

Door mounting isolation switch - Mini Vario - Vario

Type of product	Range		Pages
Switch disconnectors Mini-Vario	Up to 12 or 20 A		B3/2
Switch disconnectors, high performance applications Vario	From 12 to 175 A		B3/6
Accessories Mini-Vario and Vario			B3/8

Technical Data for Designers

B3/17

TeSys protection components

Mini-VARIO switch-disconnectors for standard applications

Complete units

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



VCDN 20

Switch-disconnectors



VCCDN 20



VBDN 20

Main and Emergency stop switch-disconnectors for door mounting

Operator			lth	Reference
Handle	Front plate	Fixing		
	mm	mm	A	
Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	Ø22.5	12	VCDN12
			20	VCDN20

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

Operator			lth	Reference
Handle	Front plate	Fixing		
	mm	mm	A	
Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	Ø22.5	12	VCCDN12
			20	VCCDN20

Main switch-disconnectors for door mounting

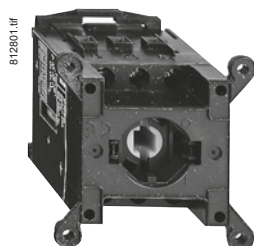
Operator			lth	Reference
Handle	Front plate	Fixing		
	mm	mm	A	
Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 60 x 60	Ø22.5	12	VBDN12
			20	VBDN20

⁽¹⁾ Switches supplied with a shaft extension **VZN 17** and a door interlock plate **KZ 32** (see page B3/5).

TeSys protection components

Mini-VARIO switch-disconnectors for standard applications

Switch bodies, add-on modules



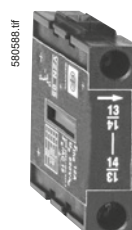
VN 20



VZN 11



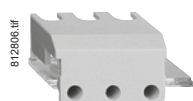
VZN 14



VZN 05



VZN 26



VZN 08

Switch bodies

Description	Rating A	Reference
3-pole switch-disconnectors	12	VN12
	20	VN20

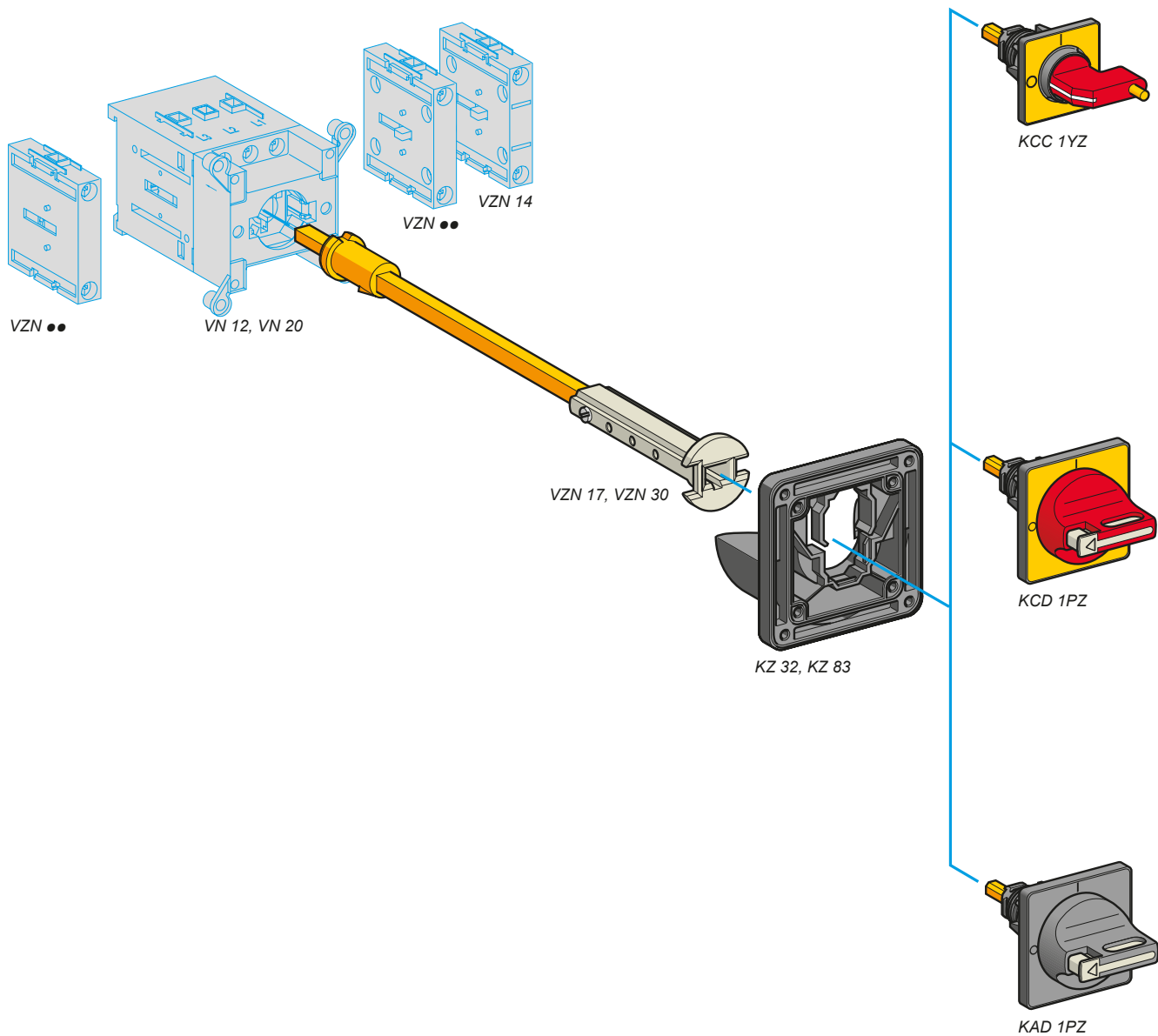
Add-on modules

Description	Rating A	Reference
Main pole modules	12	VZN12
	20	VZN20
Neutral pole module with early make and late break contacts	12 and 20	VZN11
Earthing module	12 and 20	VZN14
Auxiliary contact block modules	1 N/O late make contact	VZN05
	1 N/C early break contact	VZN06
Input terminal protection shrouds	For add-on pole modules or auxiliary contact block modules (single-pole shroud)	VZN26
	For switch bodies (3-pole shroud)	VZN08

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

VZN 12 or VZN 20	+	VN 12	+	VZN 12 or VZN 20
		or		
	or	VN 20		VZN 11 + VZN 14
			or	
VZN 05 or VZN 06				VZN 05 or VZN 06

Switch-disconnectors



TeSys protection components

Mini-VARIO switch-disconnectors for standard applications

Operators and accessories

- Degree of protection IP 65.
- Marking on operator .
- Padlockable operating handle (padlocks not supplied).
- Operator fixing by 1 Ø22.5 hole; for other operators see pages B3/11 and B3/13.
- For other accessories and empty enclosures, see pages B3/14, B3/15 and A1/3.

Operators for main and Emergency stop switch-disconnectors

Handle	Front plate mm	Reference
Red, padlockable with 1 padlock (Ø4 to Ø6)	Yellow 45 x 45	KCC1YZ
Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	KCD1PZ

Operators for main switch-disconnectors

Handle	Front plate mm	Reference
Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 60 x 60	KAD1PZ

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
Shaft extensions	–	300...330	1	VZN17
		400...430	1	VZN30
Door interlock plate	45 x 45 or 60 x 60	–	5	KZ32
Plate for door mounting	45 x 45 or 60 x 60	–	5	KZ83

TeSys protection components

VARIO switch-disconnectors for high performance applications

Complete units

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

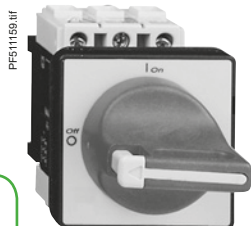
Main and Emergency stop switch-disconnectors for door mounting

Handle	Front plate mm	Fixing	Rating A	Reference	Weight kg
Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	Ø22.5	12	VCD02	0.215
			20	VCD01	0.215
			25	VCD0	0.215
			32	VCD1	0.215
			40	VCD2	0.215
		4 screws	12	VCF02	0.250
			20	VCF01	0.250
			25	VCF0	0.250
			32	VCF1	0.250
			40	VCF2	0.250
			63	VCF3	0.560
			80	VCF4	0.560
Red, long, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 90 x 90	4 screws	125	VCF5	1.200
			175	VCF6	1.200

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 (Ø4 to Ø8)	Yellow 60 x 60	Ø22.5	12	VCCD02	0.392
			20	VCCD01	0.392
			25	VCCD0	0.392
			32	VCCD1	0.392
			40	VCCD2	0.392
		4 screws	12	VCCF02	0.527
			20	VCCF01	0.527
			25	VCCF0	0.527
			32	VCCF1	0.527
			40	VCCF2	0.527
			63	VCCF3	0.440
			80	VCCF4	0.680
Red, long, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 90 x 90	4 screws	125	VCCF5	1.320
			175	VCCF6	1.320

(1) Unit supplied with a shaft extension **VZN 17** or **VZ18** and a door interlock plate **KZ 32** or **KZ 74** (see page B3/14).



VCF 0



VCF 5



VCCF 0

TeSys protection components

VARIO switch-disconnectors for high performance applications

Complete units

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

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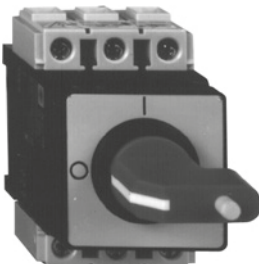
VBD 01

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VBF 4

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VVE 1

Main switch-disconnectors for door mounting

Handle	Front plate mm	Fixing	Rating A	Reference	Weight kg
Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 60 x 60	Ø22.5	12	VBD02	0.215
			20	VBD01	0.215
			25	VBD0	0.215
			32	VBD1	0.215
			40	VBD2	0.215
		4 screws	12	VBF02	0.250
			20	VBF01	0.250
			25	VBF0	0.250
			32	VBF1	0.250
			40	VBF2	0.250
			63	VBF3	0.560
			80	VBF4	0.560
Black, long, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 90 x 90	4 screws	125	VBF5	1.200
			175	VBF6	1.200

Switch-disconnectors

Main and Emergency stop switch-disconnectors

For mounting in an enclosure or for modular distribution boards

Handle	Front plate mm	Fixing	Rating A	Reference	Weight kg
Red, padlockable with 1 padlock (Ø4 to Ø6)	Yellow 45 x 45	4 screws	25	VVE0	0.250
			32	VVE1	0.250
			40	VVE2	0.250
			63	VVE3	0.530
			80	VVE4	0.530

Main switch-disconnectors

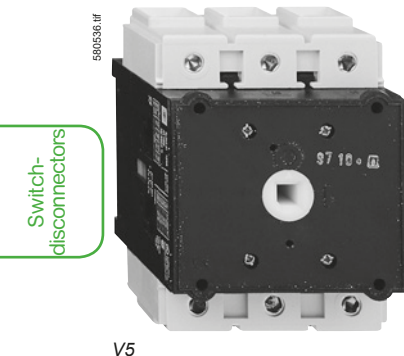
For mounting in an enclosure or for modular distribution boards

Handle	Front plate mm	Fixing	Rating A	Reference	Weight kg
Black, not padlockable	Black 45 x 45	4 screws	25	VVD0	0.250
			32	VVD1	0.250
			40	VVD2	0.250
			63	VVD3	0.560
			80	VVD4	0.560

TeSys protection components

VARIO switch-disconnectors for high performance applications

Switch bodies, add-on modules, auxiliary contacts (for customer assembly)



Switch bodies

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

Add-on modules

Description	Rating A	Reference
Main pole modules	12	VZ02
	20	VZ01
	25	VZ0
	32	VZ1
	40	VZ2
	63	VZ3
	80	VZ4
Neutral pole modules with early make and late break contacts ⁽¹⁾	12 to 40	VZ11
	63 to 80	VZ12
	125 and 175	VZ13
Earthing modules	12 to 40	VZ14
	63 and 80	VZ15
	125 and 175	VZ16

Auxiliary contact block modules

Description	Type	Reference
Auxiliary contact block modules with 2 auxiliary contacts	N/O + N/C ⁽²⁾	VZ7
	N/O + N/O	VZ20

⁽¹⁾ Protection shrouds are available if required: see page B3/14.⁽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	+	V5	+	VZ 7
or				or	or			or	
VZ 11 or VZ 12	+	V0	+	VZ 11 or VZ 12	VZ 20	+	V6	+	VZ 20
or				or	or			or	
VZ 14 or VZ 15	+	to	+	VZ 14 or VZ 15	VZ 13	+	or	+	VZ 13
or				or	or			or	
VZ 0●/VZ 0 to VZ 4	+	V4	+	VZ 0●/VZ 0 to VZ 4	VZ 16	+	V6	+	VZ 16

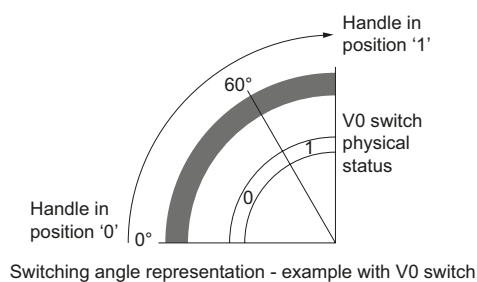
Switch-disconnectors

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

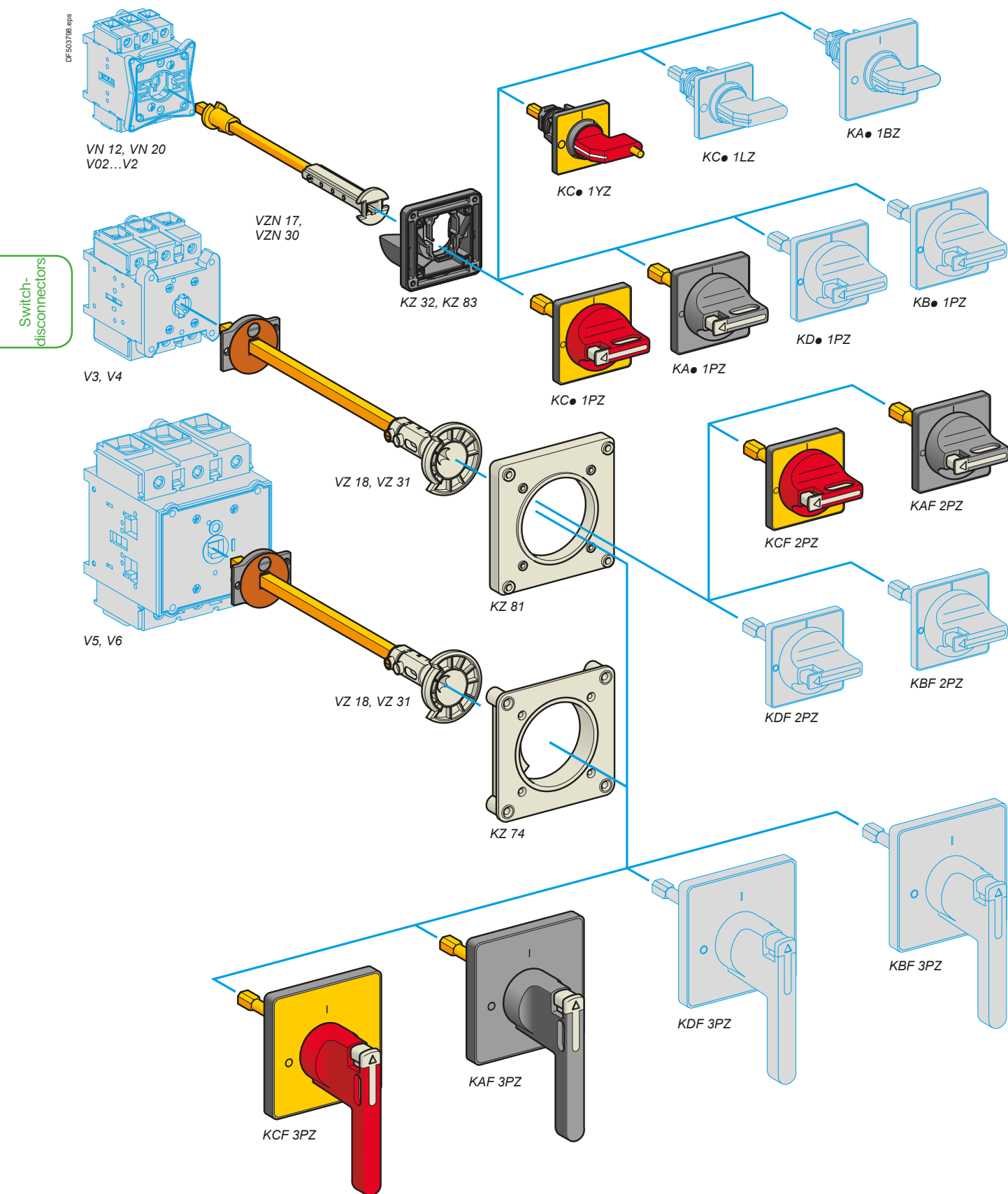
VZ 0●	+	VZ 0●	+	V0●	+	VZ 0●	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 0	+	VZ 0	+	V0	+	VZ 0	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 1	+	VZ 1	+	V1	+	VZ 1	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 2	+	VZ 2	+	V2	+	VZ 2	+	VZ 7	or	VZ 20	or	VZ 11	or	VZ 14
VZ 3	+	VZ 3	+	V3	+	VZ 3	+	VZ 7	or	VZ 20	or	VZ 12	or	VZ 15
VZ 4	+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

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

Auxiliary switch switching angles



	0: contact open 1: contact close			
Handle travel 0 > 1	0°	30°	60°	90°
3-pole switch-disconnectors V02 / V01 / V0 / V1 / V2 / V3 / V4 / V5 / V6			60°	
Main pole modules VZ02 / VZ01 / VZ0 / VZ1 / VZ2 / VZ3 / VZ4			60°	
Neutral pole modules with early make and late break contacts VZ11 / VZ12 / VZ13		45°		
Auxiliary contact block modules with 2 auxiliary contacts (N/0+N/C) VZ7			75°	
Late make N0 and earlier break NC (Early break N0 and late make NC for travel 1-0)	N/0	0		1
	N/C	1	0	
		20°		
Auxiliary contact block modules with 2 auxiliary contacts (N/0+N/C) VZ20			60°	
		0		1
		0		1
			60°	



Protection components

Mini-VARIO and VARIO switch-disconnectors

Operators, handles and front plates (for customer assembly)

- Marking on operator .
- Padlockable operating handle (padlocks not supplied).
- Degree of protection IP 65.

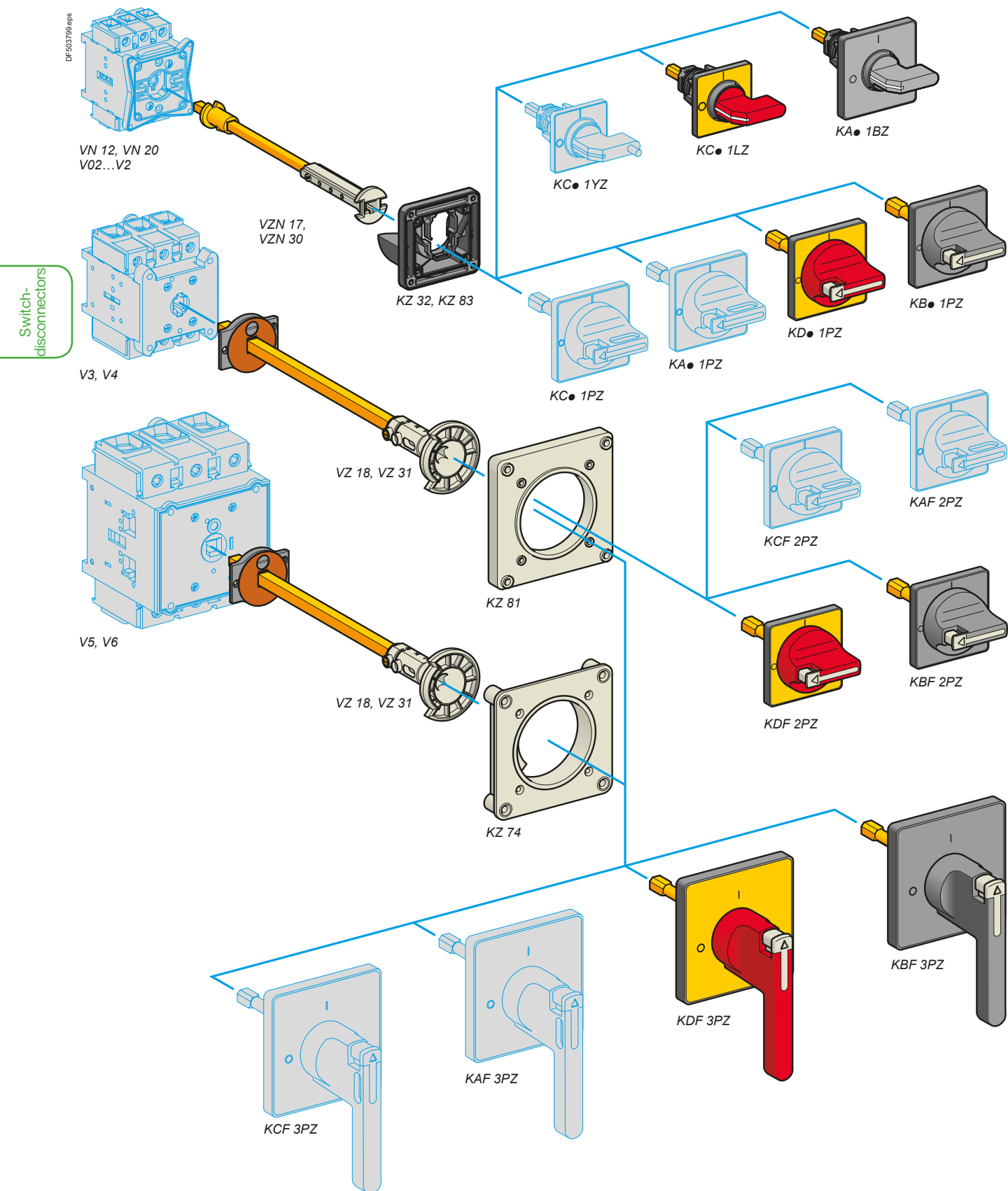
Handles and front plates for main and Emergency stop switch-disconnectors

For switch body	Operator Handle	Front plate		Reference
		Dimensions	Fixing	
		mm		
VN 12, VN 20 V02...V2	Red, padlockable with 1 padlock (Ø4 to Ø6)	Yellow 45 x 45	Ø22.5	KCC1YZ
			4 screws	KCE1YZ
	Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	Ø22.5	KCD1PZ
			4 screws	KCF1PZ
V3 and V4	Red, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 60 x 60	4 screws	KCF2PZ
V5 and V6	Red, long, padlockable with up to 3 padlocks (Ø4 to Ø8)	Yellow 90 x 90	4 screws	KCF3PZ ⁽¹⁾

Handles and front plates for main switch-disconnectors

For switch body	Operator Handle	Front plate		Reference
		Dimensions	Fixing	
		mm		
VN 12, VN 20 V02...V2	Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 60 x 60	Ø22.5	KAD1PZ
			4 screws	KAF1PZ
V3 and V4	Black, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 60 x 60	4 screws	KAF2PZ
V5 and V6	Black, long, padlockable with up to 3 padlocks (Ø4 to Ø8)	Black 90 x 90	4 screws	KAF3PZ ⁽¹⁾

⁽¹⁾ For door mounting of 63 and 80 A switch-disconnectors, adapter plate **KZ 106** must be ordered separately (see page B3/14).



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
		Dimensions	Fixing	
		mm		
VN 12, VN 20 V02...V2	Red, not padlockable	Yellow 45 x 45	Ø22.5	KCC1LZ
			4 screws	KCE1LZ
		Yellow 60 x 60	Ø22.5	KDD1PZ
			4 screws	KDF1PZ
V3 and V4	Red, long, not padlockable	Yellow 60 x 60	4 screws	KDF2PZ
V5 and V6	Red, long, not padlockable	Yellow 90 x 90	4 screws	KDF3PZ ⁽¹⁾

Handles and front plates for switch-disconnectors

For switch body	Operator Handle	Front plate		Reference
		Dimensions	Fixing	
		mm		
VN 12, VN 20 V02...V2	Black, not padlockable	Black 45 x 45	Ø22.5	KAC1BZ
			4 screws	KAE1BZ
		Black 60 x 60	Ø22.5	KBD1PZ
			4 screws	KBF1PZ
V3 and V4	Black, not padlockable	Black 60 x 60	4 screws	KBF2PZ
V5 and V6	Black, not padlockable	Black 90 x 90	4 screws	KBF3PZ ⁽¹⁾

⁽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

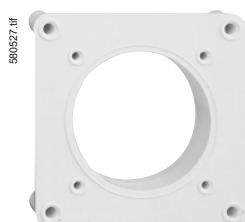
Switch-disconnectors



VZ 18



KZ 32



KZ 81

Input terminal protection shrouds

Description	For use on	Reference
For switch bodies (3-pole shroud)	V02...V2	VZ8
	V3 and V4	VZ9
	V5 and V6	VZ10
For add-on pole modules (single-pole shroud)	VZ 02...VZ 2, VZ 11, VZ 14	VZ26
	VZ 3, VZ 4, VZ 12, VZ 15	VZ27
	VZ 13, VZ 16	VZ28
For contact blocks with 2 auxiliary contacts	–	VZ29

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
Shaft extensions	VN 12, VN 20 V02...V2	300...330	1	VZN17 ⁽¹⁾
		400...430	1	VZN30 ⁽¹⁾
	V02...V2	300...330	1	VZ17
		400...430	1	VZ30
	V3 and V4	300...320	1	VZ18
		400...420	1	VZ31
Door interlock plates	VN 12, VN 20 V02...V2	–	5	KZ32
		–	5	KZ74
	V3...V6	–	5	KZ32
		–	5	KZ74

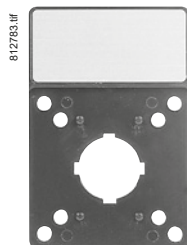
Description	For use on	Front plate dimensions mm	Sold in lots of	Unit reference
Plates for door mounting of handles with 4 screw fixing	VN 12, VN 20 V02...V2	45 x 45 or 60 x 60	5	KZ83
	V3...V6	60 x 60 or 90 x 90	5	KZ81
Adapter plate for switch-disconnectors	V3 and V4	90 x 90	5	KZ106

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

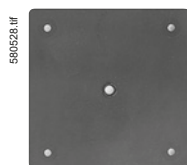
Protection components

Mini-VARIO and VARIO switch-disconnectors

Accessories



KZ 15



KZ 67



Z01

Accessories for operators

Description	For use on	Front plate dimensions mm	Sold in lots of	Unit reference
Legend holder with silver coloured blank legend plate	Front plate	45 x 45	5	KZ13
		60 x 60	5	KZ15
		90 x 90	5	KZ103
Legend holders Front plate without legend plate	Front plate	45 x 45	20	KZ14
		60 x 60	10	KZ16
		90 x 90	5	KZ101
Silver coloured blank legend plates for engraving by customer	KZ 14	—	20	KZ76
	KZ 16	—	10	KZ77
	KZ 101	—	5	KZ100
Seals	VN 12, VN 20	45 x 45	5	KZ65
	V02...V2	60 x 60	5	KZ66
	V3 and V4	60 x 60	5	KZ62
	V3...V6	90 x 90	5	KZ67
Tightening tool	For operators with Ø22.5 fixing	—	5	Z01

Technical Data for Designers

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Vario:

> Dimensions B3/24 to B3/25

> Schemes B3/25

Characteristics

Safety control and protection solutions

Mini-VARIO and VARIO switch-disconnectors

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/EN 60947-3 and UL/CSA 60947-4-1										
Product certifications			UL, CSA	UL, CSA, DNV-GL, CCC, IEC	UL, CSA	UL, CSA, DNV-GL, IEC, EAC, CCC ⁽¹⁾							
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 60695-2-11									
Shock resistance 1/2 sine wave = 11ms 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			
Power dissipation per pole for the above operational currents			W	AC-23A				1.25		2			
			W	AC-21A				3.2		5			
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					
	690 V	A/kW	8.6/7.5		12.3/11		17.5/15						
Rated operational power	AC -3	230/240 V	kW	1.5		3		4					
		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		

⁽¹⁾ CCC: except for VVD, VVE switches.

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/EN 60947-3 and UL/CSA 60947-4-1								IEC/EN 60947-5-1, UL/CSA 60947-5-1	

UL, CSA, DNV-GL, IEC, EAC, CCC ⁽¹⁾

IP 20 conforming to IEC 60529

-20...+50

960 conforming to IEC 60695-2-11

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	12
32	50	63	100	140	10	10
2.4	4.2	5.1	7.5	11	—	
5.4	6.4	12.5	15	25	—	
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	16

⁽¹⁾ CCC: except for VVD, VVE switches.

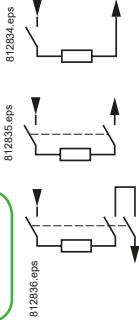
Characteristics

Safety control and protection solutions

Mini-VARIO and VARIO switch-disconnectors

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

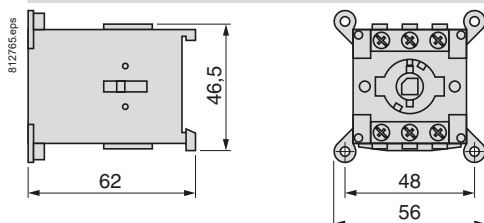
Switch type (bare type)			VN 12 VZN 12	V02 VZ 02	VN 20 VZN 20	V01 VZ 01	V0 VZ 0	VVD 0 VVE 0	V1 VZ 1	VVD 1 VVE 1
Mechanical durability (millions of operating cycles)			0.05	0.1	0.05	0.1				
Electrical durability in cat. AC-21 (millions of operating cycles)			0.05	0.1	0.05	0.1				
Electrical durability in cat. DC-1 to 5 (operating cycles)			30000							
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-1)	
40		63		80		125	175	–	
40		63		80		125	175	–	
40		63		80		125	175	8 (le/DC-1)	
40		63		80		125	175	–	
40		63		80		125	175	–	
35		40		50		60	70	4 (le/DC-1)	
40		63		80		125	175	–	
40		63		80		125	175	–	
12		20		25		30	37	2 (le/DC-1)	
20		63		80		125	175	–	
40		63		80		125	175	–	
4		6		8		12	15	1 (le/DC-1)	
14		25		30		40	50	–	
25		30		40		80	100	–	
2		4		5		3	10	0.8 (le/DC-1)	
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	–	
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
30000								30000 (DC-1)	
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	

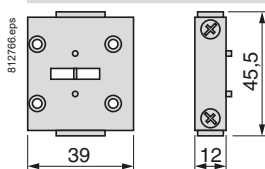
Dimensions

Switch-disconnectors

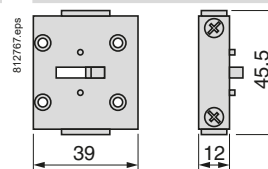
Switch bodies VN 12, VN 20



Add-on modules VZN 12, VZN 20



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

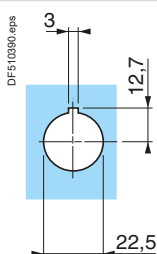
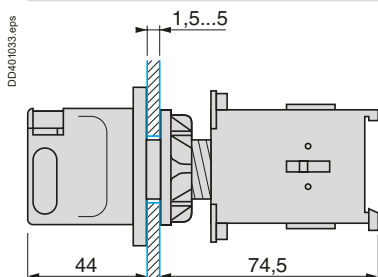


Mounting

Switch-disconnector mounted on enclosure door

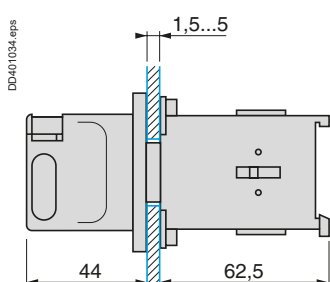
VN 12, VN 20

Single hole fixing

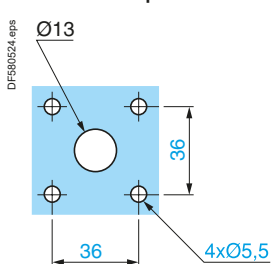


VN 12, VN 20

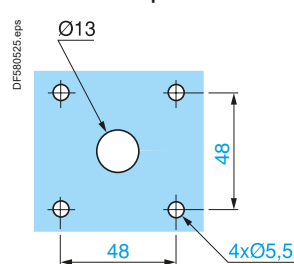
4 screw fixing



45 x 45 front plate



60 x 60 front plate

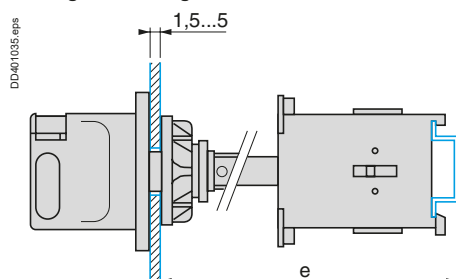


Mounting (continued)

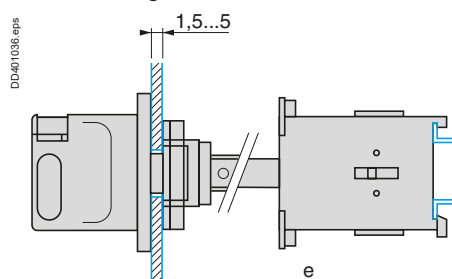
Switch-disconnector mounted at back of enclosure with shaft extension VZN 17 or VZN 30 (clip-on mounting on $\perp$ rail)

VN 12, VN 20

Single hole fixing



4 screw fixing

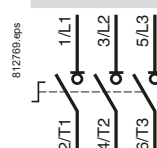


	Shaft extension	Distance (e) enclosure back/door mm
VN 12, VN 20	VZN 17	300...330
	VZN 30	400...430

Schemes

Switch body

VN 12, VN 20



Main pole module

VZN 12, VZN 20



Neutral pole module

VZN 11



Auxiliary contact blocks

VZN 05



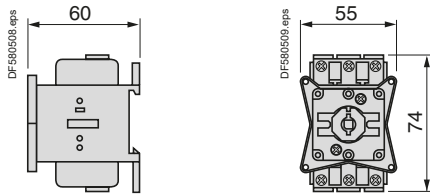
VZN 06



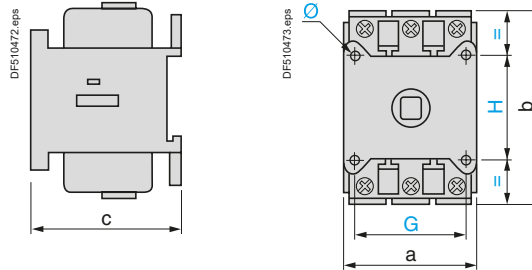
Dimensions

Switch-disconnectors

Switch bodies V0●, V0 to V2

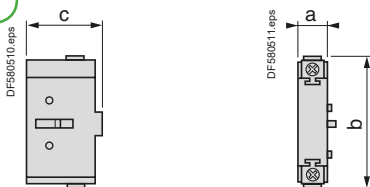


Switch bodies V3 to V6

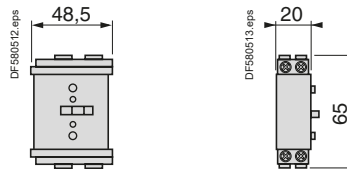


	a	b	c	G	H	Ø
V3, V4	60	83	65	48	48	5.5
V5, V6	90	125	90	68	68	5.5

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



Add-on modules VZ 7, VZ 20

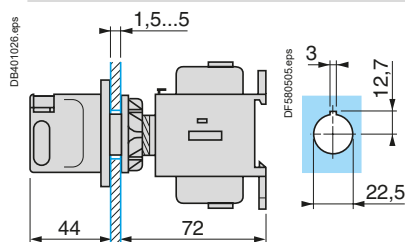


	a	b	c
VZ 02 and VZ 01, VZ 0 to VZ 2, VZ 11, VZ 14	16	74	35
VZ 3, VZ 4, VZ 12, VZ 15	20	83	46
VZ 13, VZ 16	30	125	63

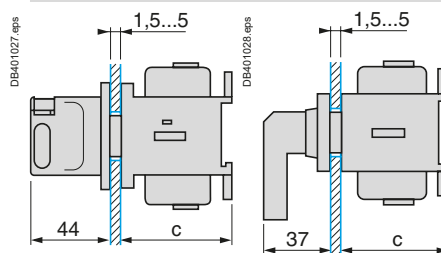
Mounting

Switch-disconnector mounted on enclosure door

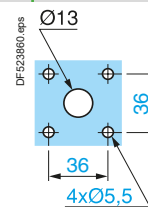
Single hole fixing V0●, V0 to V2



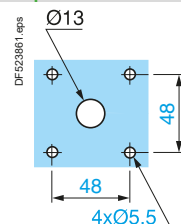
4 screw fixing V0●, V0 to V4



4 screw fixing 45 x 45 front plate V0●, V0 to V2

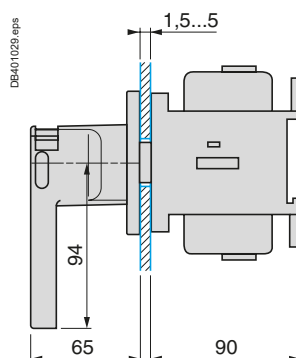


4 screw fixing 60 x 60 front plate V0●, V0 to V4

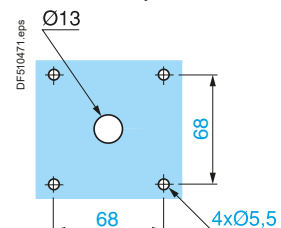


	c
V0●, V0 to V2	60
V3, V4	65

V5 and V6. 4 screw fixing



90 x 90 front plate



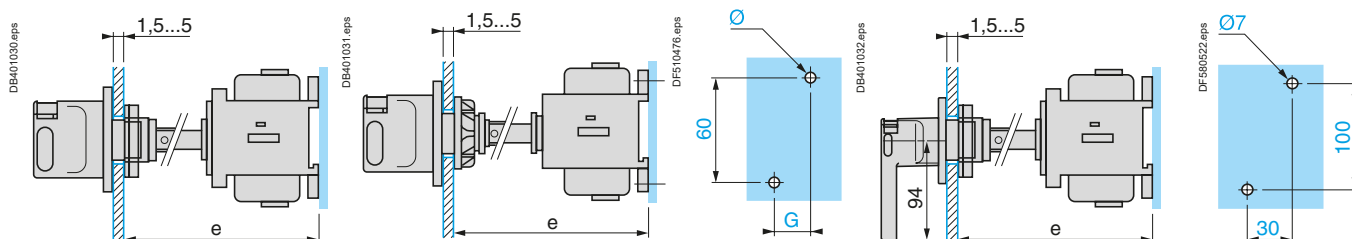
Mounting (continued)

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  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



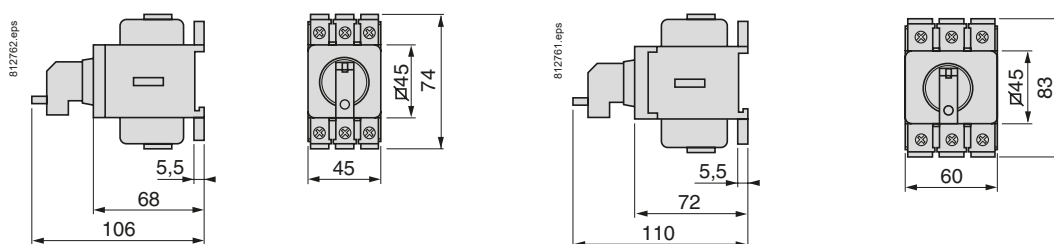
	Shaft extension	Distance (e) enc.back/door mm	Ø	G
V02 and V01 V0 to V2	VZ 17	300...330	2 x 4.2	15
	VZ 30	400...430	2 x 4.2	15
V3 and V4	VZ 18	300...320	2 x 5	20
	VZ 31	400...420	2 x 5	20

	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

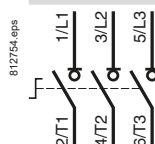
VV● 3 to VV● 4



Schemes

Switch body

V02 and V01
V0 to V6



Main pole module

VZ 02 and VZ 01
VZ 0 to VZ 4



Neutral pole module

VZ 11 to VZ 13



Auxiliary contact blocks

VZ 7



VZ 20



