381-2500	0132843
Wall charging station	-	ZLA-142221	0126159
Tool for connector (socket/D-Sub/mains connection cable)	-	ZBG-140375	0125322

Ordering key

24 Ordering designation MCU

MCU - 1 1 - 00 3 000 - 0000

Type

Number of channels

1 1 channel
2 2 channels

Option

000 Current cut-off 6 A
EXP Current cut-off 9 A
EYE Current cut-off 6 A, electrical emergency lowering of channel 1
2AT Current cut-off 9 A, electrical emergency lowering of channel 1
EYR Individual current cut-off 6 A (for 2-channel version only)

001DF6E8

5 COMPACT

25 COMPACT



5

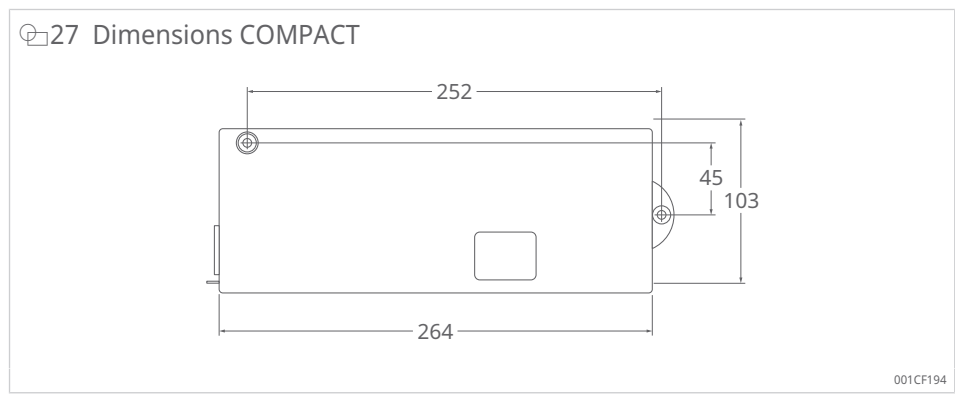
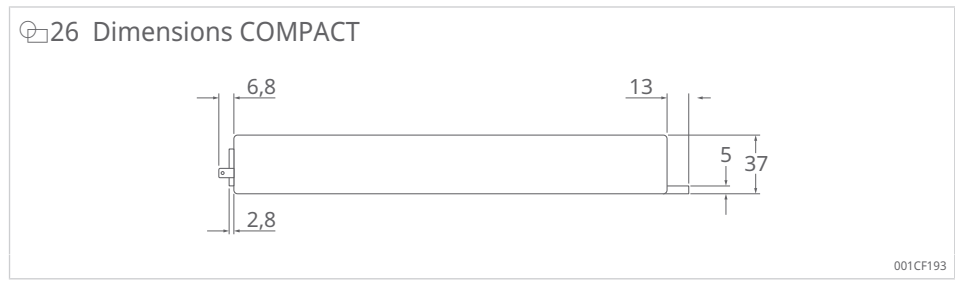
Benefits

- enables synchronized movement of 3 linear actuators
- up to 4 memory positions (depending on operating device)
- possibility to connect up to 4 operating devices
- enhanced control convenience
- adjustable positions for container and shelf stop
- low travel speed ranges
- highly efficient switched-mode power supply (SMPS)
- low standby power consumption, low field emissions

14 Technical data COMPACT

Feature	Unit	COMPACT	
Motor connections (DIN8)	No.	3	
Operating device connections (DIN7)	No.	1	
Battery connections	No.	0	
Limit switch connections (LogicConnector DATA)	No.	1	
Single fault safety	yes/no	No	
Encoder processing	yes/no	yes	
Nominal voltage/frequency	V AC / Hz	EU: 230 / 50 US: 120 / 60	
Input current (max)	AC 120 V	A	10
	AC 230 V	A	5
Standby power	W	0.5	
Output voltage (rated)	V DC	24	
Output sum current (rated)	A	15	
Output current per channel (max)	A	8	
Ambient temperature	°C	0-+30	
Humidity	%	5-85	
Protection code (IP)	-	IP20	
Protection class	-	I	
Approvals	EN/UL	EN 60335-1/UL/CSA 60950-1	
Mass	kg	2.3	

Dimensional drawings



Suitable control units and accessories

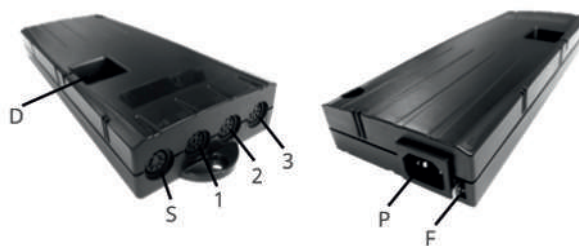
15 Suitable lifting columns and operating devices

Linear system		Control unit
		COMPACT
Lifting column	THG10	✓
	TXG10	✓
Operating device	T TOUCH-UD-MDF-4M2-LD	✓
	T HSM-OD-2-LD	✓
	T HSF-MDF-4M4-LD	✓

- M Hand switch
- F Foot switch
- T Desk switch
- ✓ suitable
- not suitable

Switching cycles

28 Switching cycles



001CF196

1	Motor socket 1 (M1)	2	Motor socket 2 (M2)
3	Motor socket 3 (M3)	S	Hand switch socket (HS)
P	Mains socket	F	Functional earth
D	LogicConnector DATA for sensors, squeeze lines and cascading		

16 Switching cycles

High-power cycle:	20 s up	19 A at 20 V, 380 W
	20 s down	7 A at 33 V, 231 W
	Pause:	9 min
Normal cycle 1/9	30 s up	15 A at 24 V, 360 W
	30 s down	7 A at 33 V, 231 W
	Pause:	9 min
Normal cycle 2/18	2 min operation:	7 A at 33 V, 231 W
	Pause:	18 min

Desk switch

17 Desk switch

Designation	Designation	Order number
Particularly simple desk switch (up/down)	HSM-OD-2-LD	0123247
Desk switch with display for 2 motor groups (up/down and memory)	HSF-MDF-4M4-LD	0123246

Accessories

18 Accessories COMPACT

Designation	Ordering designation	Order number
Mains cable, straight, 3 m, Schuko plug (Germany, France, ...)	LOG-CBL-PWK	0131665
Mains cable, straight, 3 m, UL plug (US)	LOG-CBL-PWK-US-SJT	0131666
Cable for cascading, length 0.5 m	LOG-CBL-HT-SYNC-500	0131678
Cable for cascading, length 1.5 m	LOG-CBL-HT-SYNC-1500	0132061

Ordering key

29 Ordering designation COMPACT

COMPACT - E - 3 - 2 - DIN - TFG - US

Type**Number of motors used**
(optional, depending on parameter)

	3 motors (no additional designation required)
2	2 motors
1	1 motor

Actuator type

TFG	TFG10
TXG	TXG10

Voltage

US	AC 120 V, 60 Hz, class I
EU	AC 230 V, 50 Hz, class I

001DF6F8

6 SEM

30 SEM



001CF199

Benefits

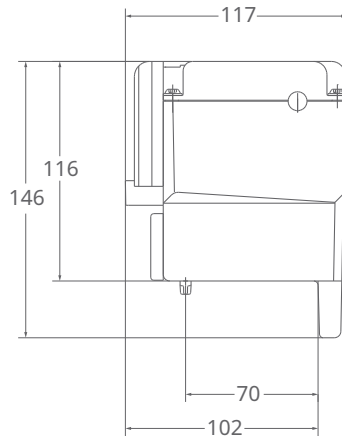
- controls up to 4 linear actuators
- suitable for care beds

19 Technical data SEM1

Feature	Unit	SEM1
Motor connections	No.	4
Operating device connections	No.	1
Supply voltage/frequency	V AC / Hz	230 / 50 120 / 60
Output voltage	V DC	24
Output current (max)	A	5
Duty cycle	min	1/9
Ambient temperature	°C	+10--+40
Protection code (IP)	-	IPX4
Approvals	UL	UL 60601-1 (1st edition)
Mass	kg	1.8

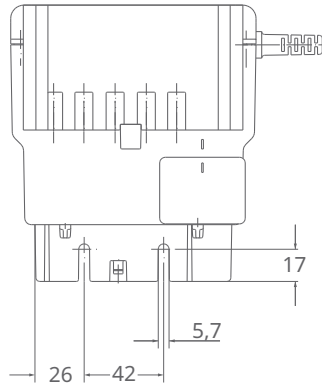
Dimensional drawings

31 Dimensions SEM



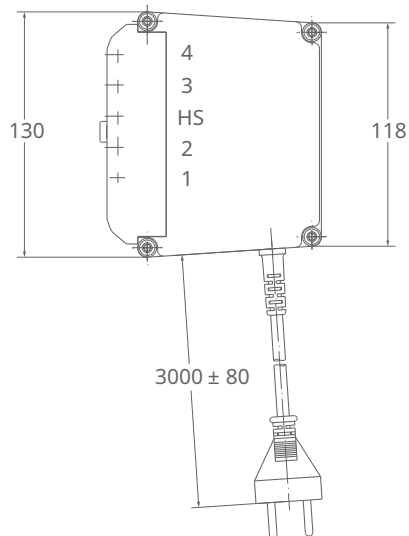
001CF19B

32 Dimensions SEM



001CF19C

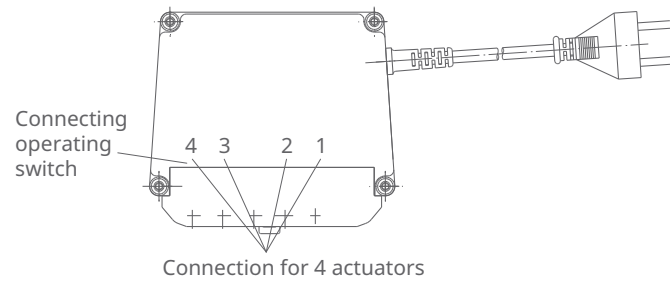
33 Dimensions SEM



001CF1A0

Wiring diagrams

34 Connecting diagram SEM



001D376B

6

Suitable control units and accessories

20 Suitable linear actuators, lifting columns, and operating devices

Linear system		Control unit
		SEM1
Linear actuator	ECOMAG	✓
Operating device	M EHE1	✓

- M Hand switch
- F Foot switch
- T Desk switch
- ✓ suitable
- not suitable

Ordering key

35 Ordering designation SEM

		SEM1	2	-	1	1	A	0	0	-	000
Type											
Number of channels											
2	2 channels										
4	4 channels										
Voltage/frequency											
1	230V/50Hz										
2	120V/60Hz										
Mains plug											
1	Protection class II, 2-pin mains plug (Euro standard)										
2	Protection class II, 2-pin mains plug (British standard)										
3	Protection class II, 2-pin mains plug (USA)										
B	Protection class I, 3-pin mains plug (Schuko)										
E	Protection class I, 3-pin mains plug (USA)										
Colors											
A	Black										
B	Gray RAL 7035										
Options, electrical											
0	None										
Fastening											
0	Mounted on Ecomag										

001DF708

Schaeffler Technologies AG & Co. KG

Georg-Schäfer-Straße 30

97421 Schweinfurt

Germany

www.schaeffler.de/en

info.de@schaeffler.com

In Germany:

Phone 0180 5003872

From other countries:

Phone +49 9721 91-0

All information has been carefully compiled and checked by us, but we cannot guarantee complete accuracy. We reserve the right to make corrections. Therefore, please always check whether more up-to-date or amended information is available. This publication supersedes all deviating information from older publications. Printing, including excerpts, is only permitted with our approval.
© Schaeffler Technologies AG & Co. KG
PDB 89 / 01 / en-US / 2026-04