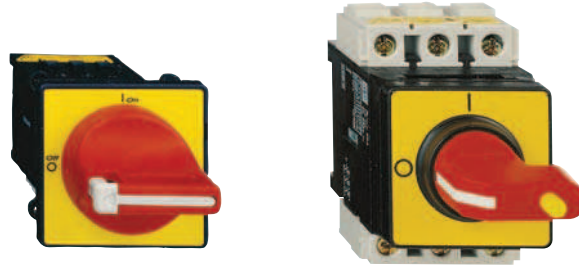


Applications

Mini-Vario and Vario rotary switch disconnectors from 12 to 175 A are suitable for on-load making and breaking of resistive or mixed resistive and inductive circuits where frequent operation is required. They can also be used for direct switching of motors in utilisation categories AC-3 and DC-3 specific to motors. Vario switch disconnectors are suitable for isolator applications with fully visible breaking (since the handle cannot indicate the “open” position unless all the contacts are actually open and separated by the appropriate isolating distance) and it is possible to padlock the handles in the open position.



4

Switch type

Mini-VARIO for standard applications	VARIO for high performance applications			
--------------------------------------	---	--	--	--

Thermal current

12 A	20 A	12 A	20 A	25 A
------	------	------	------	------

Operational current AC-23 A at 400 Volts

8.1 A	11 A	8.1 A	11 A	14.5 A
-------	------	-------	------	--------

Number of poles

3...5	3...6
-------	-------

Number of auxiliary contacts

1 or 2	1...4
--------	-------

Switch fixing

From the front

From the back

Screw fixing, 1 or 4 holes
Fixing: 1 x Ø 22.5 hole or 4 x Ø 5.5 screws

Clip-on mounting on rail	Clip-on mounting on rail or screw fixing
---------------------------	---

Reversible terminal blocks

Yes

Door mounting, direct operator

Yes

Mounting at back of enclosure, indirect operator with door interlock

Yes

Enclosure reference

V•DN 12	V•DN 20	V•D 02 V•F 02	V•D 01 V•F 01	V•D 0 V•F 0
----------------	----------------	--------------------------------	--------------------------------	------------------------------

Product reference

VCFN 12GE	VCFN 20GE	V•F 02GE	V•F 01GE	V•F 0GE
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Pages

2/4 and 4/8	4/12 and 4/13
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Mini-Vario and Vario rotary switch disconnectors from 12 to 175 A are suitable for on-load making and breaking of resistive or mixed resistive and inductive circuits where frequent operation is required. They can also be used for direct switching of motors in utilisation categories AC-3 and DC-3 specific to motors. Vario switch disconnectors are suitable for isolator applications with fully visible breaking (since the handle cannot indicate the “open” position unless all the contacts are actually open and separated by the appropriate isolating distance) and it is possible to padlock the handles in the open position.



VARIO for high performance applications

32 A	40 A	63 A	80 A	125 A	175 A
21.8 A	29 A	41.5 A	57 A	68.5 A	83 A
3...6				3 + N + PE	
1...4					
Screw fixing, 1 or 4 holes					
Fixing: 1 x Ø 22.5 hole or 4 x Ø 5.5 screws			Fixing 4 x Ø 5.5 screws		
Clip-on mounting on  rail or screw fixing				Screw fixing	
Yes					
Yes					
Yes					
V•D 1 V•F 1	V•D 2 V•F 2	V•F 3	V•F 4	V•F 5	V•F 6
V•F 1GE	V•F 2GE	V•F 3GE	V•F 4GE	V•F 5GE	V•F 6GE

2/4, 4/8 and 4/13

Characteristics

Environment

Switch type (bare type)	VN 12 VZN 12	V02 VZ 02	VN 20 VZN 20	V01 VZ 01	V0 VZ 0	VVD 0 VVE 0	V1 VZ 1	VVD 1 VVE 1
Conforming to standards	IEC 60947-3							
Product certifications	UL, CSA, GL							
Protective treatment	"TC"							
Degree of protection with protection shroud	IP 20 conforming to IEC 60529							
Ambient air temperature	° C	- 20...+ 50						
Flame resistance	° C	960 conforming to IEC 60695-2-1						
Shock resistance 1/2 sine wave = 11 ms conforming to IEC60068-2-27	gn	15	30	15	30			
Vibration resistance 10...150 Hz conforming to IEC 60068-2-6	gn	5	1					

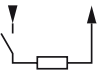
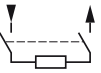
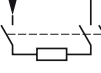
Electrical characteristics, a.c. operation

Switch type (bare type)	VN 12 VZN 12	V02 VZ 02	VN 20 VZN 20	V01 VZ 01	V0 VZ 0	VVD 0 VVE 0	V1 VZ 1	VVD 1 VVE 1	
Rated operational voltage (Ue)	V	690							
Rated impulse withstand voltage (Uimp)	kV	6	8	6	8				
Conventional thermal currents in free air (Ith) and rated uninterrupted (Iu)	A	12	20		25	32			
Conventional thermal current in enclosure (Ithe)	A	10	16		20	25			
Rated operational power and current	AC-21A/22A	230...690 V	A	12	20	25	32		
	AC-23A	230 V	A/kW	10.6/3	14/4	19.7/5.5			
		240 V	A/kW	10.6/3	14/4	19.9/5.5	18.9/5.5		
		400 V	A/kW	8.1/4	11/5.5	14.5/7.5	21.8/11		
		415 V	A/kW	8.1/4	11/5.5	14/7.5	21/11		
		500 V	A/kW	8.9/5.5	11.9/7.5	16.7/11			
Rated operational power	AC -3	230/240 V	kW	1.5	3	4			
	400/415 V	400/415 V	kW	3	4	5.5	7.5		
		500 V	kW	4	5.5		7.5		
		690 V	kW	4	5.5	7.5	11		
Intermittent duty class	30								
Characteristics in normal operating conditions	Rated making capacity AC-21A/22A/23A (I rms)	A/ 400 V	120	200		250	320		
	Rated breaking capacity AC-21A/22A/23A (I rms)	A/ 400 V	120	200		250			
Short-circuit characteristics	Permissible rms short time rating (Icw)	A/ 400V/1s	140	300	140	300	384		
	Rated making capacity under short-circuit conditions (Icm) I peak	kA/ 400 V	0.5	1	0.5	1			
	Rated conditional short-circuit current (I rms) with aM/gG fuses	kA/ 400 V	6	10	6	10			
A		12	20		25	35			

V2 VZ 2	VVD 2 VVE 2	V3 VZ 3	VVD 3 VVE 3	V4 VZ 4	VVD 4 VVE 4	V5	V6	VZ7 VZ2 0	VZN 05 VZN 06
IEC 60947-3								IEC 60947-5	
UL, CSA, GL									
"TC"									
IP 20 conforming to IEC 60529									
- 20...+ 50									
960 conforming to IEC 60695-2-1									
30								-	
1								-	
V2 VZ 2	VVD 2 VVE 2	V3 VZ 3	VVD 3 VVE 3	V4 VZ 4	VVD 4 VVE 4	V5	V6	VZ7 VZ2 0	VZN 05 VZN 06
690									
8								6	
40		63		80		125	175	12	6
32		50		63		100	140	10	4
40		63		80		125	160	le/AC-15	
25.8/7.5		50.3/15		61.2/18.5		71.9/22	96.6/30	6 A	
24.8/7.5		48.2/15		58.5/18.5		68/22	92.7/30	6 A	
29/15		41.5/22		57/30		68.5/37	83/45	4 A	
28/15		40/22		55/30		66/37	80/45	4 A	
28.5/18.5		44/30		54/37		64.5/45	79/55	2 A	
17.5/15		25/22		33/30		42/37	49/45	1 A	
5.5		11		15		22	30	-	
11		18.5		22		30	37	-	
15		22		30		37	45	-	
11		18.5				30	37	-	
30								-	
400		630		800		1250	1750	-	
320		500		640		1000	1400	-	
480		756		960		1500	2100	-	
1		2.1				2.8		-	
10								1	
50		63		80		125	200	16	1.6

Characteristics

Electrical characteristics, d.c. operation

Switch type (bare type)			VN 12 VZN 12	V02 VZ 02	VN 20 VZN 20	V01 VZ 01	V0 VZ 0	VVD 0 VVE 0	V1 VZ 1	VVD 1 VVE 1
Rated operational current DC-1 (L/R = 1ms)   	24 V	1 contact	A	12	20		25		32	
		2 contacts	A	12	20		25		32	
		3 contacts	A	12	20		25		32	
	48 V	1 contact	A	12	20		25		32	
		2 contacts	A	12	20		25		32	
		3 contacts	A	12	20		25		32	
	60 V	1 contact	A	12	20		25		32	
		2 contacts	A	12	20		25		32	
		3 contacts	A	12	20		25		32	
110 V	1 contact	A	1.5	2		9		10		
	2 contacts	A	8	10		12		16		
	3 contacts	A	12	20		25		32		
220 V	1 contact	A	1.5	2		2.5		3		
	2 contacts	A	7	8		10		12		
	3 contacts	A	10	14		16		20		
250 V	1 contact	A	0.6	0.7		0.8		1		
	2 contacts	A	3	4		6		8		
	3 contacts	A	8	10		12		16		
Rated operational current DC-2 to DC-5 (L/R = 1ms)	24 V	1 contact	A	12	20		25		32	
		2 contacts	A	12	20		25		32	
		3 contacts	A	12	20		25		32	
	48 V	1 contact	A	12	20		25		32	
		2 contacts	A	12	20		25		32	
		3 contacts	A	12	20		25		32	
	60 V	1 contact	A	10	14		16		20	
		2 contacts	A	12	20		25		32	
		3 contacts	A	12	20		25		32	
	110 V	1 contact	A	1.5	2		2.5		3	
		2 contacts	A	3	4		5		6	
		3 contacts	A	12	20		25		32	
	220 V	1 contact	A	0.4	0.5		0.5		0.8	
		2 contacts	A	1.4	1.5		1.5		2	
		3 contacts	A	1	2		3		4	
	250 V	1 contact	A	0.3	0.4		0.5		0.8	
		2 contacts	A	0.4	0.6		0.8		1	
		3 contacts	A	1.2	2.4		1.6		2	

Other characteristics

Switch type (bare type)			VN 12 VZN 12	V02 VZ 02	VN 20 VZN 20	V01 VZ 01	V0 VZ 0	VVD 0 VVE 0	V1 VZ 1	VVD 1 VVE 1
Mechanical durability (millions of operating cycles)			0.05	0.1	0.05	0.1				
Electrical durability in cat. AC-21 (millions of operating cycles)			0.05	0.1	0.05	0.1				
Electrical durability in cat. DC-1 to 5 (operating cycles)			30 000							
Suitable for isolation			Yes							
Cabling	Flexible cable + cable end	mm ²	4	6	4	6				
	Solid cable	mm ²	4	10	4	10				
Tightening torque		N.m	0.7	2.1	0.7	2.1				

V2 VZ 2	VVD 2 VVE 2	V3 VZ 3	VVD 3 VVE 3	V4 VZ 4	VVD 4 VVE 4	V5	V6	VZ7 VZ2 0	VZN 05 VZN 06
40		63		80		125	175	8 (le/DC-11)	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	8 (le/DC-11)	
40		63		80		125	175	–	
40		63		80		125	175	–	
35		40		50		60	70	4 (le/DC-11)	
40		63		80		125	175	–	
40		63		80		125	175	–	
12		20		25		30	12	2 (le/DC-11)	
20		63		80		125	175	–	
40		63		80		125	175	–	
4		6		8		12	15	1 (le/DC-11)	
14		25		30		40	50	–	
25		30		40		80	100	–	
2		4		5		3	10	0.8 (le/DC-11)	
12		20		25		30	40	–	
20		30		40		50	61	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
25		40		50		60	70	–	
40		63		80		125	175	–	
40		63		80		125	175	–	
5		6		8		10	12	–	
8		10		20		22	24	–	
40		50		63		70	80	–	
1		1.5		2		2.2	2.4	–	
3		4		6		7	8	–	
7		10		15		16	13	–	
1		1.2		1.5		1.6	1.8	–	
2		3		6		7	8	–	
6		8		10		12	14	–	
V2 VZ 2	VVD 2 VVE 2	V3 VZ 3	VVD 3 VVE 3	V4 VZ 4	VVD 4 VVE 4	V5	V6	VZ7 VZ2 0	VZN 05 VZN 06
0.1		0.03						0.1	0.05
0.1		0.03						0.1 (AC-15)	0.05
30 000								30 000 (DC-11)	
Yes								–	
6		16				70		2 x 0.75...1.5	
10		25				95		2 x 1...2.5	
2.1		4				22.6		0.7	

TeSys protection components

Mini-VARIO switch disconnectors for standard applications

Complete units

- 3-pole rotary switch disconnectors, 12 to 20 A
- Marking on operator O J.
- Padlockable operating handle (padlocks not supplied).
- Degree of protection IP 65.



VCDN 20



VCCDN 20



VBDN 20

Main and Emergency stop switch disconnectors for door mounting

Operator	Front plate	Fixing	Ith	Reference	Weight
Handle	mm	mm	A		kg
Red, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow 60 x 60	Ø 22.5	12	VCDN 12	0.177
			20	VCDN 20	0.177

Main and Emergency stop switch disconnectors for mounting at back of an enclosure (1)

Operator	Front plate	Fixing	Ith	Reference	Weight
Handle	mm	mm	A		kg
Red, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow 60 x 60	Ø 22.5	12	VCCDN 12	0.334
			20	VCCDN 20	0.334

Main switch disconnectors for door mounting

Operator	Front plate	Fixing	Ith	Reference	Weight
Handle	mm	mm	A		kg
Black, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Black 60 x 60	Ø 22.5	12	VBDN 12	0.177
			20	VBDN 20	0.177

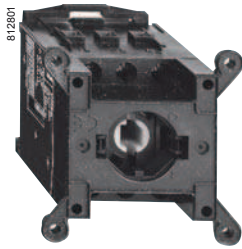
(1) Switches supplied with a shaft extension **VZN 17** and a door interlock plate **KZ 32** (see page 4/11).

TeSys protection components

Mini-VARIO switch disconnectors

for standard applications

Switch bodies, add-on modules



VN 20



VZN 11



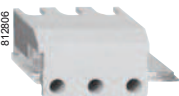
VZN 14



VZN 05



VZN 26



VZN 08

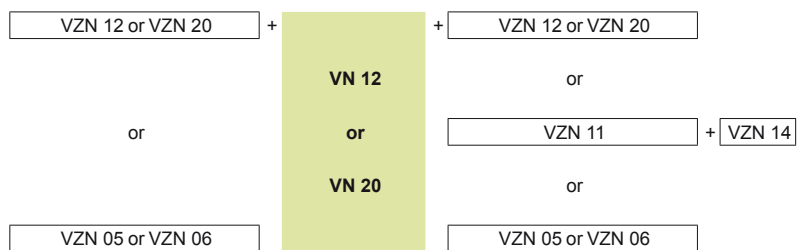
Switch bodies

Description	Rating A	Reference	Weight kg
3-pole switch disconnectors	12	VN 12	0.110
	20	VN 20	0.110

Add-on modules

Description	Rating A	Reference	Weight kg
Main pole modules	12	VZN 12	0.020
	20	VZN 20	0.020
Neutral pole module with early make and late break contacts	12 and 20	VZN 11	0.020
Earthing module	12 and 20	VZN 14	0.016
Auxiliary contact block modules	1 N/O late make contact	VZN 05	0.020
	1 N/C early break contact	VZN 06	0.020
Input terminal protection shrouds	For add-on pole modules or auxiliary contact block modules (single-pole shroud)	VZN 26	0.004
	For switch bodies (3-pole shroud)	VZN 08	0.007

Maximum number of add-on modules that can be fitted on a switch body



TeSys protection components

Mini-VARIO switch disconnectors

for standard applications

Operators and accessories

- Degree of protection IP₁ 65.
- Marking on operator O.V.
- Padlockable operating handle (padlocks not supplied).
- Operator fixing by 1 Ø 22.5 hole; for other operators see pages 4/17 and 4/19.
- For other accessories and empty enclosures, see pages 4/20, 4/21 and 2/5.

Operators for main and Emergency stop switch disconnectors

Handle	Front plate mm	Reference	Weight kg
Red, padlockable with 1 padlock (Ø 4 to Ø 6)	Yellow 45 x 45	KCC 1YZ	0.050
Red, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow 60 x 60	KCD 1PZ	0.084

Operators for main switch disconnectors

Handle	Front plate mm	Reference	Weight kg
Black, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Black 60 x 60	KAD 1PZ	0.084

Accessories for door interlocking

For rear fixing switch disconnectors mounted at the back of an enclosure, in addition to a direct operator

Description	Front plate mm	Distance enclosure back/door mm	Sold in lots of	Unit reference	Weight kg
Shaft extensions	–	300...330	1	VZN 17	0.100
		400...430	1	VZN 30	0.130
Door interlock plate	45 x 45 or 60 x 60	–	5	KZ 32	0.170
Plate for door mounting	45 x 45 or 60 x 60	–	5	KZ 83	0.205

TeSys protection components

VARIO switch disconnectors
for high performance applications

Complete units



VCF 0

- 3-pole rotary switch disconnectors, 12 to 175 A
- Marking on operator $\circ \downarrow$
- Padlockable operating handle (padlocks not supplied).
- Degree of protection IP 65.

Main and Emergency stop switch disconnectors for door mounting

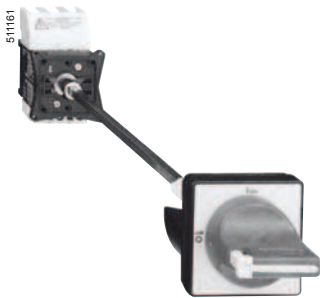
Handle	Front plate mm	Fixing	Rating A	Reference	Weight kg
Red, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow 60 x 60	Ø 22.5	12	VCD 02	0.215
			20	VCD 01	0.215
			25	VCD 0	0.215
			32	VCD 1	0.215
			40	VCD 2	0.215
4 screws			12	VCF 02	0.250
			20	VCF 01	0.250
			25	VCF 0	0.250
			32	VCF 1	0.250
			40	VCF 2	0.250
			63	VCF 3	0.560
Red, long, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow 90 x 90	4 screws	125	VCF 5	1.200
			175	VCF 6	1.200



VCF 5

Main and Emergency stop switch disconnectors for mounting at back of an enclosure (1)

Handle	Front plate mm	Fixing	Rating A	Reference	Weight kg
Red, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow 60 x 60	Ø 22.5	12	VCCD 02	0.392
			20	VCCD 01	0.392
			25	VCCD 0	0.392
			32	VCCD 1	0.392
			40	VCCD 2	0.392
4 screws			12	VCCF 02	0.527
			20	VCCF 01	0.527
			25	VCCF 0	0.527
			32	VCCF 1	0.527
			40	VCCF 2	0.527
			63	VCCF 3	0.440
Red, long, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow 90 x 90	4 screws	125	VCCF 5	1.320
			175	VCCF 6	1.320



VCCF 0

(1) Unit supplied with a shaft extension VZN 17 and a door interlock plate KZ 32 or KZ 74 (see page 4/20).

TeSys protection components

VARIO switch disconnectors
for high performance applications

Complete units

- 3-pole rotary switch disconnectors, 12 to 175 A
- Marking on operator $\circ \downarrow$.
- Padlockable operating handle (padlocks not supplied).
- Degree of protection IP 65.

Main switch disconnectors for door mounting

Handle	Front plate mm	Fixing	Rating A	Reference	Weight kg
Black, padlockable with up to 3 padlocks (\varnothing 4 to \varnothing 8)	Black 60 x 60	\varnothing 22.5	12	VBD 02	0.215
			20	VBD 01	0.215
			25	VBD 0	0.215
			32	VBD 1	0.215
			40	VBD 2	0.215
4 screws			12	VBF 02	0.250
			20	VBF 01	0.250
			25	VBF 0	0.250
			32	VBF 1	0.250
			40	VBF 2	0.250
			63	VBF 3	0.560
			80	VBF 4	0.560
Red, long, padlockable with up to 3 padlocks (\varnothing 4 to \varnothing 8)	Black 90 x 90	4 screws	125	VBF 5	1.200
			175	VBF 6	1.200

Main and Emergency stop switch disconnectors

For mounting in an enclosure or for modular distribution boards

Handle	Front plate mm	Rating A	Reference	Weight kg
Red, padlockable with 1 padlock (\varnothing 4 to \varnothing 6)	Yellow 45 x 45	25	VVE 0	0.250
		32	VVE 1	0.250
		40	VVE 2	0.250
		63	VVE 3	0.530
		80	VVE 4	0.530

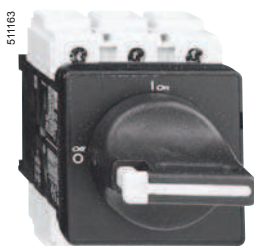
Main switch disconnectors

For mounting in an enclosure or for modular distribution boards

Handle	Front plate mm	Rating A	Reference	Weight kg
Black, not padlockable	Black 45 x 45	25	VVD 0	0.250
		32	VVD 1	0.250
		40	VVD 2	0.250
		63	VVD 3	0.560
		80	VVD 4	0.560



VBD 0



VBF 4



VVE 1

TeSys protection components

VARIO switch disconnectors

for high performance applications

Switch bodies, add-on modules, auxiliary contacts

(for customer assembly)



V0



V5



VZ 0



VZ 11



VZ 15



VZ 20

Switch bodies

Description	Rating A	Reference	Weight kg
3-pole switch disconnectors (1)	12	V02	0.200
	20	V01	0.200
	25	V0	0.200
	32	V1	0.200
	40	V2	0.200
	63	V3	0.500
	80	V4	0.500
	125	V5	0.900
	175	V6	0.900

Add-on modules

Description	Rating A	Reference	Weight kg
Main pole modules	12	VZ 02	0.050
	20	VZ 01	0.050
	25	VZ 0	0.050
	32	VZ 1	0.050
	40	VZ 2	0.050
	63	VZ 3	0.100
	80	VZ 4	0.100
	Neutral pole modules with early make and late break contacts (1)	12 to 40	VZ 11
63 to 80		VZ 12	0.100
125 and 175		VZ 13	0.250
Earthing modules	12 to 40	VZ 14	0.050
	63 and 80	VZ 15	0.100
	125 and 175	VZ 16	0.250

Auxiliary contact block modules

Description	Type	Reference	Weight kg
Auxiliary contact block modules with 2 auxiliary contacts	N/O + N/C (2)	VZ 7	0.050
	N/O + N/O	VZ 20	0.050

(1) Protection shrouds are available if required: see page 4/20.

(2) Late make N/O, early break N/C contacts

TeSys protection components

VARIO switch disconnectors

for high performance applications

Switch bodies, add-on modules, auxiliary contacts

(for customer assembly)

Maximum number of add-on modules that can be fitted on a switch body

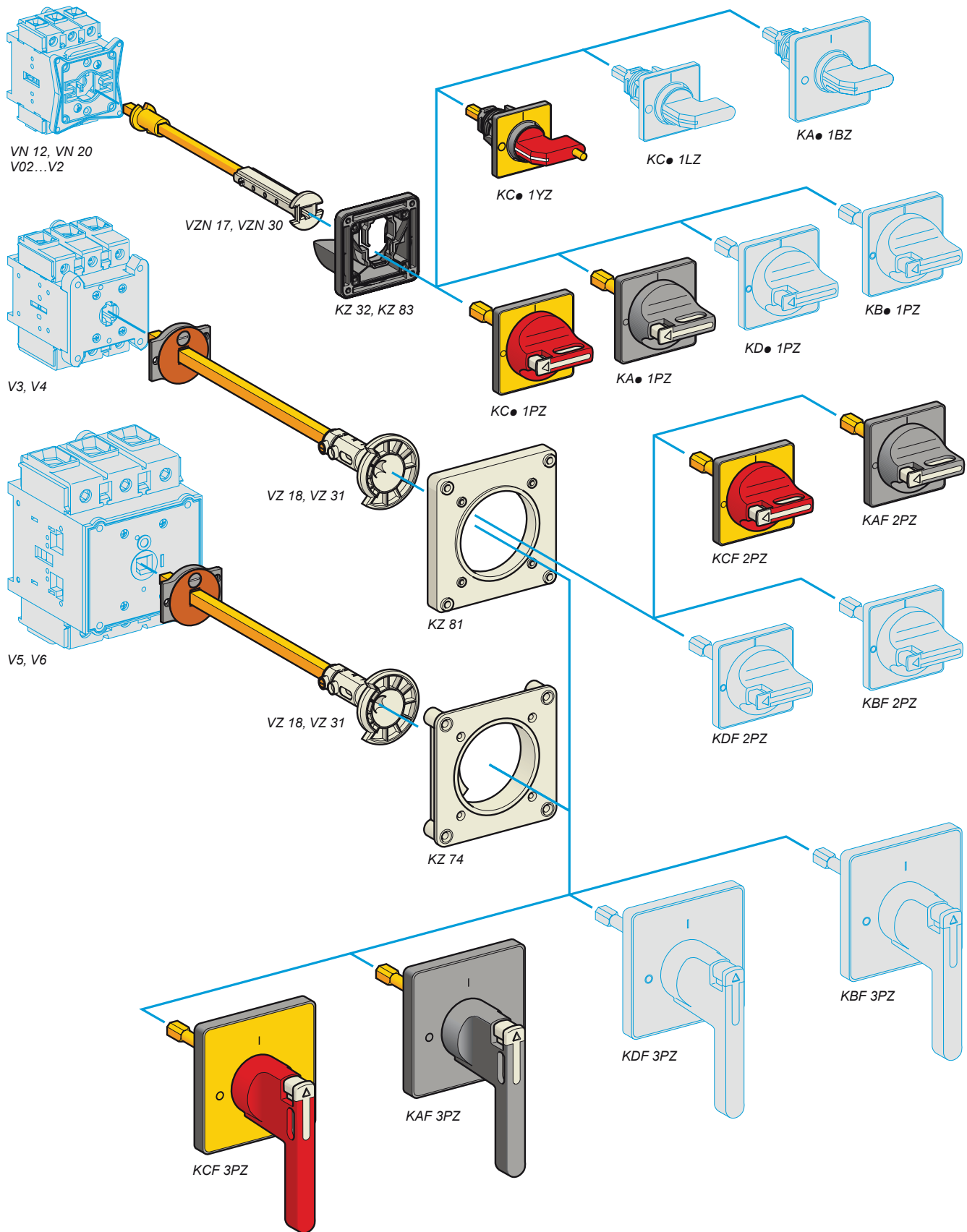
1 add-on module on each side of the switch body

VZ 7 or VZ 20	+	V0●	+	VZ 7 or VZ 20		VZ 7	+		+	VZ 7
or				or		or				or
VZ 11 or VZ 12	+	V0	+	VZ 11 or VZ 12		VZ 20	+	V5	+	VZ 20
or		to		or		or		or		or
VZ 14 or VZ 15	+		+	VZ 14 or VZ 15		VZ 13	+	V6	+	VZ 13
or		V4		or		or				or
VZ 0●/VZ 0 to VZ 4	+		+	VZ 0●/VZ 0 to VZ 4		VZ 16	+		+	VZ 16

2 add-on modules on each side of the switch body

VZ 0●	+	VZ 0●	+	V0●	+	VZ 0●	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 0	+	VZ 0	+	V0	+	VZ 0	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 1	+	VZ 1	+	V1	+	VZ 1	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 2	+	VZ 2	+	V2	+	VZ 2	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 3	+	VZ 3	+	V3	+	VZ 3	+	VZ 7	or	VZ 20	or	VZ 12	or	VZ 15
VZ 4	+	VZ 4	+	V4	+	VZ 4	+	VZ 7	or	VZ 20	or	VZ 12	or	VZ 15

Nota : The add-on modules mounted next to the switch body are main pole modules. Maximum of 3 main pole modules per switch body.



Protection components

Mini-VARIO and VARIO switch disconnectors

Operators, handles and front plates

(for customer assembly)

- Marking on operator $\text{O} \downarrow$
- Padlockable operating handle (padlocks not supplied).
- Degree of protection IP 65.

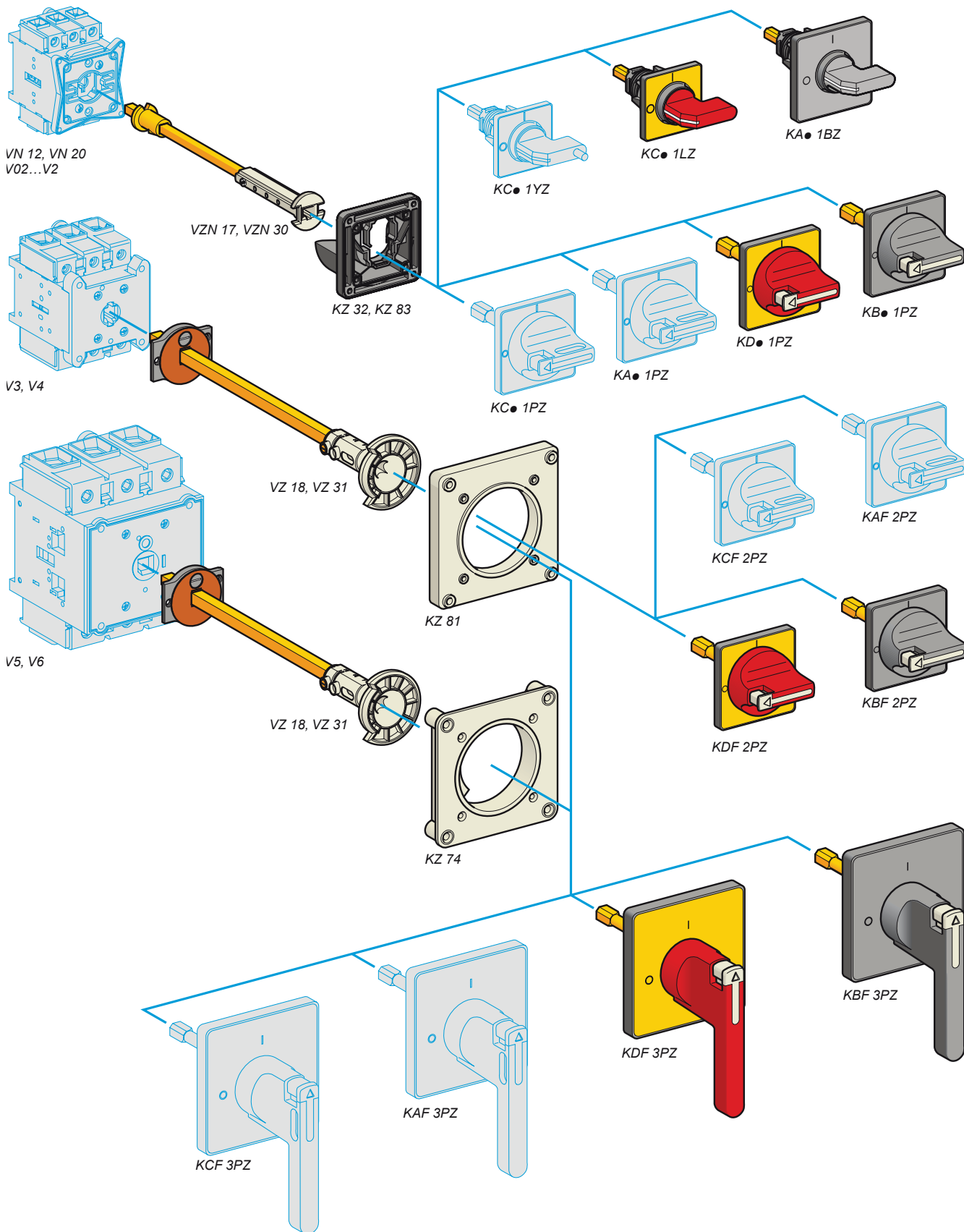
Handles and front plates for main and Emergency stop switch disconnectors

For switch body	Operator Handle	Front plate		Reference	Weight
		Dimensions	Fixing		
		mm			
VN 12, VN 20 V02...V2	Red, padlockable with 1 padlock (Ø 4 to Ø 6)	Yellow	Ø 22.5	KCC 1YZ	0.050
		45 x 45	4 screws	KCE 1YZ	0.040
	Red, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow	Ø 22.5	KCD 1PZ	0.082
60 x 60		4 screws	KCF 1PZ	0.075	
V3 and V4	Red, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow	4 screws	KCF 2PZ	0.070
V5 and V6	Red, long, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow	4 screws	KCF 3PZ (1)	0.160

Handles and front plates for main switch disconnectors

For switch body	Operator Handle	Front plate		Reference	Weight
		Dimensions	Fixing		
		mm			
VN 12, VN 20 V02...V2	Black, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Black	Ø 22.5	KAD 1PZ	0.082
		60 x 60	4 screws	KAF 1PZ	0.075
V3 and V4	Black, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Black	4 screws	KAF 2PZ	0.070
V5 and V6	Black, long, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Black	4 screws	KAF 3PZ (1)	0.160

(1) For door mounting of 63 and 80 A switch disconnectors, adapter plate **KZ 106** must be ordered separately (see page 4/20).



Protection components

Mini-VARIO and VARIO switch disconnectors

Operators, handles and front plates

(for customer assembly)

- Marking on operator
- Degree of protection IP 65.

Handles and front plates for Emergency stop switch disconnectors

For switch body	Operator Handle	Front plate		Reference	Weight
		Dimensions	Fixing		
		mm			
VN 12, VN 20 V02...V2	Red, not padlockable	Yellow	Ø 22.5	KCC 1LZ	0.050
		45 x 45	4 screws	KCE 1LZ	0.040
		Yellow	Ø 22.5	KDD 1PZ	0.082
		60 x 60	4 screws	KDF 1PZ	0.075
V3 and V4	Red, long, not padlockable	Yellow	4 screws	KDF 2PZ	0.070
		60 x 60			
V5 and V6	Red, long, not padlockable	Yellow	4 screws	KDF 3PZ (1)	0.160
		90 x 90			

Handles and front plates for switch disconnectors

For switch body	Operator Handle	Front plate		Reference	Weight
		Dimensions	Fixing		
		mm			
VN 12, VN 20 V02...V2	Black, not padlockable	Black	Ø 22.5	KAC 1BZ	0.050
		45 x 45	4 screws	KAE 1BZ	0.040
		Black	Ø 22.5	KBD 1PZ	0.055
		60 x 60	4 screws	KBF 1PZ	0.045
V3 and V4	Black, not padlockable	Black	4 screws	KBF 2PZ	0.070
		60 x 60			
V5 and V6	Black, not padlockable	Black	4 screws	KBF 3PZ (1)	0.160
		90 x 90			

(1) For door mounting of 63 and 80 A switch disconnectors, adapter plate **KZ 106** must be ordered separately (see next page).

Protection components

Mini-VARIO and VARIO switch disconnectors

Accessories



VZ 8



VZ 26

Input terminal protection shrouds

Description	For use on	Reference	Weight kg
For switch bodies (3-pole shroud)	V02...V2	VZ 8	0.015
	V3 and V4	VZ 9	0.020
	V5 and V6	VZ 10	0.060
For add-on pole modules (single-pole shroud)	VZ 02...VZ 2, VZ 11, VZ 14	VZ 26	0.005
	VZ 3, VZ 4, VZ 12, VZ 15	VZ 27	0.007
	VZ 13, VZ 16	VZ 28	0.020
For contact blocks with 2 auxiliary contacts	–	VZ 29	0.005

Components for door interlocking

For rear fixing switch disconnectors mounted at the back of an enclosure, in addition to a direct operator

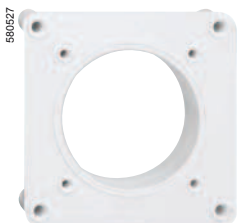
Description	For use on	Distance enc. back/door mm	Sold in lots of	Unit reference	Weight kg
Shaft extensions	VN 12, VN 20 V02...V2	300...330	1	VZN 17 (1)	0.100
		400...430	1	VZN 30 (1)	0.130
	V02...V2	300...330	1	VZ 17	0.075
		400...430	1	VZ 30	0.125
	V3 and V4	300...320	1	VZ 18	0.170
		400...420	1	VZ 31	0.215
V5 and V6	330...350	1	VZ 18	0.170	
	430...450	1	VZ 31	0.215	
Door interlock plates	VN 12, VN 20 V02...V2	–	5	KZ 32	0.177
	V3...V6	–	5	KZ 74	0.020



VZ 18



KZ 32

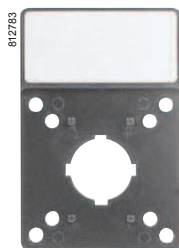


KZ 81

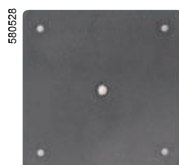
Description	For use on	Front plate dimensions mm	Sold in lots of	Unit reference	Weight kg
Plates for door mounting of handles with 4 screw fixing	VN 12, VN 20 V02...V2	45 x 45 or 60 x 60	5	KZ 83	0.205
	V3...V6	60 x 60 or 90 x 90	5	KZ 81	0.010
Adapter plate for switch disconnectors	V3 and V4	90 x 90	5	KZ 106	0.075

(1) Can be used with V02 to V2 switches.

4



KZ 15



KZ 67



Z01

Accessories for operators

Description	For use on	Front plate dimensions mm	Sold in lots of	Unit reference	Weight kg
Legend holder with silver coloured blank legend plate	Front plate	45 x 45	5	KZ 13	0.060
		60 x 60	5	KZ 15	0.065
		90 x 90	5	KZ 103	0.070
Legend holders without legend plate	Front plate	45 x 45	20	KZ 14	0.060
		60 x 60	10	KZ 16	0.065
		90 x 90	5	KZ 101	0.070
Silver coloured blank legend plates for engraving by customer	KZ 14	–	20	KZ 76	0.020
	KZ 16	–	10	KZ 77	0.010
	KZ 101	–	5	KZ 100	0.005
Seals	VN 12, VN 20	45 x 45	5	KZ 65	0.037
	V02...V2	60 x 60	5	KZ 66	0.033
	V3 and V4	60 x 60	5	KZ 62	0.033
	V3...V6	90 x 90	5	KZ 67	0.064
Tightening tool	For operators with Ø 22.5 fixing	–	5	Z01	0.050

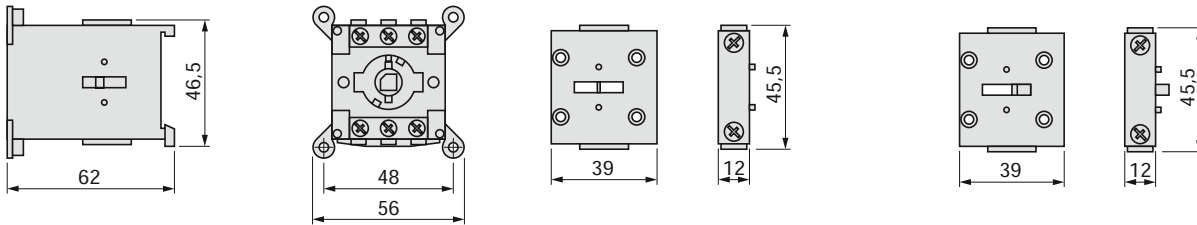
Dimensions

Switch disconnectors

Switch bodies VN 12, VN 20

Add-on modules VZN 12, VZN 20

Add-on modules VZN 11, VZN 14 VZN 05 and VZN 06



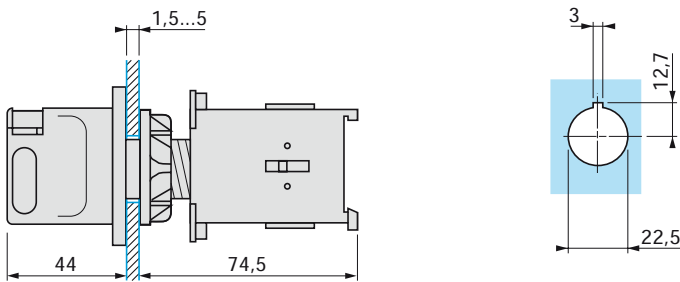
Mounting

Switch disconnector mounted on enclosure door

VN 12, VN 20

Single hole fixing

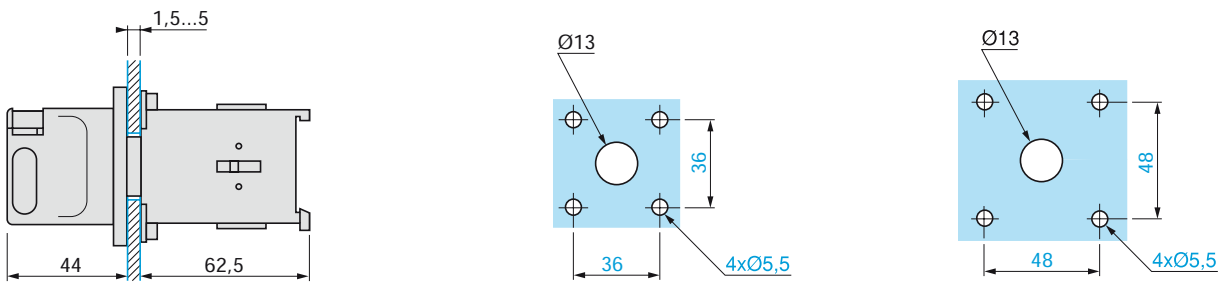
4



VN 12, VN 20
4 screw fixing

45 x 45 front plate

60 x 60 front plate



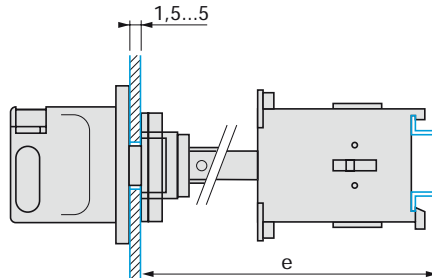
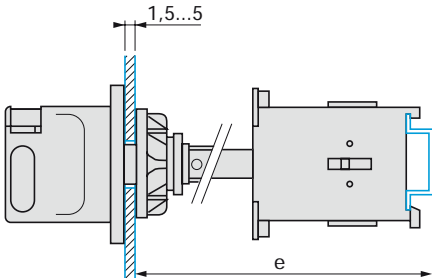
Mounting (continued)

Switch disconnector mounted at back of enclosure with shaft extension VZN 17 or VZN 30 (clip-on mounting on L rail)

VN 12, VN 20

Single hole fixing

4 screw fixing



	Shaft extension	Distance (e) enclosure back/door mm
VN 12, VN 20	VZN 17	300...330
	VZN 30	400...430

Schemes

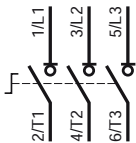
Switch body
VN 12, VN 20

Main pole module
VZN 12, VZN 20

Neutral pole module
VZN 11

Auxiliary contact blocks
VZN 05

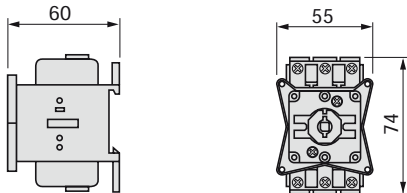
VZN 06



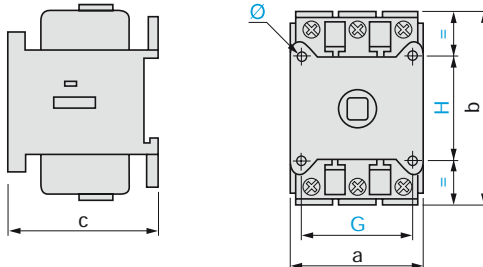
Dimensions

Switch disconnectors

Switch bodies V0 \bullet , V0 to V2

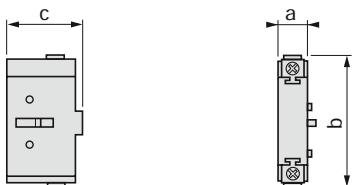


Switch bodies V3 to V6

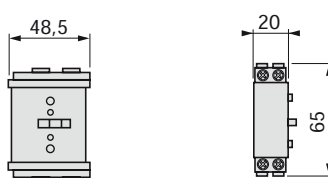


	a	b	c	G	H	Ø
V3, V4	60	83	65	48	48	5.5
V5, V6	90	125	90	68	68	5.5

Add-on modules VZ 02 to VZ 4 and VZ 11 to VZ 16



Add-on modules VZ 7, VZ 20

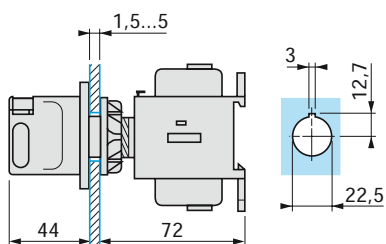


	a	b	c
VZ 02 and VZ 01, VZ 0 to VZ 2, VZ 11, VZ 14	16	74	35
VZ 3, VZ 4, VZ 12, VZ 15	20	83	46
VZ 13, VZ 16	30	125	63

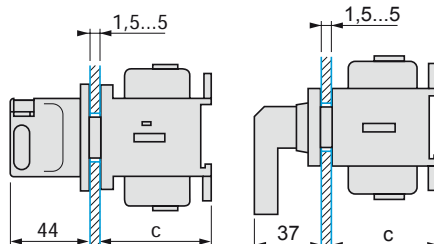
Mounting

Switch disconnector mounted on enclosure door

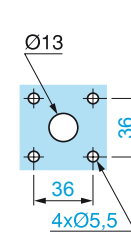
Single hole fixing V0 \bullet , V0 to V2



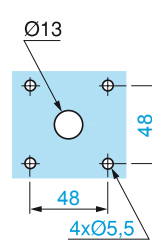
4 screw fixing V0 \bullet , V0 to V4



4 screw fixing 45 x 45 front plate V0 \bullet , V0 to V2

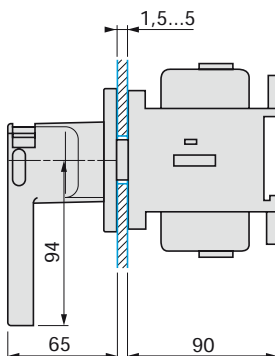


4 screw fixing 60 x 60 front plate V0 \bullet , V0 to V4

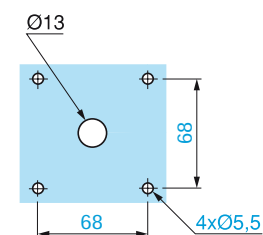


	c
V0 \bullet , V0 to V2	60
V3, V4	65

V5 and V6. 4 screw fixing



90 x 90 front plate



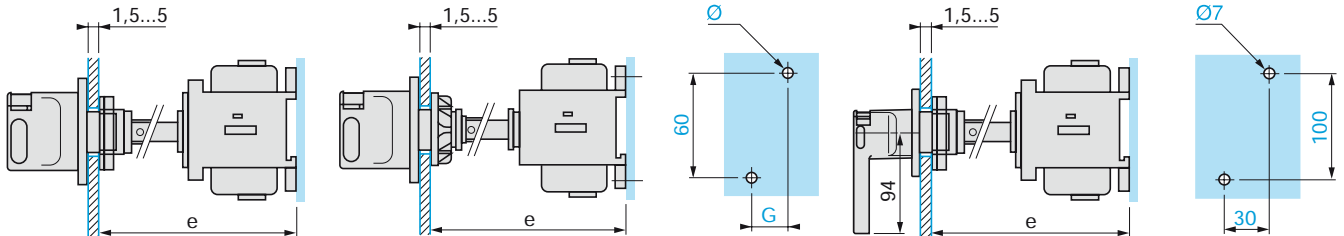
Mounting (continued)

Switch disconnector mounted at back of enclosure

4 screw fixing
V0●, V0 to V2 with shaft extension VZ 17 or VZ 30 (clip-on mounting on L rail possible for V0● to V2)

Single hole fixing
V3 to V4 with shaft extension VZ 18 or VZ 31

V5 and V6 with shaft extension VZ 18 or VZ 31



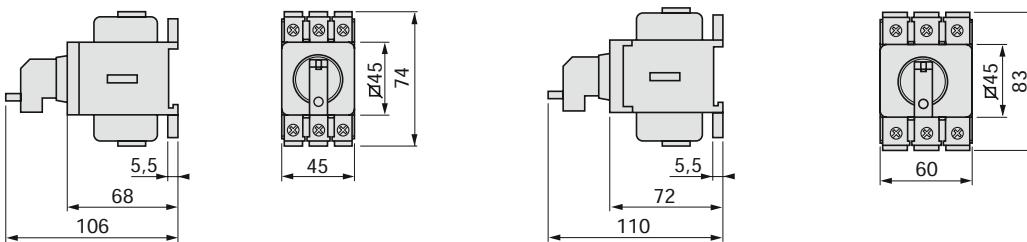
	Shaft extension	Distance (e) enc.back/door mm	Ø	G
V02 and V01 V0 to V2	VZ 17	300...330	2 x 4.2	15
	VZ 30	400...430	2 x 4.2	15
V3 and V4	VZ 18	300...320	2 x 5	20
	VZ 31	400...420	2 x 5	20

	Shaft extension	Distance (e) enc.back/door mm
V5 and V6	VZ 18	300...350
	VZ 31	430...450

Switch disconnectors for modular distribution boards

VV● 0 to VV● 2

VV● 3 to VV● 4



Schemes

Switch body

Main pole module

Neutral pole module

Auxiliary contact blocks

V02 and V01
V0 to V6

VZ 02 and VZ 01
VZ 0 to VZ 4

VZ 11 to VZ 13

VZ 7

VZ 20

